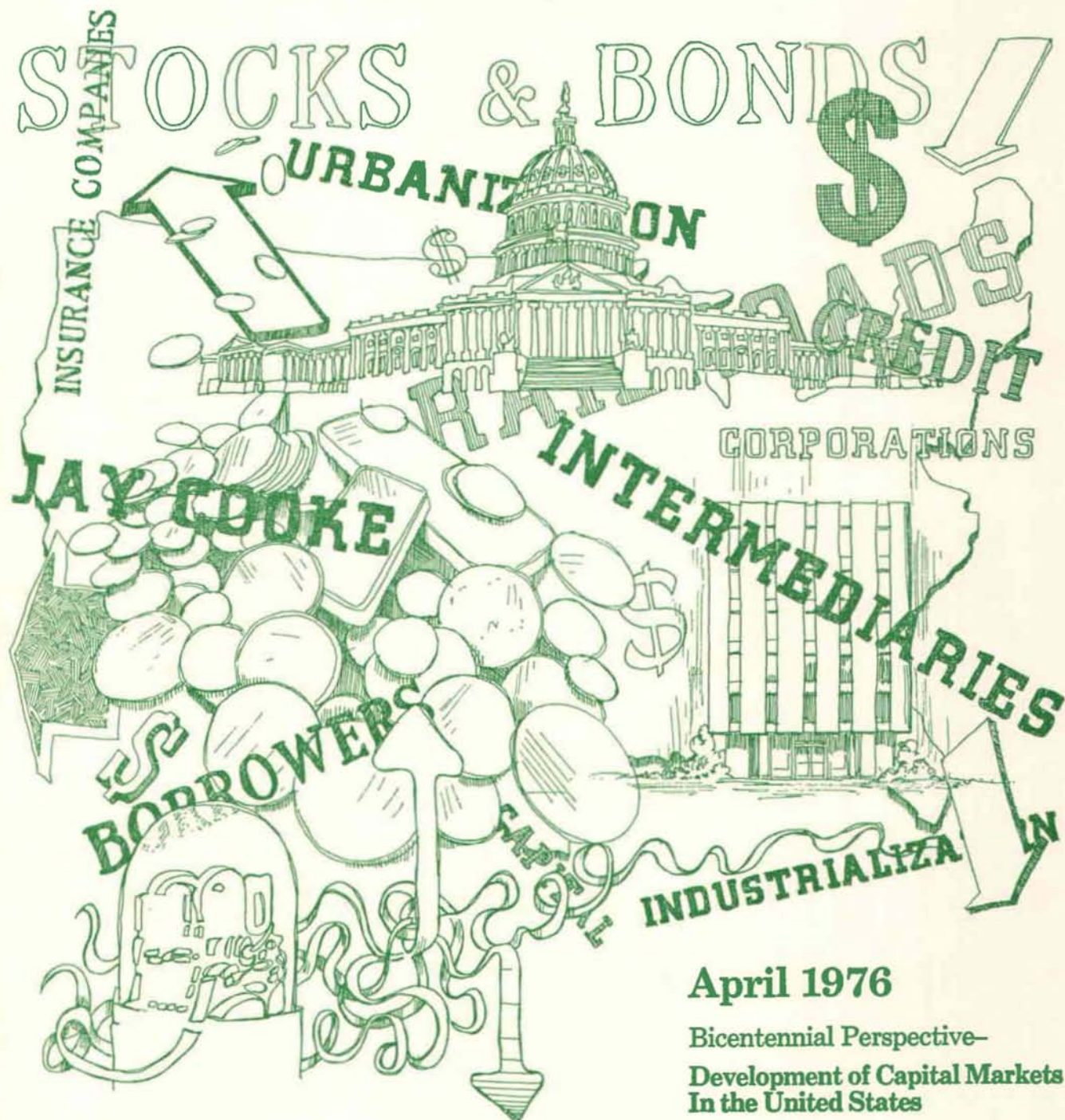


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Bicentennial Perspective—
Development of Capital Markets
In the United States

Development of Capital Markets In the United States

The United States possesses a complex system of capital markets, which, by facilitating the transfer of resources from savers to borrowers, increases economic welfare and encourages growth. Present-day capital markets did not develop overnight, however, but are the product of adaptation to basic changes in the structure of the economy over the entire history of the nation.

With the spread of industrialization came increased specialization, which heightened the need for formal credit markets to transfer funds to their highest yielding uses. Primary and secondary securities markets developed in response, first regionally and then nationally, and the growth of bank and nonbank financial intermediaries increased the efficiency with which the markets operated.

Colonies lack capital markets

Formal capital markets did not exist in the colonies before the Revolutionary War. Ninety percent of the labor force was engaged in agriculture. Manufacturing was limited to shipbuilding and milling so that business activity, for the most part, was confined to commerce and trade.

Business firms were organized as proprietorships and partnerships since corporations were virtually nonexistent. The initial capital requirements of firms were generally provided by the owners, and subsequent expansion usually was financed from retained earnings.

Credit was used and gave rise to financial instruments. Credit was extended by merchants to their customers, by foreigners to their domestic importers, and by the colonial governments to individuals. But the extension of credit was on the basis of direct, face-to-face contact. The accompanying financial instruments essentially were merely records of personal transactions. A centralized marketplace to bring borrowers and lenders together did not exist.

Most of the nation's capital needs during the colonial period were met by foreign sources—a condition that continued into the 19th century. It has been suggested that reliance on foreign sources of capital resulted more from the absence of domestic financial institutions that could transfer credit from economic units with surpluses to those with deficits than from a lack of domestic resources.¹ Foreign credit was, therefore, a means of overcoming capital immobility caused by the absence of developed markets.

The rudimentary level of techniques available to effect transfers from savers to borrowers is illustrated by the extent to which the colonial governments financed their deficits by money issue and lotteries. The absence of capital markets contributed to financing by colonial governments through money issue to an excessive and inflationary degree. Lotteries were widely used by governments to aid in financing toll bridges, toll roads,

and toll canals. Their decline after the early 1800's was associated, at least in part, with the development of alternative capital financing techniques.

Basic institutions emerge

The Revolutionary War cut the colonies off from their foreign sources of credit, forcing them to develop domestic financial institutions. As a result, the development of banks and securities exchanges coincided with the establishment of the new federal government. The first commercial bank, the Bank of North America in Philadelphia, was formed in 1781 to help establish credit facilities for the Continental Congress.

Growth of the new industry at first was slow. By 1791, only four banks were in existence. But as their profitable operations attracted more capital, rapid expansion followed. In 1811, 80 banks were operating and, by 1820, there were over 300. Commercial banks grew faster than all other financial intermediaries so that, by 1850, the banks accounted for about 80 percent of the total assets of financial intermediaries.

The development of securities exchanges was also intimately linked to the establishment of the federal government.² Under the Funding Act of 1790, previous debts of Congress and the state governments were refunded into obligations of the new government. The newly created securities provided a financial asset that

1. John Knapp, "Capital Exports and Growth," *Economic Journal* 67 (September 1957): 432-44

2. The early development of securities exchanges and the development of the New York money market are discussed in Margaret G. Myers, *The New York Money Market*, vol. 1, *Origins and Development*, New York, Columbia University Press, 1931.

prompted the organization of the first investment market.

The federal government issues were well received. They were followed by the issue in 1791 of stock of the Bank of the United States and by an increase in the stock of the Bank of New York. The issue of the Bank of the United States was oversubscribed by 20 percent an hour after the books were opened. An issue of the Bank of New York a month later was accepted in five minutes. The reception given these issues suggests there was a substantial pool of funds awaiting the development of a satisfactory vehicle for transferring resources to borrowers.

The Revolutionary War cut the colonies off from their foreign sources of credit, forcing them to develop domestic financial institutions.

Because slow transportation and communication prevented regional unification, stock exchanges were established in several different cities, including New York, Boston, and Philadelphia. Of these, Philadelphia was the leading financial center because of its dominance as a trading center supported by the banking facilities of the Bank of Pennsylvania and the Bank of the United States.

Gradually, however, New York supplanted Philadelphia as a center of trade and finance. New York's location made it a natural port for foreign trade. By 1796, New York imported more goods than Philadelphia, and by 1797, it also exported more. As the population moved westward, trade from the West became more important relative to that from the South. Completion of the Erie Canal in 1825 opened New York to the flow of goods from the Midwest. Penn-

sylvania, with a longer and more expensive canal system, could no longer compete as a conduit for the western trade.

The gradual shift of trade to New York was accompanied by a movement of finance. Between 1840 and 1880, the securities market centralized in New York City, as the New York Stock Exchange became the dominant long-term market. The growing volume of trade formed the basis for a short-term money market that was essential for financing transactions in long-term instruments.

Call loans and commercial paper became attractive investments for the commercial banks. Because they held deposits of many country banks, New York banks had substantial funds to invest in these instruments. Call loans were significant in the development of the securities markets because traders used them to finance the purchase and sale of securities.

New York's position as the nation's financial center was secured when the failure of the Second Bank of the United States in 1841 removed much of the financial support from the Philadelphia market. Although regional exchanges continued to exist, they dealt primarily in local securities and, in terms of national issues, were little more than extensions of the New York market.

Activity on the securities exchanges responded to the volume of externally financed capital expenditures, which, in turn, was determined by underlying economic developments. Trading of securities, confined to issues of the federal and state governments and of banks and insurance companies, was sluggish until the War of 1812 provided new deficits and new government borrowing.

From around 1825 to 1840, many state governments incurred deficits to finance internal improve-

ments. States issued a large number of securities to finance the improvement of transportation facilities, notably roads, canals, and railroads. Expansion of the transportation network was inspired by competition for shares in the lucrative shipping of agricultural products from western states to Atlantic states.

Competition took the form of providing transportation facilities at the lowest cost. Many of these projects were not economically viable, however, and many states incurred staggering debts. When the states left the transportation field, large private corporations took over. The building of the railroads, for example, was accomplished primarily by private firms. But the shift of ownership did not alleviate the need for capital, and railroads became major borrowers within the business sector.

Railroad stock was added to the New York Stock Exchange in 1830. At that time, it was becoming apparent that steam was the coming power source for railroads. The public, seemingly intrigued at the prospect, was eager to provide the capital needed for expansion. Although part of the domestically supplied capital came from states, most of it came from individuals. Trading in railroad securities significantly boosted activity on the securities exchanges.

Borrowing by local governments added to that by the federal and state governments. A growing population and the rise of urban centers forced local governments to incur debt to provide such public services as water systems, street paving and lighting, sewers, and garbage removal.

Such other financial institutions as insurance companies, mutual savings banks, and building and loan societies were established in this formative period of capital markets. The initial development

Functions of capital markets

The quantity of goods and services that an economy can produce, given its endowment of natural resources and state of technology, depends on the size of its capital stock and on available labor services. The current change in an economy's capital stock is defined as its current rate of investment and is equal to the amount of its current product that is not consumed. The rate at which capital can accumulate is determined by the amount of potential current consumption an economy is willing to forgo—the amount it is willing to save. Savings and investment, therefore, are necessary prerequisites for the maintenance and growth of economic welfare as measured by per capita income.

If all units in an economy always maintained balanced budgets, with savings equal to investment, the economy would have no need for capital markets. The need for capital markets arises when the desired savings of some economic agents differ from their desired investment in real assets. The purpose of capital markets is to allow separation of savings and investment and satisfy the resulting need to transfer resources from net surplus units (those having desired savings that exceed their desired accumulation of real assets) to net deficit units.

Because of the difficulty of carrying out barter through time, such transfers of resources are facilitated by means of financial assets, which represent evidence of debt or ownership. These financial assets may represent claims on other financial assets but ultimately represent claims to real assets. Since the transfer of resources between surplus and deficit units may be for any specified time period, the financial assets accompanying and evidencing such transactions may be for any maturity. Capital markets, therefore, are defined here to include all financial assets and all transactions in such assets *regardless of maturity*.

By allowing individuals to separate their own savings and investment, financial assets and markets in them make it possible, first, to obtain an increase in individual satisfaction for a given level of income and, second,

to obtain an increase in the economy's total income for a given rate of saving. Financial assets allow an individual to reallocate his consumption through time, given his total income or wealth, by borrowing or lending and thereby consuming relatively less in one time period and relatively more in another. When individuals differ in their preferences for current relative to future consumption, the choices available to them are expanded and their satisfaction can be increased if they have the opportunity to trade in goods through time, as well as at a given time.

It may also be possible to increase productivity, given the rate of saving and available resources, through a redistribution of savings and investment if individuals have different entrepreneurial opportunities and abilities. With such differences, the total return on capital—and, therefore, society's total income—can be increased by transferring savings from individuals whose investments would yield a relatively low rate of return to individuals whose investments would yield a higher one.

Under such circumstances, there is an incentive to specialize, with some individuals saving more than they invest and others investing more than they save. The gains from the redistribution of investment from low to high-yield projects can be exploited until the marginal rate of return is equalized on all investment projects.

An additional factor favoring the separation of savings and investment is the possibility that some projects may require investment in amounts larger than the savings available to any one individual. This obstacle can be overcome by pooling the savings of several individuals. Gains may be made from such pooling until the marginal rates of return are equalized on large and small projects.

of insurance companies was concentrated in marine and fire insurance. The first companies offering marine insurance and fire insurance, respectively, were established in 1724 and 1736. By 1800, 33 charters had been issued to incorporate insurance companies. The nature of their business required the development of funds to cover possible emergencies. These funds were invested in mortgages and, subsequently, in other securities.

The development of insurance companies as important financial intermediaries, however, had to await the growth of life insurance, because this form of insurance allowed the accumulation of substantially larger amounts of investable funds. Growth of this industry was slow until life insurance became popular in the second half of the 19th century.

The first mutual savings bank was established in 1816, and the first building and loan association was organized in 1831. These were the first nonbank thrift institutions in the United States. Mutual savings banks initially were intended to encourage savings by lower-income groups but soon diversified to become a generalized intermediary accepting deposits from all income groups. Savings banks grew faster than all other intermediaries between 1840 and 1860. The building and loan, or savings and loan, associations were established to help small savers acquire homes but, later, became generalized savings institutions specializing in mortgage lending.

Industrialization speeds growth

At the same time that the early institutions of credit markets were developing, the economy began a process of industrialization that would continue for more than 100 years. The transition from an agricultural base to an industrial base was accompanied by changes in the

basic fabric of the economy—changes that were facilitated by capital markets and, at the same time, increased the need for them.

Industrial development before the Civil War can be divided into three periods. Until around 1810, industrial conditions were basically unchanged from the colonial period. From 1810 to 1840, the industrial base gradually developed and expanded. The third period, from 1840 to 1860, was characterized by rapid growth of industrial output and rapid development of the factory system.

Industrialization and the accompanying urbanization increased the volume of transfers to be effected through the capital markets by increasing the separation of savings and investment.

A number of developments during the first two periods culminated in the rapid spread of industry beginning in the 1840's. The use of steam as a source of power, together with advances in engineering techniques and production methods, greatly increased productive capacity.

Capacity was also increased by the addition of natural resources through geographic expansion. The construction of roads, canals, and railroads improved transportation and thereby allowed faster and cheaper movement of an expanded volume of goods and services. Improved transportation, combined with a growing population and increasing urbanization, expanded the markets for manufactured products. Mass markets, in turn, made profitable the adoption of production methods based on specialization of labor.

The net result of these influences was a growing demand for

manufactured goods and associated services that drew resources into production for the market. Between 1810 and 1860, the value of manufactured products rose ten times, from \$200 million to \$2 billion. Much of this growth occurred in consumer goods industries. Industrial development permitted and encouraged a decline in self-sufficiency, which was manifested in a separation of the activities of households and firms. Until around 1830, most consumer goods were produced in the home whereas, afterward, home manufacture—except for food—was virtually nonexistent.

Industrialization and the accompanying urbanization increased the volume of transfers to be effected through the capital markets by increasing the separation of savings and investment. The agricultural household had a variety of opportunities to channel savings directly into investment. The urban industrial worker had fewer opportunities for direct real investment and, therefore, was more likely to have surplus savings that could be directed to the accumulation of financial assets.

The increased capital requirements associated with industrialization had far-reaching implications for the forms of business organization and for the means by which investment would be financed. The manifestation of these forces, however, would not become widespread in industry until after the Civil War.

Although enterprises with relatively small capital requirements could be financed by a single owner or by several partners, the capital requirements of the factory system were too large for the savings of a few individuals. The need for large amounts of capital gave impetus to the growth of the corporation because this organization could mobilize the savings

of a large number of individuals while providing the saver with limited liability.

Corporations initially were used for public activities. In the colonial period, corporations were used for municipalities, educational and charitable organizations, and transportation projects. Three-fourths of the corporations formed before 1800 incorporated for the construction of roads, canals, bridges, and local public-service enterprises, such as water supply. By 1810, the corporate form had spread to finance and was commonly used for banks and insurance companies.

The spread of the corporate form initially may have been hampered by the absence of limited liability and by difficulties in obtaining charters. Early corporations did not possess limited liability, a feature that makes them such an attractive device for raising capital. Some states imposed double liability—twice the amount of the investment—and some specified unlimited liability. After 1830, however, provisions for limited liability began to be adopted, and by 1860, the principle was generally accepted. In 1837, Connecticut passed a law of general incorporation that made incorporation a right rather than a special privilege. Other manufacturing states subsequently passed similar laws.

From 1837 on, manufacturing firms adopted the corporate form with increasing frequency. Nevertheless, as late as the Civil War, partnerships and proprietorships still held most of the resources in manufacturing. At that time, the capital needed for most manufacturing enterprises could still be raised by individuals and manufacturing firms could grow primarily from internally generated funds. The corporate form did not

become important in manufacturing as a whole until the 1870's.

Whether the reliance on internal finance reflected the preference of the firms, the difficulties of incorporation, or a reluctance on the part of investors to invest in such issues, the result was that industrial shares played a small part in the growth of capital markets before the Civil War. The first industrial shares appeared on the Boston Stock Exchange in 1827 and on the New York Stock Exchange in 1831. By 1855, only 15 industrial issues were listed on the New York exchange.

Investment in new and unfamiliar areas and new and unfamiliar industries involved risk, and financial intermediaries were needed to facilitate the transfers.

As the frontier expanded, population and industry moved westward, which added to the need for institutions to aid in capital transfers. The greatest relative demand for funds for investment was concentrated in growing areas, while the greatest relative supply of funds was held by individuals in already developed areas. But investment in new and unfamiliar areas and new and unfamiliar industries involved risk, and financial intermediaries were needed to facilitate the transfers.

Despite the development of financial intermediaries and organized securities exchanges, capital—especially long-term capital—remained relatively immobile. This was reflected in large differences in interest rates from region to region. Interest rates in the West and South were higher than those in

the relatively more developed East. Although some eastern capital moved to these regions, most of the finance came from foreign sources.

Firms lacking access to foreign capital frequently depended on local capital or on internally generated funds. In many cases, capital transfer between industries occurred only in conjunction with a transfer of the owners of capital to the industry. In general, capital transfer between industries was more a function of personal contacts than of organized securities markets.³

Financial structure matures

The trend to an industrial economy accelerated after the Civil War so that by World War I, the United States had been transformed from a predominantly agricultural to a predominantly industrial economy. The change can be shown by comparing the shares of value added, in constant prices, accounted for by agriculture and industry. Agriculture accounted for 64 percent of value added in 1849 but only 22 percent in 1919.

The rate of growth of national output, which had increased in the early decades of the 19th century, escalated in the middle of the century. From 1710 to 1840, per capita national product grew at an annual rate of around 0.3 to 0.5 percent. From 1840 to 1900, this rate rose to about 1.4 percent a year.

Industrialization required capital formation, which proceeded at a rapid pace. Rates of savings and investment relative to the level of income increased considerably in the middle of the 19th century. By one estimate, the rate of gross capital formation (including home-produced capital equipment but excluding consumer durables) rose

3. Lance E. Davis, "Capital Immobilities and Finance Capitalism: A Study of Economic Evolution in the United States, 1820-1920," *Explorations in Entrepreneurial History*, Series 2, vol. 1, no. 1 (Fall 1963), pp. 88-105

from 15 percent of GNP for the 1834-58 period to 25 percent for the 1869-88 period.⁴ Unless the higher savings and investment were carried out by the same economic units, this increase would have implied a greater transfer of funds through capital markets.

Railroads continued to be important demanders of funds and issuers of securities. From 1830 to 1860, the railroads grew to dominate the transportation field. Between 1840 and 1850, the number of miles of railway in use grew from 3,000 to 7,500, and over the next ten years, it quadrupled to 30,000.

As rapid and large as the pre-war expansion was, it was dwarfed by the expansion after 1860. Between 1860 and 1890, an additional 140,000 miles of railway were added to the network. This rapid expansion required high rates of investment. The railroads accounted for 10 percent of gross capital formation in the 1830's and 1840's and 15 percent in the 1850's. By the 1860's, railroad investment had grown to five times its level in the 1840's. It quadrupled again for the 1880's, accounting for 18 percent of total gross capital formation.

Most of the funds for railroads came from private domestic sources. Railroad securities, therefore, continued to be important in capital markets. The railroads pioneered in developing innovative methods of finance. Before 1860, they had issued first, second, and third-mortgage bonds, convertible debentures, and real estate bonds. Preferred stocks were initially issued by railroads and canal companies in the 1830's.

Increased urbanization continued to accompany the rise of industry. Both the number and size of urban areas grew. In 1860, 80 percent of the population lived in rural areas. Of the 20 percent in cities, only 8 percent lived in cities of 100,000 or more. By 1920, only 49 percent of the population was in rural areas. Of the 51 percent in cities, 26 percent lived in cities of 100,000 or more.

The rapid growth of the cities required large outlays for public services—water and sewer systems, gas and electric lighting systems, and telephone and power equipment and lines. The growth of city services, as well as construction of the cities themselves, meant an increased demand for producer goods.

After 1880, business firms increased dramatically in size, primarily through vertical and horizontal integration. The integration movement was inspired by the growth of larger markets. National markets were opened as the expanding railroad network linked regions. The growth of cities created markets for consumer goods demanded by urban dwellers. Large markets implied economies of scale that could be exploited through centralized production, purchasing, distribution, and management.

Accompanying the growth of industry and the rise of big business, the corporate form spread rapidly in the industrial sector, increasing the proportion of funds raised through equity issue. The integration movement transformed small firms into large firms of national scope, which improved the demand for their stock. At the

same time, industrial firms began to issue preferred stock, which increased the attractiveness of their issues. As a result, industrial securities accounted for much of the increase in trading on the stock exchanges during this period.

Intermediaries increased capital mobility and contributed to the development of capital markets that were nationwide in scope.

The use of financial instruments and the importance of financial intermediaries increased more rapidly in this period than previously. Growth of intermediaries institutionalized the transfer of savings to investment. With more funds flowing through intermediaries, there was less direct participation in capital markets by ultimate borrowers and lenders. Intermediaries increased capital mobility and contributed to the development of capital markets that were nationwide in scope.

The growth of intermediation in the second half of the 19th century occurred primarily through expansion of existing institutions, as few new types of intermediaries were established. Raymond Goldsmith has identified decades in which various financial intermediaries first appeared in a technically developed form and of a size sufficiently large to be considered more than experiments. Of 23 intermediaries that Goldsmith distinguishes, eight appeared in the first half of the 19th century. Only the mortgage company appeared in the latter half.⁵

4. Robert E. Gallman, "Gross National Product in the United States, 1824-1909," *Output, Employment, and Productivity in the United States After 1800*, Dorothy S. Brady, ed., Studies in Income and Wealth, vol. 30, New York, National Bureau of Economic Research, 1966

5. Raymond W. Goldsmith, *Financial Intermediaries in the American Economy Since 1900*, National Bureau of Economic Research Studies in Capital Formation and Financing, no. 3, Princeton, Princeton University Press, 1958

Economics of financial intermediaries

The mere existence of financial assets is sufficient to allow the separation of savings and investment with an attendant gain in efficiency. But the transfer of savings to investment that is required by such separation is facilitated by financial intermediaries.

Financial intermediaries develop because of a dichotomy between the characteristics that lenders and borrowers want debt instruments to have. Investors prefer to borrow to acquire capital goods, which they anticipate will sufficiently enlarge future income to repay the loan and provide a net profit. Therefore, they generally want to match repayment of a loan to income from the corresponding investment—that is, match the maturity of the asset to the maturity of the liability financing it. The greater the life of the investment, the longer is the desired borrowing term.

The purpose of saving is to rearrange the pattern, through time, of resources available for consumption. Savers, therefore, must determine their desired saving and lending on the basis of their expectations about the future. However, they face the possibility of unexpected expenses or unforeseen declines in income. Savers, then, prefer assets that are liquid—a quality that is measured by the speed with which an asset can be converted to money and by the certainty of the price at which the conversion can be made. In general, liquidity is greater the shorter the maturity of the asset.

The saver faces the risk of default by the borrower and the risk attendant upon holding his savings in less than perfectly liquid assets. The greater the risk attached to the borrower and the less the liquidity of the asset, the higher is the rate of return required to induce savers to hold a given financial instrument. The saver may be willing to trade a lower rate of return for greater liquidity and less default risk.

Financial intermediaries accept the savings of ultimate lenders, issue claims on themselves, and use the proceeds to make loans to other intermediaries or to ultimate borrowers. Through the principles of predictability of large numbers, reduction of risk

through diversification, and the expertise and economies of operation available through specialization, intermediaries can increase the return net of risk to lenders, can reduce the interest cost to borrowers, or both.

Because of the predictability of a large number of independent claims, intermediaries can issue liabilities that are more liquid than the assets in which they invest. Through specialization of function, the intermediary reduces the administrative costs of making loans and obtains expertise in evaluating the quality of investment projects, thereby reducing risk to its owners and depositors.

An even more important reduction of risk is obtained through diversification of loans. The risk of investment, measured by the variability of return, is reduced by holding diversified portfolios of investments. This is an extremely important function of financial intermediaries: to provide the benefits of diversification to ultimate savers whose assets are too small relative to the minimum size of transactions to permit them to diversify directly.

For society, investment risk lies in the possibility that resources will be allocated to projects that yield unnecessarily low returns. If intermediaries cannot allocate funds more efficiently than individuals, then they can reduce risk to individuals through diversification but not the risk to society of misallocation of resources.

But, in fact, the costs of obtaining the information necessary to evaluate investments outside the range of accustomed experience are likely to be prohibitive to the individual saver. Individuals, therefore, would be inclined to limit their investments to projects within their own experience in the absence of intermediaries. The result would probably be overinvestment in some areas and underinvestment in others. Intermediaries can profitably incur the information costs necessary to evaluate new investments because they can exploit economies of scale in knowledge acquisition, spreading the costs over a large base of pooled savings.

The relative importance of various intermediaries, however, changed significantly after the Civil War. Although commercial banks continued their rapid growth, they declined relative to other intermediaries. While assets of commercial banks were about three times as large as those of all other intermediaries in 1850, they were only slightly larger in 1900.

Among the nonbank intermediaries, life insurance companies grew rapidly. Between 1860 and 1900, the assets of life insurance companies increased 72 times, from \$24 million to \$1.7 billion. The growth of these intermediaries was especially important in terms of long-term finance, as they played an important role in the evolution of a national capital market.

Because their liabilities are long-term and predictable, life insurance companies can invest in longer-term assets than can intermediaries with short-term liabilities. In addition, they can accumulate more investable funds than general insurance companies because premiums on life insurance, unlike other types of insurance, exceed costs in the early years of the policy and because many types of life insurance combine a savings feature with the insurance feature.

National capital market emerges

The size of regional interest rate differentials provides an indication of the efficiency of capital markets. Persistent rate differentials on similar investments indicate that capital markets are not efficiently allocating funds. Such differentials existed between regions of the United States and were quite large until the early 20th century. Their gradual reduction reflected the development of a national credit market. Regional interest rate dif-

ferentials continue to exist today, especially on mortgages. However, by the 1920's, a reasonably well functioning national market had appeared for both long and short-term funds.

Lance E. Davis has described the importance of financial intermediaries in the development of a national capital market.⁶ In the short end of the market, rate differentials were reduced by the arbitraging activities of commercial banks and commercial paper firms. Interest rates tended to be high in the West, where there was a relatively large demand for and small supply of capital, while rates were lower in the East, where the opposite conditions prevailed.

The increase in capital mobility and the movement toward a national capital market were less complete and proceeded more slowly in the long end of the market than in the short end.

Consequently, commercial banks in the high-interest regions of the West issued certificates of deposit to savers and banks in the East. They also rediscounted their holdings of commercial paper with banks in low-interest areas and used the proceeds to make loans in high-interest areas. However, these techniques provided only a limited means of arbitraging regional interest rate differentials, because of regulatory restrictions and because banks were hesitant to rediscount for other than seasonal and emergency needs.

More important for the narrowing of rate differentials was the development of a national commercial paper market. Firms specializ-

ing in buying commercial paper from banks in high-interest areas and selling it to banks in low-interest areas had appeared in the East before the Civil War. After the war, commercial paper firms expanded to the western states and, by 1913, were represented in virtually every major city outside the South. These firms increased capital mobility by linking cities and regions across the country into a national capital market.

The increase in capital mobility and the movement toward a national capital market were less complete and proceeded more slowly in the long end of the market than in the short end. Forces helping to integrate the long-term market included the growth of life insurance companies and the expansion of a national securities market.

Beginning in the 1870's, a number of legal restrictions on the lending activities of life insurance companies were relaxed. Growing assets and relaxed legal restrictions gave life insurance companies the means and the ability to lend in high-interest areas and thereby increase capital mobility. In the process, their portfolios changed dramatically. Between 1860 and 1890, the proportion of stocks and bonds in their portfolios rose from 9 percent to 35 percent.

Life insurance companies, however, were not large enough to complete the process of arbitrage by themselves. This was accomplished by the continued expansion and development of the securities markets. The markets formed a vehicle for transferring capital between regions and industries.

Throughout the 19th century and during the first decade of the 20th century, the markets expanded and developed to encom-

6. "The Investment Market, 1870-1914: The Evolution of a National Market," *Journal of Economic History*, vol. 25, no. 3 (September 1965), pp. 355-99

pass the entire country and a much broader range of economic activity. Regional unification was accomplished through the centralization of the securities markets in New York City. The expanded scope of the national capital market was reflected in the gradual increase of industrial issues listed on the stock exchanges.

As was pointed out earlier, Government securities provided the impetus for the development of the first formal securities market. Similarly, the techniques developed in distributing the Government securities that were issued to finance the Civil War played an important role in the later expansion of the securities markets.

The task of floating the securities was given to Jay Cooke, who is considered the father of modern investment banking in this country. Cooke employed a variety of aggressive marketing techniques

to distribute the securities to the general public. After the war, he and other investment bankers used the same techniques to distribute private securities. By accustoming savers to holding financial claims and by providing new techniques to investment bankers, Cooke's actions helped make postwar sales of private securities easier and, so, facilitated the development of the securities markets.

Efficiency of market improves

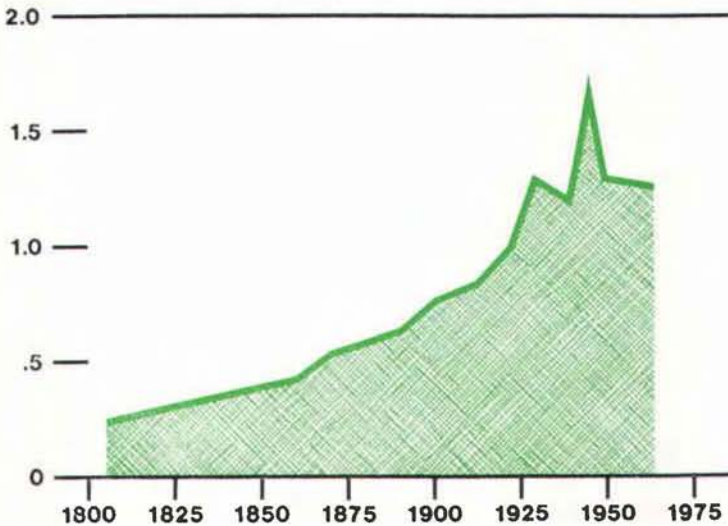
By the early part of the 20th century, the United States had a national capital market served by a network of financial intermediaries. Since then, the efficiency of the market has been increased by the development of new techniques and the evolution of new institutions. In addition, significant changes have taken place in the relative importance of various lenders and borrowers and in the

relative positions of the various financial intermediaries.

Capital market instruments and techniques have become more flexible, allowing more efficient mobilization of loanable funds through a tailoring of the instruments to the needs of ultimate lenders and borrowers. Important examples of tailoring of instruments on the lending side include the issuance of tax anticipation certificates by the Treasury and the issuance by commercial banks of certificates of deposit with a wider range of maturities and denominations.

Capital market instruments and techniques have become more flexible, allowing more efficient mobilization of loanable funds through a tailoring of the instruments to the needs of ultimate lenders and borrowers.

Ratio of Total Financial Assets to National Wealth



SOURCE: Raymond W. Goldsmith (*Financial Intermediaries in the American Economy Since 1900*, National Bureau of Economic Research, and *Financial Structure and Development*, Yale University Press)

On the borrowing side, the proportion of borrowing through direct placement or negotiated financing has increased relative to open market financing. A number of factors have been responsible for this trend, including growth in the variety and size of financial intermediaries and in competition between them. Large, competitive intermediaries allow business firms to bypass investment bankers and the new-issues market, opting instead for direct placement of loans, short-term financing, and leasing. Direct placement permits the tailoring of loans to the specific needs of borrowers, creating a borrowing avenue for small companies that might normally experience difficulties in floating issues in the open market.

Most of the development of new institutions occurred in the early part of the century. A central bank, investment companies, sales

finance companies, personal finance companies, and private pension funds were all established in the 1920's; and federal lending institutions and the Social Security program appeared in the 1930's.

The proportion of savings channeled through financial intermediaries continued to grow. Goldsmith reports that the share of financial intermediaries in all savings through intangible assets averaged about two-fifths from 1897 to 1929 but rose to three-fourths from 1939 to 1949.⁷

An indication of this trend for the post-World War II period may be obtained from the Federal Reserve's flow-of-funds accounts, even though the latter figures are not strictly comparable. Securities purchased directly in the credit markets by households averaged only 13 percent of their net acquisition of financial assets in the 1946-74 period. Nearly all the remainder was channeled through financial intermediaries.

Institutionalization of savings in the post-World War II period was encouraged by several factors. The growth of per capita income, for example, created a large body of small savers for whom the relative safety and liquidity of indirect investment through intermediaries were especially attractive.

In addition, reforms and innovations designed to increase the safety and attractiveness of investment through intermediaries had been adopted to overcome a number of weaknesses in the financial system that had been brought out in the Depression. Examples include insurance of commercial bank deposits by the Federal Deposit Insurance Corporation, insurance of savings and loan deposits by the Federal Savings

and Loan Insurance Corporation, and lending to savings and loan associations by the Federal Home Loan Bank System.

Relative positions of the financial intermediaries shifted in response to the evolving structure of the economy. Total financial assets of commercial banks grew 4.6 times from 1945 to 1972, compared with 11.5 times for private nonbank financial institutions. Among nonbank financial institutions, savings and loan associations, credit unions, pension funds, finance companies, and open-end investment companies had above-average growth. On the other hand, the growth of mutual savings banks, life insurance companies, and securities brokers and dealers was below average.

The demand for housing grew rapidly in the 1920's and again after World War II. Consequently, savings and loan associations, which specialize in supplying mortgage finance, experienced rapid growth in the demand for loans. Similarly, the large-scale marketing of automobiles and other consumer durables created a demand for consumer credit to finance these new goods. Sales and personal finance companies arose to fill this credit need. The loans made by these intermediaries were secured by the goods purchased.

More recently, intermediaries have recognized that human capital—an individual's future flow of income appropriately discounted for time and risk—provides a form of collateral. As a result, unsecured lending to consumers has increased in recent years. Banks, in particular, have been aggressive lenders in this field, as evidenced by the remarkable growth in the use of bank credit cards.

In contrast to savings and loan associations and finance companies, which grew in response to changes in borrowing demands, pension funds have grown because of a shift in the allocation of loanable funds. A widespread desire for increased security has directed a flow of funds to public and private pension funds. Initially, pension plans emerged partly as a response to the need for financial security in industrial employment, which is not as self-sufficient as agricultural employment.

More recently, intermediaries have recognized that human capital—an individual's future flow of income appropriately discounted for time and risk—provides a form of collateral.

The first pension plan was established in 1875 by the American Express Company, but only a dozen existed by 1900. Pension plans expanded rapidly in subsequent years, and by 1929, almost 400 were in operation. In the post-war period, the growth of pension funds has escalated. Between 1945 and 1972, total financial assets of private pension funds increased 55 times, while retirement funds of state and local governments grew 28 times.

Because intermediaries tend to match the maturities of their assets to the maturities of their liabilities and because the liabilities of pension funds are long-term and predictable, channeling of funds to these intermediaries has increased the funds available for long-term lending. These institutions have become major purchasers of corporate equities and

7. *Financial Intermediaries*, p. 304

bonds. In the 1956-72 period, private pension funds and retirement funds of state and local governments absorbed about 80 percent of new issues of corporate equities and about 35 percent of new issues of corporate and foreign bonds.

Conclusion

The process of historical evolution has resulted in a closely inter-related network of markets in which financial instruments with varying characteristics are traded. Although they differ, these instruments, as a whole, form a spectrum composed of many substitutes. Consequently, the capital markets are highly competitive.

Similarly, the financial intermediaries that service the markets are competitive with each other. In addition to competition among individual members of a single type of financial institution, there is also substantial competition among different types of financial intermediaries. The entire set of financial intermediaries forms a network of institutions competing to transfer funds from savers to spenders. Competition, therefore, emerges on both the supply and demand sides of the markets. Through time, then, capital markets have generally evolved so as to provide an efficient medium for the exchange of funds at the lowest possible cost.

-Steven W. Dobson

New member banks

Canyon Creek National Bank, Richardson, Texas, a newly organized institution located in the territory served by the Head Office of the Federal Reserve Bank of Dallas, opened for business February 23, 1976, as a member of the Federal Reserve System. The new member bank opened with capital of \$400,000, surplus of \$400,000, and undivided profits of \$200,000. The officers are: R. B. Cousins, Chairman of the Board; Floyd Ham, President and Chief Executive Officer; and Ed Bufkin, Senior Vice President and Cashier.

Prestonwood National Bank, Dallas, Texas, a newly organized institution located in the territory served by the Head Office of the Federal Reserve Bank of Dallas, opened for business March 2, 1976, as a member of the Federal Reserve System. The new member bank opened with capital of \$800,000, surplus of \$700,000, and undivided profits of \$500,000. The officers are: Max W. Wells, Chairman of the Board and President; Lex Johnston, Executive Vice President; Willette Rosson, Vice President and Cashier; and Larry C. Shumate, Vice President.

South Loop National Bank, Houston, Texas, a newly organized institution located in the territory served by the Houston Branch of the Federal Reserve Bank of Dallas, opened for business March 2, 1976, and is a member of the Federal Reserve System. The new member bank opened with capital of \$400,000, surplus of \$400,000, and undivided profits of \$320,000. The officers are: William T. Keenan, President; George M. Dow, Jr., Vice President; Archie W. Benham, Vice President; and John S. Duckering, Cashier.

Parkway National Bank, Houston, Texas, a newly organized institution located in the territory served by the Houston Branch of the Federal Reserve Bank of Dallas, opened for business March 18, 1976, as a member of the Federal Reserve System. The new member bank opened with capital of \$1,000,000, surplus of \$1,000,000, and undivided profits of \$500,000. The officers are: C. Travis Traylor, Jr., Chairman of the Board; Charles E. Armstrong, President and Chief Executive Officer; Stephen A. Marburger, Vice President and Cashier; and Kathy Gamel, Assistant Vice President.

New par bank

Charlotte State Bank, Charlotte, Texas, an insured nonmember bank located in the territory served by the San Antonio Branch of the Federal Reserve Bank of Dallas, began remitting at par March 8, 1976. The officers are: F. W. Weber, President and Chairman of the Board; Tom Dean, Vice President; Lorene Hurley, Active Vice President and Cashier; Marietta Schrutka, Assistant Cashier; and June Pacey, Assistant Cashier.



Federal Reserve Bank of Dallas

April 1976

Eleventh District Business Highlights

Drilling in Texas—in terms of the number of active rigs—doubled from early 1972 through 1975. Petroleum production, on the other hand, declined some 10 percent during this period. The drilling boom, rather than boosting the state's output of oil, has only slowed the decline in petroleum production.

Much of the increase in drilling activity was in response to rising petroleum prices. But developmental drilling, rather than exploratory drilling, has accounted for most of the increase in total drilling activity in the past four years. This type of drilling increases the ability of existing fields to produce, instead of locating new oil deposits.

The exploratory drilling that has been conducted since early 1972 has been unsuccessful in locating a giant oil field. It was the giant fields discovered in the twenties and thirties that made Texas the leading oil state. Even today, the 95 largest fields, out of about 8,000, account for more than two-thirds of the state's production. The last giant strike was the Fairway Field that was found in 1960.

But even after exploratory drilling has located new reserves, it may take several years before sufficient developmental drilling can take place to bring a field to its full productive potential. Therefore, much of the newly discovered oil has yet to be brought into production.

One positive development, however, that promises to increase production is unitization. By placing a field under the control of a single operator, rather than developing a field piecemeal, more oil can be recovered.

The field that may be unitized is the Yates Field. Under the control of a single operator, production in

this field could be doubled from 50,000 to 100,000 barrels a day. That is significant because total annual production for the state dropped 196,000 barrels daily last year.

Businesses in the Eleventh District are rapidly transferring funds to newly available savings accounts at commercial banks. On November 10, 1975, the Board of Governors of the Federal Reserve System amended regulations to permit member banks to offer savings accounts to businesses. These new accounts, which are limited to \$150,000, are an attractive interest-earning alternative for funds previously held in demand deposits which do not earn interest. Another regulatory change permits the transfer of funds between savings and demand deposit accounts by telephone instructions, also adding to the attractiveness of the accounts.

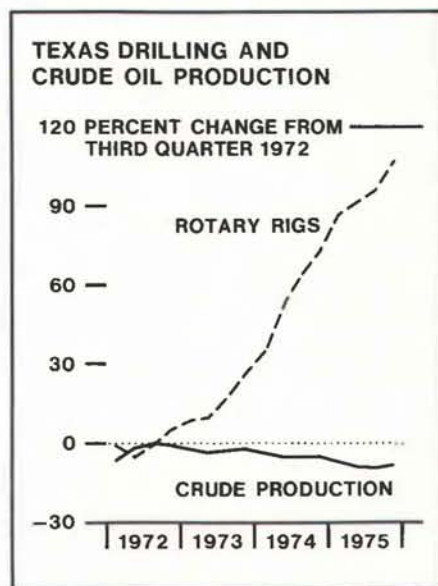
By early January, four out of five member banks in the District were offering the new savings accounts to businesses. And, according to a survey at that time, an additional 6 percent of the banks planned to offer them by spring.

These new savings accounts were enthusiastically received by businesses. At the time of the January survey, businesses had already opened accounts at more than two-thirds of the banks offering them. And since then, weekly data reported by 27 large banks in the District indicated that business savings deposits have continued to rise sharply.

On January 7, business savings deposits at the weekly reporting banks amounted to \$26.9 million, or about half of the total volume of these deposits at all member banks in the District. By mid-March, business savings deposits at the weekly reporting banks had risen an additional \$58.7 million, or 218 percent. The ratio of business savings accounts to total savings deposits at these banks jumped from 1.9 percent on January 7 to 5.1 percent on March 17.

The rapid growth has had a significant impact on the composition of bank liabilities. While business savings deposits have risen sharply, total demand deposits have declined noticeably. This suggests that perhaps much of the gain in business savings accounts reflects a shift from demand deposits. No precise data are available to indicate the degree to which deposits were actually transferred. However, the banks reporting balances in business savings accounts in the January survey speculated that slightly more than half of the out-

(Continued on back page)



CONDITION STATISTICS OF WEEKLY REPORTING COMMERCIAL BANKS

Eleventh Federal Reserve District

(Thousand dollars)

| ASSETS | Mar. 24, 1976 | Feb. 18, 1976 | Mar. 19, 1975 | LIABILITIES | Mar. 24, 1976 | Feb. 18, 1976 | Mar. 19, 1975 |
|--|------------------|------------------|------------------|---|------------------|------------------|------------------|
| Federal funds sold and securities purchased under agreements to resell | 1,717,349 | 1,942,456 | 2,002,272 | Total deposits | 16,980,749 | 17,214,485 | 15,904,458 |
| Other loans and discounts, gross | 10,721,083 | 10,641,350 | 10,316,946 | Total demand deposits | 7,651,800 | 8,091,104 | 7,251,846 |
| Commercial and industrial loans | 5,406,213 | 5,415,485 | 4,942,072 | Individuals, partnerships, and corporations | 5,582,030 | 5,736,639 | 5,221,944 |
| Agricultural loans, excluding CCC certificates of interest | 214,828 | 218,410 | 200,839 | States and political subdivisions | 486,050 | 392,915 | 414,349 |
| Loans to brokers and dealers for purchasing or carrying: | | | | U.S. Government | 66,459 | 149,868 | 162,914 |
| U.S. Government securities | 1,029 | 219 | 15 | Banks in the United States | 1,357,236 | 1,603,926 | 1,280,374 |
| Other securities | 81,002 | 58,730 | 27,863 | Foreign: | | | |
| Other loans for purchasing or carrying: | | | | Governments, official institutions, central banks, and international institutions | 1,822 | 2,766 | 3,385 |
| U.S. Government securities | 5,991 | 7,100 | 2,330 | Commercial banks | 67,669 | 62,209 | 70,289 |
| Other securities | 359,498 | 371,209 | 396,520 | Certified and officers' checks, etc. | 90,534 | 142,781 | 98,591 |
| Loans to nonbank financial institutions: | | | | Total time and savings deposits | 9,328,949 | 9,123,381 | 8,652,612 |
| Sales finance, personal finance, factors, and other business credit companies | 230,029 | 164,759 | 141,071 | Individuals, partnerships, and corporations: | 1,701,173 | 1,574,213 | 1,244,721 |
| Other | 608,488 | 581,541 | 564,316 | Savings deposits | 7,627,776 | 7,549,168 | 7,407,891 |
| Real estate loans | 1,325,160 | 1,334,819 | 1,492,484 | Other time deposits | 4,820,300 | 4,785,881 | 4,600,995 |
| Loans to domestic commercial banks | 40,676 | 41,085 | 67,339 | States and political subdivisions | 2,281,083 | 2,265,109 | 2,494,872 |
| Loans to foreign banks | 56,950 | 67,464 | 78,332 | U.S. Government (including postal savings) | 10,449 | 11,445 | 11,729 |
| Consumer installment loans | 1,100,022 | 1,111,944 | 1,106,768 | Banks in the United States | 492,446 | 458,007 | 272,458 |
| Loans to foreign governments, official institutions, central banks, and international institutions | 14,927 | 4,699 | 5 | Foreign: | | | |
| Other loans | 1,276,270 | 1,263,886 | 1,296,992 | Governments, official institutions, central banks, and international institutions | 14,139 | 14,139 | 22,237 |
| Total investments | 5,685,313 | 5,421,942 | 4,682,276 | Commercial banks | 9,359 | 14,587 | 5,600 |
| Total U.S. Government securities | 2,081,070 | 1,939,125 | 1,121,114 | Federal funds purchased and securities sold under agreements to repurchase | 3,199,579 | 3,604,517 | 2,808,437 |
| Treasury bills | 500,549 | 431,969 | 146,352 | Other liabilities for borrowed money | 13,947 | 24,052 | 82,763 |
| Treasury certificates of indebtedness | 0 | 0 | 0 | Other liabilities | 765,861 | 708,840 | 657,913 |
| Treasury notes and U.S. Government bonds maturing: | | | | Reserves on loans | 198,308 | 195,329 | 204,469 |
| Within 1 year | 234,033 | 281,469 | 209,582 | Reserves on securities | 27,516 | 24,770 | 21,279 |
| 1 year to 5 years | 1,158,707 | 1,061,829 | 613,218 | Total capital accounts | 1,559,666 | 1,549,918 | 1,448,161 |
| After 5 years | 187,781 | 163,858 | 151,962 | TOTAL LIABILITIES, RESERVES, AND CAPITAL ACCOUNTS | 22,745,626 | 23,321,911 | 21,127,480 |
| Obligations of states and political subdivisions: | | | | | | | |
| Tax warrants and short-term notes and bills | 215,791 | 195,380 | 104,894 | | | | |
| All other | 3,053,468 | 2,945,249 | 3,077,041 | | | | |
| Other bonds, corporate stocks, and securities: | | | | | | | |
| Certificates representing participations in federal agency loans | 13,455 | 14,037 | 8,425 | | | | |
| All other (including corporate stocks) | 321,529 | 328,151 | 370,802 | | | | |
| Cash items in process of collection | 1,429,329 | 2,116,722 | 1,367,039 | | | | |
| Reserves with Federal Reserve Bank | 1,002,220 | 910,382 | 1,119,420 | | | | |
| Currency and coin | 135,091 | 131,877 | 130,442 | | | | |
| Balances with banks in the United States | 542,070 | 683,761 | 469,653 | | | | |
| Balances with banks in foreign countries | 230,868 | 202,417 | 30,354 | | | | |
| Other assets (including investments in subsidiaries not consolidated) | 1,282,303 | 1,271,004 | 1,009,078 | | | | |
| TOTAL ASSETS | 22,745,626 | 23,321,911 | 21,127,480 | | | | |

DEMAND AND TIME DEPOSITS OF MEMBER BANKS

Eleventh Federal Reserve District

(Averages of daily figures. Million dollars)

| Date | DEMAND DEPOSITS | | | TIME DEPOSITS | |
|----------------|-----------------|-----------------------|-----------------|---------------|---------|
| | Total | Adjusted ¹ | U.S. Government | Total | Savings |
| 1974: February | 13,949 | 10,082 | 264 | 14,919 | 2,909 |
| 1975: February | 13,956 | 10,245 | 150 | 17,052 | 3,124 |
| March | 14,114 | 10,349 | 165 | 17,177 | 3,226 |
| April | 14,247 | 10,572 | 213 | 17,196 | 3,325 |
| May | 14,106 | 10,374 | 195 | 17,303 | 3,348 |
| June | 14,333r | 10,529r | 199r | 17,273r | 3,409r |
| July | 14,501 | 10,698 | 164 | 17,315 | 3,480 |
| August | 14,514 | 10,745 | 129 | 17,452 | 3,493 |
| September | 14,748 | 10,608 | 196 | 17,563 | 3,513 |
| October | 14,725 | 10,752 | 171 | 17,715 | 3,581 |
| November | 15,072 | 10,947 | 165 | 18,031 | 3,608 |
| December | 15,418 | 11,217 | 201 | 18,249 | 3,689 |
| 1976: January | 15,736 | 11,438 | 188 | 18,558 | 3,817 |
| February | 15,363 | 11,178 | 218 | 18,955 | 4,063 |

1. Other than those of U.S. Government and domestic commercial banks, less cash items in process of collection.
r—Revised.

CONDITION STATISTICS OF ALL MEMBER BANKS

Eleventh Federal Reserve District

(Million dollars)

| Item | Feb. 25, 1976 | Jan. 28, 1976 | Feb. 26, 1975 |
|---|------------------|------------------|------------------|
| ASSETS | | | |
| Loans and discounts, gross | 22,978 | 22,843 | 21,932 |
| U.S. Government obligations | 3,759 | 3,572 | 2,246 |
| Other securities | 7,631 | 7,620 | 7,123 |
| Reserves with Federal Reserve Bank | 1,725 | 1,791 | 1,888 |
| Cash in vault | 412 | 419 | 376 |
| Balances with banks in the United States | 1,526 | 1,588 | 1,373 |
| Balances with banks in foreign countries ^e | 217 | 185 | 43 |
| Cash items in process of collection | 1,967 | 1,901 | 1,758 |
| Other assets ^e | 2,355 | 2,325 | 1,706 |
| TOTAL ASSETS ^e | 42,570 | 42,244 | 38,445 |
| LIABILITIES AND CAPITAL ACCOUNTS | | | |
| Demand deposits of banks | 1,855 | 1,880 | 1,701 |
| Other demand deposits | 13,248 | 13,157 | 12,134 |
| Time deposits | 19,113 | 18,849 | 17,059 |
| Total deposits | 34,216 | 33,886 | 30,894 |
| Borrowings | 3,701 | 3,864 | 3,258 |
| Other liabilities ^e | 1,842 | 1,707 | 1,612 |
| Total capital accounts ^e | 2,811 | 2,787 | 2,681 |
| TOTAL LIABILITIES AND CAPITAL ACCOUNTS ^e | 42,570 | 42,244 | 38,445 |

e—Estimated

RESERVE POSITIONS OF MEMBER BANKS

Eleventh Federal Reserve District

(Averages of daily figures. Thousand dollars)

| Item | 4 weeks ended Feb. 25, 1976 | 4 weeks ended Jan. 28, 1976 | 4 weeks ended Mar. 5, 1975 |
|---------------------------|--------------------------------|--------------------------------|-------------------------------|
| Total reserves held | 2,098,922 | 2,131,516 | 1,998,763 |
| With Federal Reserve Bank | 1,736,509 | 1,739,151 | 1,665,927 |
| Currency and coin | 362,413 | 392,365 | 332,836 |
| Required reserves | 2,092,329 | 2,113,982 | 1,992,523 |
| Excess reserves | 6,593 | 17,534 | 6,240 |
| Borrowings | 12,918 | 6,179 | 11,889 |
| Free reserves | -6,325 | 11,355 | -5,649 |

BANK DEBITS, END-OF-MONTH DEPOSITS, AND DEPOSIT TURNOVER

SMSA's in Eleventh Federal Reserve District

(Dollar amounts in thousands, seasonally adjusted)

| Standard metropolitan statistical area | DEBITS TO DEMAND DEPOSIT ACCOUNTS ¹ | | | | DEMAND DEPOSITS ¹ | | | |
|--|--|----------------|-----------|--------------------------|------------------------------|-------------------------|-----------|-----------|
| | Feb. 1976 (Annual-rate basis) | Percent change | | | Feb. 29, 1976 | Annual rate of turnover | | |
| | | Jan. 1976 | Feb. 1975 | 2 months, 1976 from 1975 | | Feb. 1976 | Jan. 1976 | Feb. 1975 |
| ARIZONA: Tucson | \$29,729,304 | 2% | 76% | 78% | \$379,503 | 78.1 | 74.2 | 46.6 |
| LOUISIANA: Monroe | 7,886,318 | 0 | 41 | 41 | 137,465 | 57.5 | 57.5 | 45.0 |
| Shreveport | 20,906,868 | 13 | -1 | -3 | 364,250 | 57.9 | 49.3 | 62.5 |
| NEW MEXICO: Roswell ² | 1,735,151 | 9 | 33 | 21 | 59,811 | 29.3 | 26.5 | 25.6 |
| TEXAS: Abilene | 5,170,934 | -3 | 24 | 28 | 167,740 | 31.9 | 33.1 | 28.9 |
| Amarillo | 11,673,169 | -3 | 16 | 15 | 291,704 | 41.3 | 43.3 | 42.5 |
| Austin | 28,309,132 | -7 | 41 | 43 | 630,794 | 49.9 | 57.5 | 46.1 |
| Beaumont-Port Arthur-Orange | 12,914,554 | 4 | 20 | 13 | 385,342 | 34.1 | 33.3 | 33.1 |
| Brownsville-Harlingen-San Benito | 5,609,101 | 5 | 40 | 41 | 143,067 | 39.6 | 36.5 | 32.3 |
| Bryan-College Station | 2,401,584 | 8 | 42 | 32 | 67,126 | 34.8 | 31.6 | 28.5 |
| Corpus Christi | 13,841,539 | 3 | 11 | 13 | 362,627 | 38.9 | 39.0 | 41.0 |
| Corsicana ² | 798,478 | -5 | 6 | 10 | 46,425 | 17.4 | 18.5 | 18.2 |
| Dallas | 288,186,403 | 19 | 11 | 8 | 3,389,090 | 85.9 | 74.0 | 84.2 |
| El Paso | 19,547,460 | 32 | 42 | 33 | 378,868 | 53.5 | 41.7 | 41.5 |
| Fort Worth | 47,404,661 | 2 | 16 | 16 | 1,015,105 | 45.3 | 43.8 | 44.0 |
| Galveston-Texas City | 4,902,121 | -8 | 5 | 1 | 165,046 | 30.6 | 32.9 | 32.7 |
| Houston | 306,741,529 | 3 | 18 | 20 | 4,540,247 | 67.8 | 67.0 | 66.0 |
| Killeen-Temple | 3,231,215 | -4 | 11 | 16 | 138,503 | 23.3 | 24.9 | 24.3 |
| Laredo | 2,400,077 | 6 | 26 | 21 | 84,291 | 29.0 | 27.7 | 28.2 |
| Lubbock | 12,156,472 | 9 | 27 | 33 | 268,539 | 46.5 | 43.1 | 41.5 |
| McAllen-Pharr-Edinburg | 5,406,242 | -3 | 25 | 21 | 189,329 | 28.7 | 29.5 | 26.3 |
| Midland | 6,677,558 | -4 | 61 | 59 | 263,057 | 26.0 | 26.4 | 19.3 |
| Odessa | 5,955,372 | 2 | 78 | 80 | 143,788 | 40.4 | 39.4 | 25.0 |
| San Angelo | 4,654,394 | 8 | 61 | 59 | 109,199 | 42.6 | 39.1 | 30.1 |
| San Antonio | 37,765,524 | 6 | 17 | 17 | 976,030 | 39.1 | 35.8 | 35.4 |
| Sherman-Denison | 1,959,274 | -2 | 28 | 24 | 91,978 | 21.7 | 22.5 | 17.7 |
| Texarkana (Texas-Arkansas) | 2,631,586 | 5 | 14 | 13 | 100,024 | 26.5 | 24.9 | 25.2 |
| Tyler | 4,735,096 | 6 | 23 | 18 | 170,867 | 28.4 | 27.5 | 27.6 |
| Waco | 6,162,370 | -7 | -4 | 4 | 188,049 | 33.6 | 36.4 | 39.1 |
| Wichita Falls | 4,937,934 | 1 | 0 | 2 | 196,677 | 25.5 | 25.5 | 27.5 |
| Total—30 centers | \$906,431,420 | 8% | 18% | 17% | \$15,444,541 | 59.3 | 55.7 | 56.6 |

1. Deposits of individuals, partnerships, and corporations and of states and political subdivisions
2. County basis

CONDITION OF THE FEDERAL RESERVE BANK OF DALLAS

(Thousand dollars)

| Item | Mar. 31, 1976 | Mar. 26, 1975 | Feb. 25, 1976 |
|---|---------------|---------------|---------------|
| Total gold certificate reserves | 422,062 | 609,918 | 422,062 |
| Loans to member banks | 570 | 9,166 | 10,270 |
| Other loans | 0 | 0 | 0 |
| Federal agency obligations | 337,764 | 220,710 | 322,594 |
| U.S. Government securities | 4,462,491 | 3,589,895 | 4,459,739 |
| Total earning assets | 4,800,825 | 3,819,771 | 4,792,603 |
| Member bank reserve deposits | 1,821,696 | 1,762,463 | 1,725,204 |
| Federal reserve notes in actual circulation | 2,993,653 | 2,648,081 | 2,933,999 |

VALUE OF CONSTRUCTION CONTRACTS

(Million dollars)

| Area and type | Feb. 1976 | Jan. 1976 | Dec. 1975 | January—February | |
|---|-----------|-----------|-----------|------------------|--------|
| | | | | 1976 | 1975r |
| FIVE SOUTHWESTERN STATES¹ | | | | | |
| Residential building | 422 | 347 | 292 | 770 | 1,399 |
| Nonresidential building | 259 | 217 | 275 | 476 | 492 |
| Nonbuilding construction | 195 | 245 | 307 | 440 | 259 |
| UNITED STATES | 6,149 | 6,390 | 5,431 | 12,560 | 10,171 |
| Residential building | 2,546 | 2,157 | 2,233 | 4,726 | 3,070 |
| Nonresidential building | 1,996 | 1,939 | 1,865 | 3,925 | 4,437 |
| Nonbuilding construction | 1,608 | 2,294 | 1,334 | 3,909 | 2,664 |

1. Arizona, Louisiana, New Mexico, Oklahoma, and Texas
r—Revised
NOTE: Details may not add to totals because of rounding.
SOURCE: F. W. Dodge, McGraw-Hill, Inc.

BUILDING PERMITS

| Area | VALUATION (Dollar amounts in thousands) | | | | | | |
|-----------------|---|-------------|-----------|----------------|-----------|-----------|--------------------------|
| | NUMBER | | | Percent change | | | |
| | Feb. 1976 | 2 mos. 1976 | Feb. 1976 | 2 mos. 1976 | Jan. 1976 | Feb. 1975 | 2 months, 1976 from 1975 |
| ARIZONA | | | | | | | |
| Tucson | 282 | 522 | \$4,056 | \$7,009 | 37% | -4% | -33% |
| LOUISIANA | | | | | | | |
| Monroe | 102 | 159 | 1,391 | 2,570 | 18 | 7 | -12 |
| West Monroe | 388 | 742 | 4,439 | 7,732 | 35 | 15 | 14 |
| TEXAS | | | | | | | |
| Abilene | 123 | 228 | 2,473 | 5,674 | -23 | 29 | 86 |
| Amarillo | 251 | 491 | 5,091 | 10,424 | -5 | 55 | 67 |
| Austin | 498 | 949 | 11,878 | 23,091 | 6 | -29 | 8 |
| Beaumont | 189 | 317 | 4,528 | 7,006 | 83 | 113 | 85 |
| Brownsville | 111 | 221 | 1,041 | 4,182 | -67 | 88 | 219 |
| Corpus Christi | 303 | 543 | 5,587 | 9,920 | 29 | 129 | 36 |
| Dallas | 1,044 | 1,955 | 54,499 | 71,492 | 221 | 373 | 44 |
| Denison | 26 | 39 | 161 | 432 | -41 | 53 | 1 |
| El Paso | 520 | 823 | 9,094 | 20,257 | -19 | 88 | -22 |
| Fort Worth | 326 | 679 | 9,275 | 14,526 | 77 | 97 | 73 |
| Galveston | 68 | 118 | 1,152 | 1,626 | 143 | 793 | 14 |
| Houston | 1,856 | 3,668 | 34,525 | 84,676 | -31 | -12 | -10 |
| Laredo | 87 | 180 | 1,206 | 2,524 | -8 | 712 | 209 |
| Lubbock | 171 | 350 | 4,338 | 11,136 | -36 | 36 | 47 |
| Midland | 125 | 241 | 3,263 | 5,597 | 40 | 84 | 62 |
| Odessa | 129 | 259 | 2,187 | 5,415 | -32 | -20 | 48 |
| Port Arthur | 71 | 127 | 1,342 | 1,544 | 564 | 448 | 195 |
| San Angelo | 84 | 134 | 2,010 | 3,080 | 88 | 66 | 80 |
| San Antonio | 1,044 | 1,766 | 11,200 | 22,238 | 1 | 92 | 68 |
| Sherman | 30 | 55 | 406 | 1,894 | -73 | 298 | 99 |
| Texarkana | 62 | 105 | 1,375 | 1,598 | 517 | 517 | 83 |
| Waco | 162 | 345 | 2,341 | 3,262 | 154 | 198 | 13 |
| Wichita Falls | 117 | 232 | 1,181 | 4,777 | -67 | -16 | 159 |
| Total—26 cities | 8,169 | 15,248 | \$180,039 | \$333,682 | 17% | 57% | 19% |

INDUSTRIAL PRODUCTION AND TEXAS MANUFACTURING CAPACITY UTILIZATION

(Seasonally adjusted indexes, 1967 = 100 for production)

| Area and type of index | Feb 1976p | Jan 1976 | Dec 1975 | Feb 1975r |
|--|-----------|----------|----------|-----------|
| TEXAS | | | | |
| Total industrial production | 127.5 | 126.7 | 127.8 | 122.1 |
| Manufacturing | 134.4 | 133.4 | 133.7 | 125.1 |
| Durable | 132.0 | 132.2 | 134.8 | 128.2 |
| Nondurable | 136.2 | 134.3 | 132.8 | 122.7 |
| Mining | 105.5 | 105.1 | 108.0 | 109.1 |
| Utilities | 174.0 | 174.0 | 174.0 | 166.1 |
| Capacity utilization in manufacturing (1972 = 100) | 97.0 | 96.6 | 97.1 | 94.2 |
| UNITED STATES | | | | |
| Total industrial production | 119.9 | 119.2 | 118.6 | 111.2 |
| Manufacturing | 118.6 | 117.7 | 117.1 | 109.3 |
| Durable | 110.0 | 109.1 | 108.5 | 104.8 |
| Nondurable | 131.1 | 130.6 | 130.0 | 115.6 |
| Mining | 102.7 | 104.9 | 104.2 | 108.6 |
| Utilities | 157.5 | 157.2 | 156.0 | 150.9 |

p—Preliminary

r—Revised

SOURCES: Board of Governors of the Federal Reserve System
Federal Reserve Bank of Dallas

LABOR FORCE, EMPLOYMENT, AND UNEMPLOYMENT

Five Southwestern States¹

(Seasonally adjusted)

| Item | Thousands of persons | | | Percent change Feb. 1976 from | |
|--|----------------------|-----------|------------|-------------------------------|-----------|
| | Feb. 1976p | Jan. 1976 | Feb. 1975r | Jan. 1976 | Feb. 1975 |
| Civilian labor force | 9,341.0 | 9,328.6 | 9,216.4 | 0.1% | 1.4% |
| Total employment | 8,758.2 | 8,762.9 | 8,651.5 | -.1 | 1.2 |
| Total unemployment | 582.9 | 565.7 | 565.0 | 3.0 | 3.2 |
| Unemployment rate | 6.2% | 6.1% | 6.1% | .1 | .1 |
| Total nonagricultural wage and salary employment | 7,761.8 | 7,749.1 | 7,612.7 | .2 | 2.0 |
| Manufacturing | 1,285.1 | 1,283.7 | 1,261.9 | -.1 | 1.8 |
| Durable | 712.8 | 713.2 | 710.1 | -.1 | .4 |
| Nondurable | 572.3 | 570.5 | 551.8 | .3 | 3.7 |
| Nonmanufacturing | 6,476.7 | 6,465.4 | 6,350.8 | .2 | 2.0 |
| Mining | 274.4 | 273.5 | 266.2 | .3 | 3.1 |
| Construction | 498.1 | 504.1 | 514.6 | -1.2 | -3.2 |
| Transportation and public utilities | 503.4 | 505.2 | 507.6 | -.4 | -.8 |
| Trade | 1,862.9 | 1,859.5 | 1,815.9 | .2 | 2.6 |
| Finance | 428.2 | 427.2 | 421.6 | .2 | 1.6 |
| Service | 1,336.6 | 1,328.6 | 1,302.2 | .6 | 2.6 |
| Government | 1,573.0 | 1,567.5 | 1,522.7 | 4% | 3.3% |

1. Arizona, Louisiana, New Mexico, Oklahoma, and Texas

2. Actual change

p—Preliminary

r—Revised

NOTE: Details may not add to totals because of rounding.

SOURCES: State employment agencies

Federal Reserve Bank of Dallas (seasonal adjustment)

standing balances in these accounts probably represented shifts from demand deposits.

These developments at banks in the District, and similar developments elsewhere, may indicate the reason for the slow growth of the nation's narrowly defined money supply (M_1) in early 1976. Apparently, the regulatory change permitting banks to offer savings accounts to businesses has decreased the demand for demand deposits—money—and induced a shift of funds into the new savings accounts.

Other highlights:

- The unemployment rate for the five southwestern states rose slightly in February to 6.2 percent from a downward-revised 6.1 percent in January. The rise in the jobless rate was due to a further increase in the labor force and a small reduction in total employment.

The demand for labor continued to strengthen in most nonagricultural industries. However, weakness persisted in the construction, transportation and public utilities industries.

- Industrial production in Texas rose at a 7.3-percent annual rate in

February. The gain reflected increased output in nondurable goods manufacturing and mining. Durable goods manufacturing declined slightly with reduced output in the transportation equipment and electrical machinery industries.

Since the recovery began, the Texas industrial production index has increased 5 percent from last April's low but remains at a level 1.2 percent below the June 1974 high. The only industries that have not shared in the recovery are primary metals manufacturing, petroleum and gas mining, and natural gas utilities.

- Placement of cattle on feed may continue to decline this spring. Lower slaughter cattle prices, increasing feeder cattle prices, and relatively high costs of gain have squeezed profit margins and curtailed the number of cattle placed on feed. In fact, many of the cattle marketed from the feedlots since January have been sold at a loss.

Cattle on feed in Texas and Arizona on March 1 totaled slightly less than 2.3 million head. That was down 5 percent from the previous month but was at a level two-thirds higher than a year earlier. Marketings of slaughter cattle were up 16

percent in February and a fifth above a year earlier. Placements, however, were down nearly a tenth for the month but 85 percent above a year earlier. As a result of the decline in placements, the number of fed cattle marketed this summer will likely drop.