

scope for policy discretion, by the 1920s the Fed had begun to use open market operations in government securities to affect money market conditions with the aim of achieving macroeconomic policy objectives. Confidence in the Fed's expertise at monetary management was one of the factors that underlay the optimistic faith in the "New Era" of that decade.

During its first major test, however – the downward economic slide of 1929–1933 – the Fed proved unequal to the task. In August 1929, amidst signs that the economy was already slowing down, the Fed raised the discount rate (the rate charged for borrowing by member banks) to 6 percent (see Table Cj113–117). Intended to discourage stock market speculation, the action may have precipitated the Crash of October 1929. From that point the Fed quickly reversed course. But its major critics have charged the Fed with neglecting its obligation to serve as lender of last resort, doing little or nothing to prevent several waves of bank failures, while allowing the money supply to fall by one third (Friedman and Schwartz 1963). Subsequent writers have questioned the primacy of the Fed's role in the crisis, pointing out that the stock of high-powered money (currency plus bank reserves) actually rose between 1929 and 1933, while interest rates fell (see Tables Cj113–117 and Cj141), suggesting that deflationary pressures were emanating from elsewhere in the economy (Temin 1976). Nonetheless, interpretations of the Fed's thought and action during this episode continue to be debated (Wicker 1966; Epstein and Ferguson 1984; Wheelock 1991).

Legislation of the 1930s reorganized the Fed's Open Market Committee, giving greater authority to the Board of Governors. The Banking Act of 1935 extended the Fed's authority to change commercial bank reserve requirements. Concerned about expanding levels of excess reserves, the Fed raised reserve requirements in two steps, in 1936 and 1937 (see Table Cj131–134). The economy subsequently slipped into recession in 1937 and 1938, and although analysts are not agreed on the causal connection, the Fed was highly criticized for these actions and has largely avoided the use of reserve requirements as a policy instrument since then.

During World War II and in the postwar period to 1951, the Fed conducted its operations in coordination with the U.S. Treasury to maintain ceiling yields on government securities. In March 1951, the Fed and the Treasury agreed to an accord, which permitted the Fed to pursue other objectives, such as the control of inflation. The Fed then returned to a strategy of targeting net borrowed or "free" reserves (excess less borrowed reserves) with the aim of influencing market interest rates and, ultimately, achieving the system's goals for inflation, employment, and the international balance of payments. Over time, this strategy focused increasingly on influencing the federal funds rate – the interest rate at which commercial banks borrow reserves from one another (series Cj117). Since the early 1970s, the Fed has specified target rates or ranges for the federal funds rate and carried out its open market operations to achieve those targets.

The Fed's free reserves and money market operating strategies have been criticized by proponents of monetary aggregate targeting. These critics point out that the Fed's focus on interest rates led to substantial contraction of the money stock during the Great Depression and to rapid growth of the money stock and inflation from the mid-1960s to 1980. Proponents of monetary aggregate targeting argue that while money market interest rates and free reserves may reflect the intent of policymakers, the growth of monetary aggregates better reflects the true stance of monetary policy. The

monetary base, which consists of bank reserves and currency held by the public, is one such aggregate. Because the reserve requirements that depository institutions are required to meet have varied over time, two measures of the monetary base adjusted for such charges have been created – one by the Board of Governors of the Federal Reserve System and one by the Federal Reserve Bank of St. Louis (see Table Cj135–140).

The Fed has never targeted the monetary base, though at times the Fed has sought to influence the growth of monetary aggregates. In particular, from 1979 to 1982, the Fed acted to reduce inflation by enhancing its control over money supply growth, which entailed a substantial expansion of its federal funds rate target range. Since 1982, the Fed has again rejected monetary aggregate targeting in favor of tight control of the federal funds rate. The evolution of monetary policy since the 1930s is traced in Calomiris and Wheelock (1998).

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FINANCIAL INSTITUTIONS AND THEIR REGULATION

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Encouraged by Alexander Hamilton, in 1781 Robert Morris persuaded the Continental Congress to charter the Bank of North America, the first commercial bank in the New World. The bank made loans to the cash-strapped Revolutionary government as well as to private citizens, mostly Philadelphia merchants. In addition to supplying a medium of exchange and intermediary services, early American financial institutions were expected to support private enterprise and public infrastructure projects, including bridges, roads, and canals. In many respects, contemporaries viewed banks as one of many government-sponsored infrastructure investments.

Early National and Antebellum Banking

By 1800, each major U.S. port city had at least one commercial bank serving the local business community. As Americans grew more familiar and comfortable with the corporate form, banking spread to smaller communities and expanded its clientele. Thus, in 1818, there were 338 banks that specialized in short-term credit to

merchants, artisans, and farmers (Table Cj142–148). In addition to commercial banks, mutual savings banks were organized, initially as charitable organizations (modeled after British “friendly” societies) to promote thrift among the working poor. The first mutual savings banks were founded in Boston and Philadelphia in 1816, and they soon spread throughout the Northeast. In the West and the South, building and loan societies later fulfilled the same role.

Gradually, explicit public interest justifications for banks were no longer necessary and banks were seen as profit-making enterprises that served the public interest only indirectly. Yet, the growth of banks was not unrestricted. Politicians often limited the number of charters, concerned about excessive expansion and competition, and the need to protect the monopolies of political allies. Worries about overexpansion seemed justified when America first experienced widespread bank failures during the depression of the early 1820s. Not until 1827 did the United States have as many banks as it had in 1818.

Federal involvement in banking and bank regulation began with the charter of the First Bank of the United States in 1791 (Table Cj177–188). Congress granted it a twenty-year charter in 1791, with provisions that it be both a commercial bank and the government’s fiscal agent. Proposed by Alexander Hamilton and modeled after the Bank of England, the bank was based in Philadelphia with branches in eight other cities. It was a well-managed institution but was widely criticized for its Federalist affiliations, its restraining influence on state bank operations, and ownership of its stock by English and Dutch investors. For these and other reasons, Jeffersonian Democrats opposed the bank. When the bank’s charter came up for renewal in 1811, they refused to support it even though the Treasury Secretary, Albert Gallatin, argued that its closure represented a greater danger than its continuance. The rechartering bill failed by a single vote.

Difficulties in financing the War of 1812 and in regulating state banks discredited the antibank position, and in 1816 the Second Bank of the United States was granted a twenty-year charter (Tables Cj189–202). Modeled after its predecessor, the Second Bank acted as the federal government’s fiscal agent, engaged in commercial bank lending, and practiced some very limited central bank functions. The Second Bank’s first two administrations provided ineffectual leadership. Nicholas Biddle assumed leadership of the bank in 1823 and reconstructed a more centralized national institution out of one whose twenty-five branches had previously acted semiautonomously.

Like the First Bank of the United States, the Second Bank had powerful enemies. By 1832 there were 464 state banks that chafed at the Second Bank’s ability to control their note issues, which limited their lending. In 1832, Henry Clay, an ardent bank supporter, opposed Andrew Jackson, a bank detractor, in the presidential election. The Second Bank’s recharter, due in 1836, became a political flashpoint. Congress approved the recharter, but Jackson vetoed it and interpreted his reelection as broad support for his antibank stance. He removed federal deposits from the bank, and its charter expired in 1836.

The Second Bank’s closing left a void in U.S. financial markets. Many states responded by chartering new banks. Eighteen others responded by enacting so-called free banking acts. Such acts allowed prospective bankers to establish banks without the formality of legislative charters. After meeting a number of regulatory demands – notably minimum capital restrictions and depositing government bonds with a regulatory agency’s guaranty

fund – these banking associations were granted most corporate powers. Between 1836 and 1860, the number of state banks grew from 713 to 1,562, and total industry assets increased from about \$622 million to nearly \$1 billion (Table Cj149–157).¹

Banking after the Civil War

The free banking era effectively came to an end with the passage of the National Banking Acts of 1863 and 1864. Proposed by Salmon Chase, the acts invited state banks to take out federal charters. Designed to assist war finance and establish a more uniform currency, the system was modeled after New York’s 1838 Free Banking Act in that it required national banks to buy federal bonds as a guarantee for note issues. Banks turned these bonds over to the U.S. Treasury, which issued bank notes equal to 90 percent of the value of the deposited bonds, thus protecting noteholders from losses.

The banking acts vested oversight of national banks in the Office of the Comptroller of the Currency (OCC), a bureau of the U.S. Department of the Treasury. The subsequent National Bank Act authorized the Comptroller of the Currency to employ a staff of bank examiners to oversee bank activities, including their lending and investments. In addition to examinations, the OCC approved applications for new national bank charters or changes to the capital or branches of existing banks. As the regulator of national banks, the OCC remains one of the most important institutions of bank regulation.

In the post-Civil War era, most state banks gave up their state charters for national ones that imposed higher operating costs. National banks were forced to buy U.S. government bonds, which sold above par and increased the costs of note issue, and were subject to aggregate note issue limits. They also faced minimum capital and reserve requirements and were denied the right to make real estate loans. Hindered by these regulations, the national banking system grew slowly until Congress imposed a 10 percent tax on state bank notes in 1865. Although this action initially brought a drastic reduction in the number of state-chartered banks, the post-1870 growth of deposit banking spurred the recovery of the state banking systems. Regulated by state banking authorities and the OCC, the United States developed a dual banking system. The banking system was further shaped by the Comptroller’s 1866 ruling that banned branch banking for national banks, a regulation adopted by many states. Consequently, the rapid growth in the demand for banking services resulted in a vast increase in the number of banks rather than in the number of branches. Although the more lightly regulated state banks outnumbered them by the end of the nineteenth century, the national banks were generally the larger and more prominent institutions (Tables Cj203–250).

Trust companies first developed before the Civil War, but at the end of the nineteenth century they emerged as competitors for commercial banks. Combining deposit taking and lending with their trust business, they became the fastest growing intermediaries at the turn of the century. Similarly, insurance companies were transformed into important intermediaries late in the century. Initially, the industry was dominated by marine and fire insurance companies, but the innovating life insurance companies – first stock and later mutual firms – became major forces in the financial markets by

¹ The evolution of banks and financial markets in this era is surveyed in Bodenhorn (2000).

investing the steady inflow of funds provided by premiums (Tables Cj713–796).

The regulations derived from the National Bank Act had important consequences for the stability of the banking system. Economic fluctuations were amplified because of an “inelastic currency,” the inability to increase national bank note issues in a timely manner in response to transitory or seasonal increases in the demand for currency. Bank reserves were subject to rapid withdrawals from financial centers in times of crisis, partly because of the “pyramiding” of reserves, which encouraged country banks to place their reserves in designated reserve cities and central reserve cities. Furthermore, the prohibition on branch banking created thousands of small, undiversified country banks, less able to withstand economic shocks. Thus, autumn pressure in the money markets had a tendency to produce financial panics, bank runs, and the suspension of specie payments.

The Reforms of the Federal Reserve Act and the New Deal

Following the panic of 1907, Congress commissioned the National Monetary Commission to study contemporary and historical banking systems, providing the intellectual background and information needed for extensive banking reforms. The vehicle for reform was the Federal Reserve Act of 1913. Designed to prevent crises, the Act left the structure of the banking system unchanged but created a central bank to correct its perceived weaknesses. Supervised by the Federal Reserve Board, the Federal Reserve System divided the United States into twelve districts, each with a reserve bank. Reserve banks were organized as federally chartered corporations owned by member banks in their districts. They were to hold the legal reserves of member banks, provide check clearing and settlement services, and act as fiscal agents and depositories for the U.S. Treasury and other federal government agencies. Even though the Federal Reserve Act conferred central banking powers on the Federal Reserve to maintain the gold standard and provide liquidity to the banking system in times of crisis, it also made the Fed the regulator of member banks. Members include all national banks and those eligible state banks seeking membership. As membership for state banks was voluntary, the dual banking system was left intact and a tripartite division emerged, comprising national banks, state member banks, and nonmember banks (Table Cj289–297).

Unlike banking, the insurance industry had always been regulated primarily by the states. The increasingly close ties among investment banks, commercial banks, and insurance companies prompted New York State’s 1905 Armstrong investigation. The findings of this investigation produced punitive laws that broke interlocking relationships and forced insurance companies to sell their stocks and eliminate semitontine policies. Most other states copied New York’s law, creating a more narrowly defined insurance industry that invested almost exclusively in bonds, real estate mortgages, and policy loans. The progressives who attacked the practices of the insurance companies also sought to offer small savers a safe repository for their funds, and they persuaded Congress to create the Postal Savings System in 1911. Administered by the Post Office, it enjoyed considerable growth during the Great Depression and World War II but declined afterward, when banks and savings associations sought smaller accounts and paid higher rates. The system was closed in 1967 (Table Cj432–436).

In the stable economic environment of the 1920s, the financial system boomed with the economy. However, constrained by limits on branching and lending, commercial banks and mutual savings banks saw their share of financial intermediation shrink, as the securities industry, insurance companies, and savings and loans became more important. The larger banks adapted to the new environment and offered new financial services, but many smaller banks failed in stagnating rural areas. The Great Depression of 1929–1933 brought the financial system to the brink of total collapse. The decline in national income and rise in unemployment led the public to withdraw funds from financial intermediaries, who in turn reduced lending. Already beset by defaults on loans and securities, insolvency threatened many institutions. Three banking crises in 1930, 1931, and 1933 winnowed the banking system before President Roosevelt declared a bank holiday on March 6, 1933.

Deteriorating economic conditions and the rush for liquidity forced huge contractions of the savings and loan and insurance industries. States declared holidays for insurance companies to protect them from withdrawals of funds by policyholders, and Congress attempted to bolster the thrift industry by passing the Federal Home Loan Bank Act of 1932. Modeled on the Federal Reserve System, the law provided for twelve regional home loan banks, owned by member thrifts, operating under the supervision of the Federal Home Loan Bank Board (FHLBB). These home loan banks borrowed at favorable rates and re-lent to member thrifts (Tables Cj448–463).

Dramatic Congressional hearings, the Democrats’ electoral landslide, and intense political lobbying produced the New Deal legislation that reshaped the banking industry. The Banking Act of 1933, often known as the Glass-Steagall Act, and the Banking Act of 1935 determined the basic structure of commercial banking for the next half century. The Federal Deposit Insurance Corporation (FDIC) was created by the first Act (Tables Cj486–550). All Federal Reserve member banks were required to join, but fearful of exposure to banking runs, most nonmember banks quickly signed up. Insured banks paid a premium to create a mutual guarantee fund to compensate depositors of failed banks.²

The Glass-Steagall Act also required an almost complete divorce of commercial and investment banking, narrowly defining each industry. The Banking Acts of 1933 and 1935 placed new legal restrictions on competition. Interest rate ceilings for deposits were imposed, and charters became increasingly difficult to obtain. National banks were limited to the branching rights enjoyed by the state-chartered banks where they were domiciled, whereas bank holding companies were brought under the regulation and supervision of the Federal Reserve.

In this wave of legislation, dual regulatory systems were created for the thrift industry and credit unions. States had been solely responsible for chartering savings and loan associations. The Home Owners Loan Act of 1933 gave the FHLBB new authority to charter federal mutual savings and loan associations. Similarly, Congress made federal charters available in the Federal Credit Union Act of 1934, competing with the issuance of credit union charters by the states. Concerned that the FDIC would give commercial banks an advantage over the savings and loan associations, Congress

² For the historical background to federal deposit insurance, see Calomiris and White (1994).

established the Federal Savings and Loan Insurance Corporation (FSLIC) in 1934 to provide insurance for the thrift industry.

The New Deal in banking appeared to be a great success. Bank failures almost disappeared. Even though the public was less inclined to run on the banks, thrifts, and insurance companies, there was little need for concern as the surviving institutions had become extraordinarily liquid and conservative in the wake of the collapse of the early 1930s. The long period of prosperity from the end of World War II to the early 1970s was marked by growing incomes and price stability. Although the New Deal legislation may have contributed to stability in the financial sector, the tight regulations left commercial banks, mutual savings banks, and life insurance companies with a shrinking share of intermediation. The more lightly and favorably regulated savings and loan associations, finance companies, pension funds, and mutual funds benefited and captured a greater share of the flow of funds. Chafing under New Deal regulations, commercial banks tried to grow in size by mergers, acquisitions, and bank holding companies when state laws limiting branching could not be changed. However, the courts limited mergers, and Congress ensured that one-bank and multibank holding companies remained under the supervision of the Federal Reserve in the Bank Holding Company Acts of 1956 and 1970.

Crisis, Competition, and the Emergence of Financial Services Conglomerates

Higher inflation, hard recessions, and crises between 1970 and 1990 gradually undermined the regulation governing the financial sector. Burdened by New Deal restrictions, commercial banks, mutual savings banks, and life insurance companies lost further ground not only to more lightly regulated intermediaries but also to financial markets. Commercial bank failures began to reappear in the 1970s and then burgeoned in the 1980s, as interest rates soared and real estate and oil booms and busts ravaged the industry. The wave of bank failures helped to ease opposition to mergers and branching, while automated teller machines (ATMs) crept around the restrictions on branching (Table Cj354–361). Merger policy relaxed, holding companies were allowed to buy out-of-state banks, and the Riegle-Neal Interstate Banking and Branching Efficient Act of 1994 cleared the final obstacles to nationwide branch banking.

Like banks, insurance companies faced a weak demand for their traditional products. Inflation and high interest rates of the early 1980s increased policy surrenders and policy loans, reducing companies' liquidity and producing a number of failures. To survive, insurance companies moved aggressively into new activities, including the pension and annuity business. Credit crunches in the 1960s led Congress to create the National Credit Union Administration in 1970 to provide short-term lending for troubled credit unions and the National Credit Union Share Insurance Fund (NCUSIF) to set up an insurance fund for them.

Although the savings and loan industry first enjoyed a rapid expansion, its profits and net worth disappeared when inflation rose unexpectedly. Congress tried to revive the industry with the Depository Institutions Deregulation and Monetary Control Act of 1980 and the Garn–St. Germain Act of 1982, which lifted interest rate ceilings and allowed thrifts to invest in riskier loans. These efforts did not make savings and loans solvent; instead, their losses made the FSLIC insolvent. The FSLIC and the FHLBB were closed, and

insurance of the remaining thrifts was transferred to the FDIC's new Savings Association Insurance Fund, while the Office of Thrift Supervision became their regulator. Insolvent thrifts were liquidated by the Resolution Trust Corporation.

Since the early nineteenth century, the segmentation of the financial industry into distinct types of intermediaries had been a steady feature of the American system. This narrow definition of intermediaries, bolstered by the New Deal banking laws, gradually began to erode in the 1980s. Many of the remaining barriers among commercial banks, securities firms, and insurance companies were dissolved by the Gramm-Leach-Bliley Act of 1999. The formation of financial conglomerates with highly diverse financial activities may be the hallmark and challenge of the twenty-first century.

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SECURITIES MARKETS

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Despite their central role in today's economy, the development of securities markets in the early United States has received relatively little attention from researchers, perhaps because the historical record of the banking sector, owing to reporting requirements, is far more accessible and complete. Nevertheless, securities markets, starting with informal groups of brokers in Boston, New York, Philadelphia, and Baltimore that traded securities in coffee houses and in the street shortly after the framing of the federal Constitution, have been a fundamental part of the U.S. financial landscape. By early 1792, trading in New York had become adequately voluminous and competition for brokering services so intense that a group of street brokers met beneath a buttonwood tree on Wall Street on May 17 to form an alliance for setting commissions and providing preferential treatment to trades among themselves as opposed to trades with nonmembers. And so with the "Buttonwood Agreement," the precursor of the New York Stock Exchange (NYSE) was born. By 1830, all of the nation's major cities had developed a network for the trading of debt and equity securities. As communications technologies improved in the late nineteenth century, however, trading became increasingly concentrated in New York, and that city's dominant position in the securities industry persists to this day. The data presented in this chapter offer an overview of the securities markets across the nineteenth and twentieth centuries and reflect the considerable progress that has been made to date in building the historical record of securities market activity from primary sources such as contemporary newspapers.

Common stock represents the residual claim to a firm's assets after all other obligations, including those to employees, suppliers, the government, and creditors, have been paid. This makes common stock the most risky of corporate securities; however, it has provided by far the largest cumulative return over the long term. As the value of a firm's common stock, which includes the potential of