

Assessing International Risk Exposures of U.S. Banks

by Timothy Curry, Christopher Richardson, and Robin Heider*

The debt crisis of the early 1980s was a critical period for the largest U.S. international banks. Several of these institutions verged on insolvency because of their international lending exposure and the potential for massive defaults by the less-developed countries (LDCs). Had one or more of these institutions failed, the stability of the entire U.S. financial system could have been jeopardized. Policies adopted by bank regulatory officials, along with assistance from international lending organizations, managed to prevent the failure of any large U.S. banks and to otherwise contain the crisis.¹ However, it took almost a decade for the international banks to clean up their balance sheets, rebuild capital levels, and resume international lending.

Loan losses incurred by banks in overseas lending during the 1980s and in other periods reflect the credit risks associated with such activity. Bank supervisors keep a close watch on this exposure by requiring the U.S. banking organizations that are engaged in international lending to file quarterly disclosure reports. In recent decades, with the integration of the regional and global economies, bank supervisors have also become concerned with indirect, or “secondary,” risks. *Secondary risk* refers to increased probability of loan defaults because of trade-based economic linkages between nations. If the economies of two or more nations are linked by trading relationships, then adverse economic events in one nation may spill over to, and compound problems for, that nation’s trading partner(s); and these secondary effects can, in turn, influ-

ence the ability of borrowers in these nations to repay loans to third parties like U.S. banks.

Foreign lending risk therefore has at least two components, direct and indirect, and to identify the true magnitude of the exposure, one cannot take a piecemeal approach. This article examines recent trends in both the direct and the indirect risks associated with the international lending activities of U.S. banks. The first section defines the components of foreign lending and surveys trends since 1982 in loan volume, risk exposure, and lending organizations; trends in foreign lending claims, by borrower and by maturity; and trends in the direction of foreign lending. The next section looks at secondary, or indirect risk, and the international trading relationships of the United States and of the countries to which U.S. banks have extended the largest dollar amounts of loans. The final part summarizes the data presented and draws conclusions about risks to U.S. foreign lenders in the near future.

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¹ U.S. bank regulators granted forbearance to the international banks with respect to the provisioning for future losses and other matters. Forbearance was the only practical solution at the time, for otherwise some of the large banks would have been insolvent. In addition, the international lending organizations like the World Bank and International Monetary Fund provided funds to developing nations to facilitate debt reduction. Part of these funds were used to repay bank creditors. For a discussion of these issues, see Seidman (1993) and Curry (1997).

Trends in Foreign Lending

Foreign lending has at least three components. First, “cross-border” lending is the dollar-denominated loans booked at the U.S. offices of American banks and extended outside the boundaries of the United States. These loans can be made to other commercial banks, private nonbank borrowers, or various governments and agencies. For example, Citibank, NY, might book a credit payable in U.S. dollars to a Mexican corporation headquartered in Mexico City. Cross-border lending entails considerable risks besides borrower default risk because lenders also have to consider the effects of local currency devaluations in terms of U.S. dollars. As the conversion rate of the local currency into dollars deteriorates, the weight of the debt service payments of the loans increases because foreign borrowers have to earn more units of the local currency to meet their dollar-denominated debt payments. Loan defaults caused by collapsing exchange rates have been associated with most international financial crises, including that of the early 1980s and the current Asian and Russian crises.

Second, international banks also engage in “local-currency” lending, which consists of loans that branches or subsidiaries of U.S. banks in a foreign country extend in the domestic currency. In contrast to cross-border lending, this type of activity does not involve direct exchange-rate risks for the borrower.² For example, when Citibank’s branch in London extends loans in the local currency (pounds), they are considered local-currency loans rather than cross-border loans. The interest and principal payments on these loans are made in pounds and thus are not affected by fluctuations in the exchange rate.

Third, existing loan commitments to foreign borrowers are counted as foreign lending because commitments are contractual pledges by a financial institution to extend funds at some future date, even if the funds have yet to be disbursed.

In this article, “total foreign lending” refers to all three categories combined, and the degree of international lending risk is usually expressed as a function of a common measure, such as total capital or assets of the lending institutions.³

The rest of this section discusses trends in (a) loan volume, risk exposure, and lending organizations; (b) the nature of foreign lending claims; and (c) the direction of foreign lending.

Loan Volume, Risk Exposure, and Lending Organizations

Historically, cross-border lending followed international trading relationships, with large commercial banks pursuing opportunities generated by the expansion of multinational corporations. For decades this trend was reflected in the global expansion of U.S., Japanese, and European banks. More recently, there have been other incentives for international lending: world economic growth, the expansion of world trade, and the emergence of developing economies. Financial institutions with the necessary capital and technical skills have moved globally to take advantage of these opportunities, and large U.S. commercial banks have been at the forefront of such lending activities.

Foreign lending by U.S. banks declined during most of the 1980s and early 1990s in response to that period’s LDC debt and other crises, all of which significantly eroded bank capital.⁴ For example, between 1982 and 1992, such lending decreased from \$520 billion to \$398.7 billion (table 1). In 1993, as these banks recovered and recapitalized, they resumed lending; and over the next five years outstanding loans and commitments increased significantly, peaking in 1997 at \$703.3 billion, for an annual compound rate of growth of 12 percent over this period. The Asian crisis, which broke out in mid-1997, chilled the fervor for new lending to the point that in the first quarter of 1998, loans and commitments remained unchanged. Furthermore, in response to the crisis, lending to certain nations (including, among others, Thailand, Indonesia, the Philippines, and Malaysia) has plummeted.

² The lender still faces exchange-rate risks, however, when converting the interest and principal payments on the loans back into U.S. dollars. To protect themselves against potential currency fluctuations, most lenders that are engaged in local-currency lending enter into foreign-exchange contracts to hedge potential losses.

³ The analysis of foreign lending does not consider *all* risks associated with international lending by U.S. banks. For example, off-balance-sheet risks such as derivative contracts also represent potential drains on the capital of lending banks but are not considered here because data are lacking. Similarly, loans to investment funds that engage in international investments, or loans to domestic corporations that engage in international trade also represent risks to U.S. banks but are not considered in this analysis. Finally, third-party guarantees represent another potential source of risk.

⁴ The collapse of commercial real-estate markets during the late 1980s and early 1990s significantly diminished bank capital by causing heavy loan losses and, in many cases, bank failures.

International Risk Exposures of U.S. Banks

Table 1
Foreign Lending by U.S. Commercial Banks, Year-end 1982–1998
(\$Billions)

	1982	1987	1992	1997	1998 ^a
All U.S. Banks (number)	171	184	150	109	107
Total Capital ^b	\$ 70.6	\$ 129.2	\$ 182.0	\$ 342.9	\$ 356.2
Total Assets	1,261.0	1,633.0	1,767.5	3,257.8	3,389.6
Cross-Border Loans	353.3	267.3	197.1	333.9	325.4
Total Commitments	87.3	76.3	72.8	105.3	101.6
Total Cross-Border Lending	440.6	343.7	269.9	439.2	426.9
Percent of Capital	624%	266%	148%	128%	120%
Percent of Assets	35%	21%	15%	13%	13%
Local-Currency Loans and Other Claims ^c	79.4	136.4	128.8	264.1	277.0
Total Foreign Lending	520.0	480.1	398.7	703.3	703.9
Percent of Capital	737%	372%	219%	205%	198%
Percent of Assets	41%	29%	23%	22%	21%
Money-Center Banks (number)^d	9	9	8	6	6
Total Capital ^b	\$ 29.0	\$ 51.5	\$ 74.9	\$ 122.5	\$ 123.9
Total Assets	588.0	626.0	667.2	1,298.8	1,337.3
Cross-Border Loans	205.3	162.9	123.6	234.0	237.2
Total Commitments	69.1	60.2	60.8	79.7	75.0
Total Cross-Border Lending	274.4	223.1	184.4	313.7	312.2
Percent of Capital	946%	433%	246%	256%	252%
Percent of Assets	47%	36%	28%	24%	23%
All Other Large Banks (number)^e	15	13	11	7	7
Total Capital ^b	\$ 13.5	\$ 23.9	\$ 29.4	\$ 70.0	\$ 72.5
Total Assets	253.0	284.0	278.8	677.5	704.5
Cross-Border Loans	67.3	44.7	34.5	65.9	59.2
Total Commitments	10.5	10.5	7.4	11.1	12.1
Total Cross-Border Lending	77.8	55.2	41.9	77.0	71.4
Percent of Capital	577%	231%	142%	110%	98%
Percent of Assets	31%	19%	15%	11%	10%
All Other Reporting Banks (number)	147	162	131	96	94
Total Capital ^b	\$ 28.1	\$ 53.8	\$ 77.6	\$ 150.3	\$ 159.7
Total Assets	420.0	723.0	821.4	1,281.5	1,347.8
Cross-Border Loans	80.6	59.7	38.9	34.0	28.9
Total Commitments	7.7	5.6	4.7	14.5	14.4
Total Cross-Border Lending	88.4	65.3	43.7	48.5	43.3
Percent of Capital	314%	121%	56%	32%	27%
Percent of Assets	21%	9%	5%	4%	3%

Source: FFIEC, *Country Exposure Reports*.

^aMarch 31, 1998.

^bTotal capital includes equity, subordinated debentures, and reserves for loan losses.

^cData on local-currency loans were not available for the individual groupings but only for the aggregate. Thus, the combined data for the individual groupings contain only the total cross-border lending and commitments and do not add up to the “total foreign lending” panel for all banks.

^dFor year-end 1997 and March 1998, the “money-center banks” category includes Bank of America, Bankers Trust, Chase Manhattan, Citicorp, First Chicago, and J. P. Morgan.

^eFor year-end 1997 and March 1998, the “other large banks” category includes BankBoston Corp, Bank of New York Co., Corestates Financial Corp, First Union Corp, NationsBank Corp, Republic NY Corp, and State Street Corp.

U.S. banks' overall risk exposure to foreign lending also declined for most of the 1980s through 1992. At year-end 1982, at the outbreak of the LDC debt crisis, the concentration of foreign loans and commitments on the balance sheets of U.S. banks represented over seven times capital and 41 percent of total assets. This ratio fell during the next decade as new commitments declined and delinquent loans were written off.⁵ By year-end 1992, the total of loans to capital was only approximately 30 percent of what it had been in 1982. This downward trend continued, slowly, over the next five years, as U.S. banks were recapitalized. By March 31, 1998, the total capital at risk was still relatively modest in comparison with what it had been at the start of the 1980s (table 1).

Foreign lending is dominated by large money-center banks, and this domination has increased over time. As of March 31, 1998, money-center banks accounted for \$312.2 billion of the \$426.9 billion in cross-border loans and commitments by U.S. banks (table 1). This market share has been steadily increasing in recent years, going from 62 percent of total foreign lending in 1982 to 73 percent as of March 31, 1998 (figure 1). The money-center banks have also had substantially more capital and assets at risk than all other foreign lending banks, leveraging almost 2.5 dollars of loans for each dollar of capital and holding 23 percent of total assets in foreign loans as of the same date. But

while the money-center banks' risk exposure has been increasing since 1992, the levels are modest in comparison with what they were at the outbreak of the debt crisis in 1982, when foreign lending represented 946 percent of capital and 47 percent of total assets for these banks.

Unlike the money-center banks, the "other large banks" (super-regionals) and "all other reporting banks" have cut back foreign lending both in terms of the absolute volume of loans on their books and as a percentage of capital and assets devoted to such lending. For example, the super-regionals' foreign loans outstanding declined slightly from \$77.8 billion at year-end 1982 to \$71.4 billion at the end of the first quarter of 1998. Furthermore, their foreign lending declined from 577 percent of capital and 31 percent of assets at year-end 1982 to 98 percent of capital and only 10 percent of assets as of March 31, 1998 (table 1). The "other reporting banks" that have been involved in foreign lending have also cut back from the business but much more dramatically. As of March 31, 1998, these banks carried almost 50 percent fewer foreign loans on their books than in the early 1980s, and the group's international lending amounted to only 27 percent of its capital and 3 percent of its assets.

Nature of Foreign Lending Claims

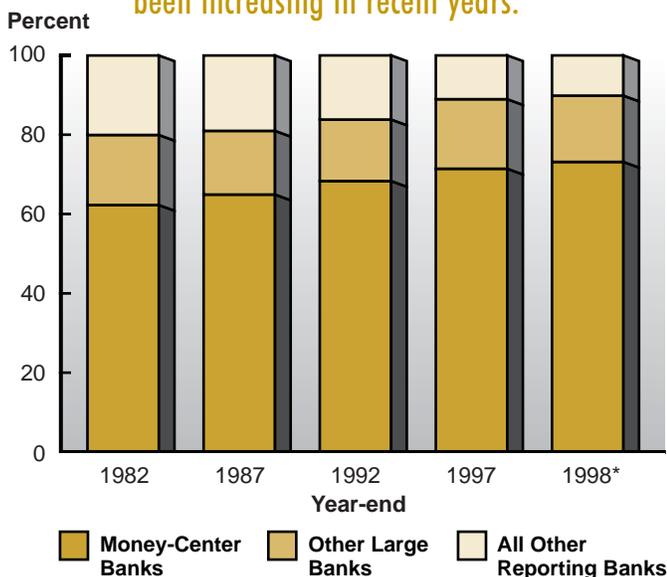
Characteristics of foreign loans granted by U.S. banks over the 1982–1998 period:

■ Borrower

The data show that over the 1982–1998 period, U.S. bank foreign lending to other bank intermediaries (interbank market) declined relative to lending to other groups. U.S. bank loans to the banking sector have been trending downward since the early 1980s, with the market share for this type of loan declining from 53 percent of total cross-border lending in 1982 to 32 percent in 1998 (figures 2 and 3). The cross-border interbank market consists of loans to various parties, including local financial institutions, correspondent banks, and, in some instances, branches or subsidiaries of the parent bank. These loans are typically unsecured, although secured lending also occurs through

Figure 1

"The market shares of the money-center banks have been increasing in recent years."



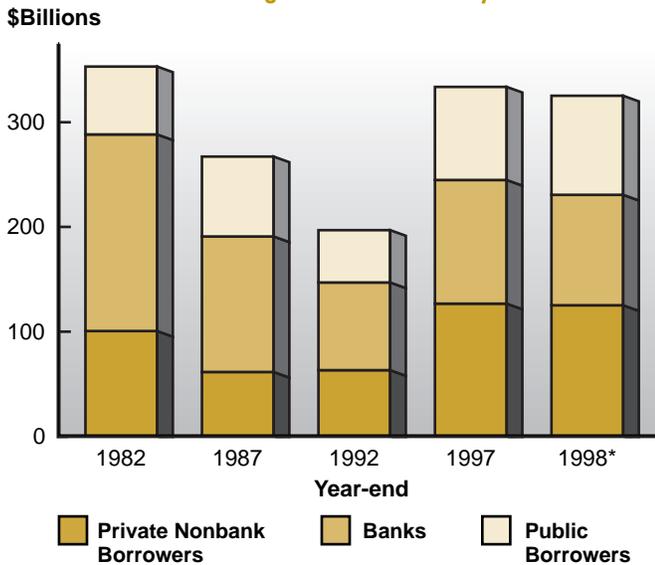
Source: Federal Financial Institutions Examination Council (FFIEC), *Country Exposure Reports*.

* March 31, 1998.

⁵ Citicorp was the first U.S. bank to take a loss on its foreign lending portfolio. It wrote off approximately \$3.3 billion of international loans in 1987, and shortly thereafter most other major U.S. banks that engaged in international lending followed suit. See Curry (1997), 208.

Figure 2

“U.S. bank cross-border lending has been increasing to the private nonbank sector and declining to the banking sector in recent years.”

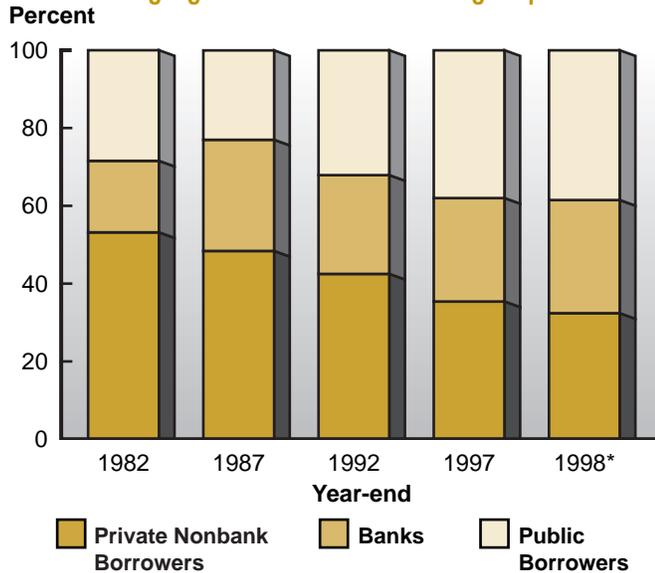


Source: FFIEC, Country Exposure Reports.

* March 31, 1998.

Figure 3

“Increased U.S. bank lending to the different foreign sector borrowers is reflected in the changing market shares of the groups.”



Source: FFIEC, Country Exposure Reports.

* March 31, 1998.

the “repo” or repurchase market (overnight or term loans collateralized by pledged securities). The recent shift away from the interbank market is explained primarily by the declining risk/reward trade-offs, as re-

flected in the narrowing spreads on interbank loans relative to other types of lending.

As lending to the interbank market has declined, direct loans to private nonbank borrowers have captured an increasing share of cross-border lending, growing from 29 percent in 1982 to 39 percent in 1998 (figure 3). Increases in the flow of bank funds to the private nonbank sector are linked, in part, to (a) active privatization programs in several nations and regions, including (among others) Mexico, Argentina, Brazil, and Eastern Europe; (b) continued economic expansion and capital investment in Asia through the mid-1990s; and (c) accelerating economic reforms in China and elsewhere. Increases in private-sector loans may have also resulted from greater direct access to private-sector borrowers, as U.S. banks have maintained a substantial international presence in various countries over time with branch offices and subsidiaries.⁶

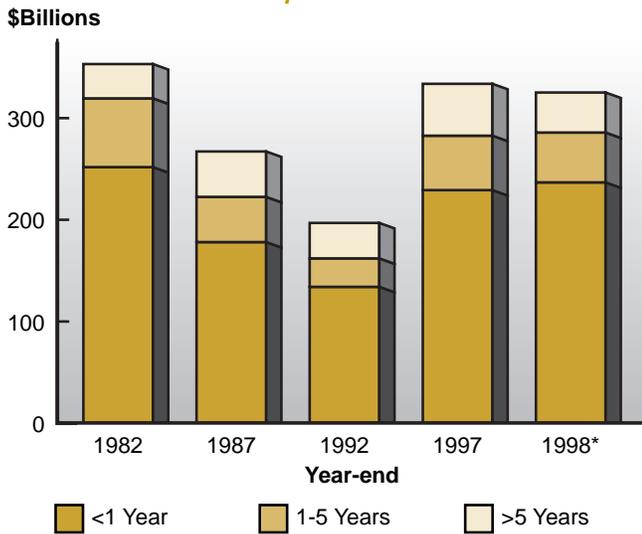
Loans to public institutions, or “sovereign” debt, includes obligations of the federal, state, and local governments and governmental agencies. This type of lending, too, has been growing in recent years. For example, the market share accounted for by lending to public institutions has increased from 18 percent of total U.S. cross-border lending in 1982 to 29 percent in 1998. In addition, in sharp contrast to the absolute decline in U.S. bank lending to the private sector during the first quarter of 1998 as the Asian financial crisis deepened, lending to public institutions increased more than 6 percent. This growth in sovereign debt reflects the increasing concern over default risk from private-sector loans, a concern that has prompted many lenders to shift new credits to institutions backed by the government or international organizations.

■ *Maturity*

Figures 4 and 5 display trends in the maturity distribution of outstanding foreign loans by U.S. banks. Short-term credits, or those with maturities of less than one year, still dominate U.S. international lending. Most of these credits are trade-related transactions associated with the financing of imports or with third-party export credits. The proportion of total lending accounted for by short-term loans remained fairly constant over the 1987–1997 period at approxi-

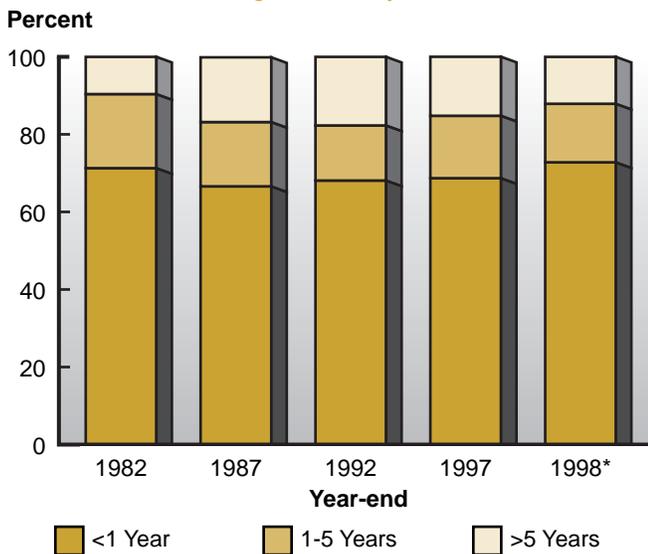
⁶ For example, as of year-end 1997, the six money-center banks operated 580 foreign branch offices, excluding foreign subsidiaries, and all U.S. banks engaged in international lending operated 907 branch offices.

Figure 4
"International lending by U.S. banks has been dominated by short-term loans."



Source: FFIEC, *Country Exposure Reports*.
 * March 31, 1998.

Figure 5
"Market shares of foreign loans by U.S. banks with maturities of less than one year have been reasonably stable over time but increased during the first quarter of 1998."



Source: FFIEC, *Country Exposure Reports*.
 * March 31, 1998.

mately 69 percent but increased during the first quarter of 1998 by approximately 4 percentage points (figure 5). This change represented a natural response to the problems in Asia and elsewhere, as lenders sought to lessen default risk by restricting longer-term loans.

The high proportion of international lending accounted for by short-term credits is explained by commercial bank preferences for international trade-related finance, concerns over default risk, and a number of structural factors related to regional trends and changes in the underlying status of developing-country debt positions. In general, most international banks have preferred to extend short-term trade credit, especially to developing countries, as opposed to medium- or long-term credit. This is especially true for lending to Latin America, where creditor banks took severe losses in the wake of the 1980s debt crisis. Other reasons for the high level of outstanding short-term loans include: (a) the bunching of residual maturities of long-term loans falling due, (b) debt sales or write-offs of loans with maturities greater than one year, or (c) debt conversions. The shift is also due to the entry into the capital markets of nations from Eastern Europe and Central Asia, many of which could contract funds only for short durations.⁷

In the past, when emerging nations wanted to raise long-term funds, they relied more on syndicated bank loans than on bond issues. Bond issuance was minimal because investors generally lacked information about developing-country borrowers, and few emerging countries had high-enough credit ratings to enable institutional investors to purchase their bonds. In contrast, many commercial banks had long-established relationships with developing-country borrowers, having provided them with short-term financing over the years. These relationships, coupled with knowledge of local economic conditions, often enabled the banks to extend their loans to unrated or speculatively rated borrowers. Moreover, syndicated bank financing is easily tailored to the requirements of the borrower.⁸

The typical foreign term loan consists of an intermediate- to long-term syndicated credit with a floating-rate contract. The interest rate is usually tied to the London Interbank Offering Rate (LIBOR) and reprices approximately every three to six months. Syndicated lending can be highly profitable to the banks that originate the loans because, in addition to a variable interest rate that offers some protection when interest rates go up, these loans carry fees for the

⁷ Bank for International Settlements (1998).

⁸ While syndicated loans have been the primary source of funds for emerging nations, an increasing number of developing countries have been gaining access to the bond and equity markets in recent years. This access has reduced the share of total emerging-nation borrowings that originate with commercial banks.

banks that manage and participate in the loans. Typically, the managers of the loan receive a fee representing $\frac{3}{8}$ to $1\frac{1}{4}$ percent of the total loan amount. This is divided among the loan managers, with the largest share going to the lead bank—the bank that won the syndication rights for the loan. Banks party to the offering also receive a participation fee, which generally ranges from $\frac{1}{4}$ to $1\frac{1}{8}$ percent of the total loan value.⁹ This fee is usually split among all the banks participating in the loan, with largest shares going to the banks that assumed the greatest risk or largest participations. Because the managing banks generally have the largest shares in a loan, they usually receive the largest percentage of the participation fee, in addition to the management fee.¹⁰

Figures 4 and 5 show that intermediate-term lending in the one- to five-year range is accounting for a slightly decreasing portion of longer-term credits, declining from 19 percent in 1982 to 16 percent in 1997. Longer-term syndicated credits with maturities greater than five years captured some market share from the intermediate ranges, increasing from approximately 10 percent in 1982 to 15 percent at the end of 1997. But with the current crises in various parts of the world, the amount of longer-term loans on the books of the U.S. banks decreased during the first quarter of 1998, with the market share of total lending accounted for by this category declining to 12 percent, the lowest level since 1982.

Direction of Foreign Lending

The direction of bank lending has changed considerably during the past several decades. The geographic regions with the largest share of cross-border lending by U.S. banks are listed in table 2. As of March 31, 1998, the greatest exposure of the large banks was in Western Europe, which accounted for \$177.7 billion, or 42 percent of total cross-border lending. Latin America and the Caribbean nations (excluding Mexico) rank second with \$91.4 billion, or 21 percent. East Asia is the third-largest destination for U.S. loans with \$63.9 billion, or 15 percent, followed by Canada and Mexico with \$40.7 billion, or approximately 10 percent. U.S. bank loans to Eastern European nations (including Russia) increased significantly during the 1990s in response to those countries' economic reforms and now account for \$22.9 billion, or 5.4 percent. Miscellaneous other regions account for the balance.

Table 2 also lists outstanding loans and commitments to individual nations. The majority of credits is highly concentrated among the developed nations, with the five largest recipients (United Kingdom, Germany, Mexico, Brazil, and France) accounting for \$142.7 billion, or almost 33.4 percent of total lending as of March 31, 1998. The next five largest (Japan, Canada, Cayman Islands, the Netherlands, and Argentina) account for an additional \$81.5 billion, or 19.1 percent of the total. The next five (Italy, Korea, Russia, Hong Kong, and Switzerland) account for an additional \$49.7 billion, or 11.6 percent.

Figure 6 shows the direction of international lending by U.S. banks since 1982 by region. After the debt crisis erupted in Mexico in August 1982, U.S. banks started to cut back international lending to almost all nations. As international lending resumed in the early 1990s, the flow of funds moved rapidly toward Western Europe during the next five years. Furthermore, this flow continued increasing to Western Europe in the first quarter of 1998, as the Asian crisis caused a “flight to quality” in lending. Starting in 1992, funds flowed again to Mexico and the Latin America/Caribbean area as they recovered from a decade of slow growth. Loans to East Asian nations, whose economies were growing, increased rapidly during the early to mid-1990s; after peaking in 1996, loans to the region dropped precipitously with the outbreak of the financial and economic crisis there.

Secondary Lending Risk: Trade Relationships

In addition to the direct risk of foreign lending, U.S. banks are subject to secondary risk. Secondary risk arises from the spread of adverse economic conditions between countries. Economic theory suggests that adverse economic conditions may be spread between countries by international trade. The spread of adverse conditions may be between the United States and its own trading partners, or it may be between the countries for which U.S. banks have relatively high lending exposure and their partners, but in either case, loans by U.S. banks may be at risk.

⁹ Madrid (1990), 51.

¹⁰ Ultimately, the interest-rate spread determines the profitability of a loan. However, fees can be lucrative when loan amounts are in the hundreds of millions of dollars.

Table 2
Foreign Lending by Region and Nation, March 31, 1998
 (\$Millions)

	Total Amount Owed by Borrowing Region/Nation	Total Commitments for New Lending	Total U.S. Cross-Border Exposure	Risk Exposure as a Percent of U.S. Foreign Lending ^a
Region				
Western Europe	\$ 129,866	\$ 47,813	\$ 177,679	41.6%
Latin America/Caribbean	73,665	17,721	91,386	21.4
East Asia	50,247	13,673	63,920	15.0
Canada and Mexico	29,204	11,455	40,659	9.5
Eastern Europe	19,873	3,116	22,989	5.4
All Other	22,523	7,776	30,299	7.1
Total	\$325,378	\$101,554	\$426,932	100.0%
Nation				
1 United Kingdom	35,019	19,009	54,028	12.7%
2 Germany	20,400	4,527	24,927	5.8
3 Mexico	17,378	4,101	21,479	5.0
4 Brazil	19,344	1,975	21,319	5.0
5 France	15,750	5,193	20,943	4.9
6 Japan	15,119	5,663	20,782	4.9
7 Canada	11,826	7,354	19,180	4.5
8 Cayman Islands	13,213	1,491	14,704	3.4
9 Netherlands	9,930	3,655	13,585	3.2
10 Argentina	10,609	2,660	13,269	3.1
11 Italy	10,479	1,165	11,644	2.7
12 Korea	9,194	1,336	10,530	2.5
13 Russia	8,820	743	9,563	2.2
14 Hong Kong	7,681	1,574	9,255	2.2
15 Switzerland	5,653	3,045	8,698	2.0
16 Bermuda	2,504	5,966	8,470	2.0
17 Belgium	6,737	736	7,473	1.8
18 Spain	6,395	977	7,372	1.7
19 Sweden	3,753	3,280	7,033	1.6
20 Australia	4,875	1,386	6,261	1.5
21 Indonesia	4,108	1,146	5,254	1.2
22 Chile	4,764	444	5,208	1.2
23 Singapore	4,025	981	5,006	1.2
24 Norway	3,313	1,572	4,885	1.1
25 Venezuela	3,927	753	4,680	1.1

Source: FFIEC, *Country Exposure Reports*.

^aExcluding local-currency loans.

Trade flows (exports and imports) are a key mechanism in the transmission of risk among countries because countries closely linked by direct trade are more likely to transmit economic disturbances—positive or negative—to each other. Trade relationships tend to be regional, and evidence suggests that financial market disturbances (for example, currency crises) are more likely to spread among countries in close geographic proximity that have strong trade relationships.¹¹ Identifying trade relationships can thus be

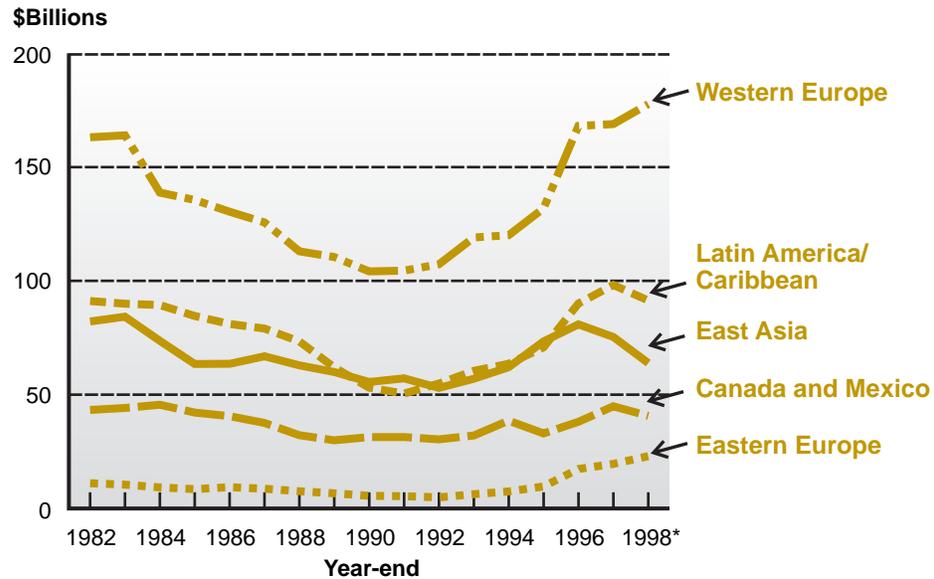
helpful in identifying possible sources of international lending risk.

For example, if the U.S. economy is highly dependent upon a country (or group of countries) for export

¹¹ Glick and Rose (1998) and Eichengreen and Rose (1998) provide recent evidence that trade relationships are important to the spread of currency crises. Backus, Kehoe, and Kydland (1993), Stockman and Tesar (1995), and Fernald, Edison, and Loungani (1998) also find high correlations of economic variables among major industrialized countries that happen to have significant intercountry trade flows.

Figure 6

“U.S. bank foreign lending to Western Europe has been growing rapidly in recent years.”



Source: FFIEC, *Country Exposure Reports*.

* March 31, 1998.

earnings, adverse economic events in those countries (such as a recession) may have negative consequences for the United States in the form of decreased foreign demand for U.S. goods. These negative consequences may, in turn, make it more difficult for businesses exporting from the United States to meet their debt obligations. Conversely, if a foreign country is highly dependent upon the United States as an export market, adverse economic events in the United States may decrease U.S. demand for the foreign country's goods, and to the extent that the decrease in demand makes it harder for foreign businesses to meet their debt obligations, the performance of their loans from the U.S. banks may be impaired.

Of particular importance to the effect of trade fluctuations on foreign lending is the relationship between where a country *lends* and where it *trades*. If a country lends heavily to and trades heavily with the same partner, the risk associated with foreign lending may increase, because in this case the risk component of foreign lending that is due to fluctuations in trade with other countries is not as easily offset by domestic loans. The scenario is akin to, for example, lending money to a chef to cook meals that you will buy back from the chef, with the understanding that you will be

the chef's biggest customer and the chef can sell a limited number of meals to other people as well. If you later decide you don't like the chef's cooking anymore or you can't afford to continue buying the meals, the chef will lose sales and may not be able to pay you back, and both of you lose. However, if you make a loan to the chef but are only a small portion of the chef's market, the chef's ability to repay the loan is less likely to be affected if you decide to stop buying the meals or are unable to afford them.

Another significant aspect of trade relationships and the transmission of risk from one country to another is that the more trade-dependent a country's economy, the more sensitive its economic condition and foreign loan performance are to fluctuations in trade flows and the terms of trade. Thus, because the United States is less dependent on trade than most other industrialized nations (see table 3), the United States is also less susceptible to fluctuations in trade flows or to the events that cause such fluctuations (for example, changes in the terms of trade, fluctuations in exchange rates, and import tariffs). For many other countries, however, exports and imports account for a substantial portion of GDP, and for these countries, fluctuations in trade flows can cause significant fluctuations in economic

growth. As table 3 shows, many European and Asian economies are heavily dependent on international trade. For example, exports of goods totaled nearly 60 percent of GDP in 1996 for Belgium and Luxembourg¹² and more than 25 percent for Korea. All other things being equal, therefore, fluctuations in foreign trade are more likely to affect economic growth in these countries than in countries such as the United States and Japan.

U.S. Trade Relationships

Even though the United States is less trade-dependent than other industrialized countries, it has grown more dependent in recent decades. Figure 7 shows that in 1970 both exports and imports of goods and services totaled less than 6 percent of U.S. GDP, with exports actually greater than imports. Since 1970, however, U.S. trade dependence has increased, with exports and imports at approximately 13 and 11.5 percent of GDP, respectively, as of year-end 1996. This trend suggests that currently international trade has a potentially greater effect on the performance of U.S. international loans than it did in 1970.

One can examine international trade at both the regional and the country levels. At the regional level, U.S. trade is concentrated in North America (Canada and Mexico) and East Asia. As of year-end 1996, North America accounted for 30.3 percent of U.S. exports and 28.4 percent of U.S. imports (table 4). East Asia accounted for 29.1 percent of exports and 37.3 percent of imports. Western Europe is less significant as a trading partner to the United States, making up 21.9 percent of exports and 19.4 percent of imports in 1996. At the country level, the largest U.S. trading relationships involve Canada, Japan, and Mexico, which together accounted for more than 41 percent of total U.S. exports and 43 percent of U.S. imports as of year-end 1996. The next three largest markets for U.S. exports are the United Kingdom, Korea, and Germany, followed by Singapore, the Netherlands, France, and Hong Kong (table 5). The ordering of the largest markets for U.S. imports, however, deviates from the ordering of exports after the first three countries: China, Germany, and the United Kingdom are the next three largest markets for U.S. imports (after Canada, Japan, and Mexico), followed by Korea, Singapore, France, and Italy (table 5).

¹² Export and import data were available only for Belgium and Luxembourg combined.

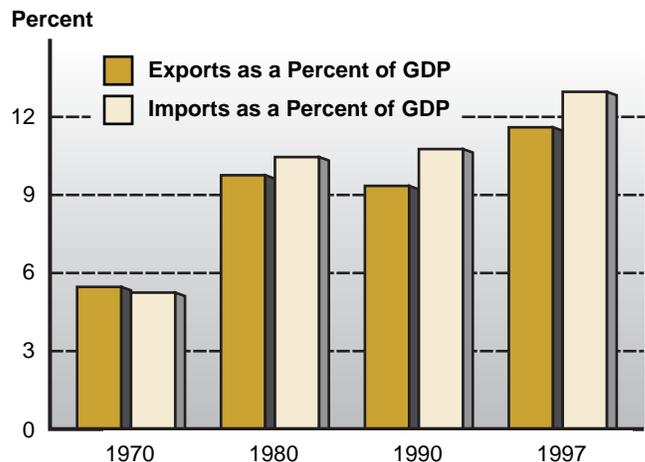
Table 3
Exports of Goods as a Percent of GDP for Major Borrowers of U.S. Banks and for Selected East Asian Countries (Year-end 1996)

Major Borrowers from U.S. Banks	Exports as a Percent of GDP
Belgium–Luxembourg ^a	59.7%
Netherlands	50.3
Canada	33.5
Korea	26.8
Switzerland	25.9
Argentina	24.7
United Kingdom	22.5
Germany	22.2
Italy	20.7
France	18.8
Mexico	17.7
Spain	17.6
Australia	15.5
Japan	8.9
United States	8.2
East Asia	
Malaysia	78.9
Thailand	30.3
Philippines	24.4
Indonesia	21.9

Source: International Monetary Fund.

^a Export data are not available for Belgium and Luxembourg separately.

Figure 7
“U.S. exports and imports of goods and services as a percent of GDP have increased since 1970.”



Source: Haver Analytics.

Table 4
U.S. Trade Relationships by Region
 (Year-end 1996)

Region	Total U.S. (\$Millions)	Percent of Total U.S.	As a Percent of U.S. GDP
Exports^a			
North America (Canada and Mexico)	\$ 189,345	30.3%	2.5%
East Asia	182,044	29.1	2.4
Western Europe	136,895	21.9	1.8
Latin America/Caribbean	35,312	5.6	0.5
All Other	81,477	13.0	1.1
Total Exports	\$625,073	100.0%	8.2%
Imports^b			
East Asia	\$ 306,812	37.3%	4.0%
North America (Canada and Mexico)	233,857	28.4	3.1
Western Europe	159,271	19.4	2.1
Latin America/Caribbean	52,080	6.3	0.7
All Other	70,005	8.5	0.9
Total Imports	\$822,025	100.0%	10.8%

Source: International Monetary Fund.

^aExports of goods only.

^bImports of goods only.

Table 5
U.S. Trade Relationships by Country
 (Year-end 1996)

Nation	Total U.S. (\$Millions)	Percent of Total U.S.	As a Percent of U.S. GDP
Exports^a			
1 Canada	\$ 132,584	21.2%	1.7%
2 Japan	67,536	10.8	0.9
3 Mexico	56,761	9.1	0.7
4 United Kingdom	30,916	4.9	0.4
5 Korea	26,583	4.3	0.3
6 Germany	23,474	3.8	0.3
7 Singapore	16,686	2.7	0.2
8 Netherlands	16,614	2.7	0.2
9 France	14,431	2.3	0.2
10 Hong Kong	13,956	2.2	0.2
Total Exports	\$399,541	63.9%	5.2%
Imports^b			
1 Canada	\$ 159,746	19.4%	2.1%
2 Japan	117,963	14.4	1.5
3 Mexico	74,111	9.0	1.0
4 China	54,409	6.6	0.7
5 Germany	39,989	4.9	0.5
6 United Kingdom	29,700	3.6	0.4
7 Korea	23,297	2.8	0.3
8 Singapore	20,648	2.5	0.3
9 France	19,196	2.3	0.3
10 Italy	19,001	2.3	0.2
Total Imports	\$558,060	67.9%	7.3%

Source: International Monetary Fund.

^aExports of goods only.

^bImports of goods only.

Trade Relationships of Countries with High Totals of U.S. Loans

Economic instability in a foreign economy may pose additional risk to U.S. foreign loans if that country's adverse economic conditions spread to countries the United States lends heavily to. Suppose, for example, that the economies of the United States and Indonesia are linked to one another through trade and bank lending and that Indonesia and Japan are similarly linked. In this case, economic fluctuations in Japan represent secondary risk to U.S. lending to Indonesia because economic fluctuations in Japan may affect the profitability of Indonesian businesses and, in turn, the performance of U.S. loans to Indonesia. Thus, a viable means of identifying secondary risks to U.S. lending is to examine the international trade relationships of countries to which the United States has large lending exposure.

Table 6 shows trade relationships for the 15 nations with the largest amount of indebtedness to U.S. commercial banks as of December 31, 1997. Columns (1) and (2) identify the nations and specify each one's fraction of total U.S. foreign lending. Column (3) ranks the five most important trading partners of each of the nations in column (1), and column (4) specifies the percentage of exports (goods only) going to each of the five trading partners. As indicated by table 6, most of the top 15 nations are highly dependent on exports to the United States. Six of the top 15 nations have the United States as their largest export market; of those 6 nations, 2 (Mexico and Canada) send over 80 percent of their total exports of goods to the United States, while another (Japan) ships almost 27.5 percent of its total exports to the United States. For another 2 (Switzerland and Argentina), the United States is the second-largest export market. For the remaining 7 nations, the United States is one of the top 5 export markets.

Table 6 also reveals that, excluding the United States, the export markets of major U.S. borrowers are largely regional. The biggest U.S. borrower as of year-end 1997, the United Kingdom, exports mainly to Germany, France, the Netherlands, and Belgium-Luxembourg, with almost 33 percent of the U.K.'s exports going to these four countries. A similar regional pattern is evident in other European countries: Germany, France, Italy, Belgium-Luxembourg, and Switzerland all export a considerable percentage of

goods to other Western European nations. To a somewhat lesser degree, the regional pattern is also present in Asia: while exporting heavily to the United States (27.5 percent), Japan—which represented 9.2 percent of U.S. foreign lending exposure at year-end 1997—exports mainly to Asian nations, with Korea, Hong Kong, China, and Singapore as its four next-largest export markets.

Significant U.S. trade relationships are not limited to countries with strong lending ties to the United States; many countries that do not borrow heavily from the United States nevertheless depend greatly on the United States as a major export market. Of particular current interest in this regard are the economies in East Asia. Most of the developing Asian nations stricken by the "Asian flu" of devalued currencies, massive outflows of capital, stock market fluctuations, and banking sector instability are only moderately indebted to U.S. banks but are still highly dependent upon the United States as a major export market. As table 7 shows, the United States is the number-one export market for Singapore, Thailand, and the Philippines, and the number-two market for Indonesia and Malaysia. As the world's economic superpower, the United States influences foreign economies—through trade or financial flows—throughout the world.

The patterns of U.S. trade flows and bank-loan flows suggest that a major threat to U.S. lending to foreign countries is, ironically, a U.S. recession. A U.S. recession would decrease this country's demand for exports from countries that borrow heavily from it, thus making it harder for these countries to pay back their loans to the United States.

Similarly, a major threat to economic stability in Europe is a recession in Germany. Germany has the third-largest economy in the world, behind the United States and Japan. Germany is also much more dependent on international trade than are the United States and Japan, as its ratio of exports to GDP is 22 percent. Moreover, Germany is a major export market for most Western European nations, including the United Kingdom, France, the Netherlands, Switzerland, Italy, and Belgium-Luxembourg (table 6). Germany's trade statistics strongly suggest that the German economy to a large extent "drives" Europe. Hence, an economic downturn in Germany would likely cause economic problems for many of the countries of the continent

International Risk Exposures of U.S. Banks

Table 6
Secondary Risk Exposures of U.S. Banks, All Countries
 (Year-end 1996)

(1) Largest U.S. Bank Exposures (Country A)	(2) Percent of U.S. Foreign Lending ^a	(3) Largest Export Markets of Country A	(4) Exports of Country A as a Percent of Its Total Exports
1 United Kingdom	10.2%	1 United States	12.1%
		2 Germany	11.3
		3 France	9.3
		4 Netherlands	7.3
		5 Belgium–Luxembourg	4.7
2 Japan	9.2	1 United States	27.5
		2 Korea	7.1
		3 Hong Kong	6.2
		4 China	5.3
		5 Singapore	5.1
3 Germany	7.4	1 France	10.7
		2 United Kingdom	7.9
		3 United States	7.7
		4 Netherlands	7.3
		5 Italy	7.3
4 France	6.1	1 Germany	16.8
		2 United Kingdom	9.2
		3 Italy	9.0
		4 Belgium–Luxembourg	8.2
		5 United States	6.0
5 Canada	5.6	1 United States	81.7
		2 Japan	3.7
		3 United Kingdom	1.4
		4 Germany	1.1
		5 China	1.0
6 Brazil	4.2	1 United States	19.5
		2 Argentina	10.9
		3 Netherlands	7.4
		4 Japan	6.4
		5 Germany	4.4
7 Korea	3.8	1 United States	16.8
		2 China	8.9
		3 Hong Kong	8.6
		4 Singapore	5.0
		5 Germany	3.6
8 Netherlands	3.6	1 Germany	25.1
		2 Belgium–Luxembourg	11.6
		3 France	9.7
		4 United Kingdom	8.4
		5 Italy	5.2

(continued)

Table 6 (continued)
Secondary Risk Exposures of U.S. Banks, All Countries
 (Year-end 1996)

(1) Largest U.S. Bank Exposures (Country A)	(2) Percent of U.S. Foreign Lending ^a	(3) Largest Export Markets of Country A	(4) Exports of Country A as a Percent of Its Total Exports
9 Mexico ^b	3.4	1 United States	83.4%
		2 Canada	2.2
		3 Japan	1.4
		4 Spain	1.0
		5 Italy	0.1
10 Switzerland	3.3	1 Germany	23.6
		2 United States	9.8
		3 Italy	7.8
		4 United Kingdom	6.8
		5 Japan	4.3
11 Italy	3.2	1 Germany	17.4
		2 France	12.5
		3 United States	7.4
		4 United Kingdom	6.5
		5 Spain	5.0
12 Spain	3.1	1 France	20.1
		2 Germany	14.5
		3 Italy	8.8
		4 Portugal	8.6
		5 United Kingdom	8.5
13 Belgium–Luxembourg ^c	2.7	1 Germany	20.4
		2 France	17.8
		3 Netherlands	13.3
		4 United Kingdom	9.0
		5 United States	4.1
14 Australia	2.5	1 Japan	19.9
		2 Korea	9.5
		3 New Zealand	7.2
		4 United States	6.4
		5 Indonesia	4.0
15 Argentina	2.3	1 Brazil	27.8
		2 United States	8.3
		3 Chile	7.4
		4 Netherlands	5.1
		5 Uruguay	3.1

Sources: FFIEC, *Country Exposure Reports*; International Monetary Fund.

^a Excluding local-currency loans.

^b Total exports for Mexico uses the DOTS world total. All other total exports data use the IFS world total.

^c Commercial bank lending data for Belgium only; exports data for both Belgium and Luxembourg.

Table 7
Secondary Risk Exposures of U.S. Banks, East Asian Countries
 (Year-end 1997)

(1) Largest U.S. Bank Exposures (Country A)	(2) Percent of U.S. Foreign Lending ^a	(3) Largest Export Markets of Country A	(4) Exports of Country A as a Percent of Its Total Exports ^b
Indonesia	1.3%	1 Japan	25.9%
		2 United States	13.6
		3 Singapore	9.2
		4 Korea	6.6
		5 China	4.1
Singapore	1.1	1 United States	18.4
		2 Malaysia	18.0
		3 Hong Kong	8.9
		4 Japan	8.2
		5 Thailand	5.7
Thailand	1.1	1 United States	18.0
		2 Japan	16.8
		3 Singapore	12.1
		4 Hong Kong	5.8
		5 Malaysia	3.6
Malaysia	0.6	1 Singapore	20.4
		2 United States	18.2
		3 Japan	13.4
		4 Hong Kong	5.9
		5 Thailand	4.1
Philippines	0.6	1 United States	34.1
		2 Japan	18.0
		3 Singapore	6.0
		4 Netherlands	5.5
		5 United Kingdom	4.6

Sources: FFIEC, *Country Exposure Reports*; International Monetary Fund.

^aExcludes local-currency loans.

^bExports of goods only.

and, as a result, would limit the profitability of U.S. loans not only to Germany but to the entire continent.

Similarly in East Asia, the trade flow data suggest that the greatest threat to the economic stability and well-being of the region is a prolonged recession in Japan. The current Japanese recession highlights the debilitating effect of Japan's economy on the rest of East Asia. As table 7 shows, Japan is the leading export market for Indonesia (26 percent of exports as of year-end 1997), the second-largest export market (after the United States) for the Philippines (18 percent) and Thailand (17 percent), and the third-largest (after Singapore and the United States) for Malaysia (13 percent). The East Asian corridor has suffered not only

because of trade relations with Japan but also because systemic structural problems in the Japanese banking system have all but eliminated the ability of Japanese banks to provide the credit necessary to spur investment and economic growth in the region—and Japan has lent heavily to developing East Asian countries.¹³

¹³“Available, but incomplete, balance-sheet data compiled by the Bank for International Settlements (BIS) indicate that as of mid-1997, banking system exposures to Asian emerging market countries amounted to approximately \$260 billion in the European Union (3¼ percent of GDP), \$210 billion in Japan (5 percent of GDP), and \$40 billion in the United States (½ of 1 percent of GDP)” (International Monetary Fund [1998], 25.

Summary and Conclusions

Trends in both the primary and secondary risks associated with the international lending activities of U.S. banks over the 1982–1998 period indicate that U.S. banks recovered from the heavy losses they incurred on foreign loans during the 1980s debt crisis; and in the 1990s they resumed international lending. But while foreign lending grew significantly during the 1990s, substantial amounts of new capital also came into the industry. Thus, the amount of risk exposure as reflected in the ratio of foreign loans to total capital is lower than it was during the early 1980s, when some of the largest U.S. banks faced the possibility of insolvency because of delinquent cross-border loans. Another way in which foreign lending by U.S. banks is different in the 1990s is that the money-center banks have expanded their domination of these markets.

This expansion of the role of money-center banks has come about for several reasons: the money-center banks pursue highly competitive pricing strategies, they have numerous foreign branch offices, they have the technical expertise to originate such loans, and at the same time many of the super-regional and other U.S. banks have cut back their origination of and participation in foreign lending, after incurring heavy loan losses on developing-country debt during the 1980s.

Some of the characteristics of foreign loans made by U.S. banks have also changed. An increasing percentage of these loans is being made to the private non-bank sector and away from the interbank market. The shift has occurred because active privatization programs under way in many nations, as well as other developments, have increased the demands for private-sector loans and made them more profitable, especially with the recent narrowing of interest-rate spreads on loans in the interbank market. Maturity, however, has not changed: the maturity of most foreign loans continues to be short term—over 70 percent of total foreign loans are in this category. But the direction of foreign lending has shifted somewhat: during the 1990s loans to Western Europe have accounted for an increasing share of total lending. Lending to the Latin American/Caribbean region resumed after a decade of retrenchment, and loans to East Asia increased significantly during the 1980s and

early 1990s but declined in the late 1990s, in response to changing circumstances in Asia. These changing lending patterns—the heavy concentration of lending to Western Europe and away from East Asia—may have reduced overall U.S. bank lending risk during the 1990s, but the increasing levels of lending to Mexico, Brazil and other Latin American/Caribbean region may partially offset the reduction.

In addition to the primary risks of international lending, bank supervisors have also become concerned about the secondary risks of such lending, risks that arise when economies are linked by trading relationships. Adverse economic disturbances are transmitted between countries by international trade. The greater the trading interdependence among countries, the more likely it is that economic disturbances will be transmitted, and the higher the probability that one country's economic problems will affect other countries. Economic problems transmitted through the trade mechanism affect not only the private nonbank sector of an economy but also the banking sector, as trade-related problems such as currency devaluations and falling exports can increase the incidence of credit risk and loan defaults.

An example of the direct risk is evident in Asia. The recession in Japan has reduced its import demand for products from other Asian countries. This in turn has jeopardized the loans of Japanese banks to exporters in these countries. Although U.S. banks may be sheltered from this direct risk they nevertheless may be exposed. Because most Asian nations depend somewhat upon the Japanese market for export earnings, indirect risk appears to have increased. Thus, a prolonged recession in Japan is likely to increase the total risk to banks in the United States. Similarly, because most European nations depend upon the German market for export earnings, a recession in Germany would also increase the total risk to banks in the United States. In today's increasingly international banking environment, when bankers and their supervisors assess the risks associated with the international lending activities of U.S. banks, they should be particularly aware of the linkages between economies.

The largest indirect risk to U.S. international lending, however, is a recession in the United States itself. The United States is a major export market for most of the world, and particularly for nations that the

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United States lends heavily to. If the U.S. economy were to fall into a sustained recession, exports to the United States would probably fall. This would make it harder for many countries around the world to pay

back their loans to the United States. Thus, as international trade and financial linkages grow, weakness in the largest economies increases the risk associated with international lending.

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