Chapter 4

The US financial system

What you will learn in this chapter:

- The organization of the US banking system
- The relationship between US bank legislation and the development of the banking system
- The reasons for the recent large changes in the structure of the US banking
- The reasons for the Savings and Loans crisis of the late 1980s
- The nature of the US central bank system
- The nature of non-depository financial institutions in the USA

EMBF_CH04.QXD 1/16/08 5:22 PM Page 105

4.1 Introduction

The US financial system is often grouped with that of the UK as a market-based system, indicating that the finance of firms comes largely from the issue of securities, and thus via markets. In fact, in some periods, the net contribution of bond and equity issues to corporate finance has not been particularly high and has certainly been lower than that in the UK. Nonetheless, it remains true that Wall Street (the location of the New York Stock Exchange) is central to the US financial system both psychologically and in terms of its influence on economic policy.

The psychological importance of Wall Street stemmed in part from the role of securities markets in the financing of firms during the period of the USA's most rapid growth; but in part also from the image that the USA had of itself as a young, confident, risk-taking nation in which almost anyone could become rich overnight. The stock market became the focus of one element of the American dream. The sharp price rises on Wall Street in the 1920s and the crash in 1929 are widely accepted as indicators of the economic boom and the subsequent worldwide depression of the 1930s. Commodities markets first developed in the USA, as did trading in futures, financial futures and options. US markets in these instruments remain the world's largest. The 'get rich' aspect of financial markets has remained important as shown, for instance, by the junk bonds scam of the 1980s (discussed in Box 4.4).

Although the role of securities markets in providing finance to industry has declined, the importance of the stock exchange in the lives of average Americans has increased since the 1970s with the growth of mutual funds and the development of pension funds. This was caused partly by the limitations imposed by law on the US banking system and partly by the increased volatility of inflation and interest rates in the world economy in the 1970s. Banking laws and the attitudes that gave rise to them have thus played an important role in the development of the system as a whole and, like all national financial systems, that of the USA is highly individual. Comparisons can, of course, be drawn and there are ways in which the US system has more in common with that of the UK than with that of, say, Germany. One example of this is the strength of securities houses which concentrate on business lending and investment activity. However, there are many ways in which the US system is dramatically different from that of the UK.

The importance of the US financial system to economic policy is not recent. For example, it is widely held that the contractionary policies of the US Federal Reserve System in 1928 contributed significantly to the onset of the Great Depression. These contractionary policies were introduced specifically to curb stock market speculation. We have had a recent example of concern regarding the potential of problems in financial markets to spill over to the real economy with the difficulties experienced by banks in the **subprime** section of the housing market. Banks, having lent heavily to borrowers regarded as high-risk, unsurprisingly found that, as interest rates rose, they faced larger than usual defaults on loans. This had a significant impact on the US stock market and fears of consequent falling demand and increasing unemployment influenced the behaviour of the US central bank. This case is dealt with in Section 4.5.

The size of the US economy and the continued dominance of the dollar in international transactions has meant that the US financial system has become central not only to the US economy but also to the global economy. Financial markets in all countries pay great attention to the ups and downs of the Dow Jones Industrial Average index and to the NASDAQ index. In addition, large banks and other financial firms outside the US may have significant exposure to financial risks within the US. Again, the 2007 subprime lending fears provide a good example of this.

4.2 Deposit-taking institutions in the USA

The US banking system has a number of characteristics that distinguish it from those of other countries. Firstly, there are a very large number of banking organizations. Although the number of banks has fallen sharply in recent years, particularly through mergers and acquisitions, there remained at the end of August 2007 a total of 7,355 commercial banks, down from 7,769 at the end of 2003. This shows a decline in the rate of reduction of the number of commercial banks from the height of merger activity in the middle 1990s. At the end of 1990 there had been 12,343 commercial banks.

Secondly, until recently, legislation limited the growth of US banks and their ability to expand from

EMBF_CH04.QXD 1/16/08 5:22 PM Page 106

their home states to other states within the country. The restriction on expansion within the USA was one of a number of reasons for large banks from the financial centre, New York, choosing, from the 1960s on, to establish branches offshore, and playing a major part in the development of the Eurocurrency markets.

Thirdly, there is a dual system of licensing, with banks being chartered by both the federal government and individual states. Fourthly, for a significant part of the twentieth century, other restrictions on the operation of banks were in force, limiting interest payments on deposits and providing for a strict separation of investment banks from commercial banks.

Finally, a central bank was not established until 1913 – although there had been two much earlier attempts to do so. The central bank that was then established was not a single institution but a system of 12 **Federal Reserve Banks** overseen by a Board in Washington DC.

Most of these characteristics can be explained by two major fears within the USA – the fear of centralized authority and the fear of domination by moneyed interests. These fears reflect the origins of the US nation state – settlement from Europe had been by separate, relatively small groups often fleeing from religious or political domination. The first significant united action by settlers was the struggle against the distant authority of Britain. The two fears combined to produce a determination to prevent the financial system being controlled either by large institutions in the financial centre of New York or by political forces concentrated in Washington. This led to severe geographical restrictions on the development of US banking – banks were not permitted to have branch offices. The result of this was the continued existence of a very large number of banks, most of them small. It was only in the 1970s, and particularly the 1980s and 1990s, that this structure began to change.

The limitations on the development of banks, together with a general distrust in the population of financial institutions, left the system vulnerable to **bank runs** on individual banks. These frequently developed into **multi-bank panics**. Fourteen such panics have been identified in the years between 1800 and 1933, 11 of which led to widespread restriction of convertibility of deposits into currency. This strongly influenced the nature of bank legislation and this, in turn, had a marked impact on the way in which the system developed. Laws passed during the 1930s sought to restrict what was seen as damaging competition among banks, to prevent firms from engaging in a mixture of banking and non-banking business, and to provide a system of insurance of bank deposits. Ironically, the system that had been developed to limit the number of bank failures and to provide greater security for depositors was held by many to be largely responsible for a new wave of failures in the 1980s and early 1990s.

4.2.1 The classification of US depository institutions

Classification of the US banking system is complicated by a number of the system's features. Firstly, there is the classification of depository institutions into commercial banks, thrifts (saving institutions) and credit unions. Commercial banks are deposit-accepting institutions (depository institutions) which engage in a variety of financial activities. Under *The Banking Act, 1933* (widely known as the **Glass–Steagall Act**), commercial banks were effectively restricted to banking activities. The act prohibited them from originating, trading or holding securities other than those of the federal government, state and local governments. Other securities business was restricted to investment banks, which were non-depository institutions. However, the Glass–Steagall Act was repealed in 1999, allowing commercial banks to take on the activities of investment banks.

Thrifts are subdivided into **savings and loan associations** (S&Ls) and **savings banks**. Thrifts have longer-term assets and liabilities than commercial banks. Their assets principally consist of long-term bonds or house mortgages. Until the early 1980s, mortgage advances were required to be fixed-interest loans. Their liabilities are almost exclusively savings and time deposits.

S&Ls are primarily involved in real estate and housing finance. They can be traced back to the early 1830s when they began to be set up as credit cooperatives to provide housing finance and to act as a safe repository for small savers. They became the second largest type of financial institution in the USA, behind only commercial banks, but have declined both in number and asset size following the savings and loans crisis of the 1980s (discussed in Box 4.1). Most S&Ls were organized as mutual associations (owned by their members rather than by stock-holders). Indeed,

EMBF_CH04.QXD 1/16/08 5:22 PM Page 107

BOX 4.1 The Savings and Loans crisis of the 1980s and 1990s

The Banking Act, 1933, had introduced federal deposit insurance through the FDIC. This was extended to S&Ls by the setting up of the Federal Savings and Loan Insurance Corporation (FSLIC) in 1934. The schemes required the payment by members of flat-rate premiums unrelated to the degree of risk of assets. The Act also prohibited interest payments to owners of FDIC-insured demand deposits and authorized the Federal Reserve System (the Fed) and the FDIC to set limits for rates paid on insured savings deposits of various maturities. This was implemented by the Fed under Regulation Q. Although these interest rate ceilings were not extended to thrifts until 1966, their imposition on banks allowed thrifts also to raise funds at low cost without fear of competition for deposits from the banks. S&Ls flourished during the 1950s and 1960s as housing became a national priority. Mortgage lending tripled in the 1950s and in the 1960s the assets of S&Ls again doubled.

However, commercial banks began to find their way around the limitations through the use of Certificates of Deposit, placing increased pressure on S&Ls. The Fed responded by using powers granted to them in 1966 to allow S&Ls to offer interest rates on deposits half-a-point higher than the limit on banks. But in the 1970s inflation rates became more volatile and the Fed met increased inflationary pressure by tight monetary policy which forced market interest rates well above Regulation Q ceilings. Money market mutual funds developed in the mid-1970s to offer savers higher rates of return, putting both banks and thrifts under severe competitive pressure for deposits.

In 1980, interest rate ceilings were removed, allowing banks and thrifts to compete for deposits, but the problem continued until 1982 when they were allowed to offer an unregulated deposit account directly competitive with the money market mutual funds. But the higher interest rates sharply increased costs and, since S&Ls were still largely invested in much lower yielding fixed rate mortgages, most thrifts lost money. Net worth declined to what would have been crisis levels in the absence of federal deposit insurance.

No action was taken since it was assumed that the problem would disappear when interest rates again fell. Indeed, S&Ls were encouraged to expand and their capital requirements were lowered from 5 to 3 per cent of assets. Informally, the standards were lowered even further by the introduction of less stringent accounting principles and a cut in the number of examiners of thrifts.

Variable rate mortgages were allowed in 1981 but there was considerable consumer resistance to them. Congress expanded the lending activities permitted to thrifts to allow them to diversify their portfolios but this only made things worse as S&Ls sought to return to profit by engaging in very risky activities, including the purchase of junk bonds (see Box 4.4), secure in the knowledge that they were covered by the FSLIC. The number of loan defaults began to rise and S&Ls to fail.

Problems during the period were intensified by poor management of S&Ls and by fraud which was uncovered in many of the loans when institutions were taken over by FSLIC. The resources of FSLIC came under great pressure as it sought to dispose of the assets and liabilities of failed S&Ls. The FSLIC became insolvent and in 1989 its duties were transferred to the new Savings Association Insurance Fund (SAIF) at the FDIC. In 2005, the US Congress passed legislation merging the SAIF with the Bank Insurance Fund (BIF) of the FDIC to create one insurance fund, the *Deposit Insurance Fund* (DIF).

in the majority of states they were required by law to be mutual associations. Their very rapid growth in the nineteenth and early twentieth centuries can be seen as a reflection of the fear of 'moneyed interests' mentioned above. The collapse of house prices in the Great Depression of the early 1930s led to the failure of nearly 2,000 S&Ls (out of a total of just under 13,000) and to two important pieces of legislation – the establishment of the Federal Home Loan Bank system (1932), which provided a central credit facility to lend to troubled institutions, and the introduction of deposit insurance with the establishment of the Federal Savings and Loan Insurance Corporation (FSLIC) in 1934. This was similar to the FDIC, established under the Glass–Steagall Act, to provide deposit insurance for commercial banks. Problems began to arise, however, in the late 1960s and 1970s.

Savings banks were first set up in the early nineteenth century as mutual philanthropic institutions aimed to encourage the poor to save. They grew rapidly throughout the century, although they remained heavily concentrated in the north-east and middle Atlantic regions of the country. They, too, engaged in mortgage lending while also holding large

EMBF_CH04.QXD 1/16/08 5:22 PM Page 108

Table 4.1 Changes in number of FDIC-insured banks 1984–2007

	Number				Assets ($bn)
	end 1984	end 1994	end 2004	June 2007	June 2007
Commercial Banks	14,381	10,452	7,631	7,350	10,411
Savings Institutions	3,414	2,152	1,345	1,265	1,850
Credit Unions	15,193	11,991	9,209	8,504	766
Total	32,988	24,595	18,185	17,119	13,027

Sources: Federal Deposit Insurance Corporation (FDIC), *Statistics on Banking*, Tables 101 and RC; Credit Union National Association (CUNA), *Annual Reports*.

quantities of government and corporate bonds. Savings banks have always been safer than other depository institutions. During the Depression only eight of the 598 savings banks failed and they also performed much better than S&Ls during the 1980s crisis. This was partly because they responded more flexibly to the changing economic and financial circumstances than did S&Ls and, from the late 1960s on, began diversifying their assets away from mortgages towards securities. Recently, a number of surviving S&Ls have converted to savings banks to escape the S&L name. Regulatory changes since the Second World War have, however, eroded the boundaries between savings banks and other financial intermediaries. All savings banks are now federally insured and many of the larger banks have shed their mutual status, although a higher proportion of savings banks have remained mutuals than has been the case with S&Ls. Fewer than 40 per cent of thrifts have remained mutual.

Credit unions deal primarily in small, fixed-term, personal loans. Their funds come entirely from persons (and individual deposits are very small). Credit unions too were established as mutuals. Under the *Federal Credit Union Act*, their membership was limited to groups having a common bond of occupation or association. They were thus essentially local in nature. Although, unlike commercial banks and other thrifts, they were not legally prohibited from operating across state lines, the common bond requirement restricted the interstate activities of credit unions to a few large institutions serving the armed forces or large multinational corporations. However, in 1982, the regulator of federally chartered credit unions, the National Credit Union Administration (NCUA), ruled that in some cases a single credit union could serve more than one unrelated group, each of which shared a common bond. Much freer interpretations of the term 'common bond' have followed, resulting in credit union mergers. In 1991, the NCUA also allowed credit unions to share branches, giving them an inexpensive way of expanding geographically. Despite these changes, the credit union sector remains small in relation to other deposit-taking institutions.

Table 4.1 provides a comparison of the numbers of different types of federally insured depository institutions at the ends of 1984, 1994 and 2004 and the end of June 2007 and also gives the total assets of the different types of depository institutions at the end of June 2007.

As Table 4.1 shows, at the end of June 2007, credit union assets totalled $766bn compared with $10,411bn for commercial banks and $1,850bn for savings institutions (thrifts). That is, credit union assets were only 7.4 per cent of commercial bank assets. Not only are credit unions much smaller in total than commercial banks and savings institutions but also the average size of credit unions in terms of assets is small in comparison with both banks and savings

MORE FROM THE WEB

If you want to be really up-to-date with the number of US banks, try the FDIC website: www.fdic.gov. On the home page, click on 'go' for quick links for bankers in the top left-hand corner of the screen. Then, under the heading 'Top Picks', click on 'Institution Directory'. Here you will find up-to-date statistics on FDIC-supervised institutions as well as historical data.

EMBF_CH04.QXD 1/16/08 5:22 PM Page 109

Table 4.2 Distribution of Consumer Savings* ($ bn)

	31 December 2006		31 December 2002		
	Outstanding	Mkt share %	Outstanding	Mkt share %	% Change 2002 to 2006 %
Commercial banks	4,117.2	60.9	3061.1	54.6	34.5
Savings institutions	811.7	12.0	744.9	13.3	9.0
Money mkt mutual funds	1,005.1	14.9	1,106.5	19.7	–9.2
Credit unions	621.1	9.2	500.1	8.9	24.2
US savings securities	202.4	3.0	194.9	3.5	3.8
Total	6,757.5		5,607.5		20.5

*From Credit Union Call Reports and Fed Reserve H6 release.
Source: Credit Union National Association (CUNA), Annual Reports, 2003 p. 9 and 2006 p. 9: http://advice.cuna.org/download/curepd06.pdf; Statistical Abstract of the United States. US Census 2000 Table 809. Federal and State-Chartered Credit Unions – Summary.

institutions. The average size of the three types of depository institutions at the end of June 2007 was:

- commercial banks $1.416bn
- savings institutions $1.462bn
- credit unions $90.075m

That is, the asset base of the average credit union is well under one tenth the size of that of the average commercial bank.

Table 4.2 shows the distribution of consumer savings in the USA at the end of 2002 and 2006. Here we can see that the main change over the four-year period was the steady increase in market share of the commercial banks at the expense of the **money market mutual funds** and, to a lesser extent, the savings institutions. The fall in market share of the money market mutual funds largely reflects the relatively poor performance of the stock market in the early years of the century. Indeed, the market share of consumer savings of these funds had fallen as low as 13.7% by the end of 2005 before recovering a little in 2006. There is no indication in these figures of a significant advance for credit unions.

Secondly, there is the dual nature of the chartering system with financial institutions being granted licences (charters) to operate either by individual states (**state-chartered banks, state-chartered savings institutions**) or by an agency of the federal government (**nationally chartered banks, nationally chartered savings institutions**). This had its origin in the strong desire for local independence so important in the development of the US governmental system. Still today, state financial authorities continue to encourage new banks to take out state charters and existing financial institutions to convert to a state charter. They claim greater knowledge of local conditions, closer geographical proximity to their primary regulator and hence better communication with regulators. They might also claim lower fees and more favourable local banking regulations. This makes evident a possible danger of a dual regulation system – the possibility that one of the chartering agencies will have weaker regulations or will enforce them less well, allowing banks to join the weaker agency, lowering the overall effectiveness of control. In the US system it has been argued that federal banking authorities are less strict in the supervision of financial institutions than are many state bank regulators.

In the past, states used their power to charter banks to restrict the ability of banks to open branches

MORE FROM THE WEB

For an example of an attempt to persuade financial institutions to take out a state charter, see the website of California's DFI, the Department of Financial Institutions:

http://www.dfi.ca.gov/cacharter/advantages.asp

For the argument in favour of the dual charter system see the website of the Wyoming Department of Audit:

http://auditstate.wy.us/banking/banking

EMBF_CH04.QXD 1/16/08 5:22 PM Page 110

even within their own states and virtually to prevent cross-border activities of banks by not allowing those chartered in other states to open within their borders. **National banks** were prevented from opening branches until the *McFadden–Pepper Act* of 1927 when they became subject to the banking restrictions that applied to state-chartered banks in the state in which they were operating.

At the end of June 2007, there were 1,677 nationally chartered (22.8 per cent of the total) and 5673 state chartered commercial banks. A much higher proportion (59.8 per cent) of saving institutions have national charters – at the end of June 2007, there were 756 nationally chartered and 509 state chartered savings institutions. Although it has often been predicted that the proportion of state charters would steadily fall, the movement has been in the opposite direction in recent years with the number of national charters of commercial banks falling from 25.9 per cent since the end of 2003. However, a much higher proportion of larger banks are nationally chartered.

A third distinction arises because of the deposit insurance provisions of banking law mentioned above. Although the first insurance fund to protect depositors was set up by New York State as early as 1829, the present, nationwide system of deposit insurance was established by the Glass–Steagall Act (*The Banking Act, 1933*). This, in reaction to three banking panics between 1930 and 1933, set up the Federal Deposit Insurance Corporation (FDIC) to implement the federal insurance of bank deposits. Participation in the scheme was mandatory for all Federal Reserve member banks. Other banks could participate if approved by the FDIC. A very high percentage of banks currently participate in the scheme although there remain a few uninsured banks.

To be approved by the FDIC, banks must follow specified liquidity and reserve requirements. The FDIC then classifies member banks according to their risk-based capital ratio. If this ratio falls below 6 per cent, the bank is said to be significantly undercapitalised, the FDIC can change the management of the bank and force it to take other corrective action. If the ratio falls below 2 per cent, the bank is declared insolvent. The insurance scheme covers all bank deposits with member banks up to a current limit of $100,000. It does not cover investment products sold by member banks. Since 1989, the FDIC has also insured thrifts (see Box 4.1).

Deposits with credit unions are insured by the National Credit Union Share Insurance Fund (NCUSIF) which is managed by the National Credit Union Administration, another agency of the Federal Government. Again, there are some small credit unions that are not part of this deposit insurance scheme.

A fourth distinction is that between independent banks and banking organizations or **bank holding companies** (BHCs) – companies that have controlling interests (i.e. directly controlling more than 5 per cent of voting shares) in one or more US banks. The ability to form a bank holding company has existed for more than a century but it became a popular form of organization only after the Second World War. Forming a bank holding company provided a way around some of the restrictions imposed on banks by legislation. This was particularly true of restrictions on the formation of bank branches both within and between states since a bank holding company could form separate banking subsidiaries in other parts of its home state or in other states. Up until 1956, bank holding companies could also have controlling interests in companies engaged in activities other than banking. This led to fears that bank assets would be used to finance the losses of non-banking subsidiaries, increasing the risk attached to banks. Thus, the *Bank Holding Company Act, 1956*, prevented multi-bank holding companies from engaging in non-banking activities that were not, in the judgement of the Federal Reserve, closely related to banking. Multi-bank holding companies were also limited to owning banking subsidiaries in their home states, unless other states expressly permitted their entry. Since no state permitted such entry prior to 1975, the 1956 Act ruled out the possibility of multi-bank holding companies engaging in interstate banking. In 1970 the law was extended to cover the activities of one-bank holding companies. We discuss recent changes to the Bank Holding Company Act in Section 4.2.2.

Fifthly, there is the relationship between banks and the **Federal Reserve System** (widely known as the Fed). Under the *Federal Reserve Act, 1913*, all nationally chartered banks were required to become members of the Federal Reserve but membership was optional for state-chartered banks. Membership gave access to Federal Reserve services but imposed obligations such as reserve requirements designed to guarantee the liquidity of banks. The *Depository Institutions and Monetary Control Act, 1980*, extended the Fed's benefits and obligations to all depository institutions but state banks may still be classified as member or non-member banks of the Federal Reserve System.

EMBF_CH04.QXD 1/16/08 5:22 PM Page 111

As at the end of June 2007, only 15.6 per cent of state-chartered commercial banks were Fed members (883 out of 5,673).

Membership or not of the Fed also determines which of the three institutions responsible for the supervision of commercial banks supervises state-chartered commercial banks. All nationally chartered banks (1,677 at the end of June 2007) are supervised by the Office of the Comptroller of the Currency (OCC), an independent bureau of the Department of the Treasury established in 1863 specifically to supervise banks chartered by the Federal government. State-chartered banks that are members of the Federal Reserve (883 at the end of June 2007) are supervised by the Fed itself. The state-chartered banks that are not members of the Federal Reserve are supervised by the FDIC.

A final distinction is made in official banking statistics between large and small commercial banks. Large banks are currently defined as those that have consolidated assets of $300 million or more. At 30 June 2007 there were 1,686 such banks, ranging from the Bank of America with consolidated assets of 1,252,402m to the Heritage Bank of Nevada with consolidated assets of $300m.

4.2.2 Changes in the structure of depository institutions

As Table 4.1 shows, between the end of 1984 and the end of June 2007, the total number of FDIC-insured depository institutions (commercial banks and thrifts) fell by over 50 per cent to 8,615. The number of credit unions also declined by 44 per cent in this period.

The numbers of savings institutions (down 63 per cent) declined more rapidly than those of commercial banks (down 49 per cent) between 1984 and 2007. This partly reflected the number of failed Savings and Loan Associations in the 1980s and 1990s (discussed in Box 4.1). In addition, there was a considerable shift away from independent banks to bank holding companies which now hold over 97 per cent of the total assets of the banking system.

Amel (1996) identifies five reasons for the considerable structural changes within depository institutions:

- mergers and acquisitions;
- legislative changes affecting interstate expansion;
- legislative changes affecting expansion by branching;
- changes in credit union membership regulations;
- failures of depository institutions.

Merger activity among healthy banks rose to record levels during the 1980s as banks sought to reduce costs, partly as a result of increased competition from non-depository institutions. This was spurred by technological change which broadened access to the commercial paper market and reduced the role of commercial banks in lending to large corporations. Technological change also probably reduced costs for large firms relative to small firms. From an average of about 200 in the years between 1970 and 1980, the number of bank acquisitions jumped to a total of nearly 8,000 between 1980 and 1998. Whereas acquisitions in the 1970s were principally of small banks, banks merged or taken over in the 1980s included larger institutions. The mergers that took place between 1980 and 1998 involved $2,400bn in acquired assets – equal to 55 per cent of all banking assets in existence in 1980. Some of the mergers that took place, particularly between 1995 and 1998, were among the largest in US banking history. Table 4.3 shows a breakdown

Table 4.3 Bank mergers and failures in USA, 1980–98

Period	Number of mergers	Assets acquired ($bn)	Large mergers [1]	Number of failures
1980–84	1,838	204.989	15	172
1985–89	2,515	415.914	56	858
1990–94	1,993	574.111	76	412
1995–98	1,639	1,249.507	101	15
Total	7,985	2,444.522	248	1,457

[1] Mergers involving more than $1bn of assets are classified as large.

Source: Rhoades (2000).

EMBF_CH04.QXD 1/16/08 5:22 PM Page 112

of the number and size of mergers in sub-periods between 1980 and 1998 and compares the number of acquisitions with the number of bank failures in the same period. It can be seen from the table that the number of mergers reached a peak during the mid- to late 1980s, a period when industry profit rates and share prices were very low. Rhoades (2000, p. 31) suggests that this is a little surprising because mergers are thought to be more likely during periods of high share prices and profits. However, as Table 4.3 shows, the mid- to late 1980s was also a period of many bank failures and there may have been good buying opportunities for banks that were performing relatively well. In terms of assets acquired, the peak period was in the second half of the 1990s.

Bank mergers and acquisitions have continued in recent years although at a slower rate than in the 1980s and 1990s. In 2006, there were 255 announced mergers and acquisitions among banks and 46 among thrifts.

The large decrease in the number of US banks led to a considerable increase in the nationwide concentration of bank deposits in the largest banks. This has continued. By the end of 2006, the ten largest banks held 51.7 per cent of banking industry assets and the largest 100 banks 78.5 per cent of total assets. The 50 largest bank holding companies held 76 per cent of all bank holding company assets.

It is noteworthy that despite the reduction in the number of banks and the explosion in the number of ATMs during the same period, there were continuing increases in the number of banking offices and in the number of cheques cleared. At the end of 1990, the 12,329 commercial banks had a total of 62,346 offices. By the end of 2006, the 7,479 commercial banks had 81,329 offices. This growth in the number of banking offices suggests that the restrictions on the development of branch networks had in the past limited the number of banking offices. It further suggests that local markets continue to be relevant geographic markets and that ATMs and other forms of retail electronic banking are not yet substitutes for banking offices although that may still happen in the future.

A major element in the increased number of acquisitions was the changed attitude of the US government and of federal agencies towards mergers in the finance industry. Under US law, any bank wishing to acquire another bank must obtain approval from the appropriate federal bank regulator and from the Department of Justice, which is the primary authority for administering US competition laws. From 1980 onwards, the administration of President Reagan spoke out strongly in favour of bank mergers in general and found few that it believed should be challenged.

These changed attitudes were also reflected in legislation and in the interpretation of legislation. Many individual states liberalized their banking laws to allow greater geographic expansion within their borders and interstate banking began to get under way as an increasing number of states passed laws allowing entry by banks from some or all other states. The first step towards allowing out-of-state bank holding companies to own banks was taken by Maine in 1975, although this only applied to banks from other states which granted similar rights to Maine bank holding companies. By 1983, however, all of the New England states had enacted similar reciprocal laws and by the end of 1994 every state but Hawaii had introduced laws allowing some degree of interstate banking. On 29 September 1995, bank holding companies were given the right to purchase banks throughout the USA for the first time since the passage of the *Bank Holding Company Act, 1956*. The *Riegle–Neal Interstate Banking and Branching Efficiency Act, 1994*, which permitted the expansion also from 30 September 1997, allowed banks to branch across state lines. This overrode all remaining restrictions on bank holding company expansion, including the state laws in Hawaii.

Legal interpretations by federal agencies led to the reduction of restrictions on state-chartered banks. In many states, the laws restricting intra-state branching had not applied to thrift institutions. The Office of the Comptroller of the Currency (OCC) argued that national banks were in competition with state-chartered thrifts and thus ruled that national banks could branch to the same extent as thrifts. This would have put state-chartered banking organizations at a disadvantage relative to national banks, and states responded by relaxing their restrictions on intra-state branching by state-chartered banks.

The OCC also took advantage of a long-standing rule which allowed national banks to move their head offices up to 30 miles and retain the previous head offices as branches. In 1985, the OCC ruled that a national bank that had an office within 30 miles of a state line could make that its head office and then branch into the adjacent state. The ruling had little effect until 1994 when it began to be used by bank holding companies for branching across state lines

EMBF_CH04.QXD 1/16/08 5:22 PM Page 113

against state laws. A few bank holding companies merged banks in more than two states by repeatedly moving their head offices near a state border, then across the border, then across the new 'home state' to within 30 miles of another state border and so on. This practice encouraged some states to allow interstate branching by state banks before the 1997 date set by the Riegle–Neal Act so that state-chartered banks were not at a disadvantage to national banks that branched interstate. Both the OCC rulings mentioned here survived a number of court challenges.

Federal agency interpretation was also important in breaking down the separation of securities and banking business. The Banking Act of 1933 (Glass–Steagall) had allowed banks to carry out securities business through separate subsidiaries provided they were not engaged principally in such non-banking activities. From the early 1980s on, the Fed and the OCC began to interpret this provision more liberally, allowing banks to expand in a small way into new markets – first commercial paper, then mortgage-backed bonds, corporate debt and equities. In 1982, the OCC authorized several national banks to conduct discount brokerage businesses through subsidiaries and in 1983 the Fed permitted the then second largest US bank holding company to acquire the largest US discount brokerage company. In 1986, the Fed ruled that a bank holding company subsidiary, until then doing only a discount brokerage business, could provide customers with investment advice. The OCC then authorized brokerage subsidiaries of national banks to provide investment advice. After 1986, some bank holding companies were able to extend their underwriting activities considerably.

The final factor in the consolidation of US depository institutions was the large number of failures in depository institutions in the 1980s and early 1990s. Between 1984 and 1994, 1,276 banks, 1,129 thrifts (predominantly S&Ls) and 987 credit unions failed. The crisis had an impact on interstate expansion by thrift institutions as the federal regulators sought to sell the failing firms at least cost to the thrift deposit insurance fund. In 1986, the Federal Home Loan Bank Board proposed that buyers of failing thrift institutions be allowed to branch into any three states of their choice. In 1990, a federal appeals court upheld the right of the organization set up specially to dispose of failing thrifts[1] to allow purchasing banks to convert failed thrifts into branches, even if this violated state branching laws. In May 1992, the Office of Thrift Supervision, the successor agency to the Federal Home Loan Bank Board, acted to allow nationwide branching by all thrift institutions.

In November 1999, the *Gramm–Leach–Bliley Financial Services Modernization Act* (GLBA) was passed. This repealed the Glass–Steagall Act of 1933 and greatly amended the Bank Holding Company Act of 1956. It allowed bank holding companies to become a new entity called a **financial holding company**, which may make minority or controlling investments in any company, including non-bank financial companies such as securities and insurance firms. Some restrictions still remain as banks may not 'routinely manage or operate' their portfolio companies. This made it possible for bank holding companies to have a much freer hand in merchant banking and generated a number of cross-industry mergers. By the end of 2006, 643 (599 domestic, 44 foreign) bank holding companies had qualified as financial holding companies.

The US banking system has changed rapidly in a short time.

4.3 The Federal Reserve System

The *Federal Reserve System* (the Fed) was created by the Federal Reserve Act, 1913. Unlike most central banks in Europe, the Fed had not evolved into a central bank from an ordinary bank of discount, deposit and note issue. The Fed was a compromise between two central banking traditions – that of the corporate central bank, chartered by the state but owned wholly or in great part by private investors, and that of having the government's fiscal authority (the US Treasury) act also as the central bank. The first was tried with the First Bank of the United States (1791–1811) and the Second Bank of the United States (1816–36) but both were strongly opposed on the grounds that a large and privileged corporation with a monopoly of the federal government's banking business was incompatible with America's democratic ideals. Neither charter was renewed. In 1840–41 and from 1846 to 1914, the federal government acted as its own banker, establishing a number of sub-treasuries in

[1] The Resolution Trust Corporation (RTC).

EMBF_CH04.QXD 1/16/08 5:22 PM Page 114

major cities. Treasury officials gradually realized that funds might be added to or withdrawn from the private sector on a discretionary basis to prevent financial panics and as an element of macroeconomic policy. However, this led to a widespread fear of political control of money and finance, particularly that the Treasury would have a long-run bias towards 'easy money' and inflation and that it would favour some financial, geographic and economic interests over others. A financial panic in 1907 led to the setting up of a commission of enquiry and its report led to the 1913 Federal Reserve Act.

This gave both bankers and the Treasury a voice in central bank policy formulation but aimed to prevent control of policy by either New York bankers or Washington politicians. The system consists of 12 regional *Federal Reserve Banks*, each having authority in a specific geographical area, and a coordinating Federal Reserve Board in Washington DC. The capital stock of each of the regional Reserve Banks was subscribed by the member banks in its district. Member banks received a fixed dividend on their capital contribution with any profits in excess of these dividends going to the Treasury. They also received the right to participate in electing six of the nine directors of their Federal Reserve Bank. The other three directors of each Bank were appointed by the Federal Reserve Board in Washington. The regional Reserve Banks were given a monopoly (originally only partial) of the nation's note issue, became fiscal agents of the government, banks of rediscount and reserve for member banks, and lenders of last resort in their districts.

MORE FROM THE WEB

The websites of the 12 regional Federal Reserve Banks provide a great deal of information and interest. Go to www.federalreserveonline.org and you will find links to an explanation of the Federal Reserve System and links to all 12 regional reserve banks. If you would like to play some games, try Boston (http://www.bos.frb.org) – click on 'Consumer Information' and then 'Personal Financial Information'. Several other regional Reserve Bank sites have educational resources as does the Fed itself (http://www.federalreserve.gov) – click on 'Consumer Education' along the top of the home page. The Fed also has a web site dedicated to Education, http://www.federalreserveeducation.org/Fed101/

Each Bank set its own discount rate and engaged in its own open market operations. It was hoped that this decentralized structure would ensure a sufficient supply of credit in each region.

Member banks held legally prescribed reserves as deposits in their Reserve Banks and in return were entitled to rediscount their eligible commercial paper at the Banks when in need of temporary liquidity. They were also able to use the Fed clearing facilities including electronic funds transfers and the currency and information services of the Banks. The original Federal Reserve Board comprised five members appointed to staggered 10-year terms by the US President, and the Secretary of the Treasury and the Comptroller of the Currency as *ex-officio* members. The Fed was intended to be independent of:

(a) private financial business interests;
(b) duly constituted government authorities (executive and legislature); and
(c) partisan political interests.

The job of the Federal Reserve Board was to oversee and supervise the operations of the Reserve Banks, coordinate their activities, handle the system's relations with the federal government, bring about a uniform banking and monetary policy in the USA, and participate in the regulation and supervision of the banking system. It was given little authority to initiate policies. Its late appearance meant that the Fed had to share regulatory and supervisory duties with already established federal agencies and state banking authorities. Under the present division of responsibilities, the Fed oversees bank holding companies, foreign banks and state-chartered banks which belong to the Federal Reserve System. The FDIC monitors other state banks at the federal level and runs the fund guaranteeing depositors in the event of failure.

The Office of the Comptroller of the Currency (OCC) oversees nationally chartered banks while the Office of Thrift Supervision oversees S&L institutions. (See Box 4.2 for a summary of the supervisory authorities.)

The Fed's responsibility for all bank holding companies has meant that, as bank holding companies have become more popular, it has come to be the primary federal overseer of banks, now holding about 90 per cent of the nation's deposits.

It is widely held that the Fed performed badly in the Depression. Friedman and Schwartz (1963), for

EMBF_CH04.QXD 1/16/08 5:22 PM Page 115

BOX 4.2 US banks supervisory authorities

Board of Governors of the Federal Reserve System (FRB)
The US central bank. It supervises those state-chartered banks that are members of the Federal Reserve System as well as bank holding companies and non-bank subsidiaries owned or controlled by bank holding companies. Non-bank subsidiaries of holding companies include institutions such as mortgage banking companies, finance companies, securities brokers and dealers, investment or merchant banks, and trust companies. The FRB also has overall responsibility for all foreign banks operating in the USA but directly regulates only the agencies and branches of those foreign banks with state licences. Finally, the FRB also licenses and supervises some special purpose institutions, known as Edge or Agreement corporations, which are generally authorized to finance international transactions.

Federal Deposit Insurance Corporation (FDIC)
An independent agency that supervises those state-chartered banks which are not members of the Federal Reserve System as well as insuring the deposits of banks and thrifts through the Deposit Insurance Fund (DIF), the result of the recent merging of the Bank Insurance Fund (BIF) and the Savings Association Insurance Fund (SAIF). The FDIC also regulates the small number of branches of foreign banks that are permitted to accept deposits.

Office of the Comptroller of the Currency (OCC)
An independent bureau of the Department of the Treasury, the OCC was established in 1863 to supervise all banks chartered by the Federal government. These banks all have the word 'national' in their names or carry the abbreviations 'NA' or 'NS&T'). The OCC also regulates the agencies and branches of foreign banks that have a federal licence (these cannot be identified as having a federal licence from their names).

Office of Thrift Supervision (OTS)
The primary regulator of all Savings and Loan Associations (S&Ls), whether federally chartered or state chartered. The OTS was established as a bureau of the Department of the Treasury on 9 August 1989.

National Credit Union Administration (NCUA)
Supervises all credit unions and insures credit union deposits.

Federal Financial Institutions Examinations Council (FFIEC)
Established on 10 March 1979, the FFIEC is a formal interagency body empowered to prescribe uniform principles, standards and report forms for the federal examination of financial institutions by the FRB, the FDIC, the NCUA, the OCC and the OTS and to make recommendations to promote uniformity in the supervision of financial institutions.

example, blame it for not suspending convertibility until it was too late. Part of the blame was placed on the decentralized structure of the system since during the Depression serious disagreements had arisen over monetary policy both among the Federal Reserve Banks and between the Banks and the Board. The Federal Reserve Bank of New York and, somewhat later, the Board, favoured policies to stimulate the economy, but several other regional banks had sufficient power to resist such policies.

In the Glass–Steagall Act of 1933 but particularly in the Banking Act of 1935, Congress moved to centralize authority in the renamed *Board of Governors of the Federal Reserve System*, led by a Chairman with enhanced powers. All seven members of the new Board were directly appointed by the President with the advice and consent of the Senate. The Federal Open Market Committee (FOMC) was set up and the Board was given the authority to adjust reserve requirements of its member banks. The FOMC comprised the seven members of the Board of Governors, the president of the Federal Reserve Board of New York and four other Reserve Bank presidents, serving on a rotating basis. This gave the Board members a permanent majority on the Committee and ensured a unified monetary policy.

The form of the Federal Reserve System established by the 1935 Act remains in place today. As the Bank of England did until its reform in 1997, the US central bank carries out all possible functions of a central bank, being:

- the bank to the banking system;
- the bank to the US government;
- the body responsible for monetary policy;
- the operator of the payments system;
- a major part of the system of supervision and regulation of depository institutions.

EMBF_CH04.QXD 1/16/08 5:22 PM Page 116

BOX 4.3 The functions of the 12 district Federal Reserve Banks

Although monetary policy has, since 1935, been centralized and rests with the Board of Governors of the Federal Reserve System, the 12 district Federal Reserve Banks continue to play a number of important roles.

- They provide 5 of the 12 members of the Federal Open Market Committee (FOMC) and have the specific task of helping the Committee stay in touch with the economic conditions in all parts of the country.
- They supervise banks and bank and financial holding companies, helping to maintain the stability of the financial system.
- They provide financial services to depository institutions.
- They market and redeem government securities and savings bonds and conduct nationwide auctions of Treasury securities as well as maintaining the Treasury's funds account.
- They provide payments services – the safe and efficient transfer of funds and securities throughout the financial system.
- They distribute coins and currency.
- They are heavily involved in research and have an educational role.
- The Federal Reserve Bank of New York carries out open market operations and intervenes in foreign exchange markets on behalf of the Board of Governors.

It also has a responsibility for the protection of consumers' rights in dealing with banks and for promoting community development and reinvestment.

In the 1935 reforms, the regional Reserve Banks lost their power to determine interest rates but they continue to have many functions. The modern role of the 12 regional Reserve Banks is set out in Box 4.3.

The Chairman of the Board of the Federal Reserve is now widely regarded as one of the most powerful economic policymakers in the world. Nonetheless, a potent distrust of the Fed remains in American society. This is strongly reflected in Greider (1987) who sees the Fed as a non-elected body with an anti-inflationary bias that restrains economic growth in order to preserve the value of financial assets, most of which are owned by wealthy people.

4.4 Non-depository Institutions in the USA

Non-depository institutions in the USA consist of securities firms, insurance companies, mutual funds, pension funds and finance companies.

4.4.1 Securities firms

Securities firms consist of securities brokers and dealers, investment banks and advisers, and stock exchanges. There are over 5,000 firms in this sector of the financial industry. At the end of 2006, the assets of securities firms stood at $2,741.7bn, an increase of 28.9 per cent over the year. Mergers and acquisitions are important here as well as among banks and savings institutions. In 2006, there were 179 mergers and acquisitions among securities firms. Of these, 50 (28 per cent) involved the purchase of securities firms by banks. This was slightly below the average for the period 2001–2006, which saw a total of 322 purchases of securities firms by banks out of a total of 1,015 mergers and acquisitions in the industry (31.7 per cent). This steady movement by banks into the securities industry followed the easing of restrictions on the non-banking activities of commercial banks, notably in the *Gramm–Leach–Bliley Act, 1999*.

The securities industry is overseen by the Securities and Exchange Commission (SEC) which regulates the issue of securities, and the various securities exchanges. The SEC was established by the US Congress in 1934 to protect investors and to maintain the integrity of financial markets. The *Securities Act* of 1933 required publicly-owned companies to disclose financial information to provide transparency and to give investors access to important information. The *Sarbanes–Oxley Act* of 2002 was enacted to increase the accountability of the boards of publicly held companies to their shareholders. In addition, the Federal Reserve Board has some regulatory influence on the industry through determining the credit limits or margin requirements in securities markets.

There is also self-regulation of the industry. From 1936 onwards, this was carried out by the National Association of Securities Dealers (NASD) which later changed its name to NASD, Inc. NASD was created under amendments to the *Securities Exchange Act* of 1934. All brokerage firms which were not members of

EMBF_CH04.QXD 1/16/08 5:22 PM Page 117

BOX 4.4 The growth of junk bonds

Junk bonds are corporate debt instruments that the credit-rating agencies regard as 'below investment grade' because they judge that the issuing companies might not be able to meet interest or principal payments. In the late 1970s the market consisted largely of debt securities of companies that had been successful in the past but had run into difficulties ('fallen angels'). However, from 1984 onwards, Michael Milken, of the securities firm Drexel Burnham Lambert, transformed the market by selling high-yield bonds as a means of raising finance for corporate raiders and shell companies without earnings or assets to undertake leveraged buyouts. The bonds yielded an average of 350–450 basis points more than Treasury bonds of similar maturities, but with a very wide range. For instance, bonds issued by a steel company, LTV, which sought legal protection from its creditors in 1986, yielded around 35 per cent. Milken found a ready home for the bonds among insurance companies and thrift institutions which were seeking to diversify away from fixed-interest lending and were willing to take risks to maintain returns, pension plans, the mutual funds and even the public directly. In 1980 there had been 46 issues of junk bonds for a total of $1.38bn. By 1986 this had grown to 210 issues for a total of $29.83bn.

Drexel charged very high commissions to the issuing firms (up to three or four per cent of the principal) and paid very high bonuses to their traders. In 1987 Milken received $550m for his services. However, in 1989 Drexel was heavily fined for mail and securities fraud and the following year Milken was heavily fined and later jailed for securities violations which included cheating some customers and helping others to break securities law. The value of most junk bonds declined sharply in late 1989 and S&Ls were required under the *Financial Institutions Reform, Recovery and Enforcement Act* of 1989 to sell their junk bond holdings. Drexel Burnham Lambert went bankrupt in February 1990.

another approved self-regulating organisation were required by law to be members of NASD. In practice, that meant that almost all brokerage firms were required to be members of NASD. However, on 26 July 2007, the SEC approved the formation of new self-regulating organisation for the industry to be known as the Financial Industry Regulatory Authority (FINRA). This will involve the merging of the NASD with the enforcement arm of the New York Stock Exchange, NYSE Regulation, Inc.

In recent years the large US securities firms have spread throughout the world. At the same time, although foreign banks have not made major inroads into US retail banking, foreign-owned institutions, notably the very large Japanese banks, have entered strongly into wholesale banking and the securities industry in the USA.

Securities firms come to the attention of the public principally when there is a major collapse or court case. For example, in the 1980s, the US securities industry was perhaps best known in relation to the issue of junk bonds. This is dealt with in Box 4.4. In the late 1990s, there was the case of Long Term Capital Management in which the near collapse of a **hedge fund** led to problems in many financial markets in different parts of the world. This and several other problems involving securities firms are dealt with in Chapter 20. The false description of client firms by Merrill Lynch, which came to light in the spring of 2002 is dealt with in Case Study 1 (see page **000**).

MORE FROM THE WEB

The website of the SEC (http://www.sec.gov) gives an outline of its history and responsibilities and has an educational section. Click on 'Divisions and Offices' on the home page, then on 'Investment Management' and then 'Investor Info'. For information on the new self-regulatory organization, FINRA, see http://www.finra.org/index.htm.

4.4.2 Insurance companies

Unsurprisingly, the USA has the largest insurance market in the world. A survey of world insurance premiums carried out by Swiss Re, a major reinsurance and financial services group, estimated that total insurance premiums for 2006 were $3,723bn (life insurance $2,209bn; non-life $1,514bn). The estimate for US insurance premiums was $1,170bn, nearly a third of the total. In the USA it is more common to divide insurance into three groups: Property/Casualty (covering motor vehicle, home and commercial insurance), Life/Health (life insurance and annuity products) and Health (private health insurance plans).

All types of insurance are regulated by the states. Each state has its own set of statutes and rules. State insurance departments are responsible for insurer

EMBF_CH04.QXD 1/16/08 5:22 PM Page 118

solvency and market conduct. There have been several proposals for the introduction of federal regulation to provide a more uniform system, perhaps with companies being given a choice between being state-regulated or federally regulated along the lines of the banking system, but these ideas continue to be resisted. The National Association of Insurance Commissioners (NAIC), a non-profit organisation established in 1871, provides a basis for coordination among the states. The NAIC is, however, not itself a regulator. It proposes model laws and regulations but the states decide whether and to what extent to implement the models.

In the 1970s and 1980s, life insurance companies ran into the same disintermediation difficulties as the S&Ls. At the beginning of the 1970s the assets of life insurance companies were long-term fixed interest (usually acquired years before when interest rates were low). Liabilities were very largely whole life policies. As market interest rates rose in the 1970s and as money market mutual funds developed offering much higher returns than were available on life policies, the competitiveness of the life insurance industry was much reduced.

Life insurance policies in fact consist of two elements – the insurance element and one of saving and accumulation. Policyholders found that they could unbundle their policies by taking out short-term life policies and undertaking the accumulation element in other ways. Between 1970 and 1984, premiums on life policies fell from 3.12 per cent to 1.99 per cent of disposable income while whole of life policies declined from 82 per cent to 22 per cent of new policies written. Lapses and surrenders of both old and new policies doubled to 12 per cent of all policies in force in 1984. Attempts by US companies to follow the UK practice of acquiring claims to real streams of goods and services (such as the earnings of industrial and commercial enterprises or holdings of real estate and property) were restricted by state regulations covering the types of assets life offices could hold. Nonetheless, they diversified as much as possible, often into riskier products with higher rates of return including junk bonds and doubtful commercial real estate loans. The sharp down-turn in the junk bond market in 1989 caused problems for a number of, mainly small, life insurance companies. Forty-three companies failed in 1989, another 30 in 1990 and more in 1991, including some rather larger companies. The NAIC promoted nationwide standards for capital adequacy and for state guarantee funds.

Insurance companies also responded to the pressure on their profits in the 1970s and 1980s by seeking to market more flexible types of policies and to enter new product markets. Some companies began to offer certificates of deposit or cash management accounts in direct competition with commercial banks while others which merged with brokerage firms and began to offer a wide range of securities-related services. Insurance companies also began to offer mutual funds to investors.

The Gramm–Leach–Bliley Act, 1999, which removed the long-lived restriction on mergers between commercial banks and securities and insurance firms, paved the way for cross-industry mergers, particularly involving bank holding and insurance companies. However, there have been fewer mergers between banks and insurance companies than had been expected. Banks have naturally wished to add insurance products to the range of products they offer but have more often achieved this by buying existing agencies and brokers or establishing their own agencies rather than by buying insurance companies. Some of the largest insurance brokerages now belong to banks. Equally, insurance companies have been more likely to set up thrift or banking divisions rather than to seek to acquire existing banks. None the less, there has been a continued steady movement towards the concentration of the industry.

4.4.3 Mutual and closed-end funds

Mutual funds are open-end funds run by investment companies which invest pools of money into a number of investment options. Open-end funds have a much higher share of the total market than closed-end funds. Mutual funds have been in existence since the 1920s and are regulated by the Securities and Exchange Commission (SEC) under the *Investment Company Act, 1940*. The Act sets fiduciary standards as well as reporting and disclosure requirements.

Funds usually specialize in particular types of investment, including growth stocks, income-producing stocks, small-firm stocks, short- or long-term bonds, tax-exempt bonds, precious metals or international stocks. A simple classification of mutual funds by the type of asset in which they invest gives us:

- equity funds
- bond funds
- money market funds
- hybrid funds

EMBF_CH04.QXD 1/16/08 5:22 PM Page 119

We saw in Box 4.1 that the development of money market mutual funds (MMMFs) from 1975 onwards had a profound effect on banks, thrifts and insurance companies. They specialize in high-grade, short-term securities that offer market returns on cash equivalents, and permit cheque-writing privileges. Thus they were able to offer rates of return that reflected the higher rates of short-term interest produced in the late 1970s by world economic events and the Fed's response to them. Between the beginning of 1979 and the end of 1982, the assets of money market mutual funds jumped from $12bn to $230bn. By 1985, they held nearly 50 per cent of the assets of the mutual funds industry.

Mutual funds as a whole continued to grow rapidly after 1982. Between 1985 and 2006, the net assets of the industry grew from $495.4bn to $10,413.6bn. The percentage of households investing in the funds increased from 5.77 per cent in 1980 to a peak of 49.6 per cent in 2002 before falling back slightly. At the end of 2006, 48 per cent of all US households held an investment in mutual funds. Much of this is indirect, being held through managed investments such as the popular retirement accounts (IRAs), which had benefited from changes in taxation rules in the 1990s. According to the triennial survey of consumer finances conducted by the Federal Reserve, at the end of 2004, 15 per cent of US families held a direct investment in mutual funds (not including money market mutual funds), down from 17.7 per cent in 2001, another reflection of the worsening equity market performance in 2001 and the following years.

The equity market boom of the 1990s led to a particularly rapid growth of equity-based mutual funds. In 1990, equity funds accounted for only 22.5 per cent of industry assets. By 2000, this had reached 56.9 per cent. The 2001 stock market fall caused this percentage to fall to 41.7 by the end of 2002 but this subsequently increased steadily so that by the end of 2006 again nearly 57 per cent of all mutual fund assets were in equity funds. The next largest group was money market funds with just under 23 per cent of industry assets.

4.4.4 Other non-depository institutions

Other non-depository institutions include finance companies, mortgage bankers and brokers and pension funds. Finance companies specialize in the provision of short- and medium-term credit to firms and households. Consumer finance companies lend to consumers for the purchase of motor vehicles or large household items such as furniture or domestic appliances, for home improvements or for the refinancing of small debts. Business finance companies lend to wholesalers and manufacturers, engage in factoring (purchasing accounts receivable at a discount) and engage in motor vehicle, aircraft and equipment leasing. Finance companies also offer credit cards and in recent years have moved strongly into the real estate market, which is considered separately in Box 4.5. Some finance companies are subsidiaries of bank holding companies or insurance companies or themselves have subsidiaries which offer banking or commercial services. Some are affiliated with motor vehicle or appliance manufacturers.

As financial intermediaries, finance companies compete with banks, savings institutions and credit unions. The sector is twice as large as the credit union sector, about the same size as thrifts and one-fifth as large as commercial banks. Because they are non-depository organizations, funds are raised not from the deposits of savers but through bank loans, the issue of commercial paper or bonds or the securitization of their loans, although some states allow finance companies to seek customer deposits under particular circumstances.

Finance companies are for the most part regulated by the states and regulations vary between states. There are generally, however, limits placed on the size and the maturity of loans finance companies can make and on the interest rates they can charge.

Pension funds have developed in much the same way as in the UK. The performance of their portfolios is very susceptible to market conditions. Criticisms of the operation of pension funds led to the *Employee Retirement Income Security Act, 1974* (revised in 1989) which introduced rules regarding the length of membership of the fund needed before a pension would be paid and about transfers from one fund to another. It also stipulated that contributions should be invested in a prudent manner. Pension funds are also subject to state regulation.

4.5 The home mortgage market and subprime lending

We have seen that commercial banks, thrifts, credit unions and finance companies are all involved in mortgage lending. So too are life insurance companies

EMBF_CH04.QXD 1/16/08 5:22 PM Page 120

and government-sponsored enterprises like Fannie Mae which operates in the secondary mortgage market, aiming to ensure that mortgage bankers and other lenders have enough funds to lend to home buyers at low rates. In recent years the home mortgage market has expanded rapidly, with loans outstanding doubling from $501.1bn to $1,019.2bn between the end of 2002 and 2006. In 2006, loans in the residential mortgage section of the market accounted for more than 40 per cent of the growth in lending by banks. The division of the mortgage market among the various lenders at the end of 2006 was:

	Loans outstanding $bn.
Commercial banks	637.0
Savings Institutions	137.6
Credit Unions	90.2
Finance companies	107.8
ABS[1] issuers	46.6

[1] asset-backed securities issuers

Source: Table entitled "Home Equity Mortgage Loans By Holder, 2002–2006 (1)" from the *Financial Services Fact Book 2007*, Insurance Information Institute. http://www.iii.org/financial2/about/.

The market expansion had been assisted by the low interest rates of the period and contributed to a house price boom which continued from 2001 to 2005. The expansion in home mortgages was also partly due to the big increase in subprime and non-traditional mortgages offered. The subprime category of residential mortgages:

> typically includes loans made to borrowers who had one or more of the following characteristics at the time the loans were originated: weakened credit histories that include payment delinquencies, charge-offs, judgements, or bankruptcies; reduced payment capacity as measured by credit scores or debt-to-income ratios; or incomplete credit histories.[2]

Subprime mortgages are riskier than average and so carry higher than average interest rates. Consequently, in periods with low interest rates, rising house prices and, hence, few defaults, offer lenders high profits. With house prices high, even defaults present few problems to lenders. It was not surprising then that subprime lending expanded greatly, reaching around 20 per cent of all new mortgages by 2005.

Mortgages in the USA had traditionally been simple fixed interest rate mortgages. However, this began to change as lenders designed products to attract new borrowers into the market. It has been suggested that regulators encouraged this trend. In a speech in March 2007 to the US Senate Committee on Banking, Housing and Urban Affairs, the Committee Chairman, Chris Dodd said:

> Despite those warning signals, in February of 2004 the leadership of the Federal Reserve Board seemed to encourage the development and use of adjustable rate mortgages that, today, are defaulting and going into foreclosure at record rates. The then-Chairman of the Fed said, in a speech to the National Credit Union Administration: 'American consumers might benefit if lenders provided greater mortgage product alternatives to the traditional fixed-rate mortgage.'[3]

Non-traditional or 'exotic' mortgages include fixed rate mortgages that quickly convert to variable rates; adjustable rate mortgages (ARMs) in which the interest rate is adjusted periodically according to a preselected index; interest-only mortgages (mainly ARMs) in which the borrower pays only the interest on the capital for a set term and then, usually after five to seven years, has to refinance the balance in a lump sum or start paying the principal; and 'pick a payment' loans, for which borrowers choose their monthly payment (full payment, interest only, or a minimum payment which may be lower than the payment required to reduce the balance of the loan). Almost all of these not only carry higher interest rates but also involve (possibly sharply) increasing interest rate payments as interest rates rise in the economy. In addition, in 2006 there was a significant increase in the number of 'piggyback mortgages' (80/20 mortgages), that is, two loans taken out in tandem and worth up to 100 per cent of the value of the property. This meant that a growing number of borrowers had no equity in their houses and had little incentive to go on paying when their interest payments rose sharply. This was especially the case when house prices began

[2] US Federal Reserve, 'Profits and Balance Sheet Developments at U.S. Commercial Banks in 2006', *Federal Reserve Bulletin*, July 2007, A37–A71.

[3] US Senate, 'Opening Statement of Chairman Chris Dodd – Hearing on "Mortgage Market Turmoil: Causes and Consequences"', 22 March 2007, http://banking.senate.gov/index.cfm?Fuseaction=Articles.Detail&Article_id=125&Month=3&Year=2007.

EMBF_CH04.QXD 1/16/08 5:22 PM Page 121

to fall causing the size of the loan to be repaid to be greater then the market value of the house.

One of Senator Dodd's criticisms of the authorities was that four months after Alan Greenspan's encouragement to lenders to provide alternative types of mortgage loans, the Fed Open Market Committee started pushing interest rates up and, over the following 24 months, made 17¼-point increases, taking the Fed Funds rate from one per cent to 5¼ per cent.

The way in which many of the mortgage loans were financed also contributed to the problems that later developed. All types of lenders had engaged in the expansion of subprime mortgages but commercial banks were not greatly involved. In a survey conducted in 2006, only about five per cent of US commercial banks reported that subprime mortgages made up more than 20 per cent of the residential mortgage loans on their books. Much of the subprime lending had been carried out by non-depository finance companies often financed by bundling the mortgages into mortgage-backed securities (MBS) sold on to investment banks, hedge funds and other investors. This passed the risks associated with the subprime mortgages on to other institutions. As long as financial markets remained confident and willing to buy these securities, the lenders could go on expanding. In fact, life in financial markets is much more complex than this as Box 4.5 suggests. However, by the last quarter of 2006, the market was slowing down. Construction of new houses was in decline, the increase in house prices was slowing

BOX 4.5 Mortgage-backed securities and hedge funds

Mortgage-backed securities are created when mortgage lenders bundled up a group of mortgages to create a security which is then sold on. Unfortunately, credit rating agencies are only likely to give an MBS backed by subprime mortgages a low rating (less than investment or 'junk' grade). This would mean that it would not be held in many portfolios and could only be sold at a large discount, making the funds raised by the mortgage lender to finance its lending expensive.

Enter an investment bank. It is prepared to pay rather more to the mortgage lender because it is able to slice a large quantity of MBS into a number of tranches in order to create a mixture of assets of different degrees of risk. These are known as Collateralized Debt Obligations (CDOs). Perhaps 80 per cent of the CDOs will be sufficiently low risk to be granted an investment grade rating by a credit rating agency and these can be sold on easily. Ten per cent may be middle risk (mezzanine) and 10 per cent high risk (equity). As long as things go well (low interest rates, rising house prices), the equity assets produce high returns but they lose value first and very rapidly if the housing market turns down. The investment bank won't wish to keep the medium and high risk CDOs and so has to devise a way to get rid of them.

One method is to set up a hedge fund to trade in the medium and high risk CDOs. The bank puts money into the hedge fund and uses this to buy the equity CDOs from itself. The equity CDOs are not traded on a market and so have no market value but when the housing market is doing well, as between 2001 and 2005, and there is little chance of the underlying subprime mortgages defaulting in large numbers, the equity CDOs are less risky and so a higher value can be attributed to them in the hedge fund's books. Indeed, because the CDOs have most of the risk associated with the mortgages concentrated in them they can be marked up faster than house prices are rising and the hedge fund seems to be doing spectacularly well. Investors from outside invest in the hedge fund. The hedge fund can then seek to raise the profit rates further by using the equity CDOs as collateral to borrow from another bank. The hedge fund is said to be 'leveraging risk' by doing this. It uses the loan to buy more equity CDOs from the investment bank which, in turn, buy's more MBS from the mortgage lenders who initiate more subprime mortgages. This increases demand in the housing market and helps house prices to keep rising.

As the value of the CDOs are marked up even higher with rising house prices, it is able to borrow again and so the process continues. But one can see the problem if, as at the beginning of 2007, house prices begin to fall and the proportion of subprime mortgage defaulting begins to rise. The outside bank that has lent to the hedge fund asks for its money back but the hedge fund has used it all to buy equity CDOs to which the hedge fund may still attribute a high value on its books but will have next to no value if the outside bank tries to sell them on the open market.

This is, in essence, what happened to the two Bear Stearns hedge funds, Bear Sterns High-Grade Structured Credit Fund and Bear Sterns High-Grade Structured Credit Enhanced Fund, which were two of the high profile failures in the subprime mortgage collapse.

EMBF_CH04.QXD 1/16/08 5:22 PM Page 122

MORE FROM THE WEB

For more details on CDOs and what investment banks might do with them see 'Subprime mortgage collapse: why Bear Stearns is just the start', *Money Week*, 15 October 2007, http://www.moneyweek.com. For a list of failed, failing or, at least, ill subprime mortgage lenders, see the Implod-o-meter on http://ml-implode.com/imploded/.

down and concern started to be expressed about delinquency rates of subprime mortgages. A loan is defined as 'delinquent' when payment is 30 to 60 days behind and no payments are currently being made. Loans that are more than 60 days overdue are labelled 'seriously delinquent'. The position deteriorated in the first quarter of 2007 and the number of defaults in the subprime market increased rapidly. This continued throughout the year.

As the defaults increased, investors became nervous and began to switch towards more secure investments. The demand for subprime mortgage-backed assets dried up and the finance companies found that they could no longer raise the finance to back their mortgages or could only do so at large discounts. Finance companies began to fail in large numbers. Others closed departments, put off staff or were taken over by other banks. Banks demanded higher interest rates for lending in the interbank market and the 'credit crunch' developed. Hedge funds that had invested heavily in subprime mortgage-backed assets failed or needed to be rescued. In the middle of 2007, international markets became nervous and the US crisis became of global concern, playing a major part in the problems of Northern Rock (Case Study 4, see page **000**). At the other end of the chain, many poor and vulnerable people, who had been encouraged far beyond their means, lost out.

4.6 Summary

The US financial system is highly individual, having developed to reflect two major concerns present since the early days of the country – the fear of moneyed interests and the fear of being controlled either by large institutions in the financial centre of New York or by political forces concentrated in Washington.

This led to a complicated dual system of regulation and to state and federal laws limiting the ability of banks to open branches and to engage in interstate banking. This ensured that there would be a large number of small banks and that, in turn, contributed to the tendency of the system to suffer from bank runs and multi-bank panics.

Legislation that aimed to restrict the activities of banks and to insure their deposits followed, producing a large reduction in the number of bank failures from the 1940s to the 1970s. However, with changes in the international economic environment in the 1970s, problems arose and the 1980s saw a new burst of bank failures especially among Savings and Loan Associations. This, together with the effects of technological change and a number of legislative changes at both federal and state levels, has produced a major consolidation of the US banking system which is continuing. In recent years, banks have become free to open branches and to engage in interstate banking. In addition, the barrier erected between commercial and investment banking in the 1930s has been eroded.

The US central bank (the Federal Reserve System) is also quite different from other central banks and the form it has taken also owes much to long-lived attitudes and to historical developments. There have also been a number of important developments among non-depository financial institutions, not least with the establishment of Money Market Mutual Funds in the 1970s and the very rapid growth of equity mutual funds in the 1990s.

A housing market boom between 2001 and 2005 was partially fuelled by a big increase in the number of subprime mortgages, many of which were non-traditional in kind. When interest rates rose sharply between 2004 and 2006 and particularly when house prices began to fall in 2007 there was a large increase in subprime mortgage defaults. Uncertainties following on from this led to a credit crunch and the failure of many mortgage lenders and some hedge funds. The US subprime mortgage crisis had a global impact and led to bank problems and hedge fund failures in other countries.

EMBF_CH04.QXD 1/16/08 5:22 PM Page 123

Key concepts in this chapter

Bank holding companies
Bank runs
Federal Reserve Banks
Federal Reserve System
Financial holding company
Hedge fund
Money market mutual funds
Multi-bank panics
Mutual Funds
National banks
Nationally chartered banks
Nationally chartered savings institutions
Savings and loan associations
Savings banks
State-chartered banks
State- chartered savings institutions
Subprime
The Glass–Steagall Act
Thrifts

Questions and problems

1 Why are US financial markets so important to the rest of the world?
2 Consider the relationship between US bank legislation and the structure of the banking industry in the USA.
3 Discuss the advantages and disadvantages of a banking system with large numbers of small, independent banks.
4 Why was investment banking separated from commercial banking in the USA? Do the arguments which were used for doing this in the 1930s still apply today?
5 Are there advantages in having a regionally based central bank? Compare the structure of the Federal Reserve System with that of the Bundesbank.
6 What did S&Ls and insurance companies have in common in the 1970s? Why did that cause them problems?
7 How did the subprime mortgage crisis of 2006–07, compare with the Savings and Loans Crisis of the 1980s? Did it have anything in common with the junk bond problem?

Further reading

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