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## *Financial Structure: An International Perspective*

IN RECENT YEARS many financial service firms in the United States and other industrialized countries have not prospered. Public confidence in the health of the U.S. banking system has declined as bank losses and failures have increased throughout the 1980s. Yet the record of U.S. banks, aside from their reported failures, is not so different from those in other countries. Banking troubles are not uniquely American.

In the past fifteen years banking and other financial service markets have undergone fundamental changes. In many cases national markets have moved from relatively stable environments, in which various types of firms operated in segmented markets protected by high regulatory barriers, to more fluid environments, in which market barriers are less restrictive and thus promote greater competition. The changes were often implemented through moves away from a relationship-based system of financial intermediation to one in which explicit market-based transactions predominated.

This basic change in the nature of banking systems was encouraged in many cases by national deregulatory initiatives. Many of these initiatives were associated with the removal of official sponsorship for deposit and loan pricing conventions. The initiatives have also resulted

The views expressed in this paper are those of the authors and should not be interpreted as representing the views of the Federal Reserve or its staff. We have received helpful comments from Mark Gertler, Larry Promisel, and members of the Brookings Panel. John Maluccio provided research assistance. We are particularly indebted to Paul Morgan for his continued assistance.

in fewer formal partitions of powers among various types of financial service firms.<sup>1</sup> A comparison of different countries reveals that more partitions now exist in the United States and Japan than in European countries.

The competitive environment for financial services has also been influenced by a number of other factors. In particular, lower communication and information processing costs have reduced the relative cost of writing and pricing customized financial contracts, such as over-the-counter foreign currency and interest rate options. Such contracts have frequently served to differentiate the offerings available from new entrants to banking markets from those available from established competitors. It has been a recurring pattern in national banking markets that the availability of such offerings has made it increasingly difficult for traditional bank clubs to coordinate member banks' behaviors in both old (deposit and loan) and new (state-contingent) financial product markets.

It is now widely accepted that national reform efforts will not coalesce around a single model, such as the universal bank model of Europe. Current reform proposals in the United States and Japan, for instance, do not follow this model. Furthermore, it is also highly likely that national legal structures will continue to reflect differences in national judgments concerning the responsibilities that can be prudently assigned to banks: in the United States and the United Kingdom, it has been a basic tenet that a bank with an equity interest in another firm should be presumed incapable of dispassionate analysis of that firm's creditworthiness; in countries with universal banking traditions, the presumption is reversed.

An important element of financial structure concerns the rules under which a firm's operations are continued or discontinued. In the United States and the United Kingdom, bankruptcy rules deter banks that are well informed about a troubled firm from controlling that firm's refinancing. In Germany and Japan, banks often organize refinancing for troubled firms through informal processes. Previous studies have often overlooked such fundamental differences in the national roles assigned to banks and have instead focused on differences in more visible elements of bank regulation, such as reserve requirements and interest rate

1. Germany and Morton (1985) provide an earlier discussion of some of the changes in foreign financial systems.

regulations. In this paper we expressly study the link between bank structure and bank performance in the hope of informing the international debate about financial-market reform.

Among previous efforts at reform, one international endeavor by bank supervisors of major industrial countries, which was called the Basle Accord, was an explicit attempt to erode national differences through the introduction of uniform minimum capital requirements for internationally active banks. The emphasis on capital as the most important supervisory focus has been carried forward in the U.S. Treasury's recent proposals for financial reform in the United States.<sup>2</sup> We believe, however, that a convergence of national policies on capital regulation will not necessarily ensure more fundamental alignments of bank roles internationally.

The methodology adopted in this paper is eclectic. A comparative analysis of banking systems is a research area where quantitative data are difficult to interpret—when they are available at all. The major economic role of banks is to make transactions that cannot easily be made in open, standardized markets. Such transactions are not easily analyzed using summary statistics. We examine the statistical evidence that is available, but we also rely on less formal information on financial structure. We hope to produce from these disparate sources a synthesis that draws reliable conclusions when possible and, when conclusions are not possible, marks those areas that invite further research. We believe this approach may help show which elements of the U.S. system contribute to its efficiency and stability and may also explain the international competitive pressures facing U.S. banks.

We begin our analysis of national banking systems by comparing the performances of the banking systems in Germany, Japan, the United Kingdom, and the United States. Because the measurement of banking performance is very difficult, we select statistics that cast some light on the relative performance of systems both across time and between countries. The data, while subject to some limitations, do allow some conclusions regarding differences in bank performance.

In the second section of this paper, we explore the characteristic structures of each national banking system and also describe each country's regulatory structures, including their practices regarding de-

2. See U.S. Department of the Treasury (1991).

posit insurance, interest rates, asset restrictions, and restrictions on the scope of activities in which banks may engage. We then consider the degree of competition within different national banking markets, the nature of bank relationships with customers, and the legal environment in different countries, especially with respect to bankruptcy.

In the third section, we bring all these elements together in an effort to explain disparate banking performances. We argue that regulatory differences do not entirely explain performance differences. Instead, how banks form and preserve customer relationships plays an important role, as does the degree of competition. Given the difficulty in measuring performance, this link between structure and performance is only incompletely drawn.

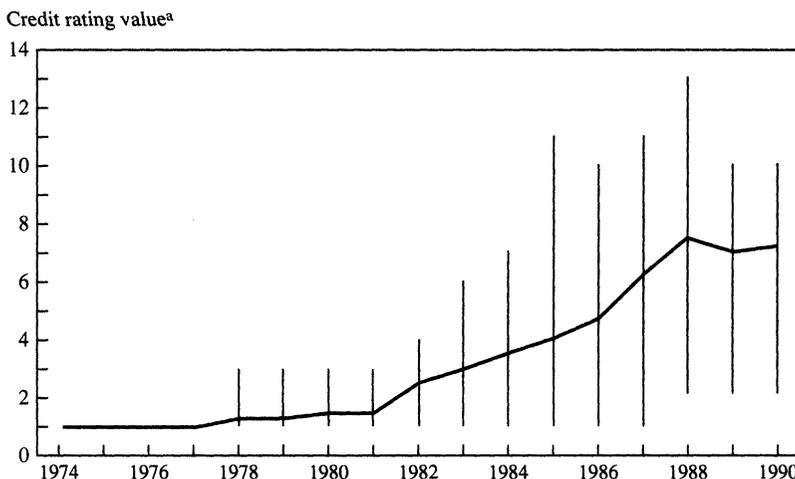
In the final section, we assess what foreign experiences can teach U.S. policymakers about structural reform in the United States. We examine this question from the perspectives of efficiency and stability.

### **Measuring Bank Performance**

This section examines statistics pertaining to the health of the banking industry in Germany, Japan, the United Kingdom, and the United States. It also considers several measures of the impact of each banking system on the rest of that country's economy. While we must interpret these statistics with care, several conclusions emerge.

The first set of conclusions concerns time-series data on our four countries. In the United States, the health of the banking system has deteriorated over the past twenty years. This deterioration has been accompanied by the development of sophisticated new financial instruments, as well as by a substantial increase in the number of corporate bankruptcies, a phenomenon that has also occurred in the United Kingdom. Banks in Germany and Japan, however, have expanded more rapidly over this period than have banks in the United Kingdom and the United States.

A second set of conclusions utilizes cross-sectional data. Banks supply a smaller percentage of total corporate finance in the United States than in other countries. British and Japanese banks appear to be the most profitable, although different accounting practices cloud this issue. The profits of German and Japanese banks appear the most stable. And large

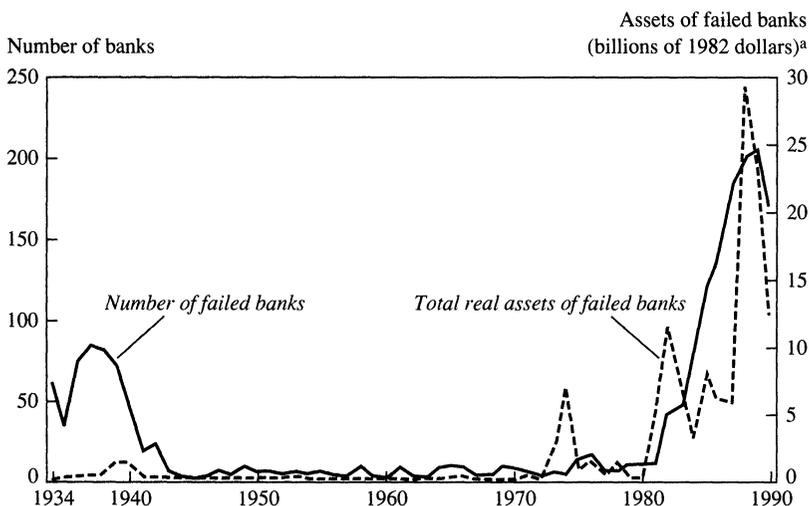
**Figure 1. Bond Ratings of Major U.S. Banks, 1974–90**

Source: Moody's Investor Services. The horizontal line denotes the annual average of Moody's senior bond ratings for nine major U.S. money-center bank holding companies. The vertical lines show the range of ratings for a given year. The sample consists of nine companies from 1978 on, and fewer in preceding years because fewer companies received bond ratings.

a. Bond ratings are assigned numerical scores based on a letter-based credit rating system. The highest letter grade (for example, AAA) is assigned a value of 1, the next level a 2, and so on.

U.S. banks appear to be in poorer health than their counterparts in other countries, at least judging from a comparison of their bond ratings. Finally, corporate investment fluctuates much less in Japan than in the other countries.

Examining these issues in greater detail, we turn first to the deterioration in the health of American banks. Figure 1 shows the average bond ratings of nine major money-center bank holding companies in the United States since 1974. The bond ratings of these firms worsened greatly over the 1980s, with the deterioration initiated by the international debt crisis of the early 1980s. Ratings continued to deteriorate through 1990; between 1981 and 1990, average ratings improved in only one year, 1989. This deterioration may be partly a function of bank holding companies' having issued more bonds, thus increasing the risk to any one bondholder. However, bank issuance of bonds peaked in the mid-1980s in response to supervisory concerns about bank capital positions. That bond ratings continued to slide suggests a genuine deterioration in the health of the banks and not simply the effects of

**Figure 2. Bank Failures in the United States, 1934-90**

Source: Federal Deposit Insurance Corporation (1990); the 1990 figure is an unpublished number from the FDIC.  
 a. The total nominal assets of the failed banks have been deflated by the GNP implicit price deflator using 1982 as the base year.

more bonds on the market. Figure 1 also shows that the range of bond ratings has expanded over time.

One potential flaw in using these bond ratings is that the data cover only large money-center bank holding companies. These companies, in contrast to smaller regional banks, were heavily involved in Third World debt. Another possible flaw is that the value of the bonds of a large bank holding company could decline not only in response to the deteriorating conditions of banks but also if the market perceives that the authorities were more likely to allow that holding company to fail.

However, other measures that take in a broader set of banks corroborate the conclusion that the health of American banks has deteriorated. Figure 2 displays the number and aggregate size of failures of FDIC-insured banks in the United States since the inception of the FDIC in 1934. The number of bank failures rose sharply throughout the 1980s. In 1982, more than 40 U.S. banks failed, the largest number since 1940. In 1985, 120 banks failed, more than in any other year since the FDIC was founded, and the number grew still larger between 1985 and 1989, when 206 banks failed. The year 1990 saw a dip in the number, with 168 banks

**Table 1. Outstanding Interest Rate and Currency Swaps, 1987–89**

Billions of dollars

<i>Type of swap</i>	<i>1987</i>	<i>1988</i>	<i>1989</i>
Interest rate swaps	682	1,010	1,503
Currency swaps	184	320	449

Source: Bank for International Settlements (1991, pp. 72–73). The table shows the end-of-year outstanding worldwide value of the notional principal of interest rate and currency swaps, which are the hypothetical underlying amounts on which swap payments are based. Figures include values for all counterparties, including interbank, end-user, and brokered swaps.

failing. The total assets of failed banks, adjusted for inflation, reached a peak in 1988.

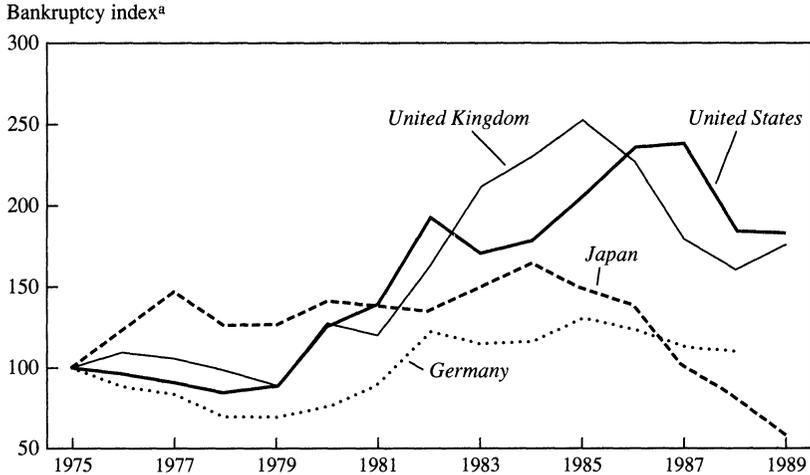
Informal evidence suggests that the nature of banking has also changed greatly in recent years, especially in the United States, but also in other countries. Banks have reportedly turned from offering standardized loans to customers with whom they have developed long-term relationships to engaging in more market-oriented transactions using derivative securities. Quantitative evidence of this trend is scarce. It is clear, however, that markets for derivative financial products have grown rapidly during the past decade. Table 1 provides evidence for the growth of one such market. It shows that the notional principal of outstanding currency and interest rate swaps has grown rapidly, even between 1987 and 1989.<sup>3</sup> The amount of swaps outstanding worldwide more than doubled over these two years, reaching a total principal of roughly \$2 trillion.

Figure 3 shows that in the 1980s the number of corporate bankruptcies increased greatly in both the United States and the United Kingdom. In both countries, the number of bankruptcies in 1989 was approximately twice that of 1975. By contrast, the number of bankruptcies in Germany and in Japan has shown no clear upward trend.<sup>4</sup> As we discuss later in

3. A swap is a financial transaction in which two counterparties agree to exchange streams of payments over time according to a predetermined rule. A swap is normally used to transform the market exposure associated with a loan or bond borrowing from one interest rate base (an interest rate swap) or currency of denomination (a currency swap) to another. The term “notional principal” refers to the hypothetical amount on which swap payments are based.

4. Our data are broad measures of corporate bankruptcies in the four countries. However, our concept of bankruptcy differs from country to country; thus the data are not strictly comparable across countries.

**Figure 3. Relative Levels of Corporate Bankruptcies in Four Industrialized Countries, 1975–89**



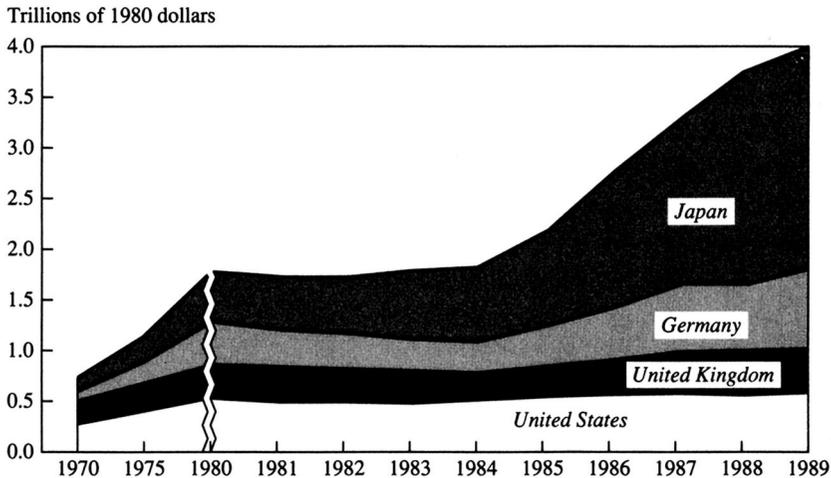
Sources: Corporate bankruptcies in Japan involving liabilities of more than 10 million yen are from *Monthly Statistics of Japan*, January 1991; corporate bankruptcies in Germany are from *Statistisches Jahrbuch für die Bundesrepublik Deutschland*, various editions; company compulsory insolvencies in the United Kingdom are from *Financial Statistics*; and business bankruptcies in the United States are from the Federal Reserve.

a. An index of corporate bankruptcies in each country is shown, with the number of bankruptcies in 1975 = 100 in each country. Cross-country comparisons of the absolute number of bankruptcies were not considered meaningful because of the differences in national definitions of bankruptcies.

the paper, the bankruptcy regime differs greatly between these two pairs of countries. Formal bankruptcy proceedings tend to be replaced in Germany and Japan by informal workouts.

The experience of banks has also varied greatly in different countries. Figure 4 shows that the value of the assets of the largest Japanese banks has grown rapidly over the past twenty years. Assets of German banks, too, have grown substantially over this period, although they started from a smaller base in 1970 than did Japanese banks. The assets of large U.S. and U.K. banks grew very little over this period. In asset terms, banking markets in 1970 were dominated by British and American banks; by 1989 they were dominated by large Japanese banks, whose assets had become greater than the *combined* assets of the large banks of the other three countries.

Part of the relatively fast growth in Japanese banks can be attributed to the relatively fast growth of the Japanese economy. Figure 5 adjusts for this by scaling the assets of large banks in the four countries by the

**Figure 4. Real Assets of Largest Banks in Four Industrialized Countries, 1970–89**

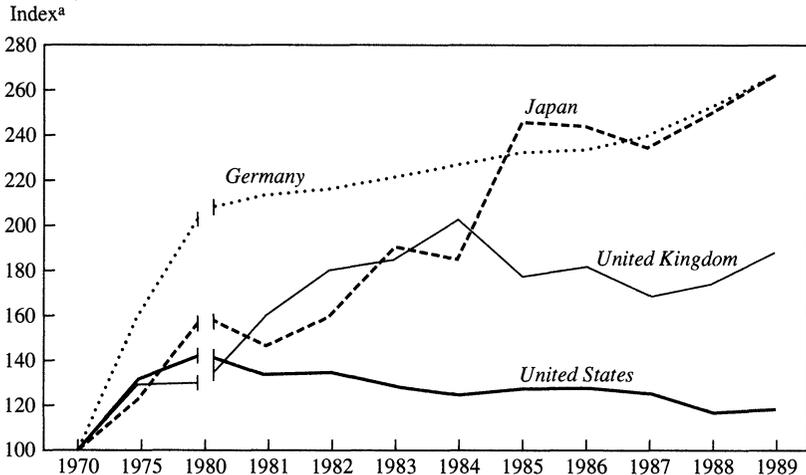
Sources: *The Banker*, various issues; and the Federal Reserve. The eight largest banks in each country were determined for each year on the basis of reported end-of-year assets. The assets of the eight largest banks were converted to dollars at end-of-year exchange rates and were deflated by respective GNP deflators using 1980 as the base year, except for the U.K. figure, which has been deflated by its GDP deflator.

GDP of their respective country. Still, relative to the size of the economy, the large U.S. banks have grown the slowest over the past two decades and have actually shrunk since 1980. By this scaled measure, German banks have grown at approximately the same rate as Japanese banks, while British banks have grown more slowly. In both Germany and Japan, large banks have more than doubled their size relative to GDP in the past twenty years. Thus, during a period when U.S. banks have shown little growth, German and Japanese banks, and to some extent British banks, appear to have expanded their roles in their respective economies.<sup>5</sup> Certainly, these measures are only a rough guide to bank growth; these data do not, for example, distinguish between domestic and foreign assets of these banks.

Another piece of evidence on the changing role of banks in these four economies comes from flow-of-funds data. Figure 6 displays the sources

5. Japanese land and equity prices surged in the late 1980s. However, only a small portion of the increase in reported bank assets during this period was caused by this surge in equity and land prices. In general, however, the appreciation of the value of Japanese stock and land prices indirectly influenced the size of Japanese banks by enhancing the value of collateral that could be offered by Japanese borrowers.

**Figure 5. Assets of Largest Banks Relative to Gross Domestic Product in Four Industrialized Countries, 1970–89**



Sources: *The Banker*, various issues; and the Federal Reserve.

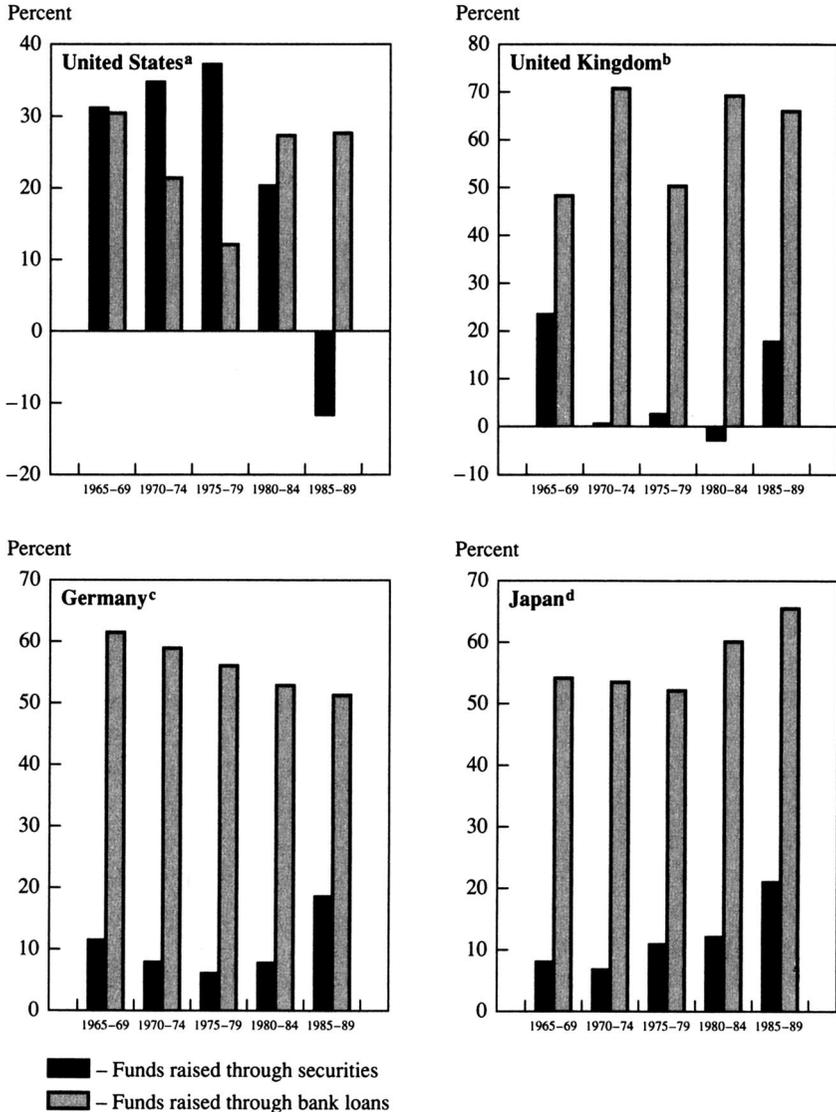
a. The index is the ratio of the assets of the eight largest banks in each country to the GDP in the respective country with 1970 = 100. Annual data for Germany, the United Kingdom, and the United States are taken from the end of the calendar year; Japanese data are from the end of March.

of net external funding of nonfinancial businesses for the four countries. The figure shows the percentage of business financing that comes from domestic securities markets (stocks and bonds) and from domestic banks. We have averaged these ratios over five-year intervals, from 1965 through 1989. The residual includes financing from all other sources, including governments. The cross-country data differ in some details. The figure describes some of these differences. Additional examples are that the inclusion of other financial institutions, an adjustment for mortgages in the United States, or the exclusion of insurance companies in Germany does not affect our basic conclusions about the relative roles of banks in those countries.

The data support the frequent characterization of the German and Japanese systems as examples of bank-oriented systems.<sup>6</sup> Banks have consistently provided over half of net external finance in both countries. The proportion of financing through securities markets decreased in both

6. See, for example, Berglöf (1990).

**Figure 6. Percent of Total Business Funds Raised through Securities and Bank Loans, 1965–89**



Sources: Data are from various issues of *Monthly Report of the Deutsche Bundesbank*, *Economic Statistics Monthly* (Bank of Japan), *Bank of England Quarterly Review*, and *Flow of Funds Accounts* (Federal Reserve Board, Z.1 release).

a. U.S. figures are for total nonfinancial business. Bank loans exclude mortgages and all lending from nonbank financial intermediaries. Securities exclude commercial paper.

b. U.K. bank loans include commercial paper and lending by nonbank financial intermediaries.

c. German figures are for "producing enterprises," which exclude housing. Bank loans include lending by insurance companies, but not by building societies.

d. Japanese figures are for "corporate business." Bank loans include lending by nonbank financial intermediaries.

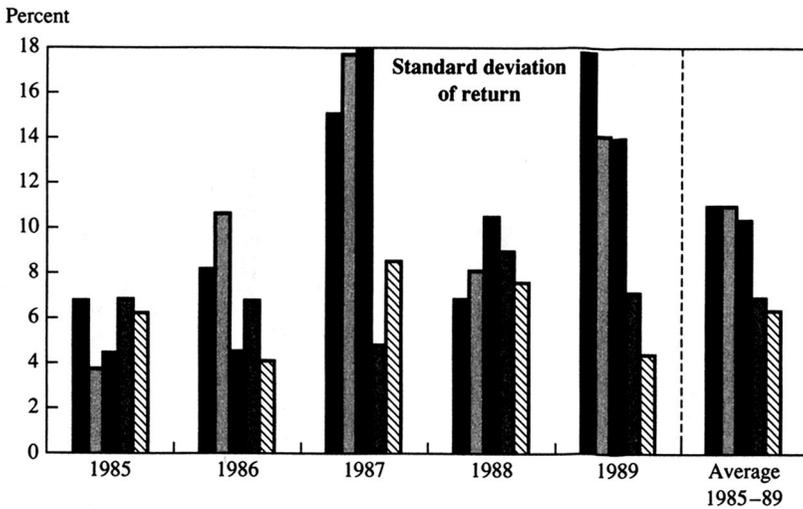
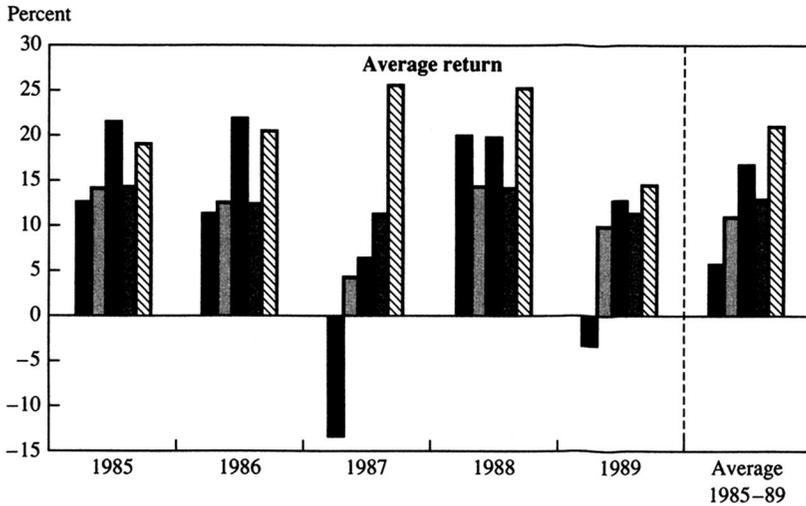
countries in the 1970s, though it has since increased steadily. Yet, in both countries banks continue to provide more than twice the funds that direct securities markets provide. Data for Britain, while less stable than for Germany and Japan, show that there too banks dominate the provision of external financing, a finding that counters the frequent presumption that the United Kingdom has a market-oriented system of corporate finance.

These three countries contrast sharply with the United States. Between 1965 and 1979, securities markets provided more financing to American firms than did banks. In the 1980s the situation reversed itself: net securities financing decreased sharply, turning negative in the second half of the decade, while bank financing increased as a proportion of total financing. This apparent reversal in the role of banks and of securities markets reflects a period of extensive corporate restructurings, in which firms borrowed heavily from banks and from other institutions (partly through junk bonds) in order to buy back their publicly traded stock. Despite this twist at the end of the sample period, however, bank financing was still a much smaller proportion of total financing in the United States—never more than 30 percent—than in the other three countries.

Figures 7 and 8 compare the levels and variabilities of bank profitability across countries. We use two different measures of profitability: return on assets and return on equity. By either measure, British banks appear relatively profitable compared to German banks and the largest American banks. Profits of German banks appear to vary less from year to year than those of other banks. Japanese bank profits appear relatively high when measured with return on equity, while smaller American banks do relatively well with return on assets.

These conclusions must be treated with some caution, since accounting standards differ among these countries. One important example of the effect of different accounting standards is Germany, where banks are permitted, in accordance with their own commercial judgments, to set up reserves against special risks pertaining to banking. German law allows banks not to disclose these hidden reserves, and the use of hidden reserves allows German banks to smooth out fluctuations in publicly reported earnings. Such reserving is also likely to reduce the level of earnings. Tax preferences encourage some of this reserving; for example, tax-deductible additions to loan-loss reserves against loans to financially

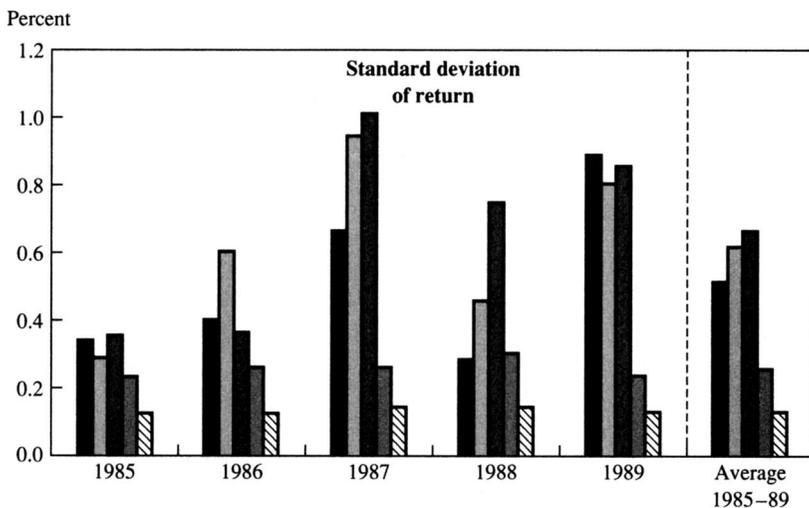
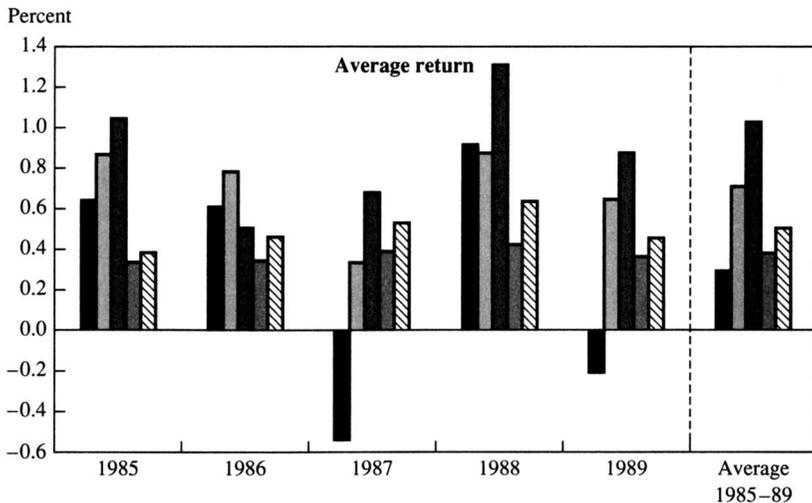
**Figure 7. Level and Variability of Banks' Return on Equity in Four Industrialized Countries, 1985-89**



- - U.S. ten largest banks
- - German banks
- ▨ - U.S. 11th to 50th largest banks
- ▨ - Japanese banks
- - U.K. banks

Sources: *The Banker*, various issues; and the Federal Reserve. The sample uses the largest 20 banks (by assets) in Germany and Japan. We use a varying sample—between 12 and 20 banks—for the United Kingdom.

**Figure 8. Level and Variability of Banks' Return on Assets in Four Industrialized Countries, 1985-89**



- — U.S. ten largest banks
- — U.S. 11th to 50th largest banks
- — U.K. banks
- — German banks
- ▨ — Japanese banks

Sources: *The Banker*, various issues; and the Federal Reserve. Samples are same as in figure 7. The return on assets is calculated as the return on equity divided by the capital-asset ratio.

**Table 2. Average Ratings of Senior Bonds in Four Industrialized Countries, 1990**

<i>Country</i>	<i>Average rating</i>	<i>Number of banks</i>
United States	7.0	11
United Kingdom	2.6	5
Germany	1.3	7
Japan	3.3	17

Source: International Bank Credit Analysis, "Report Cites Differences in Ratings of Major Credit Agencies," January 28, 1991, press release. The table shows the average year-end long-term debt ratings for privately owned banks that are evaluated by all three credit rating agencies. Bond ratings are assigned a numerical score based on a letter-based credit rating system. The highest letter grade (for example, AAA) is assigned a value of 1, the next level a 2, and so on.

troubled countries have been managed by German banks as if they were hidden reserves.<sup>7</sup>

When we examine the variability of profits across different banks in the same country, German and Japanese bank profits show less dispersion than in the other two countries. This suggests less diversity among the activities of German and Japanese banks than among those of banks in the other two countries.

Another gauge of the profitability of banks in different countries lies in a comparison of bond ratings of banks in different countries. Table 2 shows the average rating of senior (that is, not subordinated) bonds of large banks in the four countries. German banks have the best ratings, in apparent reflection of the strong financial positions of these banks. American banks have by far the worst ratings. While the state of "too-big-to-fail" doctrines in these countries may affect these ratings, they also correspond closely to the measures of profitability we have examined. In figures 7 and 8, profits of German banks vary the least from year to year, while those of the larger American banks vary the most.

One cost of financial distress is that corporations must cut back their investment plans because they lack financing. This may make investment excessively volatile. While it is beyond the scope of this paper to attempt a cross-country comparison of this issue, table 3 presents some statistics on the variability of corporate investment in the four countries. Japan appears to have the least variable corporate investment, judging by the coefficient of variation, especially when compared with Germany and the United Kingdom. American investment had been less variable than Japanese investment in the 1970s, but this ordering switched in the

7. See Hay and Bouchet (1989).

**Table 3. The Variability of Changes in Corporate Investment in Four Industrialized Countries, 1970–90**

<i>Country</i>	<i>Time period<sup>a</sup></i>	<i>Variance</i>	<i>Coefficient of variation</i>	<i>Mean</i>
Germany <sup>b</sup>	1970–90	0.00146	4.55	0.0084
	1970–79	0.00138	5.56	0.0067
	1980–90	0.00156	3.97	0.0100
Japan	1970–90	0.00050	1.67	0.0135
	1970–79	0.00063	4.30	0.0058
	1980–90	0.00030	0.85	0.0204
United Kingdom	1970–90	0.00237	4.48	0.0109
	1970–79	0.00209	5.53	0.0083
	1980–90	0.00267	3.90	0.0132
United States	1970–90	0.00069	3.23	0.0082
	1970–79	0.00064	2.49	0.0101
	1980–90	0.00075	4.31	0.0064

Sources: Data are from various issues of *Statistical Supplement (Number 4) to the Monthly Report of the Deutsche Bundesbank*, *Economic Statistics Monthly* (Bank of Japan), *Monthly Digest of Statistics* (U.K. Central Statistical Office), and *Survey of Current Business* (U.S. Department of Commerce). The statistics are based on quarterly changes in the log of real, seasonally adjusted, nonresidential private investment. The level of investment was normalized to 100 for the first quarter of 1970.

a. Only the first three quarters of 1990 were used in the analysis.

b. The German figures are based on equipment investment only.

1980s. The numbers in the table are only suggestive, since we are not using even a simple structural model of investment determination.

This section has examined a variety of statistics about the evolution of financial systems in Germany, Japan, the United Kingdom, and the United States. While the data paint a mixed picture, we have been able to distinguish some differences between U.S. and foreign financial systems. Foreign banks tend to be more heavily involved in the financing of corporations than are U.S. banks, as evidenced by a comparison of flow-of-funds data. This involvement on the part of foreign banks has not changed substantially since the 1960s. Also, foreign banks, especially German and Japanese, have also expanded more rapidly than U.S. banks. Profitability measures suggest that German and Japanese banks have the least risky income streams, a conclusion supported by a comparison of bond ratings. The levels of profits are difficult to compare across countries.

## **International Differences in Financial Structure**

In this section we analyze the structure of banking in the four countries. We take an inclusive approach and argue that the performance of a banking system depends on much more than the formal regulation governing banks. We find that differences in formal regulation across countries do not appear to conform to differences in performance. For example, of the four banking systems we address, the one subject to the most detailed regulations, the Japanese system, is also the system that by many measures has performed best.

After discussing regulation in greater depth, we examine the intensity of banking competition in each country. The level of competition says much about the stability and efficiency of national financial markets. We also discuss in this section how banking practices differ across countries, and the key issue here is how banks form relationships with customers. We find that the structure of these relationships differs markedly across countries, and that these differences stem from the interaction of regulatory factors with more diffuse elements, like the organization of corporations. One particularly important determinant of relationships between banks and customers is the rules and practices governing the resolution of customers' financial distress. We therefore compare bankruptcy procedures across countries in some detail.

### *Regulation*

Table 4 compares the regulatory environments facing banks in the four countries.<sup>8</sup> As is well known, regulation of British and German banks follows a universal bank model, under which banks are permitted to engage in a wide range of financial activities, including all insurance and securities activities. The main difference between the British and German versions of the universal bank is that British banks usually conduct their securities business through subsidiaries, while German banks conduct their securities business directly. Neither British nor German banks face restrictions on branching.

8. This table is an abbreviated and updated version of a table created by the staff of the Federal Reserve Board for Subcommittee on Financial Institutions Supervision, Regulation, and Insurance (1990).

**Table 4. Summary of Laws Affecting Domestic Activities of Commercial Banks in Four Industrialized Countries**

<i>Legal issue</i>	<i>Japan</i>	<i>Germany</i>	<i>United Kingdom</i>	<i>United States</i>
<i>Principal regulators of commercial banks</i>	Ministry of Finance (MOF).	Federal Banking Supervisory Office (FBSO); Deutsche Bundesbank.	Bank of England.	Federal Reserve Board; Comptroller of the Currency; Federal Deposit Insurance Corporation; state banking regulators.
<i>Branching restrictions</i>				
Geographic	None.	None.	None.	State-chartered banks may branch to the extent permitted by state law. National banks may branch only in a single state and only to the extent that state banks may branch in that state (McFadden Act). However, bank holding companies may own banks in more than one state if expressly permitted by state law (Douglas Amendment).
Regulatory	Prior authorization by MOF required. Number of new branches limited by MOF.	Notification to the FBSO and the Bundesbank required.	Prior notice to the Bank of England required.	Authorization by federal or state agencies required.
<i>Scope of permissible activities</i>				
Securities	Japanese banks are generally limited to (1) pur-	Full range of activities permitted.	Full range of activities permitted; usually con-	Underwriting and dealing in government securities

<p>chasing and selling securities for customer accounts or for the investment purposes of the bank; and (2) underwriting and dealing in commercial paper and government, government-guaranteed, and municipal securities. Non-Japanese banks may conduct securities activities through Japanese branches of not more than 50 percent-owned affiliates.</p>	<p>ducted through subsidiaries of parent banks. Firms carrying on securities activities are regulated by the Securities and Investments Board (SIB) and by self-regulatory organizations (SROs).</p>	<p>permitted. Underwriting and dealing in other debt and equity securities permitted through a bank holding company (BHC) subsidiary provided that: (1) the revenue from such activities does not exceed 10 percent of the total revenue of the subsidiary; (2) bank affiliates are insulated by appropriate firewalls; (3) BHC is well capitalized; and (4) policies and procedures are reviewed by the Federal Reserve Board before the activities are commenced.</p>
<p>Insurance</p>	<p>Full range of activities permitted through subsidiaries (or parents) of banks.</p>	<p>Restricted powers for national banks. Powers for state banks vary according to state law. Bank holding companies and their nonbank subsidiaries are restricted to specified insurance agency activities and limited, nonproperty, credit-related underwriting activities.</p>

(continued)

Table 4 (continued)

Legal issue	Japan	Germany	United Kingdom	United States
Industrial investments	Limited to holding 5 percent interests.	Individual interests, which are mostly held directly through the bank, are not limited. However, the total amount of these investments is limited.	Permitted subject to consultations with the Bank of England.	Generally limited to holding 5 percent interest through a bank holding company.
Capital requirements	Minimum initial capital of ¥1 billion (\$7.2 million) for city banks, regional banks, trust banks, and branches of foreign banks and ¥10 billion (\$72 million) for long-term credit banks and the specialized foreign exchange bank. <sup>a</sup>	Minimum initial capital is DM 6 million (\$3.8 million). The Banking Act requires "adequate" capital as determined by principles issued by FBSO, in agreement with the Bundesbank. <sup>a</sup>	Minimum initial capital of £1 million (\$1.9 million) for banks incorporated in the United Kingdom. There is no minimum capital requirement for branches of foreign banks. The Bank of England establishes minimum capital for each bank to reflect its own circumstances. <sup>a</sup>	Minimum initial capital generally \$1 million for national banks; varies for state banks. Federal and state operating capital requirements are typically based on a percentage of bank assets. <sup>a</sup>
Deposit protection scheme	Deposit Insurance Corporation.	Deposit Protection Fund.	Deposit Protection Fund.	Federal Deposit Insurance Corporation.
Administration and membership	Mixed public-private; mandatory.	Private; voluntary. Practically all commercial banks are members.	Mixed public-private; mandatory.	Government; mandatory for almost all banks. Required for branches of foreign banks if they accept more than a <i>de minimis</i> amount of deposits of less than \$100,000.

Maximum protection per depositor	¥ 10 million (\$71,000).	Thirty percent of bank's capital and disclosed reserves.	Seventy-five percent of £20,000 (75 percent of \$35,000).	\$100,000.
Annual cost/premiums	Rate of 0.012 percent on deposits.	Rate of 0.03 percent on total deposits (excluding interbank deposits).	Varies; payments are made to ensure a standing fund of between £5 million and £7 million.	0.12 percent of insured deposits for most banks in 1990. (Rate of 0.195 percent has been proposed for 1991.)
<i>Reserve requirements</i>	Yes; interest-free. Maximum rates of 2.5 percent for demand deposits and 1.75 percent for time deposits apply to amounts in excess of ¥2.5 trillion (\$17.8 billion).	Yes; interest-free. Maximum rate of 12.1 percent for demand deposits applies to amount of demand deposits of residents in excess of DM 100 million (\$59.0 million); rates of 4.95 percent for time deposits, 4.15 percent for savings deposits, and 12.1 percent for demand deposits of nonresidents.	Yes, for banks with more than £10 million (\$17.5 million) in sterling liabilities (excluding interbank deposits) maturing in less than two years. Rate of 0.45 percent of eligible liabilities. Reserve requirements are not used for monetary policy purposes.	Yes; interest-free. Maximum rate of 12 percent for transaction accounts applies to amount of transaction accounts in excess of \$41.1 million.

Source: This is a modified version of a table compiled by the staff of the Board of Governors of the Federal Reserve System for the Subcommittee on Financial Institutions Supervision, Regulation, and Insurance (1990). It was compiled from various sources, including information supplied by officials of the respective countries. Banking laws and regulations frequently change, however, and information therefore may not be current. In addition, presentation of the information in this format substantially oversimplifies some of the topics addressed. Currency conversions use exchange rates at the end of March 1990.

a. These countries comprise four of the twelve signatories to the 1988 Basle Accord, which provides for a minimum capital requirement of 8 percent of risk-weighted assets by year-end 1992. Some other countries, not signatories to the accord, have implemented similar risk-based capital requirements for their banks. Each country may also impose additional capital requirements.

The European system contrasts sharply with the Japanese and American systems. These latter two systems place more restrictions on the activities of banks than do the European systems. In both Japan and the United States, authorities have gradually lifted restrictions over the past decade, but both systems remain much more tightly regulated than European banking systems. Japan and the United States also have restrictions on the branching of banks. In the United States these restrictions tend to place geographical restraints on branching, although this varies from state to state. In Japan branching has been tightly controlled by the Ministry of Finance through a procedure of administrative guidance.<sup>9</sup>

Banks in these two countries have been largely prohibited from underwriting and dealing in corporate securities, although restrictions on underwriting have been eased recently in the United States. Both Japanese and U.S. banks have, however, been permitted in recent years to engage in an increasingly broad range of securities activities overseas. Japanese banks are not permitted to offer insurance services, while the insurance activities of U.S. banks are limited.

Finally, both American and Japanese banks face long-standing restrictions on the amount of equity they may hold in nonfinancial firms. The Japanese limitation on bank ownership of nonfinancial firms was established at the beginning of the postwar era by the 1947 Monopoly and Fair Trade Law. The U.S. restrictions date from the 1930s.

Japanese banking is also highly segmented. Regulations in Japan have created several different types of banks, each with distinct powers. There is little overlap among these powers, a fact that would appear to reduce competition in Japanese banking. Table 5 lists different types of Japanese banks and some of the powers granted to them. Such fine divisions in banking powers do not exist in any of the other countries we examine.

One area of substantial recent change in Japan and the United States has been the progressive removal of restrictions on the interest rates that banks may pay on deposits. This process began as late as 1984 in Japan,<sup>10</sup> and that country still has comparatively more restrictions on

9. See Federation of Bankers Associations of Japan (1989).

10. For details on deposit rate deregulation in Japan, see Federation of Bankers Associations of Japan (1990).

**Table 5. Types of Japanese Banks**

<i>Type of bank</i>	<i>Regulatory restrictions</i>
<i>Domestically owned</i>	
Ordinary banks	<ul style="list-style-type: none"> <li>—prohibited from engaging in trust-related businesses (for example, pension fund management and investment trust management)</li> <li>—prohibited from issuing long-term bank debt, except convertible bonds (since 1987) and regulated amounts of subordinated debt for the purpose of improving capital adequacy levels (since June 1990)</li> <li>—prohibited from accepting deposits with maturities over three years</li> <li>—two city banks differ in their range of activities from other ordinary banks: one is authorized to issue long-term debt but is restricted by its number of branches, the other is authorized to engage in trust-related activities despite the prohibition for other ordinary banks.</li> </ul>
Long-term credit banks	<ul style="list-style-type: none"> <li>—authorized to issue long-term bank debt (with up to a five-year maturity)</li> <li>—may only accept deposits from its borrowers and governments</li> <li>—may open only a very limited number of branches</li> </ul>
Trust banks	<ul style="list-style-type: none"> <li>—authorized to engage in trust-related businesses (for example, pension fund management and investment trust management)</li> <li>—authorized to raise funds for long-term financing through loan trusts and money trusts (that is, term deposits consolidated for the purpose of extending long-term credits)</li> </ul>
Financial institutions for small businesses	<ul style="list-style-type: none"> <li>—clients are restricted by number of employees and capitalization levels (for example, shinkin banks' business clients are limited in size to 300 employees and ¥400 million in capital)</li> <li>—clients are limited mainly to members of the cooperatives or credit unions</li> </ul>
Securities firms	<ul style="list-style-type: none"> <li>—prohibited from engaging in banking activities</li> </ul>
<i>Foreign-owned</i>	
Banks	<ul style="list-style-type: none"> <li>—authorized to engage in securities activities through partially owned securities affiliates (unlike domestic banks, which are prohibited from securities activities)</li> <li>—authorized to engage in trust-related activities through the establishment of trust bank affiliates</li> </ul>
Securities firms	<ul style="list-style-type: none"> <li>—authorized to engage in banking activities through subsidiaries (since 1990)</li> </ul>

Sources: Federation of Bankers Associations of Japan (1989) and Robins (1987).

deposit interest rates than other countries. There are no significant formal restrictions in Germany or the United Kingdom, and the only remaining restriction in the United States is a restriction on interest paid for demand-deposit accounts.

All four countries have a formal deposit insurance system. The British system is the newest, dating from 1982.<sup>11</sup> As is shown in table 4, the British system also caps individual depositor coverage at the lowest level, up to only \$35,000.<sup>12</sup> Moreover, the British system, unlike others, does not pay back the full value of the deposit; instead the customer only receives 75 percent of the face value of the deposit. The extent to which insurance systems are used varies widely. The extreme case is Japan, which has not had a bank failure over the entire postwar period; rather than allow failure, weak banks have simply been merged into strong ones.<sup>13</sup> This policy has the potential to increase the profitability of Japanese banks; by acting to prevent insured banks from running themselves into insolvency, Japanese authorities may reduce the incentive of bank managers to exploit the put-option value of deposit insurance.<sup>14</sup>

Despite these important differences in banking regulation, we hesitate to place too much weight on a comparison of deposit insurance systems. Formal deposit insurance systems are not the only part of the bank safety net. For large banks in all countries, authorities are widely believed to adhere to a "too-big-to-fail" doctrine (though this is rarely confirmed), which makes it likely that all liabilities of a large bank will be protected in the event of failure. We noted earlier that the cross-country bond ratings in table 2 may be affected by specific market beliefs concerning not only the likelihood of bank failure but also the scope of protection provided to depositors and other creditors of large banks.

In summary, we have examined what are, from the standpoint of this paper, the most important aspects of bank regulation. In terms of restrictions on banks, the Japanese system is the most heavily regulated,

11. The British deposit protection plan was established under the provisions of the Banking Act of 1979. See General Accounting Office (1991).

12. The coverage of the German system extends to 30 percent of bank's capital per depositor. This level essentially provides unlimited insurance, especially for depositors in large banks.

13. See Suzuki (1987).

14. See Merton (1977).

and the British and German systems the least regulated. The American system appears to lie between the two extremes. Yet, if we believe our performance measures, this regulation does not appear to have handicapped Japanese banks. We discuss these links between structure and performance more thoroughly in a later section.

### *Competition*

Banks clearly are affected by other, nonregulatory aspects of the banking system. One important such variable is the intensity of competition in a market. Increased competition is likely to increase the efficiency of banking, by reducing the ability of bankers to exploit their market power. A possible downside of competition, however, is that a reduction in bank profits may render banking markets less stable and may possibly harm macroeconomic stability.

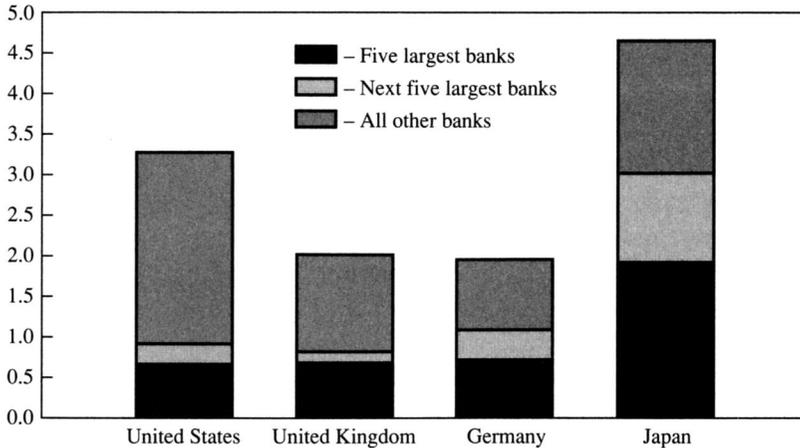
As with many banking statistics, direct comparison of banking competition across countries is difficult. The simplest measure of competition is the degree of concentration within a market. This measure differs greatly across countries. Figure 9 compares the concentration of banking markets across the four countries. It shows the value of total banking assets in the four countries and the value of assets held by the five biggest and the five next-biggest banks. All three foreign markets appear substantially more concentrated than in the United States. In both Japan and Germany, the ten largest banks have over half the total assets of all banks; in the United Kingdom they have 41 percent. The ten largest banks in the United States own less than 30 percent of total assets.

Another piece of evidence corroborates the relatively low degree of concentration in the United States compared with other countries. As shown in table 6, there are more banks in the United States than in all three of the other countries combined. Over 12,000 commercial banks held charters in the United States as of 1990. The largest comparable number was for Germany, which had 273.

The low degree of concentration in the U.S. banking market may mean that the U.S. market is more competitive and therefore more efficient than in other countries. On closer examination, however, this is far from obvious. The federal government, as well as individual state governments, has historically placed many restrictions on the geographical expansion of banks. Since a local presence is needed for many types

**Figure 9. Concentration of Bank Assets in Four Industrialized Countries, Fiscal Year 1989**

Trillions of dollars



Sources: *The Banker*, various issues; *Federal Reserve Bulletin*, July 1990, p. A18; *Bank of England Quarterly Bulletin*, February 1991, table 3.1; *Monthly Report of the Deutsche Bundesbank*, December 1990, table I.2(a); and *Economic Statistics Monthly*, February 1991. In Japan the fiscal year 1989 ended March 31, 1989, and in the United States, the United Kingdom, and Germany the fiscal year ended December 31, 1989. Assets are converted to dollars at fiscal-year-end exchange rates.

of banking services, the large number of banks in the United States does not necessarily imply a high degree of competition in local banking markets. As discussed by Montgomery in a recent study, the effect on competition of having integrated nationwide banks is ambiguous because oligopolistic banks operating in many local markets may find it easy to coordinate their actions in individual local markets.<sup>15</sup>

The greater degree of fragmentation in the United States increases the exposure of banks to idiosyncratic risk, especially to shocks specific to one geographic region. Banks will be exposed to region-specific shocks when they have concentrated their lending (and their low-cost funding) in the affected area. This is one reason that banks in the United States are more prone to failure. When banks have operations spread across many regions, their exposure to idiosyncratic shocks is reduced and failure becomes less likely.

The economic benefits of a reduced failure rate are, however, not entirely obvious. Despite the fact that regionally diversified banks are

15. Montgomery (1991).

**Table 6. Number of Commercial Banks in Four Industrialized Countries, 1990**

<i>Country</i>	<i>Number of banks</i>
United States <sup>a</sup>	12,500
United Kingdom <sup>b</sup>	209
Japan <sup>c</sup>	154
Germany <sup>d</sup>	273

Sources: U.S. Department of the Treasury (1991); *Bank of England Quarterly Bulletin* (February 1991); *Monthly Report of the Deutsche Bundesbank* (December 1990, p. 32); and *Economic Statistics Monthly* (Bank of Japan, February 1991).

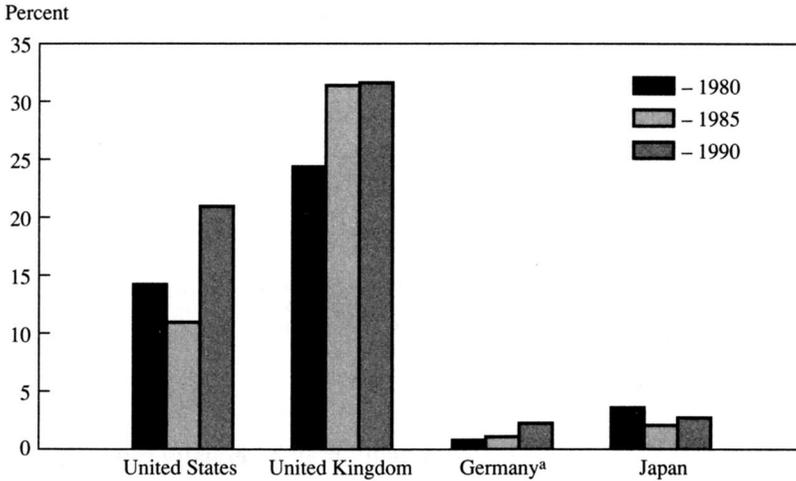
- a. Banks include all federally insured national- and state-chartered banks.
- b. Figures are for all banks that constitute the Bank of England's "monetary sector": retail banks, merchant banks, and "other British banks."
- c. Banks include all member banks of the Federation of Bankers Associations of Japan: city banks, trust banks, long-term credit banks, regional banks, and second association regional banks.
- d. Banks include all banks that constitute the Bundesbank's commercial bank category: big banks, regional banks, other commercial banks, and private banks.

less likely to fail, their loans individually may be equally risky. A bad loan in a less diversified bank is more likely to lead to bank closure, while a bad loan in a geographically diversified bank is more likely to be offset by funds from a good loan within the same firm. Only if the costs of bank failure are intrinsically high is the latter arrangement more efficient.

The presence of foreign banks may also affect competition by making it difficult for domestic banks to coordinate by adhering to "traditional banking practices," which may include informal restraints on competition. There is a sharp contrast in the activities of foreign banks in Germany and Japan on the one hand and the United Kingdom and the United States on the other. As shown in figure 10, the foreign bank share of total outstanding commercial loans is much lower for Germany and Japan, never more than 4 percent over the three years in our sample,<sup>16</sup> while the foreign shares of commercial loans for the United Kingdom and the United States reach 32 and 21 percent respectively in 1990. The high numbers for the United Kingdom may partly result from Euro-market business in London, which would not increase competition in other U.K. banking markets. However, the measure we have reported for commercial loans excludes interbank lending, which would have

16. The Japanese number may be biased downward compared to the other three countries because the Japanese figures express foreign presence as a share of all domestic loans, not just commercial loans.

**Figure 10. Percent of Outstanding Commercial Loans Made by Foreign Banks in Four Industrialized Countries, Selected Years**



Sources: *The Banker*, various issues; *Federal Reserve Bulletin*, various issues; *Bank of England Quarterly Bulletin*, various issues, tables 3.1-7; *Monthly Report of the Deutsche Bundesbank*, various issues; and *Economic Statistics Monthly*, various issues. All data are from the month of December, except the 1980 German figure, which is for September. The definition of outstanding commercial loans differs slightly across the countries: in the United States it includes commercial and industrial loans at all institutions; in the United Kingdom it is total advances to the private sector; in Japan, total loans and discounts; and in Germany, loans and advances to nonbanks.

a. The German data for 1990 include subsidiaries of U.S. banks, in both total loans and foreign loans.

made the measured foreign penetration in the United Kingdom considerably higher.

### *Customer Relationships*

Long-term relationships are an essential characteristic of the interaction between a bank and its customers. Theory suggests that relationships exist to overcome inefficiencies that would arise if interactions were restricted to the short term.<sup>17</sup> As such, the key characteristic of a relationship is the repeated interaction between intermediary and customer. Previous discussion of financing relationships has focused on a situation in which the intermediary acquires some information about the customer. The existence of this information then creates a surplus in the transactions between these two parties, a surplus that they somehow divide.

17. See Sharpe (1990).

Whether Pareto-improving, long-term contracts can be written in these circumstances depends on contracting technology. Contracts can be either implicit or explicit. Explicit contracts have the advantage of being relatively cheap to enforce; once written, parties are likely to have recourse to the legal system to enforce the contract, so that renegeing on explicit contracts is relatively unlikely. On the other hand, explicit contracts may be very costly to write. In particular, it may be very expensive to specify explicitly all important events on which the parties would find it useful to contract. Implicit contracts may be a way of getting around the costs of writing contracts, especially when unforeseen events occur.

The form of contracting available to a bank thus affects the degree to which it can form relationships. Forms of contracting vary markedly across countries. They appear to result not only from legal restrictions, but also from an accretion of traditional practices, which may get built into the expectations of supervisors and customers. In Japan and Germany banks are able to form close ties with nonfinancial firms, while in the United States and the United Kingdom a number of restrictions on ties between banks and other firms reduce the possible scope for relationships. In both Germany and Japan banks hold important equity interests in nonfinancial firms. In 1988 banks held 12 percent of outstanding stock in German firms and 21 percent of outstanding stock in Japanese firms.<sup>18</sup> In Germany banks also hold seats on supervisory boards of firms. In Japan banks routinely dispatch their own personnel to troubled client firms. By contrast, such direct involvements have been rare in the United States and in the United Kingdom.<sup>19</sup>

Corporate finance in Germany has traditionally been bank-directed. Banks are engaged not only in corporate lending, but also in equity investments, both for their own accounts and, more importantly, for custody accounts for which they have been given not only discretionary investment authority but also the exercise of proxy voting rights (the so-called *Depotstimmrecht*, or depository vote). In such a structure, banks have become accustomed to being the arbiters of corporate control. In

18. See Edwards and Fischer (1991) and Tokyo Stock Exchange (1990).

19. Such involvement is rare even for nonbank financial intermediaries that can and do have sizable equity holdings, such as insurance companies and securities firms. This suggests that tradition plays a role in determining the form of relationships. Legal factors, such as the bankruptcy issues we discuss, also deter such involvements.

fact, German commentary has stressed the superiority of German proxy voting because it affords appreciable control over a firm's management.<sup>20</sup>

In Japan relationships between banks and nonfinancial firms are less direct than in Germany. Many Japanese firms are organized into networks of firms known as *keiretsu*. Banks are important participants in *keiretsu*, but they do not control the activities of the group. In contrast to the German bank involvement with industry through supervisory boards, senior officers of Japanese banks are not members of corporate boards. The Japanese practice of cross-shareholding between banks and nonfinancial firms appears to make the *keiretsu* model one of collective decisionmaking.

The tendency of banks in the United States and the United Kingdom not to hold equity positions in client nonfinancial firms restricts the dimensions of the possible relationships these banks may form. The lack of equity positions may reduce banks' returns from transacting with a borrower. Also, stockholders can free-ride on the acquisition of information by the bank: the fact that a firm has borrowed from a bank may serve as a positive signal of the quality of the firm. If there is a long-term relationship between the firm and the bank, the bank can recover from the firm the return from cheaper equity financing. However, if this long-term relationship breaks down, the bank may be unable to extract enough return from a short-term contract to make it worthwhile to acquire the information.

It is common wisdom among observers of U.S. banking that relationship banking is becoming less common and is being replaced by market-based transactions using explicit, standardized contracts. Advances in technology have abetted this process by reducing the cost to market participants of computing the values of complex financial instruments. It is difficult, however, to get direct statistical evidence on the extent of the move away from relationship banking. It is possible that the shift in the United States has been exaggerated by anecdotal evidence.

A good example is the commercial paper market. While many American corporations have turned to this market for their short-term and medium-term financing needs, their commercial paper is almost always backed up by a credit line from the bank. These credit lines appear to resemble relationship banking, in that although banks usually have the

20. See Immenga (1979).

legal right to withdraw the lines under some circumstances, they rarely do so when a firm's financial situation deteriorates. Part of the reason for the steadfastness of banks appears to be that their reputation as reliable issuers of credit lines would suffer if they withdrew the lines.<sup>21</sup>

If there indeed has been a shift from relationship to transaction banking in the United States, it is likely to have reduced the economic costs of bank failures. Consider that one possible consequence of a bank failure is that the bank's private knowledge of customers, built up over its history, disappears or is present in a less well capitalized form and so has a harder time attracting outside funds.<sup>22</sup> In this case, the bank's knowledge represented a relationship-specific investment between intermediary and customer, for which a relationship contract provides adequate return. If the financial system has been changing so that these relationship-specific investments are no longer as common, then the failure of the bank will not destroy as much capital. Moreover, it should be easier to set up new intermediaries, since they do not require lengthy investments in relationships.

Takeo Hoshi, Anil Kashyap, and David Scharfstein argue that the close relationships of banks and firms within Japanese *keiretsu* reduce the costs of financial distress.<sup>23</sup> They find that firms that are not members of *keiretsu* are more likely to cut back investment when they experience low cash flow than are firms that are members. This clearly implies that the *keiretsu* structure enhances the stability of the Japanese economy. It is questionable, however, whether this implies that relationship banking, either in the Japanese *keiretsu* or in some other model, can more efficiently deal with troubled firms. Michelle White examines the reorganization and liquidation of bank-shareholder coalitions under different bankruptcy rules.<sup>24</sup> She argues that coalitions often have the incentive to make inefficient decisions at the expense of other stakeholders. Thus, if we extend her argument to the Japanese context, coalitions may continue investing in a firm even though it may be socially optimal to use those resources elsewhere.

21. See Hirtle (1990) for a discussion of the U.S. market for bank commitments.

22. See Bernanke and Gertler (1987) for a related discussion of the effects of a change in bank capital.

23. Hoshi, Kashyap, and Scharfstein (1991).

24. White (1989).

*Bankruptcy Procedures*

The foregoing discussion suggests that the form of relationships in a banking system can influence the resolution of the financial distress of a nonfinancial firm. How this distress is resolved affects both the efficiency and the stability of the economic system. The rules governing financial distress also influence the extent of the relationships. Thus, these rules, particularly bankruptcy laws and procedures, affect the returns of a bank when its customer has trouble.

National bankruptcy rules cover both formal bankruptcy (reorganization and liquidation) and informal workout arrangements. Importantly, informal arrangements are protected by a predisposition on the part of bankruptcy courts to refuse to review challenges to negotiated outcomes when those outcomes have been accepted by a critical core of a financially troubled firm's creditors. Such a predisposition obviously increases the likelihood of success for coalition building by those individual creditors who are particularly well informed about the interests of potential members of a coalition.

Bankruptcy rules in the United Kingdom and the United States contrast sharply with those in Germany and Japan. The common legal tradition shared by the former two countries may account for some of this difference. Bankruptcy laws in these two countries penalize banks that form close relationships with a customer. If the customer encounters financial problems, provisions in American and British law impose greater losses on the bank than on other creditors. In Germany and Japan, courts shield banks from these losses and, in Japan, favor informal workouts organized by a bank, even at the expense of other creditors.

In countries such as Germany and Japan, such informal bankruptcy arrangements predominate over formal arrangements mandated by the legal system. Banks often take responsibility for organizing creditor coalitions for financially troubled firms. A bank's behavior in such a workout may be disciplined by its interest in establishing and maintaining a reputation as a structurer and arranger of successful firms' finances.

The United States and the United Kingdom have, over extended periods, chosen to restrict or discourage the assumption by banks and other large institutional investors of "insider" roles with respect to financially distressed firms. For example, in the United Kingdom, the wrongful trading provisions of the Insolvency Act of 1986 make a financial

firm liable, as a “shadow director,” for any of its directions that contradicted the objective of minimizing the potential loss of all the company’s creditors.<sup>25</sup> It has become generally accepted that a company’s bankers can be considered shadow directors for this purpose, and this risk has supposedly had a chilling effect on the willingness of banks to participate in informal corporate rescues.<sup>26</sup>

The concept of equitable subordination in U.S. law also deters banks from active control of a financially troubled corporate borrower.<sup>27</sup> This deterrence derives from the responsibilities that equitable subordination imposes on a bank with respect to other creditors. If the bank is found to exercise effective control over a debtor firm, the court’s penalty may be a significant reduction in the priority status of a bank’s claims. American legal commentators observe that the concept of equitable subordination has been referred to with increasing frequency, particularly in chapter 11 reorganization cases.<sup>28</sup>

American law also inhibits informal workouts. Binding votes by bondholders to change any core term (principal amount, interest rate, or maturity date) of a bond issue are prohibited by law. The principal architect of this prohibition was the Securities and Exchange Commission under Chairman William O. Douglas, who reportedly was not only aware that requiring near unanimity for a change of any core term would help induce bankruptcy, but in fact welcomed the prospect. He was motivated by concerns that negotiated solutions would benefit insiders. The bankruptcy courts’ scrutiny of financial restructurings is a way of guarding against this.<sup>29</sup>

By contrast, Japanese legal structures create barriers to the use of formal reorganization procedures and encourage the use of informal mechanisms.<sup>30</sup> According to Brooke Schumm, a court may bar a filing under formal reorganization procedures “. . . based only on a brief pre-petition investigation.” A court’s dismissal of permission for a firm’s formal reorganization can be costly to the directors and managers of a

25. See *International Financial Law Review* (1990).

26. This point has been made to us in conversations with British bankers.

27. See DeNatale and Abram (1985).

28. See Phillips (1981). This tendency has been affirmed to us in recent conversations with attorneys.

29. See Roe (1987).

30. The following three paragraphs draw on work by Brooke Schumm. See Schumm (1988, p. 291).

publicly held corporation since they “. . . may become individually liable for debts of the corporation without having signed personal guarantees.”

The convening of formal bankruptcy proceedings in Japan is a much less common event than in the United States.<sup>31</sup> Such proceedings are seemingly regarded as providing public opportunities for the humiliation of those guilty of “bankruptcy crimes.” The penalties that may be levied on individuals in these circumstances include revocation of professional licenses, prohibition against serving as a director of a publicly held company, and the assignment of personal responsibility for certain debts of the bankrupt firm.

The punitive character of formal Japanese bankruptcy rules contrasts with the informal nature of the rules governing workout situations. Reportedly, the typical practice is the convening of a conference of the financially troubled firms’ creditors. The conference is successful if a “majority” of creditors accepts a solution. It is Japanese practice that all creditors who attend such a conference commit themselves to accepting the majority’s solution; that is, disaffected creditors agree not to mount legal challenges to informally negotiated workout solutions. Frequently, a bank assumes the lead role in convening a conference and in framing a workable solution, after consultation with other creditors.

In Germany bankers describe it as natural for them to assume responsibility for framing refinancing solutions for a financially troubled customer.<sup>32</sup> They state a clear presumption that German courts will normally not scrutinize an informal workout agreement, unless the court is presented with possible evidence of a fraudulent act on the part of the house bank.<sup>33</sup> In contrast with American practice, German bankers do not speak of legal deterrence to a bank’s control of a client firm, although German law does provide penalties for situations in which intent to harm the interests of other creditors of the firm can be established. German bankruptcy rules are therefore only one element in an overall regulatory

31. For example, using the data on which figure 3 is based, there were 7,234 corporate bankruptcies in Japan in 1989, while there were 63,117 in the United States.

32. Material for this discussion is based on conversations with German bankers on the general subject of relationship banking in Germany.

33. A house bank of a particular firm in Germany is the bank that is the main banker and financial adviser to the firm.

system that assigns clear monitoring responsibilities to banks with respect to the financing activities of their customers.

### **Effect of Financial Structure on Performance**

In an earlier section we considered several different measures of the performance of national banking systems. Several conclusions emerged. Over the past two decades of substantial financial innovation, the health of U.S. banks appears to have deteriorated. During the same period, German and Japanese banks have expanded more rapidly than American and British banks. Comparative bond ratings suggest that large U.S. banks are considered poorer investments than their counterparts overseas. Data on bank profits in different countries are difficult to interpret, though it appears that German and Japanese banks have the most stable profits. It also appears that corporate investment is less volatile in Japan than in other countries. We have also examined the differences in financial structure across these four countries. We now proceed therefore to consider the extent to which structural differences can explain the financial performance of these four countries.

As mentioned earlier, one important regulatory difference among the countries is that British and German banks are permitted to organize as universal banks, while American and Japanese banks face substantial restrictions on entering insurance and securities businesses. The universal bank model should improve bank performance if there are significant economies of scope when banking, insurance, and securities activities are linked. The logic of these economies of scope seems fairly strong. Underwriting corporate securities requires the same information-acquisition activities as making bank loans. This may explain why, as securities markets in the United States have become increasingly sophisticated, large corporations have relied less on banks for informationally intensive financing than in the past. Banks are no longer able to capture enough of the financing of these companies to make acquiring information on the companies worthwhile. Synergies between banking and insurance may also arise from common informational needs. Economies of scope might be obtained from the retailing of securities and insurance in bank branches. Nevertheless, while these arguments for economies of scope seem persuasive, we have not seen evidence on their empirical validity.

Our own performance data do not show a clear distinction between European banks and others, except for the evidence that corporate investment is more volatile in Europe than in Japan and the United States. But that difference does not seem to be related to the economies of scope we have discussed.

It is arguable that the lack of universal banking has hurt American banks more than Japanese banks. The Japanese *keiretsu* offers the Japanese banks a way to increase their returns from investing in information beyond the returns that might be obtained on the open market. American banks have no such alternative and therefore lose business when financial markets become more securitized. A universal banking structure that allows banks to participate fully in securitization could increase the return for banks on acquiring information.

We also noted that the domestic expansion of American and Japanese banks is limited by regulation. Such restrictions seem particularly important in the United States, since they keep banks from diversifying geographically. It is likely that this lack of diversification contributes to the large number of bank failures in the United States. It may also increase the riskiness of large, money-center banks in the United States, which have much worse bond ratings than their counterparts in other countries. To the extent that bank failures are costly, the lack of diversification of U.S. banks will impair the performance of the U.S. financial system.

One salient characteristic of the Japanese system, which table 5 illustrates, is the division of the banking system into institutional types, each with different restrictions on activities, assets, and liabilities. This practice is likely to have two effects. First, it may reduce the efficiency of banks, by preventing them from engaging in activities that offer economies of scale and scope. Second, it may reduce competition among banks, by sharply demarcating the lines of business each bank may enter. This is especially true when coupled with the dearth of new banking charters in Japan.<sup>34</sup> This lack of competition may enhance stability, but is also likely to reduce the efficiency of loan and deposit pricing in Japan.

Our conclusions about the amount of competition among banks in the different systems have been mixed. While foreign countries have far

34. The Bank of Japan (1990) reports that there were 86 ordinary banks in 1955 and 87 in 1989, and the number never fluctuated by more than one over the intervening years.

fewer banks than the United States, the geographical segmentation of the U.S. market tends to reduce the competition among the 12,000 banks chartered in that market. Penetration by foreign banks is much greater in the United Kingdom than in Germany and Japan, a fact that would tend to increase competition in the United Kingdom compared to the other two countries. Competition, in turn, should tend to reduce bank profits, yet our profit measures (albeit rather unreliable) indicate that British banks are more profitable than German banks. Given this difficulty in comparing profits across countries, we believe that comparisons of the variability of profits are more meaningful. By this metric, German and Japanese banks do the best. Thus, relatively low degrees of competition may well contribute to higher profits.

As discussed earlier, relationships between banks and their customers are an important structural element in the banking systems of Japan and Germany. For the Japanese *keiretsu*, cross-shareholdings appear to be an important part of the glue holding these groups together. In Germany banks derive part of their power over corporations from their control over proxy voting rather than through their equity stakes. In fact, German banks frequently sell their equity stakes in nonfinancial companies, rather than retain stable shares in client firms.<sup>35</sup>

There are theoretical reasons for believing that allowing banks to hold equity shares may improve the incentives for banks to make good financing decisions. Equity claims make the bank more of a residual claimant, which in a principal-agent framework increases the link between the returns to the client's business and the returns to the bank. If the bank has a close enough relationship with its customer to have substantial private information on the customer's business and also to have some control over the decisions that the customer makes, then equity holdings will give the bank a better incentive to make value-increasing decisions.

The downside of allowing banks to hold equity is that they bear more risk. This increases the risk of bank failure, especially if banks are not

35. Immenga (1979) focuses on situations in which German banks would be expected to take a temporary equity participation in a firm. Such situations are characterized by the need for "... a strong financial institution to step in and help develop a constructive solution to a business problem" (p. 33). One such situation listed by Immenga involves the passage of property by inheritance, a situation that might involve the liquidation of holdings in a family-owned firm.

well diversified. In the presence of deposit insurance, bankers may have an incentive to take on too much equity risk and therefore increase the incidence of bank failures.

This discussion of banking relationships suggests that allowing banks to hold equity may increase the efficiency of corporate decisionmaking, but may also increase the incidence of bank failures. These conclusions do not line up well with our performance data. There have been no recent failures in the Japanese system, where bank holdings of corporate equity are high, but there have been many failures in the U.S. system. This pattern seems more the result of the limited diversification of U.S. banks and the Japanese policy of merging sick banks into healthy banks, than of the equity position a bank takes. Although we did not examine any evidence on the comparative efficiency of corporate decisionmaking, nor are we aware of any such studies, this is clearly an area warranting further research. The evidence we have discussed suggests that equity holdings alone do not cause bank failures, nor does the absence of such holdings prevent failures.

In our comparison of bankruptcy procedures, we concluded that the willingness of courts to sanction informal, bank-sponsored workouts in Germany and Japan may help eliminate the free-rider problems that can arise in the absence of such workouts. This practice likely lowers the costs of financial distress in Germany and Japan. The practice also explains why the number of corporate bankruptcies has increased greatly in the United Kingdom and the United States, as the economic environment has become more volatile, while the number has risen much less in Germany and Japan. Elements of American and British bankruptcy law also penalize a bank for exerting control over a borrower. This makes banks in these countries more reluctant to enter into close customer relationships, a fact that may decrease the efficiency of corporate decisionmaking.

In summary, this section has discussed the effects of cross-country differences in the structure of banking systems on economic and financial performance. We have attempted to relate these structural differences to the observable differences in performance. The inadequacy of our performance data, however, limits this exercise. Many of the differences in performance that should theoretically exist are unobservable. In part, this is due to the fact that the structures of the four systems differ in many ways, making it impossible to identify the specific cause of any

given difference in performance. But the limitations of this exercise are also due to the fact that it is intrinsically difficult to measure the performance of a banking system. Banks deal with assets for which market prices do not exist; thus we cannot determine the efficiency of banking activities by comparing the decisions of bankers to those of markets. The stability of a financial system is even more difficult to measure empirically. Authorities are likely to act to prevent major systemic problems, so that structural features that make a system less stable may never actually cause observable instability.

### **Conclusions for U.S. Policy Reform**

In this paper we have compared the performance of the U.S. banking system with those of several other large industrial countries. We have also examined structural differences between the U.S. and foreign systems and attempted to assess the effects of these differences on performance. We believe this exercise has two major benefits. First, foreign experiences may help us foretell the consequences of changes in the U.S. financial structure. Second, an understanding of how foreign banks differ from U.S. banks may help us understand what determines the competitiveness of U.S. banks in international markets. Ensuring competitiveness is necessary in order to resist pressures to protect U.S. financial markets. In this final section, then, we discuss three possible changes in U.S. policy that our findings point to as worth considering.

The first possible change is to allow U.S. banks to take more substantial equity positions in nonfinancial firms. We noted some advantages of equity holdings in the previous section. Equity holdings can increase the return to banks from customer relations. Equity, as a residual claim, may also make bankers more concerned that their corporate customers make value-maximizing decisions. A disadvantage of equity holdings is that they would increase the riskiness of bank assets. In the fragmented U.S. banking system, with its large number of banks, this would increase the burden on bank supervisors and possibly increase the incidence of bank failures. This potentiality could be countered, however, by increasing banks' capital requirements. As stressed earlier, the advantages and disadvantages to banks' taking equity positions in nonfinancial firms are largely theoretical; we lack

empirical evidence on this issue. It would seem wise to acquire such evidence before proceeding with a policy that is likely to require either increased bank supervision or increased bank capital.

A second possible change in the United States would alter two apparent inefficiencies of the U.S. bankruptcy system. One of these is the limit on bank-customer relationships, stemming from the doctrine of equitable subordination. The other is the legal limitations on informally negotiated workouts among a subset of creditors.

A current debate in the United Kingdom concerns the consequences of relying on informal workouts structured within a framework known as the London Approach. In this framework, the lead bank of a financially distressed firm assumes responsibility for managing relationships between a creditor group and the distressed company. The Bank of England has come out in support of this approach, emphasizing the responsibility of the lead bank in contributing to the orderly management of a distressed firm's financial situation.<sup>36</sup> Although such an arrangement in the United States might encourage banks to develop closer relationships with their customers and might also forestall some of the inefficiencies associated with the formal bankruptcy process, it is doubtful whether a system that relies on a small core of large banks would be workable in the more decentralized U.S. banking system.

A third possible area for change in the United States is the elimination of remaining barriers on geographical expansion of banks. The high number of failures in the United States might be lowered if banks could take advantage of greater geographical diversification. This idea is appealing, though the case is not airtight. In a recent study, Montgomery discusses some drawbacks to a geographical consolidation of banks.<sup>37</sup> Authorities must be aware that in banking markets where effective competition across geographical lines exists, a risk also exists: the consolidation of banks may reduce the number of competing banks, and possibly reduce the efficiency of the market. The trade-off here is that greater diversification may also reduce the incidence of bank failures.

We believe all three of the above reforms warrant consideration. Of the three, the case for removing barriers on the geographical expansion of U.S. banks seems the clearest, while the case for allowing banks to hold equity is still somewhat doubtful.

36. See Bank of England (1990).

37. Montgomery (1991).

Our research also suggests some other possible areas for change. One that is widely discussed is deposit insurance. However, our cross-country analysis suggests that the nature of deposit insurance is not a particularly important determinant of bank performance and is therefore not an urgent area for reform from the perspective of enhancing bank performance. Clearly the existence of deposit insurance creates a moral-hazard problem requiring the close supervision of banks. Other countries appear to have managed this supervisory task well; there is no reason to believe that improved supervision cannot be carried out in the United States too, without overhauling the insurance system.

There is also evidence that adopting a universal bank model would improve the efficiency of U.S. banks, although this argument does not receive direct empirical support from our analysis. A universal bank format would allow American banks to realize greater return on their investments in information about customers. It might also increase competition in some of the financial markets that banks could enter, such as securities markets. Our study has not dealt directly with competitiveness in such nonbank markets.

Our comparison of the U.S. banking system with those in Germany, Japan, and the United Kingdom has focused on those aspects of the American system that prevent U.S. banks from forming long-term relationships with customers. Such aspects include the facts that equity holding by American banks is limited and that American bankruptcy laws tend to discourage close bank-borrower relationships. We also noted that the U.S. system contains many more banks than do foreign countries, partly because of restrictions on geographical expansion. This large number of banks may increase competition within some U.S. banking markets, but the geographical fragmentation within the banking industry may create substantial market power for banks in local markets and may make banks less diversified and thus more likely to fail. Despite these and other differences, however, we have found it difficult to tell from our performance indicators whether the U.S. banking system performs worse than foreign systems.

## *Comments and Discussion*

**Benjamin M. Friedman:** Banks, like other middlemen, have always been something of an embarrassment for mainstream neoclassical economics. Intellectuals nursed on Walrasian cream would be much more comfortable with an auction-type market in which ultimate savers supplied capital directly to ultimate investors. The apparent need for some intermediary to get in between is at best a challenge, and more likely downright awkward, depending on one's point of view. Evidence that such middlemen not only exist but may even be quantitatively important, in determining either the level of economic activity or its allocation, just makes matters worse.

From the standpoint of this conventional perspective, it is now all the more galling that those economies in which banks play a greater role vis-à-vis auction-type securities markets than they do in our own appear to be doing better than ours—and perhaps for that very reason. The subject is important not just because it is a practically relevant matter of current public policy (bank reform is now the lead item on the Bush administration's domestic policy agenda) but also because the questions it raises directly confront the economist's standard presumption favoring arm's-length dealings, in an open-market setting, between individually profit- or utility-maximizing entities. Weakening or even abandoning this presumption in turn creates a potentially positive role for public policy both in establishing the ground rules governing market structures and via a vast variety of more explicitly dirigiste policy interventions.

Allen Frankel and John Montgomery are on the right track in emphasizing the relevance—indeed, the importance—of institutional structures in general and financial structures in particular. The central presumptions underlying their paper are that what happens in the financial markets

can, and under practically relevant circumstances does, affect real economic activity, and, further, that what happens in financial markets may depend importantly on the institutional structures prevailing in those markets. The illustration that they offer, based on the “rules and practices governing the resolution of the financial distress of customers,” is particularly apt. Although they stop short of entertaining the possibility of interventionist policy actions on an ongoing basis, they successfully highlight the implications of their analysis for bank regulatory policies in the sense of setting the rules by which private financial institutions go about their business.

Along the way, Frankel and Montgomery put together a potentially useful array of detailed information about how banking markets in the United States, the United Kingdom, Germany, and Japan are structured, and especially about what these countries’ banks have been doing. Their table 4, for example, summarizing a dozen or so major features of these countries’ respective banking laws, is one of the most helpful such compilations I have seen. In this and other respects, they have performed a genuine service.

They have been less successful, however, in carrying out the main analytical assignment that they undertake in their paper—namely, to relate differences in the structures of these four countries’ financial systems to differences in the performance of their banks, or their economies more generally, so as to provide empirical support for recommendations about public policy in this area. The basic problem is that despite their efforts in the paper’s first substantive section, they never succeed either in establishing what they mean by “performance” in this context, or in measuring it. Not surprisingly—it is no accident that the section on “performance” comes first—this failure then undermines much of the attempt in the remainder of the paper to connect performance to market structure or to draw policy conclusions.

Frankel and Montgomery make four different attempts to measure the relative performance of different countries’ banks. They focus on banks’ growth and profitability (including, conversely, the frequency of bank failures); on the stability of an economy’s aggregate business investment; on whether banks are offering standardized loans to customers or engaging in more market-oriented transactions; and on the prevalence of bankruptcies among nonfinancial corporations. Alas, each of these dimensions of what banks do is not just imperfectly measured

but flawed conceptually as a measure of the performance that matters in Frankel and Montgomery's sense.

On bank profits: If U.S. banks had been continuously flush with profits throughout the last two decades, would we conclude that banks were efficiently allocating capital among competing uses, and being justly rewarded for doing so, or would we instead suspect some kind of monopolistic market power? Similarly, if the United States had Japan's record of literally zero bank failures since World War II, wouldn't we complain that the regulators were propping up inefficient and unnecessary institutions?

On the stability of aggregate business investment: Frankel and Montgomery show that investment spending was somewhat more stable in the United States than in Germany or the United Kingdom (albeit not Japan) during 1970–90, but then emphasize that the reverse was true during 1980–90 considered alone. But surely the wider amplitude of fluctuations in U.S. business investment in the 1980s was in large part a consequence of the successful campaign, at the outset of the decade, to slow U.S. price inflation. And, presumably, transmitting major changes in the central bank's monetary policy to the nonfinancial economy is part of what banks are supposed to do.

On the nature of bank lending: Frankel and Montgomery point to signs that U.S. banks have "turned from offering standardized loans to customers with whom they develop long-term relationships to engaging in more market-oriented transactions using derivative securities." Here too, even apart from questions of measurement, the substance of the distinction is unclear. The closest that Frankel and Montgomery come to a concise statement of what banks are supposed to do—the performance to be measured, if possible—is that "the major economic role of banks is to make transactions that cannot easily be made in open, standardized markets." For reasons that the work of Ben Bernanke and Mark Gertler, as well as that of Joseph Stiglitz and Andrew Weiss and Joseph Stiglitz and Bruce Greenwald, has nicely illustrated, to the extent that banks are turning away from long-term customer relationships they are failing to fulfill the responsibility that the authors of this paper plausibly want them to assume. By contrast, to the extent that the loans from which banks are turning away are standardized, and hence can potentially be packaged and resold in securities markets (like "CARS" and "CARDS"), they are doing just what the authors think they should do.

On corporate bankruptcies: A more Schumpeterian view would be that irregularly occurring episodes of financial distress provide the modern economy's chief mechanism for dissolving the commitments that often chain resources to their current use long after that particular application has ceased to be even economically sensible, much less optimal. Here again, the role for banks is two-edged.

What, then, is to be done? Frankel and Montgomery's policy recommendations for the United States strike me as basically sound—as far as they go. Of the three potential policy innovations that they address explicitly, the authors most strongly favor removing geographical barriers to bank consolidation (to which they refer as “bank expansion,” thereby downplaying the extent to which it is likely that the number of banks would decline along the way); they also favor introducing a system of creditor committees to enable banks to cope with the financial distress of domestic business borrowers in a manner more nearly resembling what now happens when developing countries cannot meet their obligations; and they shy away from granting U.S. banks authority to hold equity positions in nonfinancial businesses (presumably their customers') as do their Japanese and German counterparts.

By contrast, Frankel and Montgomery turn away from some of the larger issues that are, or at least ought to be, central to current discussions of bank reforms. For example, they rightly emphasize the way in which *keiretsu* relationships provide financial stability underneath Japanese product and factor markets, and this is the basis for their at least raising the question of whether U.S. banks should be allowed to own their customers' equity. (Carl Kester's recent book on corporate finance in Japan likewise emphasizes the importance of the *keiretsu* structure, but unlike Frankel and Montgomery, Kester argues that these relationships are now visibly weakening.)<sup>1</sup> But they do not entertain the possibility of equity cross-ownership between banks and nonfinancial firms in the opposite direction—that is, commercial or industrial firms' owning banks—which is the live part of this issue in the context of the current bank reform debate in the United States. Similarly, Frankel and Montgomery do not examine the parallel role of government, both in providing a security backstop in the event of financial distress and in providing a source of coordination and guidance that is absent in a setting of arm's-length market interactions. Would the U.S. economy benefit if the

1. Kester (1990).

federal government extended to nonfinancial businesses a safety net more nearly comparable to that available for banks? Would the increase in government intervention that naturally goes along with this kind of insurance role (for example, advising banks on credit allocations) be beneficial? Even if so, would it be *acceptable* in the American political and social context? The authors do not address such larger issues.

Ironically, just as more U.S. airlines today operate as explicit wards of the court or at least with the potential protection of the bankruptcy code as an active consideration in their business than was the case before the major airline deregulation of a decade or so ago, most U.S. financial institutions are more dependent on the government today than they were before the recent movement of bank and other depository institution deregulation began. Was this outcome predictable, either on the basis of economic theory or from the array of cross-country factual comparisons documented in this paper? Does it represent a regularity that bears potentially important implications about the likely consequences of bank reforms now under discussion? Questions like these are what the discussion of bank reform now ought to be all about.

For example, on the basis of the cross-country comparisons they provide, Frankel and Montgomery dismiss potential changes in deposit insurance as being of little import. (This conclusion is consistent with their exclusive focus on banks as allocators of credit. It remains true, however, that banks can create credit—that is, acquire assets—only as they take on liabilities, so that the insurance status of those liabilities is important even within the context of Frankel and Montgomery's notion of bank performance.) Their stated reason for dismissing the relevance of differences in deposit insurance is the assumption that appropriate supervision arrangements and standards can readily compensate for any given differences in deposit insurance, leaving no net implication for banks' performance. But just as the more directive role of government that parallels the *keiretsu* system in Japan may be neither politically acceptable nor practically feasible in the U.S. context, the kind of bank supervision that recent experience suggests is necessary to prevent systemically destructive abuse of current U.S. deposit insurance arrangements may be neither acceptable nor feasible. And if not, then reform of bank deposit insurance is very much to the point for the authors' focus on the performance of banks as providers and allocators of credit.

Another example of a large-scale issue that is just beneath the surface in many aspects of the current debate over bank reform in the United States is the relative merit (and shortcomings) of the continental-style universal bank. What conclusions should one draw from Frankel and Montgomery's cross-country comparisons about whether U.S. banks should become the nation's principal underwriters of corporate securities? Or sell insurance? Or act as real estate agents?

The authors have provided a real service by assembling, clearly and compactly, so many potentially useful facts about the structure of banking markets in major countries. Further research should now bring this information to bear on positive questions about how differences in market structure affect banks' ability to carry out their intended economic function, and hence on the major public policy issues in this field that seem increasingly urgent.

**Mark Gertler:** By just about any measure, U.S. commercial banking is in a decline. The ratio of bank assets to GNP has fallen steadily since 1980. So too have bank bond ratings and bank equity prices, at least until recently. What is going up are bank failures; and, notably, this rise in failures continued unchecked through the expansion of the 1980s. No one is suggesting that the system is in any danger of a "Depression-level" collapse. But there is fear that a sustained economic slowdown could move an already fragile system one step closer to a savings and loan kind of fiasco. It is this climate that provides the motivation for Allen Frankel and John Montgomery's paper.

There are two broad issues here. The first one involves positive questions: Where is the U.S. banking system headed? Are commercial banks as we know them simply dinosaurs? Will they transform themselves into the kind of universal banks that are currently popular in Europe? The second issue is normative: Should the decline in banking be viewed as simply the natural outcome of Darwinian competition? Or is it, at least in part, the product of a regulatory environment that is ill-suited to the current financial environment, one that now includes intense foreign competition? If so, what is the appropriate course of policy?

These questions are extremely difficult to answer. Empirical work is hampered because—as James Tobin taught us long ago—banks are largely creatures of the prevailing regulatory environment. This makes it difficult to form precise judgments about what will happen as the policy

environment changes. As a simple example, zero bank failures in a regulated environment tells us nothing about the stability of banking under *laissez-faire*. In this context, a reasonable strategy is to try to draw information from the experiences of other countries. This is exactly the kind of exercise Frankel and Montgomery pursue. In the process, they usefully catalogue the facts regarding the banking systems of the United States, the United Kingdom, Germany, and Japan.

In sifting through the cross-country evidence, three themes emerge. The first is that in the United States, there is a much broader use of arm's-length financial arrangements. Security issues account for a relatively higher percentage of external finance. Situations of financial distress are often likely to be resolved through formal bankruptcy proceedings. These features contrast with practices in other countries, where bank finance is dominant and where debt renegotiation is often an informal process involving the active participation of a bank. The authors appropriately cite differences in legal norms as a key factor explaining the differences. Compared to their Japanese and German counterparts, U.S. banks are limited by the extent to which they can (1) participate in the ownership and management of nonfinancial firms and (2) take the initiative in renegotiating debt. A key punch line is that so long as these legal norms remain intact, differences are going to remain between the U.S. system and others. It is unlikely, for example, that U.S. banks could ever evolve into the exact universal form popular in Germany.

But why do we care? In my view, a key issue is which kind of system best insulates the economy against the possible consequences of financial distress. The Japanese and German systems facilitate the restructuring of loans to firms in distress. Heavy bank involvement simplifies the process of renegotiation. A compensating factor in the United States, however, is the widespread use of equity and, more recently, the use of debt with equity-like features. Equity financing provides an alternative way for firms to make the required financial adjustments in periods of low earnings; that is, they may simply cut dividends. And, while not yet "equity-in-drag," innovations in the bond market have increased the flexibility of arm's-length debt. It is therefore an open question as to which kind of financial system is best. Indeed, the incentive effects of deposit insurance may be another factor weighing in the favor of the U.S. system. Because deposit insurance subsidizes risk-taking, it may be desirable to maintain some distance between banks and firms.

A second theme that emerges from the paper is that banking in the United States is considerably more decentralized than in the other three countries examined. A product of the limits on the geographical diversification of U.S. banks is a much higher failure rate. Since this issue has such important policy implications, it would be interesting to gather evidence beyond the basic aggregate statistics provided in the paper. I think casual empiricism suggests that the last two banking crises in the United States were associated with regional declines: first the recession in Texas; then the downturn in New England. It would be useful to gather data on individual bank losses over this period and then match the data with the evidence on sectoral shocks.

Some preliminary numbers are consistent with the “regional disturbances” story. A recent article from the *New York Times* suggests that, of the banks carrying nonperforming loans equal to 8 percent or more of total assets, 70 percent are concentrated in New England. In addition, banks in New England and Texas account for the vast majority of those with capital positions below the minimum regulatory requirement. These statistics suggest that easing restrictions on interstate banking may allow banks to better insulate themselves against regional disturbances and may help develop a more resilient national banking system. Clearly, obtaining more data on this issue would be desirable.

The third theme that emerges from this paper is that financial safety nets do not seem to differ significantly across those countries in the sample. Each country offers a fairly comprehensive form of deposit insurance. Minimum capital requirements apply throughout, as do reserve requirements. And, for better or worse, each country abides by some form of a “too-big-to-fail” doctrine. The main implication of these facts is that explaining the relative performance of the various banking systems means looking elsewhere; cross-country differences in the financial safety net cannot provide an explanation.

This conclusion begs the following question: Why has the U.S. banking system performed so poorly in the 1980s, especially when compared to the performance in the other sample countries? I think providing an answer to this question is central to the authors’ investigation. Appealing to interstate banking restrictions alone is insufficient, since these restrictions existed well before this time. The paper does make reference to the Latin American debt crisis, but it is hard to believe that this factor alone is responsible. The paper omits any discussion of the deregulation that occurred in the 1980s. It is difficult to believe this

event was unimportant. Correspondingly, the sharp rise in interest rates in the 1980s is probably also relevant. Overall, I think it would be useful to trace the impact of various macro shocks occurring in the 1980s on the financial systems of each country in order to gain some insight into how each system handles potential financial distress. Tracing through the impact of regulatory changes would similarly be useful.

In addition to developing some basic facts, the authors attempt to provide some measures of the relative performance of each banking system. Unavoidably, this exercise opens a can of worms. Ben Friedman has discussed the various problems in his comments. The basic issue is identification: the problem of separating the effects of the regulatory system from the effects of the macroeconomy.

The most direct way to measure efficiency is to examine the gap between price and marginal cost. In the context of banking, this gap is reflected by the differences between the loan rate and the deposit rate. True, because loans are not standardized this gap is an imperfect measure. Nonetheless, this kind of measure may be less sensitive to some of the identification problems that plague the indexes that the authors provide.

Overall, this paper provides a useful summary of the banking systems of four major countries. It also provides a convincing story of how differences in legal systems help account for the differences in banking systems. The performance measures offered, though, suffer from problems of identification. Finally, the paper offers some evidence that confirms my priors that the interstate banking laws in the United States should be reformed, though admittedly the standards for confirming my priors are weaker than the standards required to shift them.

### **General Discussion**

John Shoven and Robert Litan both felt that a discussion of banks' problems should have examined the consequences of the deregulation of the thrift industry. Shoven noted that in the 1980s banks were forced to compete with savings and loans, which offered similar services. Strapped for cash, many of the thrifts offered desperately high rates. Litan offered some calculations on the pressure this rate competition exerted on banks. In the late 1980s, out of a total of \$4 trillion of total assets held by banks and thrifts, approximately \$600 billion were held

by insolvent or extremely weak banks or thrifts. He guessed that interest rate competition from weak institutions added 15 basis points to the interest rates on bank deposits, and another 15 basis points of cost came from increased deposit insurance premiums resulting from bank failures. Only part of this 30 basis point increase in costs could be passed forward. Since banks earn 75 basis points in a good year, failures have had a dramatic effect on profits in the American banking system.

Litan argued that differences in the structure of banking systems help explain differentials in performance across countries. A financial system's ability to allocate resources is one good indicator of its performance. The thrift crisis has cost about \$200 billion and, he estimated, bank failures during the 1980s and early 1990s will cost an additional \$60 billion. Losses of this magnitude, which can be attributed to a failure of supervision and regulation, indicate very poor performance. He also noted that Norway and Japan are facing similar problems among their thrift institutions.

Richard Cooper foresaw some serious potential problems associated with widening the scope of banking activities that the authors did not explicitly address. With regard to selling as opposed to underwriting insurance, the synergies would come from shared overhead—for example, offering mortgage loan insurance with a mortgage. Since he knew of no law prohibiting an insurance company from using a bank's facilities, Cooper reasoned that the actual synergies must be few. In the case of underwriting securities, Cooper was concerned by problems resulting from self-dealing. He reported that in small European countries, where underwriting securities is allowed, bankers told him that what restricted self-dealing was the threat of being ostracized from the financial community if one were found out. He doubted that this would be an effective deterrent in the United States. Benjamin Friedman added that, according to U.S. underwriters competing in European markets, some European banks do at times engage in practices that would be considered self-dealing in the United States. However, he noted that the potential for these practices already exists in U.S. securities firms, so that it would not add a whole new problem here if banks also began to underwrite securities. Cooper responded that a person dealing with a securities firm understands there are risks, but it is important for banks to be institutions where financially unsophisticated people can save without risk. Litan pointed out that current federal law prohibits bank trust departments

from buying any securities that were underwritten by an affiliate and felt that the risk of self-dealing by banks could be handled by legislation.

The importance of bankruptcy laws and attitudes was discussed. Shoven observed that bankruptcy has become much more attractive for corporations in the 1980s and was therefore less of a sign of financial distress than it had been in the past. Litan cited a recent article in *U.S. News and World Report* (April 8) which stated that since loans to bankrupt companies acquire senior status, the size and strength of companies filing for Chapter 11 made these loans “. . . about the safest kind of lending you can imagine.” Gary Saxonhouse found the authors’ discussion of Japanese bankruptcy practices somewhat misleading. Their figure 3, which shows the trend in bankruptcies for the four countries, uses indexes with a common base of 1975. In 1975 there were five times as many bankruptcy cases in Japan as in the United States. He observed that even though there is more stigma attached to bankruptcy in Japan than in the United States, it is not unheard of for corporations, even with assets over \$1 billion, to file for bankruptcy.

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