Meir Kohn: *Financial Institutions and Markets*, 2nd edition, Oxford University Press, 2004, chapter 7, pp. 169–198.

CHAPTER 7

The Banking Industry

When you finish this chapter you will understand:

- Why there are so many bank mergers and takeovers
- Why banking is becoming globalized
- How banks get around regulations that restrict their growth
- What a Eurodollar is

The number of banks in many countries is shrinking rapidly as larger banks absorb smaller banks and as large banks merge with one another. In the major industrialized economies during the 1990s there were over 4,000 mergers and acquisitions of banks: the value of these deals was some $1.2 trillion. Most of these deals involved banks within a single country, but a significant number involved banks in different countries. Banking is becoming globalized. European and Japanese banks have established a presence in the United States, and American banks are expanding abroad.

Our goal in this chapter is to understand these trends and to explore their implications for the future of banking. We begin by reviewing the history of the banking industry to see how economics has shaped its evolution. We shall see that three factors have dominated the industry's development—economies of scale, the technology of communications, and government regulation. We shall then go on to see how these forces are continuing to shape banking industries today and how the same forces are driving the globalization of the banking industry. Finally, we shall examine the implications of banking consolidation for the industry itself and for its customers.

THE HISTORY OF THE BANKING INDUSTRY

Three Key Factors in the Evolution of the Banking Industry

Economies of Scale. In Chapter 5, we saw that banks and other financial intermediaries tend to become more profitable as they become larger.

Financial, Operational, and Reputational Economies. First, there are the financial economies of scale that result from better pooling as the pool becomes larger. We saw that the liquidity costs of a large bank are lower because the larger volume of transactions allows for more netting of deposits and withdrawals. Because larger banks can be more diversified, they can either make loans that are riskier, and so higher yielding, or they can reduce the ratio of capital to assets. In either case, the bank is more profitable.

Many studies of the banking industry have failed to find significant economies of scale because they have ignored these financial economies. Recent research has shown that when the financial economies are taken into account, bigger is always better.[1]

Second, there are the operational economies of scale that result from the element of indivisibility in fixed costs. Because fixed costs increase less than proportionally with the size of a bank, the burden is lower for larger banks. The increasing importance of informational technology has increased the operational economies of scale. Recent studies find that the minimum efficient scale of a bank in terms of operational economies is in the range of $10 billion to $25 billion in assets.[2]

Third, there are reputational economies of scale: people tend to trust large banks more. Larger banks are indeed inherently safer because of the financial economies and the operational economies. But they are also more trustworthy, since they have more to lose if they harm their reputations by taking advantage of their customers.

The Competitive Advantage of Large Banks. Because of these three types of economy of scale, large banks should be able to outcompete small ones. They should be able to operate at lower cost and to offer their customers better terms—lower lending rates and higher deposit rates. Small banks, unable to compete, should disappear—either closing down or being taken over by the larger banks. The implications of economies of scale were clear as early as 1826, when Lord Liverpool observed, "The solid and more extensive banks will not fail, in time, to expel the smaller and weaker."

Of course, there may be limits to this process. At some point, the economies of scale will be balanced by diseconomies. Large banks become more difficult to control, and the cost of management begins to rise. It is the existence of such diseconomies of scale that guarantees that the whole banking industry will not be taken over by a single, gigantic bank.

Moreover, to capture the potential economies of scale, banks have to grow. To grow, a bank must reach customers over an ever wider geographic area. Historically, this has meant branching. There have, however, been two principal obstacles to geographic expan-

[1] See Hughes (2000).

[2] See Mishkin and Strahan (1999).

sion and so to growth. The first is the technology of communications, which has limited the ability of banks to reach their customers and to control their branches. The second is government regulation, which has put obstacles in the way of geographic expansion.

The Technology of Communications. Early banks did have branches in foreign cities. However, managing these branches was a perennial problem. Poor communications made control and coordination difficult, and the absence of systematic accounting procedures made it hard to monitor performance. Because they could not consult head office on important decisions, branch managers generally had a great deal of independence. To protect their own reputations, banks felt obliged to stand behind the actions of their branch managers. So, a lazy or dishonest branch manager could, and often did, ruin the whole firm.

Poor communications remained a barrier to branching until well into the second half of the nineteenth century. In England, in the 1840s, Manchester was still a 25-hour journey from London by stagecoach. In the United States, the greater distances merely made matters worse.

The advent of the railroads and the organization of regular postal services improved things. But it was not until the spread of the telegraph in the 1860s that branching really became feasible. The telephone was even better. And, as we shall see, the Internet may have profound implications for the structure of the banking industry.

Regulatory Barriers. The technology of communications was not, however, the only barrier. In many countries, legal obstacles made it difficult for banks to expand geographically. Let us look at England and at the United States as examples.

Barriers in Early Nineteenth-Century England. To protect the Bank of England's monopoly, an act of Parliament prohibited the creation of any other joint-stock (chartered) bank. The law further limited banking partnerships to no more than six members. Limited in this way, private banks were unable to raise the capital they needed to expand and they generally remained small. Most were **unit banks** without branches. Because most English banks were small and undercapitalized, with each new economic crisis dozens of them failed.

unit bank
A bank limited to a single office.

The law imposed to protect the Bank of England did not apply in Scotland, which enjoyed a separate legal system. Scottish banks were therefore organized as extensive partnerships and were consequently well capitalized. The typical Scottish bank was considerably larger than its English counterpart and generally had many branches.[3] The economic crises that did so much damage to the English system left the Scottish banks largely unscathed.[4] The lesson did not go unnoticed in England. The Banking Act of 1826

[3] In the days when banks issued banknotes, there was an additional advantage to size. People generally did not wish to hold notes of distant banks: the soundess of such institutions was unknown and redemption of their notes difficult. So notes that found their way out of the locality of the bank tended to be returned for redemption. A bank with many branches would find its notes accepted more widely, and fewer would be returned. It was largely these economices of scale of reputation that drove the Scottish banks to open branches.

[4] The Scottish system was superior to the English in other respects, too. Vigorous competition promoted good service and rapid technological change. The Scottish banks pioneered the acceptance of small deposits (retail banking), the payment of interest on deposits, and the development of different types of deposit.

began a process of deregulation that would eventually allow English banks to develop branch systems.

The Rise and Fall of the Bank of the United States. We saw in Chapter 6 that the early banks in the United States were almost exclusively chartered banks, incorporated by either state or federal charter. The federal chartering of banks—"national banking" as it was called—was controversial from the beginning, and the debate over its constitutionality continued for almost a century.

The first federally chartered banks, the First and Second Banks of the United States, were allowed to branch nationwide. Alexander Hamilton, the first Secretary of the Treasury, strongly opposed nationwide branching because he believed that the effective management of an extensive branch system was impossible. The first Bank set up branches in eight major cities. The second, at its peak, had twenty-five branches. Hamilton's misgivings proved well-founded. Branch managers were frequently incompetent or dishonest. They often served local interests rather than those of the bank, causing the bank significant losses.

The Bank's branch network did, however, give it a substantial advantage in executing payments between different parts of the country. This, together with its position as banker to the federal government, contributed to its growing dominance. At its peak, the bank accounted for about a third of all bank assets in the United States.

There was considerable political opposition to the Bank of the United States. Agrarians opposed it for serving urban commercial interests—believing it to be a complicated fraud designed to enrich the city slicker at the expense of the honest farmer. State-chartered banks resented competition from the Bank and the discipline that it imposed on them by insisting they redeem their bank notes in specie. The Jacksonians, who favored private enterprise, opposed the kind of government intervention that a chartered bank represented.

The Bank's enemies succeeded in blocking the renewal of its charter in 1811. The needs of government finance after the War of 1812 led to the establishment of the Second Bank in 1816. But when the Second Bank's charter came up for renewal in 1836, President Jackson vetoed it. The popularity of this move contributed to his reelection the same year. With the demise of the Second Bank, banking was left entirely in the domain of the states.

Obstacles to Interstate Banking. The expansion of state banks was limited by the terms of their charters. The standard corporate charter of the time, used for banks and nonbanks alike, strictly limited the scope of the corporation's activities. It typically prohibited the corporation from conducting business outside the incorporating state.[5] This made branching across state lines impossible.

In addition to these legal handicaps, state banks too were the victims of antibank sentiment. In many western states, they were banned altogether. In these states, there were no chartered banks at all, although some private banks did operate. In states in which bank-

[5] Legal doctrine also permitted states to exclude corporations chartered in other states from doing business within their borders. Although corporations were considered legal persons, they did not in this respect receive the constitutional protections of natural citizens of other states.

ing was permitted, branching was often restricted. Some states allowed no branching at all, limiting banks to a single office under a single roof (a *unit bank*); others allowed branching within a city, within a county, or even statewide. Before the Civil War, branching was most common in the South, and southern banks were therefore among the soundest and most modern.

The Civil War changed the face of American banking. Desperate for funds, the federal government resumed its chartering of banks to help finance the war. The enabling legislation, the **National Banking Act of 1863**, said nothing specific about branching. However, to avoid bringing up any unpleasant memories of the Bank of the United States, the Treasury limited national banks to a single office.

Economies of Scale between Banks: Correspondents and Money Markets

Faced with technological and regulatory barriers to expansion and consolidation, banks developed alternative arrangements to capture economies of scale. These arrangements enabled them to capture such economies *between* banks rather than *within* banks.

Correspondent Banking. From the earliest of times, a bank in one city would have regular business relationships with banks in other cities. To make or collect payments in another city, a bank would rely on its **correspondent** there. It might also authorize its correspondent to act for it in trading or in the extension of credit.

correspondent bank
A bank with which another bank in another city has a regular business relationship.

In some ways a correspondent bank was better than a branch. The desire to continue a profitable relationship gave both parties an incentive for good behavior. However, since the relationship was arm's length, with carefully defined credit limits and a clear division of responsibilities, a correspondent offered fewer risks than an uncontrollable branch. And, in case of trouble, a correspondent could be disowned in a way that a branch could not.

A country bank's customers typically did a lot of business with the national commercial and financial center—London, New York, or Paris. It was therefore, particularly important for a country bank to have a correspondent there. To facilitate payments, the country bank would normally keep a clearing deposit with its correspondent in the financial center.

Because correspondent banks paid a good return on these deposits, country banks came to keep much of their extra funds in such correspondent balances. Financial center correspondents also provided other services. If a country bank needed additional credit to accommodate its customers, it could turn to its correspondent for help. The correspondent would also clear payments to and from country banks in other regions. In addition, it would provide valuable financial and other information.

respondent bank
A small bank with a business relationship with a city correspondent.

Both in England and in the United States, there grew up a system of financial center correspondents and country bank **respondents**. These systems captured many of the benefits that would have been obtained from branching, had branching been technologically and legally feasible.

money market
Market for short-term debt securities.

The Rise of a National Money Market in England. In both countries, large amounts of correspondent balances supported the development of a national **money market**. Rapidly developing regions and growing industries, with large appetites for credit, would go to the financial center to borrow. There, the institutions of the money market would satisfy their needs, relying on the funds deposited with them by the country banks.

The Industrial Revolution strained the capacity of England's fragmented banking system. In regions where expansion was taking place, small country banks were unable to satisfy the demand for credit. They therefore sent their customers' bills to their London correspondents to be discounted.[6] At the same time, in regions with little industrial development, banks found they had more funds than loan opportunities. So they bought bills through their London correspondents.

By the turn of the nineteenth century, London had developed a thriving market in commercial bills. Initially, it was organized by bill brokers who brought buyers and sellers together but did not themselves take a position. By 1810, however, these brokers had evolved into dealers who purchased the bills themselves for resale to others. These dealers borrowed from the London banks to finance their inventories.

By 1827 the dealers had further evolved into "discount houses." In addition to being dealers, discount houses invested in bills on their own account. They financed their portfolios with call loans from country banks.[7] For the country banks, these call loans came to replace the outright purchase of bills as an outlet for excess funds.

The Rise of a National Money Market in the United States. In the United States, too, there developed a market for call loans and a market for commercial bills. In the United States, however, these two markets did not coalesce. Instead, each developed separately. Through the correspondent system, the surplus funds of small local banks found their way to city banks in the major financial centers—particularly New York. The New York banks found an outlet for these "bankers balances" in the form of call loans—but call loans to the stock exchange not to the money market.[8]

Call loans in the United States went into the capital market rather than into the money market because the money market could not absorb them. Before the Civil War, the supply of commercial bills was small. Initially, most of the nation's trade was international, and it was financed in London. As domestic trade developed, the banks were generally able to provide the necessary finance. Industrialization did not come until the Civil War.

A modest money market did exist. Bill brokers gathered commercial bills from firms and took them from bank to bank until they found a buyer. Initially, the business was limited to New York, but it slowly spread. Brokers sent representatives out of town to solicit bills for sale and to sell bills to local banks. For many years, the business was on a commission basis. But, in 1857, one broker became a dealer, buying his customers' paper outright for resale. The practice proved so popular with customers that the other brokers were forced to do the same.

The banking legislation of the Civil War significantly worsened the fragmentation of the American banking system. State-chartered banks were forced to cut back their lending. The lending of the new national banks was restricted too. Lending to any single borrower was limited to no more than 10% of a bank's capital—a serious obstacle because capital

[6] Usually, the originating country bank would guarantee such bills against default.

[7] The loans were collateralized with bills deposited with the lending banks' London correspondents.

[8] Because call loans to the stock exchange fluctuated widely in amount, New York banks were reluctant to use them to fund loans.

was often in short supply. Moreover, with little local competition, banks often found themselves with considerable market power. They exploited this by raising their loan rates and limiting their lending.

At the same time that local loan markets were deteriorating, industrialization was increasing the demand for credit. Local borrowers had no choice but to turn to the money market. The market for *commercial paper* grew steadily, both geographically and in volume. By 1900 its reach was nationwide.

The principal buyers of commercial paper were the banks themselves. Commercial paper provided an attractive outlet for their surplus funds. It was relatively liquid, and holding paper from outside a bank's local market improved the diversification of its assets. Any surplus funds not invested in commercial paper still found their way to city correspondents where they fueled an expansion of the call loan market. This expansion played a vital role in the rapid growth of the New York capital market after the Civil War.

Integration through Correspondent Banking and Money Markets. Exhibit 7.1 illustrates how a system of correspondent banks and money market works. Panel A shows how the correspondent system allows lenders in one area to lend to borrowers in another. The lender makes a deposit at his bank. The depositor's bank deposits its excess funds with its correspondent in the financial center. The correspondent lends the funds in the money market. At the same time, the borrower borrows from his bank by discounting a bill, the borrower's bank rediscounts the bill with its correspondent, and the correspondent sells the bill in the money market. Panel B shows how payments clear. The payer sends a check to the recipient, who deposits it with his bank. The recipient's bank sends it to its correspondent, who sends it to the clearinghouse. It then finds its way back to the payer's bank through the payer's bank's correspondent.

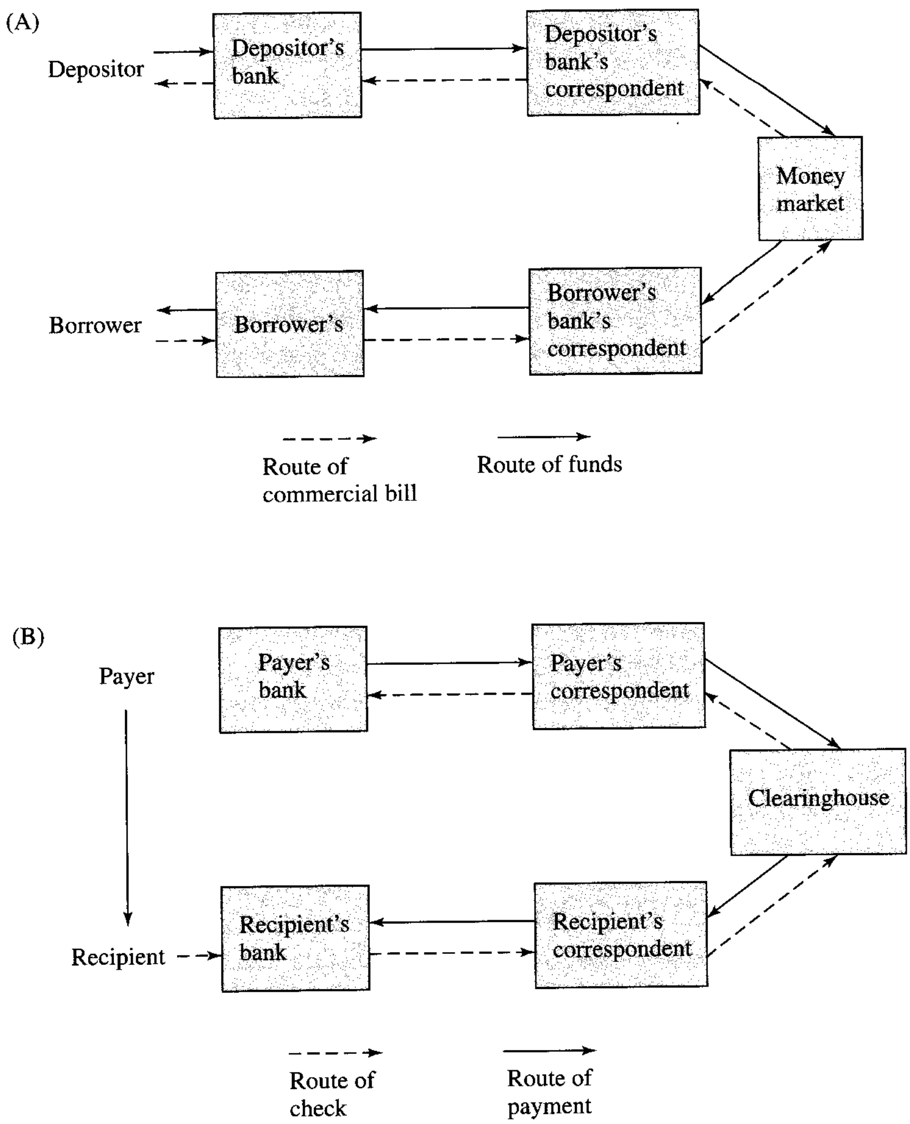
Consolidation in England and the Advantages of Branch Banking

Although similar banking structures developed in England and in the United States, their fate was quite different in the two countries. In England, the regulatory barriers were removed in a series of acts between 1826 and 1862 that liberalized joint-stock banking. At the same time, communications and control improved steadily. By the 1840s, joint-stock banks were being formed in growing numbers and were beginning to develop branch systems. As the joint-stock branch banks expanded, they slowly but steadily displaced the correspondent system of country bank, city correspondent, and money market.

Most of what the correspondent system could do, the new branch banks could do better. They could offer payments services at lower cost. Clearing payments within a bank is quicker and cheaper than clearing them between banks. The branch banks could move funds from lending regions to borrowing regions more cheaply. Moving funds among branches is less costly than interbank borrowing and lending.[9]

[9] Some joint-stock banks expanded into London to gain direct access to the London Bankers' Clearing House, rather than paying a correspondent for the service. Because of the 1826 act, they were obliged to give up the right of note issue to do this. Since checking deposits were anyhow more important than notes by this time, the joint-stock banks generally found this a small price to pay for direct access to the London payments system.

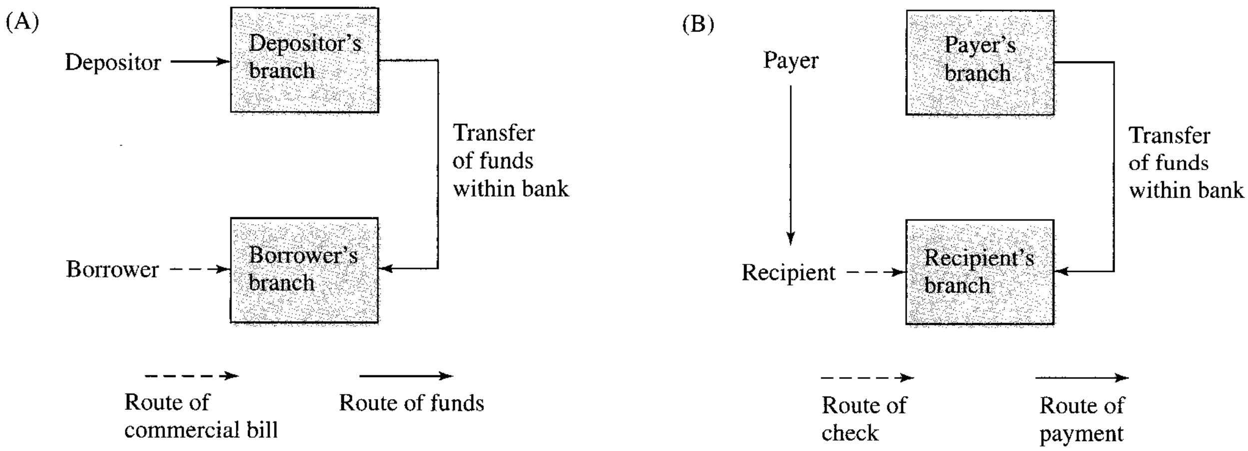
EXHIBIT 7.1 (A) Lending and (B) Payment through a Correspondent System



By comparing Exhibit 7.2 to Exhibit 7.1 you can see the advantages of a branching system. Lending now involves a single intermediary rather than a series of intermediaries. Since each loan in the series of loans involves all the transactions costs and incentive problems that we discussed in Chapter 1, having a single intermediary is much more efficient. Payments are much simpler, too, again reducing transactions costs.

The large branch systems had other advantages too. In times of crisis the larger, better diversified, joint-stock banks proved safer than the smaller unit banks. Depositors were quick to notice the difference, and they switched their funds to the larger and safer banks. They were encouraged to do so, too, by the higher interest rates the branch banks could offer because of their lower costs.

EXHIBIT 7.2 (A) Lending and (B) Payment through a Branching System



The branch banks also offered advantages to borrowers. Greater safety matters to borrowers too. They need to know that their credit will not dry up in times of general financial crisis, when their need is greatest. Moreover, branch banks were able to satisfy all their customers' needs for credit themselves, rather than having to pass on their securities to the London money market. As we saw in Chapter 2, a borrower in trouble can renegotiate with his bank, while he might be forced into bankruptcy by the anonymous holders of his securities.

Under the pressure of competition, many small private banks failed. Most of the others were bought up and integrated into the expanding branch networks. There was a process of steady consolidation among the branch banks themselves. In 1884, there were 118; by 1913, there were 43; and by 1918, the "Big Five" accounted for two-thirds of all deposits in the country. The branch banks transferred funds internally from region to region and had no need for the services of a money market.

In the same period, the banking systems of other countries, most notably Germany and France, underwent similar consolidations. The reasons were the same—improved communications, the removal of legal barriers, and the pursuit of economies of scale.

CONSOLIDATION IN THE UNITED STATES

The United States was the big exception. Although communications improved, the legal barriers remained. Repeated financial crises brought about the failure of large numbers of unit banks, and this created tremendous pressure for consolidation. The comparative stability of banking structures in other countries with consolidated banking systems made nationwide branching seem very appealing. However, the barriers to interstate banking have only slowly eroded and certain barriers remain in effect even today. The political resistance to the removal of these barriers has been enormous. Small banks have organized politically and exploited populist fears to block consolidation.[10]

[10] The American Bankers Association was set up to campaign for the existing structure.

Living with Branching Restrictions

In the face of the legal barriers to interstate banking, U.S. banks have continued to rely on correspondent relationships and money markets much more than banks in other countries. Larger correspondent banks provide smaller respondents with an array of services such as check processing as well as access to securities markets, foreign exchange, and international banking. By offering these services, the correspondent spreads the fixed costs over a much larger volume of business.

The balances small banks keep with their correspondents are useful for both parties. For the respondents, they are an important source of liquidity that can easily be drawn down if, for example, there is a net outflow of customer deposits. For the correspondent, its many respondents are an important source of funds.

There also developed in the United States an interbank market in which the larger banks could borrow from one another to meet liquidity needs. This market had its origins in the Federal Reserve Act of 1913, which required banks to maintain reserves in the form of balances held at the newly established Federal Reserve. To meet this requirement, some banks had to borrow from the Fed through the "discount window." At the same time, other banks found themselves with surplus funds in their deposits.

Beginning in 1921, a market developed in which banks with surplus reserve deposits would lend them to those with reserve deficiencies. This market came to be known as the Fed funds market. A Fed funds loan was not only cheaper than a discount loan, but it also relieved the borrower of the need to assemble collateral. Loans were arranged over the telephone. The loan was executed through the exchange of checks drawn on the Fed.

The correspondent relationship, together with the Fed funds market, provided a way for U.S. banks to replicate the liquidity benefits of pooling deposits that could be done internally by branches of a branch bank. Banks in the United States also found ways to replicate the diversification benefits of a large branch bank through *loan sharing*—a sort of interbank market in loans to parallel the interbank market in funds.

If a correspondent faces a loan request that is too large for it to take on alone, it will farm out parts of the loan to its many respondent banks. As we saw in Chapter 6, this arrangement is called a loan *participation*. Respondents are frequently the buyers. Respondents are also potential buyers when the correspondent securitizes some of its loans.[11] On the other hand, if the customer of a respondent wants a loan too large for the bank to handle, the respondent will turn to its correspondent to take on part of the loan. This arrangement is called an **overline**. In all of these cases, dividing loans among banks improves the diversification of each. This again replicates what is done internally by a large branch bank.[12]

overline
A correspondent's participation in a loan originated by a respondent.

Getting around Branching Restrictions

Banks in the United States have also responded to the legal barriers to interstate banking by finding ways to circumvent these barriers.

[11] We encountered securitization in Chapter 6 and we shall discuss it in detail in Chapters 13 and 14.

[12] The movement toward interstate banking (see later) has placed strains on the correspondent relationship. A small local bank now sees its regional or money center correspondent as a potential competitor, since the correspondent may well end up buying the bank across the street. One response to this problem, particularly in the Midwest, has been for groups of small banks to set up regional service centers under joint ownership—so-called *banker's banks*. These provide many of the same services traditionally provided by a correspondent.

holding company A corporation set up purely to own other corporations.

multibank holding company A holding company set up to own several banks, often to circumvent branching restrictions.

one-bank holding company A holding company that owns a single bank plus nonbank subsidiaries.

Multibank Holding Companies. One popular method was the **holding company**. A holding company is a corporation that does not conduct business itself: all it does is own other corporations. Banks used this structure to get around branching restrictions.

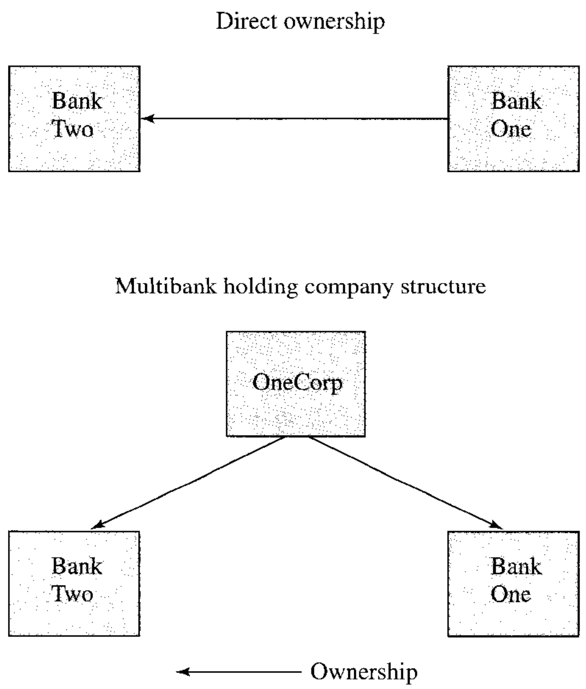
To see how this can be done, consider the two banks, Bank One and Bank Two, in Exhibit 7.3. Bank One would like to buy Bank Two, but it cannot because Bank Two is in another state. So, instead, Bank One sets up a holding company—OneCorp—that becomes the legal owner of Bank One. Because OneCorp is not itself a bank, it *is* able to purchase Bank Two without breaking the law.

A holding company that owns more than a single bank is called a **multibank holding company**. Multibank holding companies have existed since the turn of the century, and they have been particularly popular in states that restricted branching within the state. The most famous example was A. P. Giannini's Transamerica Corporation. Transamerica owned Bank of America and many other banks in several western states. In 1947 it had 43% of all deposits in California, 45% in Oregon, and 79% in Nevada. Transamerica also owned many nonbanking enterprises. The growth of bank holding companies, in particular the growth of Transamerica, aroused populist fears of concentrated financial power. As a result of increasing political opposition, the Bank Holding Company Act, which was largely motivated by a desire to restrain Transamerica, was passed in 1956. The **Douglas Amendment** to the act prohibited this method of expansion across state lines unless explicitly permitted by the states involved.

Recent changes in the law—about which we shall learn presently—have allowed the number of interstate bank holding companies to grow dramatically. In 1990 there were 160 such companies, operating among them some 465 bank subsidiaries in various states.

In contrast to multibank holding companies, **one-bank holding companies** own only a single bank. A one-bank holding company may set up subsidiaries (corporations owned

EXHIBIT 7.3 Direct Ownership vs Holding Company Structure



by the holding company) that are not themselves banks and are not owned by a bank and can therefore engage in activities prohibited a bank—for example, the securities business. Most large banks are organized as either multibank or one-bank holding companies and have securities and other nonbank subsidiaries.

Nonbank Banks and Offices. A bank cannot open branches across state lines. But what is a branch? According to the Bank Holding Company Act, a bank is an institution that "accepts demand [checking] deposits and makes commercial loans." So, if a bank sets up an office that takes checking deposits *or* makes commercial loans—but not both—it is not legally speaking a bank branch.

If the office accepts checking deposits but does not make commercial loans (channeling the funds back to the parent bank), it is called a *nonbank bank*, or *consumer bank*. If the office makes loans (with funds provided by the parent bank) but does not accept checking deposits, it is called a "nonbank office." Nonbank banks, because they accept deposits, require a bank charter; nonbank offices do not. Nonbank banks and offices can be created by buying a bank and stripping it of either its deposits or its loans. They can also be created by opening a new office that is originally a nonbank.

Of course, if a nonbank bank is not legally a bank, there is no obstacle to it being owned by a nonbank financial institution or a nonfinancial corporations, which are barred from owning banks. The nonbank bank proved a popular route into banking—or should we say "nonbanking"—for companies such as Merrill Lynch, Prudential, and Ford. The nonbank loophole was closed by the **Competitive Equality Banking Act of 1987**, which prohibited the opening of any new nonbank banks and limited the expansion of existing nonbank banks.

The Movement towards Interstate Banking

money-center bank
A large bank headquartered in one of the major U.S. financial centers—New York, Chicago, or San Francisco.

The largest banks in the United States are called **money-center banks**, because they are headquartered in the major financial centers—mainly in New York, but also in Chicago and San Francisco. They differ from other banks not only in their size, but also in the range of their activities. They are typically far more involved in international banking and in the financial markets. The 10 or so money-center banks led the way in finding ways around the ban on interstate banking.

regional bank
A medium-sized bank headquartered in a regional financial center.

Regional Interstate Banking. The success of the money center banks in bypassing the ban on interstate banking created competitive pressure on the banks immediately below them in size. These **regional banks**, several hundred in number, were located in regional financial centers, such as Boston, Los Angeles, and Charlotte, North Carolina. In terms of size and range of activity, they were between the money center banks and the thousands of small local banks. Largely at the urging of the regional banks, groups of states began from 1982 to allow mergers and acquisitions among banks within that group of states.

Regional interstate banking gave a major boost to a number of large regional banks. A number of regional banks—such as Nationsbank of North Carolina, BancOne of Ohio,

superregional A large regional bank with activities in more than one state.

and Fleet of Rhode Island—were so successful that they came to be known as **superregionals.**[13] Some of these superregionals grew to be as large or larger than the money-center banks themselves. The superregionals were more interested in expanding further than they were in being protected from competition. As a result, they joined the money-center banks in lobbying for full national interstate banking. A major step in that direction came in 1994.

The Riegle–Neal Interstate Banking Law. The Riegle–Neal Interstate Banking and Branching Efficiency Act of 1994 significantly liberalized interstate banking. It allowed nationally chartered bank holding companies to acquire banks anywhere in the nation (invalidating state laws allowing only regional interstate banking). In general, it bars acquisitions that would give a bank more than 30% of deposits in any one state or 10% of deposits nationwide. Since 1997 nationally chartered bank holding companies have been able to convert the banks they owned in different states into branches of a single bank.[14]

Even under the Riegle–Neal Act some barriers remain. Banks are still not allowed to simply open a branch across state lines. To enter a new state, they must purchase an existing bank in that state. However, once in that state, if state banking laws permit, they may open additional branches.

The Extent of Consolidation in the United States. As a result of the easing of regulatory barriers in the United States, beginning with the barriers to branching within states, there has been a considerable consolidation of the banking industry. In the period 1991–1998, there were 5,686 mergers and acquisitions involving banks; the total value of these transactions was $589 billion. Between 1980 and 1999 the number of commercial banks fell by over 40%—from 14,406 to 8,505. Since Riegle–Neal, multibank holding companies have been restructuring, consolidating 90% of their subsidiary banks into single-branch networks.

While the number of banking firms has fallen, the number of bank offices has increased over the same period by 40%, from 50,804 to 71,383. Much of this increase has come from thrifts converting to commercial bank charters and from the establishment of small branches in supermarkets (about which more shortly). The United States still has considerably fewer bank offices relative to population than does Europe: in the United States there are about 12,000 people per bank office; in Europe there are about 2,000 per bank office. Whether this means that the United States is "underbranched" or Europe "overbranched" is not clear.

Employment in the banking industry rose by 10% between 1980 and 1999, to 1,635,000. The quality of jobs has improved. While the number of tellers has fallen, the number of professionals has increased.

Concentration in the banking industry has increased: in 1999 the 10 largest banks accounted for 37% of total bank assets compared to 20% in 1980. Most of this rise has

[13] A superregional was defined in the American Banker Yearbook 1988 as a "non-money-center bank, ranked among the top 100 banking firms in total assets, and has merged across state lines to establish a banking presence in another state."

[14] States had until June 1997 to opt out of this law or to grant their own banks the same rights as national banks.

been the result of mergers and acquisitions rather than of internal growth. Concentration in the United States is still quite low by international standards. In other major industrial countries, the largest 10 banks account for 50 to 95% of total bank assets.

After the rush of mergers and acquisitions following the Riegle–Neal Act, there were signs in 1999 that the pace of consolidation was slowing.

INTERNATIONAL BANKING

Many of the same factors that have caused banks to expand geographically within a given country have also caused banks to expand internationally. There has been an enormous expansion of international banking since the 1960s.

In 1960, only nine U.S. banks had an office overseas (a branch or a subsidiary). By 1985 almost every large and medium-sized bank in the United States had become involved in international banking: 162 banks had offices overseas. These foreign offices had some $344 billion in assets—about 22% of all assets of U.S. banks. Since then the number of U.S. banks with overseas offices has declined: there were 82 in 1998. This was partly because many medium-sized banks found international banking to be harder than they thought and partly a result of consolidation in the United States.

In 1998, the assets of foreign branches and subsidiaries of U.S. banks amounted to $805 billion.[15] This number, large as it is, understates the importance of international banking, since banks conduct much of their off-balance-sheet activity abroad. U.S. banks book over half their derivatives business in their overseas offices, and their overseas offices are very active in the securities business, in trading, and in syndications and securitization.

Japanese banks, too, rapidly expanded their international activities, beginning a little later than the U.S. banks. In 1980, Japanese banks had 139 offices overseas with $189 billion of assets. By 1989, they had over 300 offices with $1.4 trillion in assets. At that time, Japanese banks accounting for 40% of total international lending. Since 1989, severe problems in the domestic economy have caused Japanese banks to cut back their international activities, and their share of international lending has steadily declined.

European banks have always been active internationally, and their relative importance grew in the 1990s as U.S. and Japanese banks retrenched. The banks of the Asian "tigers"—Hong Kong, Taiwan, Singapore, South Korea—were a growing presence until the Asian crisis of 1998.

While the nationality of the leading international banks has changed from time to time, the overall trend of international banking has been the same—steadily upward. Why has international banking grown in this way?

Reasons for the Expansion of International Banking

The Recovery of World Trade and of International Banking. From its earliest days, banking has been an international business. Indeed, as we saw in Chapter 6, it was the international trading connections of some merchants that led them into the busi-

[15] This number represents "claims on unrelated parties." Foreign offices of U.S. banks have in addition a large volume of claims on other offices of their parent banks (recall the overnight Eurodollars of Chapter 6).

ness of remittance, then into securities trading, and ultimately into banking. To a large extent, banking follows trade.

The Great Depression ushered in a long period of diminished trade and restricted international lending that turned banking inward. There was little point in having a foreign branch if there was no international business for it to do. International trade began to recover after World War II, but by 1960 imports and exports still accounted for only 5% of U.S. economic activity. Since then, trade has expanded rapidly, and imports and exports now account for more than 10% of U.S. economic activity. As more U.S. companies have dealings and operations overseas, their banks must expand their international operations and their presence overseas. Japanese banks went through a similar process, following Japanese manufacturers and trading companies overseas.

Liberalization of Financial Sectors. The second reason for the expansion of international banking is the liberalization of financial sectors and the increase in international lending. Forty years ago there was relatively little private international lending. Most countries did not even allow their citizens to buy foreign securities (the United States was an exception). Consequently, financial sectors in different countries were relatively isolated from one another. As many countries removed restrictions on international investment, the market became more integrated. Banks and other financial institutions expanded overseas to provide better service to their domestic customers.

Together with the liberalization of domestic financial systems and the removal of barriers to international lending, there has been a movement towards free trade in financial services. The Uruguay round of trade negotiations included, for the first time, trade in services as well as trade in goods. These negotiations resulted in 1997 in the **Financial Services Agreement (FSA)**, which came into force in March of 1999. The 102 countries that signed the FSA agreed, in varying degrees, to open their domestic banking, securities, and insurance industries to foreign entry and competition.

Economies of Scale and Scope. The third reason for the expansion of international banking is provided by the same economies of scale and scope that drive domestic expansion. International expansion is a way to grow bigger and a way to undertake more related activities. By branching overseas rather than relying on overseas correspondents, banks reduce the cost of their international transactions. By lending in more than one country, they improve the diversification of their assets.

Escaping Government Regulation. The fourth reason for the growth of international banking is restrictive domestic regulation. Restrictions on geographic expansion limited bank growth within the United States; international growth was a substitute. Both U.S. and Japanese banks were prohibited from engaging in many financial activities, such as underwriting corporate securities, at home. The rules for overseas branches and subsidiaries were more liberal.[16] Both U.S. and Japanese banks faced restrictions on the inter-

[16] A 1962 amendment to the Federal Reserve Act allowed foreign branches and subsidiaries of national banks to engage in all activities allowed domestic banks of the country concerned, except for nonfinancial commercial business and the underwriting of corporate securities beyond a stated maximum.

est rates they could pay on domestic deposits; overseas expansion enabled them to raise funds more easily and to circumvent these restrictions. Overseas offices sometimes enable banks to avoid regulatory costs such as reserve requirements and deposit insurance premiums, and they sometimes offer tax advantages.

multinational banking A bank operating outside its home country and in the local currency.

offshore banking A bank operating outside its home country but in its home currency.

There are two distinct types of international banking— multinational banking and offshore banking. **Multinational banking** involves a bank operating outside its home country and in the local currency. An example would be a German bank with an office in the United States taking deposits and making loans in U.S. dollars. **Offshore banking** involves a bank operating outside its home country but in its home currency. An example would be a U.S. bank with an office in London taking deposits in U.S. dollars and making loans in U.S. dollars. We shall look at each of these types of international banking in turn.

Multinational Banking

U.S. Banks Overseas. Most of the activity of U.S. banks overseas is offshore banking in U.S. dollars, which we shall discuss presently. Only a few U.S. banks are engaged in local currency banking outside the United States, and most of this activity is concentrated in Latin America. Of the U.S. banks engaged in multinational banking, the outstanding example is Citibank, which now does more business overseas than it does at home: it has over 2,000 offices in 89 countries. Citi has expanded its retail banking in Europe, in Latin America, and in Asia. It has done so by offering overseas consumers services they could not receive from their domestic banks—services like credit cards, teller machines, banking by phone, and home mortgages. Citi's strategy exploits economies of scale: products developed initially for the U.S. market can be extended to additional markets at relatively low cost. Multinational banking has also brought Citi the benefits of diversification. When the U.S. economy has been in recession, profits from overseas operations have helped to offset Citi's losses at home.

In 1994, the North American Free Trade Agreement (NAFTA) created a free trade area encompassing the United States, Canada, and Mexico. Among its provisions, the agreement liberalized trade in financial services. Since U.S. and Canadian banks were already free to operate in each others' countries, the main consequence was the opening up of the Mexican banking market to U.S. and Canadian banks.[17] U.S. and Canadian banks were allowed to acquire or establish Mexican subsidiaries beginning in 1994.

Foreign Banks in the United States. The foreign presence in the United States has expanded along with the general expansion of international banking. The U.S. market is attractive to foreign banks both because of its size and because of its language. English is the second language in most countries, and many European bankers find it easier to do business here than to expand into other countries in Europe.

In 1975 the 79 foreign banks with U.S banking offices accounted for less than 5% of total bank assets in the United States. By 1998 there were 243 foreign banks in the United States, and they accounted for 23% of total bank assets. But even this understates the increasing importance of foreign banks. For regulatory and tax reasons, foreign banks book much of their U.S. lending overseas (especially in the Caribbean).

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[17] Foreign banks were not allowed to open branches in Canada until 1999.

The Japanese are the largest single group, but their importance declined during the 1990s as part of the general retrenchment of their international activity. The Europeans together account for nearly 60% of foreign bank assets in 1998 and Canadian banks are a significant presence. Most foreign banks are located in the major banking markets—New York, California, Illinois, and Florida.

"Interstate" Banking in Europe. The nations of the European Union are committed to removing all barriers to trade in goods and services among them. The **Second Banking Directive**, adopted in December 1989, granted banks based in any member state a license to operate in any other member state without the need to register or to obtain a charter there.[18] Cross-border banking in Europe was further eased in 1999 when a subset of 11 member countries of the EU adopted a single currency, the Euro. These changes have kicked off a process of consolidation in Europe not unlike that in the United States following the easing of restrictions on interstate banking.

So far most of the consolidation has taken place within European countries rather than between them. Governments have encouraged domestic consolidation to create "national champions" that could hold their own in international competition. Some governments, such as those of Holland, Spain, Italy, and Denmark have used tax incentives and deregulation to actively encourage their banks to merge.

Cross-border mergers have mainly involved the smaller Scandinavian and Benelux countries. However, some banks in the larger countries have been active in cross-border acquisitions. For example, Germany's Deutsche Bank owns or controls banks in Austria, Italy, the Netherlands, Portugal, and Spain; France's Crédit Lyonnais bought banks in Spain, Belgium, the Netherlands, and Italy.

In addition to mergers and acquisitions, there have been a number of joint ventures and strategic alliances. These enable firms to work together without either firm relinquishing control of its own operations and activities. They are also a form of "trial marriage." Firms can get to know one another and form ties. If things work out well, a full merger may result. If not, the ties are relatively easy to dissolve. The largest existing alliance centers on Spain's biggest bank, BSCH, which has cross-shareholdings with Royal Bank of Scotland, Société Générale in France, Commerzbank in Germany, and San Paolo IMI in Italy. Such alliances have seen, however, little or no actual integration of activities to reap economies of scale and scope. Some observers suspect that their main motive may be to block acquisition by other banks.

Considerable obstacles to consolidation remain. In many European countries—especially Germany, Italy, Spain, and France—government ownership of banks is significant. In many, too, there are large "nonprofit" banks (mutuals and cooperatives). Since neither governments nor nonprofits are driven by the bottom line, they are less responsive to the imperatives of economic efficiency. Governments, that of France in particular, have found ways to block foreign banks from taking over their "national champions." Even where cross-border acquisitions have taken place, the diversity of legal and tax environments makes it difficult for banks to offer universal products.

[18] The license was also available to banks from countries outside the EC as long as their home governments allowed free entry to EC banks.

Problems of Multinational Banking. In addition to the legal and regulatory obstacles to foreign entry put up by governments, expanding into a foreign country is inherently more difficult for a bank than expanding within its own country. The difficulties include differences in language and culture, poorer information, and fewer business relationships than home-country banks. As a result of the informational disadvantages, when foreign banks expand their loan portfolios, they often wind up with the lemons that domestic banks have turned down. And of course, there is the classic problem of controlling a distant branch. A new overseas branch or subsidiary is initially given considerable independence, on the assumption that it knows local conditions best. The result is frequently disappointing.

In the United States, for example, many foreign banks have taken substantial losses on their U.S. operations, and some have pulled out. Crocker National, owned by Britain's Midland Bank, lost $324 million in 1984 before it was sold to Wells Fargo; NatWest Bancorp, owned by Britain's National Westminster, lost $352 million in 1990 on its U.S. operations; Barclays lost $397 million in 1991 before selling its retail branch network to Bank of New York (it had previously sold its California retail operations to Wells Fargo).

Multinational banking has run into problems in Europe too. Britain's National Westminster lost money on its branches in France as well as those in the United States. And the European acquisition spree of France's Crédit Lyonnais, mentioned earlier, ended in major losses.

Some banks are sufficiently efficient that the economies of scale of multinational expansion outweigh these disadvantages. However, for many, multinational expansion has been less than a stunning success. Studies have generally found that foreign banks in a country do less well on average than comparable domestic banks.

Offshore Banking: The Eurocurrency Market

We turn now to a different form of international banking—offshore banking. Like multinational banking, offshore banking involves banks operating outside their home countries. However, they operate not in the local currency, but in their home currency or in an international currency. Offshore banking is largely synonymous with the Eurodollar or Eurocurrency market. Eurodollar banking, which emerged in London in the late 1950s, is an interesting example of bank innovation.

The Origins of the Eurodollar Market. One of the risks of international trade is exchange rate risk. For example, if a Brazilian merchant importing cars from Japan agrees to pay in Japanese yen, he faces the risk that the yen will appreciate before payment is made, causing a capital loss. Setting the price in cruzeiros merely shifts the risk to the Japanese exporter. The risk to both can be minimized by invoicing in a stable international currency. Then each trader can limit his risk to changes in the value of his own currency vis-à-vis the international currency—something he is better able to handle.

Up until World War II, the pound sterling played the role of international currency. Not only was trade with Britain conducted in sterling, but so too was a significant fraction of third-party trade. Invoicing trade in pounds sterling had the additional advantage of making it easier to finance and insure in London. This was desirable because London offered the lowest interest rates and the lowest insurance premiums.

For a century and a half, London was the world's financial center. Its preeminence depended on the position of the British pound sterling as the principal international currency. However, after World War II, the chronic weakness of the British economy led to instability in the value of the pound, undermining its usefulness for international transactions. Increasingly, the pound was displaced as the principal international currency by the dollar. The decline of the pound reduced the demand for sterling finance and threatened London's role as a financial center.

London bankers came up with a simple solution: lend in dollars. However, to lend in dollars the London banks needed dollar deposits. Lending in dollars on the basis of deposits in pounds sterling would have exposed them to too much exchange rate risk. The London banks had long accepted small amounts of deposits in foreign currencies to accommodate their customers, but these were not sufficient to support a major increase in dollar-denominated lending.

As luck would have it, there was at the time a growing demand for dollar deposits located outside the United States. Because the postwar monetary system was based on the dollar, most countries kept their foreign exchange reserves in this form. However, many countries—especially those of the communist bloc—were on less than friendly terms with the United States. While they wanted to hold dollars, they did not want to those dollars to be in the United States. There was too great a danger that, in an international crisis, they would be frozen by the U.S. government. Holding dollar deposits at London banks was an attractive alternative.

The London banking market in dollars came to be known as the Eurodollar market. For British and other non-U.S. banks in London, it provided a way of doing business in U.S. dollars—the dominant international currency—rather than in the declining pound sterling.

What is a Eurodollar? To understand just how Eurodollar banking works, let us look at some typical Eurodollar transactions.

Suppose that a U.S. corporation, AT&T, deposits $5 million at a British Eurodollar bank, Barclays. AT&T makes the deposit with a check drawn in its New York bank, Chemical. When the check clears, the effects on the balance sheets of the two banks are as follows:

BARCLAYS BANK (LONDON)

Deposits at other banks		Time deposits	
Chemical	$5m	AT&T	$5m

CHEMICAL BANK (NEW YORK)

		Checking deposits	
		AT&T	−$5m
		Barclays	+5m

Notice that no dollars have left the United States as a result of this transaction. All that has happened is that 5 million U.S. dollars—in the form of Chemical Bank checking deposits—have passed in ownership from AT&T to Barclays. Instead of the $5 million in its checking deposit in New York, AT&T now has $5 million in a Eurodollar time deposit in London.

Since it earns no interest, Barclays will not want to keep this balance at Chemical. So it uses the funds to make a loan to Microsoft. It does not make the loan by creating new checking deposits in the way we saw in Chapter 2. It cannot. Eurodollar banks in London are not allowed to offer checking deposits. So Barclays makes the loan by writing Microsoft a check on its deposit at Chemical. Microsoft deposits the check at Chase, its New York bank, and the effects are as follows:

BARCLAYS BANK (LONDON)

Deposits at other banks			
Chemical	−$5m		
Loans			
Microsoft	+5m		

CHEMICAL BANK (NEW YORK)

Deposit at Fed	−$5m	Checking deposits	
		Barclays	−$5m

CHASE (NEW YORK)

Deposit at Fed	+$5m	Deposits	
		Microsoft	+$5m

The total effect on the Barclays balance sheet, of the deposit and of the loan together, is

BARCLAYS BANK (LONDON)

Loans		Time deposits	
Microsoft	$5m	AT&T	$5m

Barclays, which is not a U.S. bank and cannot create U.S. dollars, is thus acting as a financial intermediary in U.S. dollars. In this respect, it is doing much the same as would any nondepository intermediary—for example, a finance company or a pension fund.

Notice that all the dollar payments are executed in New York between New York banks. (In reality, they would be made over an electronic network called CHIPS, rather than by check.[19]) There are no dollars in London and no dollar payments are made there.

These transactions are typical of transactions in the Eurodollar market. Eurodollar banks are financial intermediaries, but they cannot themselves create dollars or execute dollar payments. Eurodollar banks rely on the U.S. banking system—mainly on New York banks—to execute their payments.

U.S. Banks in the Eurodollar Market. Initially, the London branches of U.S. banks had had very little to do with the Eurodollar market. However, in the late 1960s, as

[19] We shall discuss CHIPS in Chapter 8.

market interest rates rose, the treasurers of American companies began to switch their business from banks in the United States to Eurodollar banks in London.

Eurodollar banking in London was relatively unregulated. There was no Regulation Q, no reserve requirements, no required equity ratios, and no deposit insurance premiums. This meant that Eurodollar banks could offer higher rates on deposits and charge lower rates on loans. U.S. companies that did business overseas found it easy to keep some of their liquid assets on deposit in London to earn the higher deposit rates and to borrow there at the lower loan rates.[20]

Worried about losing business to the British and to other foreign Eurodollar banks, U.S. banks used their branches in London to enter the Eurodollar market. U.S. banks that lacked branches in London began to open them.

The involvement of U.S. banks in the Eurodollar market increased sharply in 1968 and 1969. The Fed, trying to fight inflation by restricting bank lending, had refused to raise the Regulation Q ceiling on NCDs. Faced with a massive loss of deposits, banks responded by channeling the funds through their Eurodollar branches. A bank with maturing NCDs encouraged its customers to redeposit their funds at its London branch; the London branch then lent the funds back to the U.S. bank.[21]

Another regulation that pushed U.S. banks into the Eurodollar market was a limit, imposed in the 1960s, on bank lending to foreigners. Banks could get around this limit by making foreign loans out of their overseas offices and funding them with Eurodollar deposits. These Eurodollar deposits could come from the Eurodollar market, from the banks U.S. customers, or even from the parent bank itself.

The regulations that pushed U.S. banks into the Eurodollar market were eventually dropped—Regulation Q limits on NCDs in 1970, the restrictions on foreign loans in 1974. However, some regulatory costs remained, such as reserve requirements and deposit insurance. These still gave Eurodollar banking an advantage. In any event, by then U.S. banks had learned the ropes, and they had no reason to give up Eurodollar banking.

The attempts of U.S. regulators to regulate U.S. Eurodollar banks have generally been futile. U.S. regulators have the power to regulate overseas branches and subsidiaries because they have authority over the parent bank in the United States. However, the Eurodollar market is highly competitive. Any additional regulation imposed on U.S. participants that is not imposed on other Eurodollar banks puts the American banks at a competitive disadvantage. For example, imposing a reserve requirement on deposits at overseas branches of U.S. banks would force these branches to lower the rates they offer on their deposits. Because the regulation would not apply to non-U.S. banks, the rates of those institutions would remain the same. Depositors would switch banks to earn the higher rates, and this would simply drive the U.S. banks out of the market.

The appeal of Eurodollar banking to U.S. banks was, therefore, quite different from its appeal to British banks. For U.S. banks, it provided a relatively easy way to move certain activities offshore, beyond the reach of U.S. regulators.

[20] We saw in Chapter 6 that at this time corporate treasurers were also withdrawing funds from banks and investing them in the U.S. money market.

[21] The idea is very similar to that employed in the overnight Eurodollar device that we saw in Chapter 6. In this case, the funds are of longer maturity, and there is no automatic transfer between Eurodollars and a checking deposit.

shell branch (booking center) A bank office that does no business directly but books business sent to it from other offices.

Shell Branches. Many U.S. banks wishing to enter the Eurodollar market found the cost of a London office too high. A less expensive way to enter the market is to open a Caribbean **shell branch** or **booking center**. This is typically a small office, say in Nassau, that does not conduct banking business directly. It may have hundreds of millions of dollars in loans and deposits, but the loans are made and the deposits are taken in the parent bank's home office. The Nassau "branch" is simply a set of books kept by some local people on instructions from the parent bank. Shell branches are also attractive to the larger banks because of the low tax rates of the host countries. The Caribbean region has a particular advantage as a location for shell branches in that it falls in the same time zone as New York, making office hours there the same as those at the home office.[22]

international banking facility (IBF) An entity authorized to operate within the United States as an offshore bank.

International Banking Facilities. Today, Eurodollar banking takes place even in the United States itself—"onshore offshore banking." In 1981, partly to stop the loss of jobs to overseas branches, the Fed authorized banks and Edge Act corporations to establish **international banking facilities (IBFs)** in the United States.

An IBF can do most of the things a Eurodollar bank can. It is not subject to reserve requirements, deposit insurance premiums, or interest rate ceilings. However, an IBF is not allowed to offer overnight deposits. It can do business with entities outside the United States without restriction. However, within the United States, it may do business only with other IBFs and with its parent bank. Physically, an IBF is usually simply a department at a regular bank office in the United States.

The popularity of IBFs among U.S. banks has declined since the mid-1980s as regional banks have reduced their international lending. However IBFs remain popular among foreign banks in the United States, which do considerable international business.

The success of IBFs in the United States spurred the Japanese government to initiate a similar program in 1986. IBFs have proven popular in Japan too, particularly with regional and small banks that previously had no direct access to the Eurodollar market.

Eurocurrency banking Banking anywhere in any currency other than that of the host country.

From Eurodollars to Eurocurrencies. While the Eurodollar market was originally limited to U.S. dollar deposits and loans in London, its scope today is much wider. The market has grown, both geographically and in terms of the currency denomination of deposits and loans. The term **Eurocurrency** is now used for deposits and loans anywhere in any currency other than that of the host country. For example, deposits of Japanese yen at a bank in Hong Kong are also considered "Eurocurrency" deposits.

Within Europe, the Eurocurrency market has spread to other financial centers such as Luxembourg, Paris, and Rome. It has spread to the Caribbean—for example, the Cayman

[22] Income from a foreign branch is subject to taxation both by the United States and by the country in which the branch is located. For example, if Morgan earns $100 million in London, it might owe $30 million in U.S. taxes and $50 million in British taxes. However, U.S. tax law allows banks to credit payment of foreign taxes against their U.S. tax liability. In our example, Morgan could credit the $50 million it pays in Britain against the $30 million it owes the U.S. This still leaves $20 million of taxes "wasted." However, if Morgan shifts half its business from London to Nassau (where there are no taxes), it will pay only $25 million in British taxes. It can credit this against the $30 million it owes in U.S. taxes. Moreover, while income of foreign branches is subject to U.S. federal income tax, it is not subject to state and local taxes. These are a particular burden in New York City. So shifting business from New York to a shell branch is also advantageous even if it does not reduce federal taxes.

Islands, the Bahamas, and Panama—and to the Middle East (Bahrain). In the Far East, Eurocurrency banking is conducted in Singapore, Hong Kong, and Tokyo. Europe now accounts for approximately 50% of the total, and London itself for no more than a third.

The dollar is no longer the predominant currency of the Eurodollar market. Before 1985, it accounted for 75% to 80% of deposits. By 1987 only 58% of Eurocurrency deposits was denominated in dollars. The German mark, the Swiss franc, and the Japanese yen all increased their share.

The Eurocurrency market offers banks from other countries the same advantages of offshore banking as it offers U.S. banks. It is relatively unregulated, allowing banks to operate at lower cost and to carry on activities that are restricted or prohibited at home. As we have seen, domestic regulators are reluctant to extend domestic restrictions to offshore offices because it would place their banks at a competitive disadvantage. On the other hand, regulators in Eurocurrency centers realize that tougher regulation will simply drive the business to some other, less regulated, center.

The Growth of Eurocurrency Banking. Exhibit 7.4 shows how Eurocurrency banking has grown since 1973. Measuring its true size is a little difficult because of the enormous amount of interbank lending. We take as our measure of size the amount of deposits *less* deposits of other banks. You can see that growth was interrupted by the banking problems of the early 1980s. Exhibit 7.4 also shows the proportion of Eurodollar deposits denominated in U.S. dollars. This has been trending downward.

THE IMPLICATIONS OF BANKING CONSOLIDATION

We see, then, that the banking industry is undergoing a wave of consolidation. This is true both within countries—for example, the movement towards interstate banking in the United States—and between countries—for example, consolidation within the European Union. What are the implication of this wave of consolidation for the banking industry itself and for its customers?

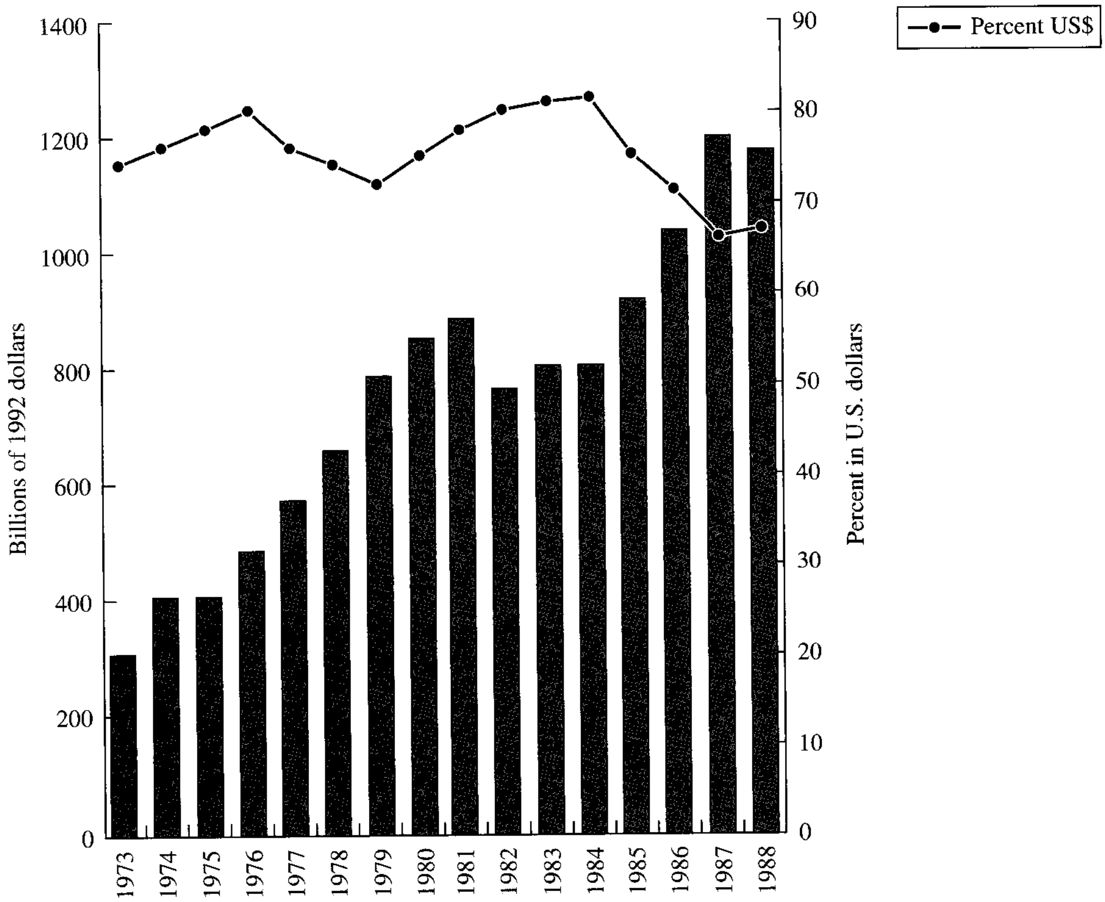
The Implications of Consolidation for the Banking Industry

Consolidation increases the efficiency of the banking industry—it enables banks to produce their "output" at lower cost. Consolidation does this in several ways: it permits banks to capture economies of scale; it weeds out the least efficient banks; it opens protected markets to greater competition; and it reduces the cost of financial integration.

Economies of Scale. Consolidation creates larger banks, and, as we have seen, larger banks should enjoy economies of scale—financial, operational, and reputational. There have been a large number of empirical studies that have tried to see whether consolidation really does improve bank efficiency. The evidence is mixed, and there are several reasons for this.

Many studies of mergers focus exclusively on operational economies of scale—on the reduction of cost (mainly fixed cost). In this respect, some mergers have been highly suc-

EXHIBIT 7.4 The Growth of Eurocurrency Banking



Source: Morgan Guaranty Trust Company (1988).

cessful. For example, the merger of Chemical and Manufacturers Hanover cut the costs of the combined bank by some $2.5 billion a year, mostly by eliminating overlapping branches. However, not all mergers have been this good at lowering costs, and, on average, the gains have been small. However, these studies do not take into account the financial and reputational economies of scale. Some researchers have attempted to measure these and have found them to be significant. It seems that the big gains from consolidation come less from lowering operational cost than from more profitable "production"—higher yielding assets and less expensive funding.

To some extent, the ability of banks to benefit from the financial and reputational economies of scale has been limited by government regulation. In principle, because larger pools work better, large banks should be able to make do with smaller reserves; they should also be able to manage with less equity; and they should be able, nonetheless, to offer depositors greater liquidity and safety. Historical studies confirm these theoretical results. They show that in unregulated banking systems, larger banks had smaller reserves, lower equity ratios, and were still safer than smaller banks.

However, there are today few if any unregulated banking systems. Most countries have legal reserve requirements that impose the same minimum reserve ratios on large banks as on small.[23] They also have legal capital requirements that impose the same minimum equity ratios on large banks as on small. Many countries have either explicit or implicit deposit insurance that makes deposits at small banks just as safe (for the depositor) as deposits at large banks. In the United States, in particular, small banks have been able to continue to compete with large banks for so long only because the playing field has been 'leveled' by regulation.[24] As we have seen, it is regulations such as these that have driven a great deal of banking into the less regulated offshore market.

The Survival of the Fittest. Of course, all the theoretical economies of scale merely represent a *potential* for greater efficiency. Whether a given bank achieves this potential depends on the quality of its management. We should not be too shocked to hear that not all banks are managed well. With respect to operational efficiency, for example, studies suggest that the average bank in the United States is at about only 80% of its potential.[25] Since U.S. banks are unlikely to be especially bad in this respect, banks in some other countries may be much further below their potential.

Consolidation improves the overall efficiency of the banking industry by bringing average efficiency closer to potential efficiency.[26] Consolidation does this in several ways. First, common sense suggests, and the evidence confirms, that more efficient banks tend to take over less efficient banks. As the more efficient grow larger and the less efficient disappear, average efficiency increases. Second, the removal of protective barriers that makes consolidation possible also increases competitive pressure. Managers realize that for their banks to survive, they have to do better. So even the banks that are not themselves involved in consolidation tend to improve their efficiency.

Greater Efficiency of the System. Whatever its effects on the efficiency of individual institutions, consolidation should improve the efficiency of the financial system as a whole. As we saw earlier, banking systems that were prevented from consolidating found ways to capture economies of scale between banks rather than within banks. They did this through correspondent relationships and money markets that helped to integrate the financial system. These solutions, however, were relatively costly: because they involved many more transactions between institutions, they incurred much higher transactions costs.

For example, in a fragmented banking system, a loan made in the West from funds originating in the east passes through a whole series of intermediaries—the eastern depositor's bank, that bank's correspondent, the western borrower's bank, and that bank's correspondent (see Exhibit 7.1). Or if the money market is involved, it passes through the hands of underwriters, dealers, and brokers. At each stage, there are costs. In contrast, with

[23] Actually, in the United States, small banks have slightly lower reserve requirements. The general reserve requirement is 10% on checking deposits. However, the first $46.8 million of deposits is subject to only a 3% reserve requirement. There is no economic reason for this break. It is simply evidence of the political power of small banks.

[24] This is not an accident. We shall see in Chapter 19 that preserving small banks from being driven out of business was the major motivation for the enactment of deposit insurance legislation in the 1930s. Small banks have also been helped, as we have seen, by the system of correspondent banks and money markets, which enabled banks to capture some of the financial economies of scale externally rather than internally.

[25] See Berger (2000). These studies compare banks in general to the most efficient banks in the industry.

[26] Jayaratne and Strahan (1996a) find that the consolidation that took place within states after the barriers to statewide branching were removed resulted in both lower operating costs and lower loan losses.

a consolidated banking system, lending is simple. There is a single intermediary, and funds move from east to west within a single bank (see Exhibit 7.2). Because there are fewer transactions, costs are lower.

Consolidation lowers transactions costs, not only in lending, but also in payments (see Exhibits 7.1 and 7.2 again). For example, clearing checks through the relatively fragmented U.S. banking system is considerably more expensive than clearing them through the consolidated Canadian system. For example, when a Miami bank receives a check drawn on one in Seattle, the check must go through a complicated procedure. It is processed and sorted several times by different institutions as it is passes from one to another. The whole process takes several days to complete, while the depositor waits for the funds. In Canada, major banks have branches all over the country. So when a bank in Vancouver receives a check drawn on a bank in Halifax, Nova Scotia, clearing is quick and easy. First, there is a good chance that the two banks are branches of the same institution. In that case, the check clears within the bank almost instantaneously. If not, it is almost certain that the Halifax bank is the branch of an institution that also has branches in Vancouver. That means that the check can be presented for payment at the Vancouver clearinghouse and payment can be received the same day.

The Implications of Consolidation for Bank Customers

Consolidation increases the efficiency of the banking system and lowers the cost of bank "output"—principally intermediation and payment services. In a competitive environment, the lower costs should be passed on to the customer. Evidence suggests that in the United States at least, this has indeed been the case.[27]

Stimulating Economic Growth. Greater efficiency and lower costs for the customer also have implications for the economy as a whole. As we saw in Chapter 3, a reduction in the cost of borrowing and lending leads to an increase in amount of borrowing and lending and to an improvement in its quality. More funds flow into investment, and they flow into better investment. Once again, the evidence confirms this. A study of the effects of allowing intrastate branching in the United States found that real economic growth increased significantly in the states in question in the period following the change.[28]

Lending to Small Business. One area of concern is lending to small business. Since small banks typically do more of such lending relative to their overall assets, there were fears that the disappearance of small banks might reduce credit availability for small businesses. However, much of the consolidation in the United States has involved medium-sized banks acquiring smaller banks. The acquiring banks are often themselves specialists in small-business lending, and because they are larger than the banks they acquire, they are able to offer their new customers larger loans without compromising their diversification. At the same time, as we saw in Chapter 6, the really large banks have been using credit scoring to develop automated methods of making small-business loans. In total, recent research suggests that the effect of consolidation on small-business lending has been positive.

[27] See Jayaratne and Strahan (1996a).

[28] See Jayaratne and Strahan (1996b).

Better Access to Banking Services. Because of its lower costs, a consolidated banking system of multibranch banks provides better access to banking services, especially for small communities. The overhead costs of setting up a branch are low relative to those of setting up a whole new bank. As a result, branch banks find it worthwhile to set up offices to serve small markets where it would not pay to set up a separate new bank.[29]

Moreover, banking consolidation and the resulting pressure to lower costs, together with modern technology, have led banks to reinvent the bank branch and to find alternative ways of delivering banking services at lower cost. In the past decade, banks have opened thousands of minibranches in supermarkets and other large retail outlets: their number increased from 1,000 in 1990 to 4,500 in 1996.[30] Such minibranches cost only a fifth as much to set up as a traditional branch and only half as much to operate.

Modern technology makes it possible to offer many banking services without actually setting up a branch. Automated teller machines (ATMs) can dispense cash, accept deposits, and conduct various other transactions at locations remote from the bank that owns them. The number of ATMs has risen rapidly—almost doubling between 1994 and 1998 to 190,000. While most of these machines are located at bank branches, many are at remote locations—in shopping malls, gas stations, and airports, for example. Banks are also able to offer many services by telephone and online. Attempts to establish online-only banks on the Internet have not, however, been a success: customers seem to lack confidence in a bank that has no visible physical presence.

In the meantime, banks have been refocusing their traditional branches on providing the kinds of product that require face-to-face contact. These include long-term saving products and insurance.

Competition. We saw in Chapter 3 that there are three conditions for efficiency of a financial system—integration, minimum costs, and competitive pricing. Consolidation certainly helps with the first two, but what about the third?

Consolidation can produce a banking system made up of a few giant banks. A small number of banks can more easily act as a cartel. They find it easier to collude—openly or tacitly—to raise prices and to reduce the level of service. Because customers lack alternatives, the members of the cartel can raise prices without losing much business. If they all agree to close on Saturdays, customers can only grumble. Reduced competition not only leads to monopoly profits and worse service, it may also lead to simple laziness—reduced effort and higher costs. If profits are good, banks may avoid the effort of introducing new technology or the risk of entering or developing a new market.

The experience of banking consolidation in many countries suggests that these concerns are not entirely misplaced. For example, the few big banks in England did for a long time operate as a cartel. They had a gentlemen's agreement not to compete on loan and deposit rates, setting them at common levels. They were also slow to adopt new technology and to enter new markets. The pattern has been similar in other countries.

In the United States, while there has been increasing concentration, the number of banks remains large. The largest single bank still has a market share of well under 10%.

[29] Calomiris (1992) quotes a study that found that branching increased the number of bank offices per square mile by about 65%.

[30] This accounts for much of the overall increase in the number of bank branches.

Moreover, concentration at the local level, which is more important, has remained about the same. The geographic restrictions in the United States actually prevented competition at the local level by preventing entry. Removing those restrictions has eroded the market power of local banks and increased the degree of competition.

Moreover, the size of the "local" market has expanded. For example, the average distance between a small firm and the bank it borrows from has increased significantly. As a result of the expansion of the market, banks are less able to exert local market power. Also, as we saw in Chapter 6, financial institutions other than banks now offer many of the same services. For example, small-business borrowers often borrow today from finance companies rather than from banks. As a result of the widening of the market and of the entry of nonbank competitors, local banks have little market power. While it used to be true that banks having few nearby competitors earned unusually high profits, this no longer seems to be the case.

Safety and Stability. The U.S. banking system has gone from crisis to crisis throughout its history. The instability of the U.S. banking system has much to do with its structure. Many of the banks in trouble were small, inefficient ones. Other, larger, banks got into trouble because of poor geographic diversification. In contrast to the U.S. experience, the Canadian banking system provides an example of stability. The Canadian system was never fragmented: its banks branched and grew with the expansion of the country. Consequently, Canada never experienced anything like the banking turmoil in the United States. Its large, integrated banks, with good diversification and liquidity, have been much better placed to weather economic adversity.

There are good reasons, therefore, to believe that consolidation of banking systems in the United States and in the world will improve bank stability.[31]

SUMMARY

- The banking industry worldwide is undergoing rapid consolidation.
- The evolution of banking structure has been molded by three factors—economies of scale, the technology of communications, and government regulation.
- The historical peculiarities of bank chartering in the United States have resulted in regulations that restrict the ability of banks to branch across state lines. For many years, branching within states was also limited.
- Because of the obstacles to branching, banks in England, the United States, and elsewhere developed alternative methods to capture potential economies of scale. Correspondent system and money markets allowed banks to enjoy many of the advantages of a branch system.
- U.S. banks learned to live with branching restrictions. They also found ways around the restrictions through holding companies and nonbank banks.
- The past 20 years have seen steady progress towards interstate banking in the United States. Initially, the initiative came mainly from the states. But in 1994 the Riegle–Neal Act removed most of the remaining restrictions.

[31] We shall discuss the connection between structure and stability more thoroughly in Chapter 19.

- International banking has expanded rapidly since the 1960s. There are four reasons: the recovery of world trade and international lending, the liberalization of financial markets, banks' attempts to capture economies of scale and scope, and banks' attempts to escape government regulation.
- U.S. bank involvement in multinational, as opposed to offshore, banking is small. However, foreign multinational banks have taken a substantial fraction of the U.S. banking market. And the adoption of the Euro has given a stimulus to cross-border banking in Europe.
- Multinational banking is modest, not only because of regulatory obstacles, but also because of inherent difficulties such as language and cultural barriers and information disadvantages.
- Eurodollar banking began in London. When the pound declined as an international currency, British banks began borrowing and lending in U.S. dollars.
- Eurodollar banks take only time deposits. They do not create U.S. dollars. Eurodollar transactions are executed through banks in New York and do not involve any movement of U.S. dollars out of the country.
- The attraction of the Eurodollar market for U.S. banks is that it allows them to escape banking regulations that hamper their operations in the United States. U.S. banks do much of their Eurodollar banking through Caribbean shell branches, and, more recently, through IBFs in the United States.
- The Eurodollar market has grown into a Eurocurrency market, involving many currencies other than the U.S. dollar and operating around the world.
- Consolidation should improve the efficiency of banking through lower costs and greater competition.
- Consolidation should benefit the economy as a whole, stimulating economic growth and improving access to credit and to banking services. There is a risk of market power, but it does not seem great in the United States. Consolidation should improve safety and stability.

DISCUSSION QUESTIONS

1. Why do banks want to expand? What are the advantages a large bank has over a small one? What are the obstacles to expansion?
2. How exactly does correspondent banking allow banks to capture economies of scale? Be specific. How does it help with liquidity, diversification, indivisibilities, and so on?
3. U.S. banks historically have relied heavily on the correspondent relationship. What are the benefits? What are the advantages and disadvantages relative to the branch banking systems that were common in most other countries? Are the relative advantages and disadvantages different today from what they were in 1800?
4. Why do you think that it has proven so difficult to remove the restrictions on interstate banking in the United States? Who stands to gain from their removal? Who stands to lose? Why do you think that interstate banking laws allow out-of-state acquisition of banks within the state rather than the opening of branches by out-of-state banks? Who benefits from this?
5. Why has international banking grown so rapidly? What do banks stand to gain? Distinguish clearly between multinational and offshore banking.
6. Why do you think foreign banks are more interested in local currency banking in the United States than U.S. banks are in local currency banking overseas? What makes entry into a banking market attractive? What are the obstacles?
7. What are the similarities between multinational banking in the European Community and interstate banking in the United States? What are the differences?

8. Chapter 3 lists three conditions for the efficiency of a financial system. Discuss the benefits and the dangers of banking consolidation in terms of those three conditions.
9. From the point of view of the borrower, the bank, and the banking system, how does lending by a Eurodollar bank differ from lending by a U.S. bank?
10. For a U.S. bank entering the Eurodollar market, what are the relative attractions of a London branch, a Caribbean shell branch, and an international banking facility?

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KEY TERMS

unit bank
National Banking Act of 1863
correspondent bank
respondent bank
money market
overline
holding company
multibank holding company
Douglas Amendment
one-bank holding company
Competitive Equality Banking Act of 1987
money-center bank
regional bank
superregional bank
Financial Services Agreement
multinational banking
offshore banking
Second Banking Directive
shell branch (booking center)
international banking facilities (IBFs)
Eurocurrency banking