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Aspects of the International Banking Safety Net

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Contents

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I. Introduction

During the 1970s international lending by banks came to play a dominant role in the flow of international finance. So far in the 1980s banks have continued to play a major role, but recently there has been evidence of strains in the international banking system. The prospect for continuity of international intermediation by banks has thus become an issue.

The present paper focuses on one aspect of banks' willingness and ability to continue international intermediation. 1/ The history of banking up to the 1930s was replete with crises that entailed a disruption of banking activity, drastically altering the volume, direction, and terms of the flow of funds within and among national economies. Could such a disruption occur today? The paper provides a qualitative assessment of the strengths and weaknesses of the existing safeguards for the continuity of international intermediation by banks. As background to that discussion, it also sets out, in general terms, some conceivable sources of banking problems, and what the consequences of such problems would be for the international economy.

1. Safety nets in domestic banking systems

The history of the development of market economies has been characterized by a growing dependence on financial intermediaries to provide the money and credit that facilitate economic activity, so that the consequences of a collapse of financial institutions have become progressively more serious. 2/ The great crisis of the 1930s could almost be defined in terms of financial collapse. In the United States, for example, the stock of money contracted by over one third between August 1929 and March 1933. In the same period, over one fifth of the commercial banks in the United States suspended operations. Others were merged or voluntarily liquidated, so that the number of commercial banks in operation declined by one third. 3/ While authorities in most European countries intervened more actively to shore up their banking systems, most experienced major bank failures or payments moratoria. Withdrawals of bank loans and deposits played a major role in the balance of payments crises of the period, particularly in Central and Eastern Europe.

Since the 1930s, the financial authorities of most countries have adapted their policies to avoid a recurrence. While economic fluctuations and failures of individual institutions have inevitably continued, the fact that these have not resulted in generalized financial panics bears witness to the success of bank "safety nets."

1/ For an assessment of some of the other factors affecting international bank intermediation, both in the immediate future and over the medium term, see, for example, International Monetary Fund (1982).

2/ A highly readable history of financial crises is provided by Kindleberger (1978).

3/ Friedman and Schwartz (1963).

The purpose of such safety nets is to keep financial systems functioning in the face of economic shocks. 1/ They can be thought of as consisting of a series of defenses: prudential measures to protect bank solvency; prudential measures to protect bank liquidity; official assurances (as through deposit insurance) to depositors that their deposits are safe, even with troubled institutions; orderly resolution of the problems of failing banks; and, in the last resort, official provision of liquidity to permit solvent institutions to keep functioning in the face of a loss of depositor confidence. In setting up these defenses, however, financial authorities face the problem of "moral hazard." 2/ That is, any measure that reduces the extent to which the market penalizes imprudent behavior, or rewards prudent behavior, may well encourage institutions to behave imprudently. For example, full insurance for all liabilities of financial institutions, adequately funded, would guard against system-wide drains of liquidity resulting from a loss of depositor confidence, but at the same time would remove the market mechanism that forces individual institutions to act so as to preserve that confidence. The multiple layers of partial protection that make up each country's safety net, and the diversity of safety nets from country to country reflect, to a large extent, attempts to require banks to accept responsibility for their actions, while preserving stability of the system.

With effective safety nets, the effect of banking problems will be limited to an increase in the price of intermediation. If banks' capital positions look weaker, whether because they have been reduced by loan losses or because banking is perceived to be a riskier business, the need to strengthen those positions (either through retaining earnings or through tapping the capital markets) will force up the spread between deposit and lending rates. While this would raise the cost of credit to borrowers, there should be no question of its availability, though if the other circumstances of the economy are unfavorable there might be problems of creditworthiness of otherwise bankable customers.

This last point gets back to the ultimate requirement for banking stability--that policies be carried out so as to maintain a reasonable degree of economic stability. One further caveat should be noted. The degree to which any bank safety net can stretch without breaking depends on the flexibility of bank supervisors and monetary authorities. If there were limits on the amount of liquidity that a central bank could supply, for example, or if banks were forced to adhere to strict quantitative standards for bank capital in the face of large loan losses, the ability of the banking system to continue intermediating could be seriously impaired.

1/ The term "safety net" is often used in the narrow sense of a system of providing financial support for troubled institutions; here the term is generalized to include all aspects of the safeguards which enhance the stability of banking systems.

2/ Grubel (1971) discusses the concept of moral hazard. The expression originated with the economics of insurance, where it initially referred to the danger of fraud where insurance applied. It has since acquired the more general definition mentioned in the text.

2. Scope of study

Following this introductory section, Section II provides a review of recent developments as background to the discussion of the issues covered in the paper.

Section III sets out some of the dimensions of the world's dependence on financial intermediation by international banks, with particular emphasis on the flow of capital to the non-oil developing countries. Section III also notes the extent to which the external accounts of industrial countries could be affected by problems in their international banking sectors.

These problems could be the result of spillovers from difficulties in domestic banking or of particular features of international banking itself. Section IV briefly looks at possible sources of instability, and how initial problems could escalate.

The remainder of the paper examines the safeguards built into the present international banking system and the gaps that remain. Section V focuses on prudential standards for the protection of bank solvency. A fundamental prudential standard involves maintaining a bank's capital large enough in relation to its assets to permit the bank to absorb significant losses. Standards are also established to limit particular sorts of risk. In the international area, the standards that have received the most attention relate to the management of foreign exchange exposure, concentration of country exposure, and maturity transformation. The section concludes with a review of the development of international coordination of supervisory standards.

Public fears of bank failure, whether justified or not, may lead to abrupt withdrawal of deposits from particular banks, or from groups of banks. Banks attempt to protect themselves against such problems by maintaining liquid assets, by limiting the degree of mismatch between the maturities of assets and of liabilities, and by arranging lines of credit with other banks. Section VI describes precautions taken by international banks in this area.

The final line of defense against bank crises is the willingness of banking authorities to provide support for banks. The support provided by deposit insurance is less significant internationally than in domestic systems. With international banks, moreover, special problems are posed for banking authorities in their role of ensuring an orderly resolution of the affairs of failing banks, and for some banks the locus of lender of last resort responsibility is not clearly defined. Questions may also be raised about the ability and willingness of lenders of last resort to provide general liquidity to their banking systems to meet their international obligations. Section VII sets out what is known about policies of lenders of last resort with respect to international banks.

In the event of a major disruption of the international banking system, there could be a need for special international financial arrangements to help countries deal with the consequences of the disruption for the capital accounts of their payments balances. Assistance might be needed both by countries that were dependent on borrowing from banks and by countries whose banking systems were under pressure. Besides temporary financial assistance to deal with the immediate consequences of the disruption, there might also be a need for the development of new channels for longer-term international capital flows if banks' withdrawal from international banking turned out to be substantial and sustained. Questions about the nature of such financial assistance are beyond the scope of this paper.

II. Recent Developments

The year 1982 has been one of turmoil in financial markets. As of this writing banking problems, as measured, say, by the tiering of interest rates, have not been severe, as in 1974-75, but it is nonetheless likely that some substantial changes in the way the international banking system operates may ensue. The present section attempts a preliminary assessment of the significance of these events.

The major events include two that have special implication for banks' attitudes toward international lending. The conflict between Argentina and the United Kingdom included mutual imposition of financial sanctions, which thus involved the fourth largest bank debtor among the developing countries and the most important center for international banking. Mexico's debt service crisis marked the first time a very large bank debtor--in this case the largest among the developing countries--had encountered such difficulties. Two significant bank failures also occurred--Penn Square in the United States and Banco Ambrosiano in Italy--the second of which involved complex international dealings, and both of which left at least some depositors uncertain about whether they would be repaid. These developments occurred against a background of rising domestic loan losses, and of serious financial difficulties of major corporations in a number of countries which threatened banks with further losses.

1. Country risk and sovereign lending

Until 1982 no very large borrower had encountered external debt servicing difficulties--even Poland accounted for less than 4 per cent of bank loans outside the industrial countries. A growing number of relatively small borrowers had sought debt reschedulings, but taken together they represented a very small proportion of banks' international assets. Mexico's debt service problems, however, involved a borrower that, by itself, accounted for 13 per cent of bank loans outside the industrial countries. Despite the magnitude of Mexico's debt to banks--it may not be far short of bank capital for some large banks--expressions of concern

about the effects on bank solvency have been muted. Presumably this reflects continuing recognition that while banks might not always emerge completely unscathed from country debt crises (although this has generally been the case thus far), the actual loss in the case of any country is likely to be small relative to the total exposure to the country.

2. Depositor confidence

The confidence of large U.S. depositors was shaken by the failure of Penn Square National Bank, which was the first failure of a sizable U.S. bank in 50 years without immediate pay-out of depositors by the Federal Deposit Insurance Corporation. As a result some banks suffered withdrawals, and some large depositors diversified their deposits to increase their effective insurance coverage, limited as it is to $100,000 per depositor at any individual bank. Rising loan losses led to doubts about even some major banks, which found themselves having to pay more than the best market rates on their obligations. Beyond such tiering among financial institutions, there was also a movement from bank certificates of deposit into government obligations that led to increasing differentials between interest rates on certificates of deposit and those on Treasury bills. 1/

More significant for international depositors was the failure of Banco Ambrosiano. While the Italian authorities and Italian commercial banks quickly took action to provide full backing for payment for depositors of the parent bank in Italy, including international depositors, no such backing applied to Banco Ambrosiano Holding (BAH) in Luxembourg, with the result that major bank creditors of BAH quickly declared default. Eventual recovery of most of the creditors' funds seemed likely, but they faced, at the very least, protracted delays in recovery.

When the Luxembourg authorities failed to persuade the Italian authorities to take responsibility for the debts of BAH, the Luxembourg authorities required Italian banks owning Luxembourg holding companies to provide written guarantees for the security of deposits. Nonetheless, some tiering occurred, with some banks in the Euromarket paying up to 1/2 per cent over the lowest market rate for funds. Such tiering was much more modest than in 1974-75, when for some banks it approached 2 per cent, but it nonetheless indicated a more discriminating attitude on the part of other banks and nonbank depositors.

1/ A major factor in such shifts in the United States appears to have been the deposit concentration associated with the growth of money market funds. Small deposits had shifted from banks, where deposit insurance would have limited the incentive to withdraw, to money market funds. The large-scale redeposits of such funds were only partly covered by insurance, and hence were subject to withdrawal from banks whose situation appeared at all doubtful.

3. Interbank relationships

Besides questions relating to interbank deposits, other aspects of interbank relationships have also come under scrutiny as a result of recent problems. On the positive side, the financial sanctions mutually imposed by Argentina and the United Kingdom do not seem to have led to interbank problems, in contrast to what occurred during the United States-Iran dispute in 1980.

It has sometimes been suggested that one area of vulnerability in international banking is that smaller banks often do not adequately analyze loans they participate in, instead simply acting on the advice of the large banks. A surprising aspect of the Penn Square failure was the extent to which the transmission mechanism worked the other way in domestic loans, with some very large banks apparently taking on loans arranged by Penn Square with a minimum of independent evaluation.

4. Regulatory adaptations

As with the near crisis of 1974-75, the current spate of problems can be expected to bring about changes in how banks are regulated and supervised. Among domestic banking systems a major strengthening of supervisory powers is under way in Italy, and Italian-owned holding companies abroad have been subjected to stronger reporting requirements. In the United States, effective September 30, 1982, national banks have been required to file quarterly reports listing poor-performing loans, which previously were identified only in the context of bank examinations, and there is to be greater public disclosure of bank positions. There is also a movement toward more conservative treatment of poor-performing sovereign loans, with banks increasingly making provisions against potential losses on such loans. In Canada, the large exposures of Canadian banks to individual corporations have led the Inspector-General of Banks to advise banks to limit such exposures to 50 per cent of capital, and a Parliamentary Inquiry has called for stringent legal lending limits. In the Federal Republic of Germany, the Bundesbank has requested a number of banking institutions to give it notice of credits to foreign borrowers totaling DM 50 million or more.

Internationally, the problems of Banco Ambrosiano Holding raised questions about the sharing of responsibilities among lenders of last resort. Many of the calls on the Italian authorities to stand behind BAH seem to reflect a belief that no depositor should be hurt by such a failure, a responsibility which presumably no lender of last resort would consider it appropriate to accept. Short of that, however, is the question of who has the responsibility to ensure an orderly and equitable resolution of the problems of failing banks. The authorities of Luxembourg and the United Kingdom, both of which have large numbers of subsidiaries of foreign banks within their jurisdictions, have made it clear that they regard the foreign parents as having full responsibility to support their subsidiaries. This

could be taken to imply that the parent authorities have lender of last resort responsibility. The Italian authorities fully protected depositors with the parent bank. Along with some other parent authorities, however, they felt limited responsibility for foreign subsidiaries whose activities they were unable to supervise. The result may be firmer contractual understandings on financial support; Luxembourg has already required the Italian parents of Luxembourg holding companies to provide written guarantees of support.

The problems of BAH also pointed up gaps in the coverage of bank supervision. Since BAH was a bank holding company, not a bank, under Luxembourg law the Luxembourg authorities did not have supervisory powers. Italy is now putting new controls on foreign subsidiaries of Italian banks to ensure better supervision of their activities.

5. Conclusions

In some ways current financial events fit the model of speculative cycles developed by Minsky, 1/ in this instance with banks themselves as the major players. International bank lending has grown rapidly in recent years as a result of the emergence of highly profitable, seemingly riskless opportunities, while institutional changes in many domestic markets (particularly deregulation in the United States) have also generated new modes of financial intermediation. In the past the end of such cycles was often accompanied by the financial collapse of the principal actors, in some cases accompanied by more general crises in the economies in which they operated. Viewed in this context, the events of 1982 so far have to a large extent demonstrated the strength of the international banking system. The enormous financial strains associated with the maintenance of high real interest rates in the face of economic recession have placed many financial institutions in serious difficulties. As in 1974-75 some banks have failed, mainly as a result of fraud or incompetence, but unlike the previous period these have not, at least not so far, resulted in major disruption of international banking relationships, despite the fact that the underlying economic situation is graver than it was then.

It is likely that in the short run there will be some negative impact on banks' attitudes to international lending, particularly among smaller banks which may have less of a long-term commitment to their international customers. Over the medium term the system should be strengthened by recent events. While some financial institutions, both those operating in domestic markets and those operating internationally, have been adversely and perhaps inappropriately affected by these events, a more discriminating approach by depositors should, in general, be salutary. The moral hazard pendulum had perhaps swung too far, with depositors--including interbank

1/ As described in Kindleberger (1978).

depositors--thinking they had no risk of loss, thus facilitating incompetent or fraudulent behavior in some institutions. A more cautious attitude on the part of depositors will make it more difficult for institutions with less than solid credentials to expand rapidly in risky or questionable areas of activity. While this may mean slower growth of bank credit, the credit that is not generated would likely be of marginal usefulness. At the same time bank supervision is likely to be strengthened, and there is likely to be further clarification of international understandings in that area. There is also likely to be a better delineation of the relative responsibilities of the various national authorities for the orderly resolution of the problems of failing banks. Taken together, these developments should do much to reduce the extent to which banks can evade the intent of regulation and supervision of prudential behavior by locating in centers where monitoring is lax.

III. Financial Consequences of International Banking Problems

The consequences of problems in international banking would be, in the first instance, financial--the disruption of payments mechanisms and the breakdown of financial intermediation. If unchecked, these could quickly impinge on the real economy, producing declines in production, employment, and trade.

1. Types of financial consequences

While the precise impact of a crisis in international banking would depend on the source of the problem (some possibilities are discussed in Section IV), three general financial consequences could be envisaged: (1) disruption of the mechanisms for international payments; (2) disruption of domestic banking services supplied by banks headquartered in other countries; and (3) disruption of international financial intermediation. The first of these problems could be resolved in a relatively straightforward fashion, provided international transactors have faith in at least some banks that are able to maintain international correspondent relationships. Some transactors might suffer losses or incur additional costs in seeking out reliable banking connections, however. By the same token, any loss of domestic services provided by foreign banks could be offset by the domestic expansion of other banks, assuming domestic banking is not seriously disrupted, though again additional costs might be incurred. The central problem is likely to be the third, the disruption of international financial intermediation.

A banking crisis could have two major direct consequences for international capital flows: international bank lending could be curtailed, and funds deposited with banks in particular countries could be shifted into bank deposits or other financial instruments in other countries.

Such intermediation as did continue, moreover, would take place on harder terms, such as higher margins between deposit and lending rates. Unless alternate channels for capital flows could be arranged, countries affected by the change in the magnitude and terms of bank intermediation could be forced into inappropriate economic adjustment, the familiar consequence of an inappropriate contraction of global liquidity. Some of the dimensions of bank involvement in international capital flows are set out below.

2. Scale of international bank lending

The extent to which non-oil developing countries 1/ have depended on international bank lending in recent years is shown in Table 1, with each of the 15 countries in that group that have debts to banks in excess of US$5 billion identified separately. For all non-oil developing countries, taken together, net borrowing from banks amounted to 10 per cent of current account receipts in the years 1977-81. For the large borrowers the amounts were very large indeed, in some cases as high as 40 per cent of total current account receipts over the period. Bank financing was equivalent to about half the aggregate current account deficit of non-oil developing countries during the period, and substantially exceeded that proportion for some borrowers.

As Table 2 indicates, the total obligations to banks of non-oil developing countries at the end of 1981 ranged up to twice their current account receipts and up to 15 times their official international reserves. 2/ Much of their borrowing has short maturities, moreover, so that the repayment of bank debt scheduled for any particular year is large. For some countries, over half their bank debt was of residual maturity of less than one year.

Some industrial countries have also relied heavily on loans from international banks for balance of payments financing in recent years, and would face difficulties if the flow of such finance were interrupted. Most industrial countries have traditionally been net capital exporters, however, and much of their capital exports is channeled through banks. An interruption of international lending by banks would not in itself put the capital accounts of most industrial countries under serious pressure; in fact capital outflows would likely decline.

3. Scale of international bank deposits

The problems for the capital accounts of industrial countries would mainly come from the fact that while their banks may have large external assets, they also have large external liabilities, most at short maturity. A banking crisis implies--indeed may be defined in terms of--attempts by depositors to withdraw their funds. If funds successfully withdrawn were

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1/ The classification of countries here is the standard classification of the International Monetary Fund (see International Financial Statistics).

2/ The data on bank claims cited here, which come from the Bank for International Settlements, are not fully comprehensive. Some countries have substantial liabilities to banks outside the BIS reporting area.

Table 1. Dependence of Non-Oil Developing Countries on Borrowing from International Banks, 1977-81 1/

	Average Annual Increase in International Bank Claims 2/		
		Ratio to:	
	Billion US$	Current account receipts 3/	Current account deficit 3/
Argentina	3.9	0.41	3.08
Brazil	4.7	0.24	0.50
Chile	1.7	0.38	0.86
Colombia	0.6	0.13	2.14
Greece	1.1	0.14	0.64
Hungary	0.8	0.09	0.87
Israel	0.6	0.06	0.22
Korea	0.5	0.12	0.82
Mexico	7.4	0.41	1.18
Philippines	0.9	0.14	0.52
Portugal	1.2	0.16	0.95
Romania	0.7	0.06	0.56
South Africa	0.4	0.02	4/
Thailand	0.2	0.03	0.11
Yugoslavia	1.2	0.09	0.64
All non-oil developing countries	33.6	0.10	0.53

Sources: Bank for International Settlements, Eurocurrency and Other International Banking Developments; International Monetary Fund, International Financial Statistics.

1/ Countries listed are those which had debts to BIS reporting banks in excess of US$5 billion at the end of 1981.
2/ Increase in bank claims as reported by BIS, adjusted for changes in BIS reporting series.
3/ Excludes official transfers.
4/ Surplus on current account.

Table 2. International Bank Claims on Selected Non-Oil Developing Countries, End-1981 1/

	Total Claims			Claims Due Within One Year			
		Ratio to:				Ratio to:	
	Billion US$	Current account receipts in 1981 2/	Official international reserves	Billion US$	Share of total claims	Current account receipts in 1981 2/	Official international reserves
Argentina	24.8	2.11	7.19	11.6	0.47	0.99	3.36
Brazil	52.7	1.94	7.88	18.3	0.35	0.68	2.74
Chile	10.5	1.98	3.20	4.2	0.40	0.79	1.28
Colombia	5.4	1.10	1.11	2.7	0.50	0.55	0.55
Greece	9.8	0.95	8.31	3.6	0.37	0.35	3.05
Hungary	7.7	0.74	4.90	3.1	0.40	0.30	1.97
Israel	6.0	0.50	1.69	4.3	0.72	0.36	1.21
Korea	19.9	0.71	7.40	11.5	0.58	0.41	4.28
Mexico	56.9	1.88	13.65	27.7	0.49	0.92	6.64
Philippines	10.2	1.19	14.49	5.8	0.57	0.67	2.56
Portugal	7.5	0.85	5.17	2.8	0.37	0.32	1.93
Romania	5.1	0.38	9.27	1.8	0.35	0.13	3.27
South Africa	11.2	0.47	10.77	6.0	0.54	0.25	5.77
Thailand	5.1	0.55	2.79	3.1	0.61	0.33	1.69
Yugoslavia	10.7	0.56	6.41	3.0	0.28	0.16	1.80
All non-oil developing countries	313.8	0.67	3.56	140.1	0.45	0.30	1.59

Sources: Bank for International Settlements, Maturity Distribution of International Bank Lending; International Monetary Fund, International Financial Statistics; and Fund staff estimates.

1/ Countries listed had debts to BIS reporting banks in excess of US$5 billion at the end of 1981.
2/ Excluding official transfers.

placed in other financial instruments within the same country, by definition there would be no associated capital outflow. Depositors might not find attractive alternative instruments in many countries, however. Moreover, doubts about banks would likely be focused more on some countries' banks than others, so that depositors might wish to shift their deposits to the banks of other countries.

Table 3 sets out the external liabilities of the banks of countries included in the BIS reporting system. For most of the countries, the liabilities of banks located within their borders at the end of 1981 were rather less than their current account receipts that year, though for Switzerland and the United Kingdom such liabilities were around three times current account receipts. In some countries liabilities were not much greater than international reserves, but for others they were as much as 28 times reserves.

Figures such as these present an oversimplified picture of the potential balance of payments impact of deposit withdrawal. For financial centers with large foreign banking presences--particularly the United Kingdom and Luxembourg among the countries listed in Table 3--branches or subsidiaries of banks headquartered elsewhere account for a large proportion of total bank liabilities. The impact of withdrawals of deposits from those banks, particularly deposits denominated in foreign currency, would tend to be shifted to the country of the parent bank. Other aspects of interbank relationships--discussed in the next section--would also tend to spread the balance of payments impact to other countries. Another type of balance of payments impact of banking problems could come about through countries that deposit part of their official reserves with international banks encountering delays or partial losses in recovering their deposits.

Banking problems could leave countries that have payments surpluses, and that have customarily deposited their funds with banks, with less attractive outlets for such funds. Just as an interruption in bank lending could lead to pressures for inappropriately strong adjustment (or restrictions) by borrowing countries, a lack of desirable banks in which to deposit funds could put exaggerated pressures on countries in surplus to adjust in the opposite direction, particularly where the domestic consequences of such adjustment would be small. Oil exporting countries, which placed about 40 per cent of their 1974-80 cash surplus in bank deposits, are an obvious example.

4. Cost of disruption of international intermediation by banks

The various safeguards described in this paper make it difficult to conceive of a crisis of such proportions that the direct effects on any country's capital account would approach the outer limits suggested by Tables 1-3. Aside from the banking safeguards, moreover, capital flows are, of course, symmetric--with downward pressure on some countries' payments balances implying upward pressure on those of others--so that

Table 3. Foreign Liabilities of Deposit Banks, End-1981 1/

	Total Billion US$	Ratio to: Current account receipts in 1981 2/	Ratio to: Official international reserves
United States	182.1	0.49	6.13
Canada	59.8	0.72	13.69
Japan	100.4	0.53	3.44
Austria	25.5	0.95	4.16
Belgium	83.1	0.93 3/	13.11 3/
Denmark	5.3	0.23	2.02
France	135.6	0.86	5.30
Germany	66.8	0.31	1.40
Ireland	10.4	1.01	3.93
Italy	51.3	0.50	2.25
Luxembourg	106.1	1.20 3/	16.74 3/
Netherlands	65.2	0.72	5.86
Sweden	14.1	0.38	3.66
Switzerland	135.0	3.33	7.77
United Kingdom	441.1	2.79	27.55

Source: International Monetary Fund, International Financial Statistics.

1/ Banks located in industrial countries that are included in the BIS reporting area.

2/ Includes exports plus other goods and services receipts plus transfers.

3/ As figures on current account receipts and international reserves are not available separately for Belgium and Luxembourg, the ratios use combined figures for the denominators.

problems which did arise would be reduced to finding alternative channels for capital flows to make up for the problems with the banking channel. Such alternatives would not emerge automatically in costless fashion.

The problem of capital flight from countries whose banks are under pressure would perhaps be the easiest consequence to deal with, as it would be similar to problems of capital flight that industrial countries have experienced in the past. The fact that, in this case, the problem would originate with doubts about a country's banks, not about its overall economic situation, would facilitate its resolution. A country thus could offer depositors, particularly official depositors, special alternative instruments to mitigate the effect on the balance of payments. Beyond that, the usual mechanisms for mutual financial support of industrial countries would come into play.

The fundamental problem of making up for the loss of banking intermediary services could remain. The cost to depositors would be measured in terms of the difference in the return on their international assets as they switched from bank deposits to alternative instruments, costs which could include loss of liquidity, flexibility, confidentiality, and desirable location, as well as lower rates of interest.

Borrowers could encounter more serious difficulties if banks withdrew their services. Borrowers who were considered highly creditworthy might have to pay more, but like depositors would not face criticial problems of availability of intermediary services. The cost of the cutback by banks in such cases could be measured as the increase in the margin between the return to depositors and the charge to borrowers, adjusted for nonfinancial aspects such as convenience and confidentiality. Other borrowers might suffer a more serious loss of access to the private financial markets.

5. The 1974 experience 1/

The near crisis of 1974 associated with the failures of a number of banks, notably Franklin National Bank and Bankhaus I.D. Herstatt, gives some indication of the potential costs. As a result of the withdrawal of many banks from international banking, publicized medium-term international bank credit commitments dropped abruptly in the third quarter of 1974, and the terms on remaining commitments began to harden sharply. By the middle of 1975 the average spread--the main component of the charges banks make for their intermediary services on medium-term floating rate loans--more than doubled to over 1.5 per cent, and the average maturity of loans dropped from eight years to little more than five. The fact that terms hardened so sharply, while the volume of international lending declined by 20 per cent between 1974 and 1975, indicated the extent to which the capacity and willingness of the international banking system to intermediate was

1/ A brief description of financial developments during the 1974 experience can be found in International Monetary Fund (1980), pp. 23-26.

strained. For a number of reasons, however, the banking crisis did not in itself greatly increase the pressures on countries to adjust, rather than finance, their current account imbalances. The coincidental recession in most of the industrial countries, together with the strength of international bond markets (which itself was partly a reflection of the sharply higher cost of intermediation by banks), was associated with a sharply reduced demand for international bank credit by borrowers in such countries; as a result banks looked for customers elsewhere, and the non-oil developing countries did not experience prolonged or significant unavailability of bank credit.

IV. Possible Sources of Banking Problems

As in all financial intermediation, risk is an inherent feature of international banking. This section describes the risks involved and brings out some of the ways in which these pose threats to the continuity of international bank lending.

1. Country risk

The most obvious risk in international banking is that international loans of banks might not be serviced. Beyond whatever commercial risk may be involved in individual loans, international lending is subject to (1) sovereign risk--the possibility of default or repudiation by a government with respect to its external debt--and (2) transfer risk--the possibility that private borrowers who are able to generate the necessary repayments in local currency are prevented from converting the funds. Table 4 shows the exposure of the international banking system as a whole to the largest country borrowers. Table 5 sets out the consolidated exposure of the banking systems of the United States and the United Kingdom to large borrowers. Data on consolidated exposure are not available for other banking systems.

The risk of loss to banks should be measured in relation to bank capital. At the broadest level of aggregation, the total capital of banks in the BIS reporting area at the end of 1981 was on the order of US$335 billion. 1/ The collective exposure of BIS reporting banks to each of the two largest borrowers among the developing countries thus exceeded 15 per cent of bank capital. The largest consolidated exposures to developing countries of banks based in the United Kingdom were of the same general order of magnitude, but for large banks based in the United States consolidated exposure to individual developing countries was as much as

1/ There are major differences in the definition of capital among banking banking systems. Problems of double counting also arise from the fact that banks in one country may own banks in other countries. This figure thus provides only a broad order of magnitude.

Table 4. International Banks: Country Exposure, End-1981 1/

	Billion US$	Percentage of Bank Capital 2/
Industrial countries outside BIS reporting area	57.5	17.3
Australia	(9.9)	(3.0)
Finland	(7.3)	(2.2)
Norway	(10.7)	(3.2)
Spain	(23.2)	(7.0)
Oil exporters	67.9	20.4
Algeria	(8.4)	(2.5)
Indonesia	(7.2)	(2.2)
Kuwait	(5.1)	(1.5)
Nigeria	(6.0)	(1.8)
Saudi Arabia	(5.6)	(1.7)
Venezuela	(26.2)	(7.9)
Non-oil developing countries 3/	313.9	94.2
Argentina	(24.8)	(7.5)
Brazil	(52.7)	(15.8)
Chile	(10.5)	(3.2)
Colombia	(5.4)	(1.6)
Greece	(9.8)	(2.9)
Hungary	(7.7)	(2.3)
Israel	(6.0)	(1.8)
Korea	(19.9)	(6.0)
Mexico	(56.9)	(17.1)
Philippines	(10.2)	(3.1)
Portugal	(7.5)	(2.3)
Romania	(5.1)	(1.5)
South Africa	(11.2)	(3.4)
Thailand	(5.1)	(1.5)
Yugoslavia	(10.7)	(3.2)

Table 4. International Banks: Country Exposure, End-1981 1/
(Concluded)

	Billion US$	Percentage of Bank Capital 2/
Offshore banking centers	240.8	72.3
Bahamas	(71.0)	(21.3)
Bahrain	(9.0)	(2.7)
Cayman Islands	(46.6)	(14.0)
Hong Kong	(31.3)	(9.4)
Liberia	(6.9)	(2.1)
Netherlands Antilles	(7.0)	(2.1)
Panama	(26.9)	(8.1)
Singapore	(36.6)	(11.0)
Centrally planned economies 4/	50.2	15.1
German Democratic Republic	(10.7)	(3.2)
Poland	(15.3)	(4.6)
U.S.S.R.	(16.3)	(4.9)

Sources: Bank for International Settlements, Maturity Distribution of International Bank Lending, July 1982; and Fund staff estimates.

1/ Aggregate claims of BIS reporting banks on countries outside the BIS reporting area. All countries for which bank claims exceed US$5 billion are listed separately.

2/ Capital of banks in the BIS reporting area at the end of 1981 was on the general order of US$335 billion.

3/ Excluding countries designated by the BIS as "offshore banking centers."

4/ Excluding Fund member countries.

Table 5. U.S. and U.K. Registered Banks: Consolidated Country Exposures, End-1981 1/

	Claims of U.S. Banks 2/		Claims of U.K. Banks	
	Billion US$	Percentage of bank capital 2/	Billion US$	Percentage of bank capital
BIS reporting area	156.9	246.3	91.8	253.5
Austria	(2.1)	(3.2)	(1.5)	(4.0)
Belgium/ Luxembourg	(9.0)	(14.2)	(6.6)	(18.3)
Canada	(17.6)	(27.7)	(4.8)	(13.2)
Denmark	(3.0)	(4.7)	(2.7)	(7.5)
France	(18.4)	(29.0)	(13.7)	(37.7)
Germany	(13.3)	(20.9)	(7.8)	(21.4)
Ireland	(1.6)	(2.5)	(1.5)	(4.0)
Italy	(10.2)	(16.0)	(5.9)	(16.4)
Japan	(38.4)	(60.3)	(13.4)	(36.9)
Netherlands	(4.6)	(7.3)	(3.6)	(10.1)
Sweden	(4.3)	(6.7)	(2.7)	(7.5)
Switzerland	(5.1)	(8.0)	(3.9)	(10.8)
United Kingdom	(29.2)	(45.8)	(--)	(--)
United States	(--)	(--)	(23.8)	(65.7)
Other industrial countries	16.8	26.3	11.4	31.5
Australia	(4.5)	(7.1)	(2.5)	(7.0)
Finland	(1.9)	(3.0)	(1.9)	(5.1)
Norway	(3.1)	(4.9)	(1.9)	(5.1)
Spain	(6.0)	(9.5)	(4.1)	(11.3)
Oil exporters	20.1	31.6	8.6	23.8
Algeria	(1.2)	(1.9)	(0.6)	(1.7)
Indonesia	(2.1)	(3.4)	(0.5)	(1.5)
Kuwait	(1.3)	(2.0)	(1.1)	(2.9)
Nigeria	(1.1)	(1.7)	(1.2)	(3.3)
Saudi Arabia	(2.3)	(3.7)	(1.3)	(3.7)
Venezuela	(10.1)	(15.9)	(3.1)	(8.6)

Table 5. U.S. and U.K. Registered Banks: Consolidated Country Exposures, End-1981 1/ (Concluded)

	Claims of U.S. Banks		Claims of U.K. Banks	
	Billion US$	Percentage of bank capital 2/	Billion US$	Percentage of bank capital 2/
Non-oil developing countries	122.6	192.5	49.8	137.6
Argentina	(8.4)	(13.3)	(3.5)	(9.5)
Brazil	(18.2)	(28.5)	(6.5)	(18.0)
Chile	(5.7)	(9.0)	(1.5)	(4.2)
Colombia	(3.0)	(4.8)	(0.6)	(1.7)
Greece	(2.9)	(4.5)	(1.3)	(3.7)
Hungary	(1.1)	(1.7)	(0.8)	(2.3)
Israel	(2.5)	(3.9)	(0.6)	(1.6)
Korea	(9.0)	(14.1)	(2.5)	(7.0)
Mexico	(21.4)	(34.2)	(7.8)	(21.4)
Philippines	(5.1)	(7.9)	(1.2)	(3.4)
Portugal	(1.8)	(2.8)	(1.2)	(3.3)
Romania	(0.3)	(0.5)	(0.6)	(1.7)
South Africa	(2.7)	(4.2)	(2.5)	(7.0)
Thailand	(1.8)	(2.9)	(0.6)	(1.6)
Yugoslavia	(2.6)	(4.1)	(1.5)	(4.1)
Offshore banking centers	(13.2)	(20.8)	(8.3)	(22.9)
Centrally planned economies	3.3	5.2	5.3	14.5
German Democratic Republic	(1.1)	(1.7)	(1.6)	(4.3)
Poland	(1.2)	(1.9)	(0.9)	(2.4)
U.S.S.R.	(0.6)	(0.9)	(1.8)	(5.0)
International organizations and unallocated	0.7	1.1	0.7	2.0
Total	320.3	503.0	167.5	462.8

Sources: Bank of England, Quarterly Bulletin; and Federal Financial Institutions Examination Council, Country Exposure Lending Survey.

1/ Where risk transfers are involved, exposure is recorded as being to the country of the guarantor. U.S. data cover 159 large banking organizations. U.K. data cover British-owned banks, consortium banks, and British subsidiaries of foreign banks. In both cases, claims of foreign subsidiaries and branches are included, except for local claims in local currencies. All countries for which total bank claims exceed US$5 billion (see Table 4) are listed separately, except for offshore banking centers. For most of the latter, claims of U.S. and U.K. banks, after risk transfers, are very small.

2/ Bank capital, estimated on the basis of published data in the Federal Reserve Bulletin and the Bank of England, Quarterly Bulletin, is US$63.7 billion for the United States and US$36.2 billion for the United Kingdom.

34 per cent of bank capital. 1/ The important consideration for banking stability is the situation of individual banks, for some of which exposure concentration is considerably higher than it is at the aggregate level.

But it is important to bear in mind that country crises in the servicing of debt to banks in recent years have resulted in reschedulings of debt on market terms. Given the nature of relations between banks and sovereign debtors, any significant degree of write-off may not occur even in the most serious cases, and the danger of total write-off that would seriously threaten a bank's solvency seems remote. In any case it would be unlikely to occur abruptly, giving banks time to adjust to the potential loss.

2. Other "normal" risks in international banking

Losses on foreign exchange operations figured in most of the bank failures of 1974-75, but such losses can be controlled through placing limits on uncovered positions in foreign exchange operations. Supervisors have tightened their guidelines in this regard, and banks now generally appear to follow prudent practices.

Another risk arises from the fact that bank assets generally have longer maturities than bank liabilities, so that losses can occur with fluctuations in interest rates. When operating in foreign currencies, moreover, banks lack the modest degree of protection offered by the ability to set "prime" rates, or by the influence on the decisions of monetary authorities, that they may have to some extent in their domestic currencies. On the other hand, the widespread use of floating interest rates internationally keeps interest rate risk small, though losses resulting from short-run fluctuations in interest rates can significantly affect bank profitability over short periods.

It is almost a truism that "the next banking crisis" will come from an aspect of risk that has not been foreseen, since if the problem is foreseen, precautions can be taken to forestall it. There is, moreover, always the risk of fraud, a factor in the bank failures in 1974 and again in 1982. Whatever the source of difficulty, however, with conditions of reasonable global economic stability, losses are unlikely to be on so widespread a scale as to threaten many banks with insolvency.

1/ The figures in Table 5 take account of risk transfers in measuring exposure. The two main sorts of risk transfers involved are guarantees by parent organizations located in other countries and guarantees by export credit insurance agencies located in the country of the lending bank. The fact that much of the nominal exposure of banks to the offshore centers is comprised of credit to branches of banks based in other countries accounts for the much lower exposures to those centers in Table 5 compared with Table 4.

3. Bank liquidity and the problem of contagion

The failure of even a few banks could lead to more widespread disruption through contagious effects on other banks. A banking crisis is, by definition, associated with requests by depositors for withdrawal of their funds from the banks in question. In attempting to meet such requests, banks need to substitute new liabilities for those being run off or to carry out a parallel runoff of assets. The cost of doing so rises sharply with the volume of funds which the banks attempt to acquire, severely constraining their ability to make new loans, and, ultimately, threatening bank solvency.

Some of the more imaginative scenarios for an international banking crisis postulate withdrawals of funds by a few large depositors as a trigger for a crisis. In such scenarios, the original withdrawals occur not because of fears about the security of deposits, but for, say, political reasons. Through contagion, such actions generate the fears that lead to crisis. Safeguards for bank liquidity seem strong enough to prevent such actions by a small number of depositors provoking a major crisis. In the past, moreover, governments have shown a readiness to block the withdrawal of deposits when security matters were involved, and there is no reason to think that they would not do so quickly if a banking crisis threatened.

More plausibly, depositors in general might ask to withdraw their funds from certain banks because of a real or imagined danger of insolvency. In the absence of complete information about the affairs of banks in which they deposit their funds, depositors are naturally prone to become doubtful of banks in general when even a few banks are thought to be in serious trouble. Contagion is likely to be a more serious problem with respect to international than domestic deposits, because of the difficulties some depositors have in obtaining information, the large size of individual deposits (which implies minimal coverage by any available deposit insurance), and uncertainty about the ability and willingness of national authorities to protect foreign depositors against loss in the event of bank failure.

4. Interbank relationships

A particular feature of international banking is the extent to which banks rely on funds "purchased" from holders of large balances. Even in domestic banking many institutions have, over time, become more dependent on such wholesale funding, as opposed to their traditional retail deposit base. But in international banking, at least for operations in foreign currency, funding is almost purely a wholesale business. A relatively small number of large banks, moreover, are favored by nonbanks as outlets for their funds. The fact that most of the other banks involved rely to a large extent on funds onlent by the big banks is a particular feature of international banking that provides a mechanism for the transmission of bank difficulties.

Banks would have difficulty collecting funds due them from a failing bank, while the failing bank or its liquidators would insist on collecting funds due it from other banks. While the exposure of a bank to any other single bank is not likely to be large relative to bank capital (unlike the exposure that some banks may have to individual countries), its collective exposure to banks in difficulty could be substantial. As with country exposure, data on the interbank exposures of individual banks are generally not available. The scale of interbank credit by various measures is in the range of 65-75 per cent of total international bank liabilities. 1/ Much of this interbank credit, however, is really intrabank, as it represents positions vis-a-vis foreign affiliates. Individual banks, moreover, are normally active on both sides of the market--that is, whether they are net takers or placers of funds, they normally take gross positions both as takers and placers.

Besides the obvious problems posed for banks of losing funds loaned to failing banks or of finding new sources of funds to replace funds previously borrowed from failing banks, banks that rely heavily on other banks for net funding might well face further difficulties. Banks placing funds, like other depositors, would become more wary of redepositing, except with banks they felt were in a strong position. Beyond that, however, banks might feel a need to protect themselves against runs on their own deposit base by shifting their assets out of interbank deposits and into cash or liquid government obligations. For net placers of interbank funds such a shift would be relatively easy to carry out; but the result would be a liquidity drain for banks that were net takers. These would include most of the smaller banks operating in the international money market. In the near crisis of 1974, for example, the large money-center banks drastically reduced the number of other banks with which they were prepared to place funds.

The continuity of international bank lending is dependent on another sort of interbank relationship as well. The large loans that characterize much of medium-term international bank lending are typically put together by a club or syndicate of banks. Anything that affects interbank confidence could jeopardize the syndication process. The actions of certain U.S. banks in connection with the Iranian crisis, for example, led to accusations of bad faith from other banks and may have temporarily hampered loan syndications. 2/ One response to such problems has been much more detailed legal specifications in loan agreements.

1/ Ellis (1981).

2/ One particular aspect of loan agreements that has sometimes been mentioned as a problem in interbank relationships is the default clause. Note, however, that in syndicated loans such clauses generally become operative only if a large majority of the participating banks agree.

5. Other threats to the continuity of international bank lending

The rest of this paper examines the various safeguards against disruptions of international banking--the elements of an international safety net. It is important to bear in mind, however, that even if banks in general were not forced to withdraw from international banking through actual bank failures or official action, they could still withdraw from it because of changes in their perceptions of its riskiness. While gradual changes in risk perceptions could be accommodated by gradual shifts in lending spreads, so that the international economy would have time to adjust to a gradual shift in financing flows, a sharp change in perceptions could lead to abrupt shifts in flows that could not be accommodated by a moderate hardening of terms. In that case, many countries could find themselves losing access to international bank credit.

Until the last few months the debt crises that had occurred had not been on such a scale as to generate sharp changes in perceptions of the risk involved in lending to developing countries in general. It is true that some earlier crises, such as that of Poland, had an effect on neighboring countries. For example, despite the general perception that its economy was basically sound, Hungary experienced major difficulties in obtaining bank finance. This perhaps involved more a question of banks' perceptions of localized political risk than of the general risk of international lending. The recent problems of Mexico and Argentina, the largest and fourth largest debtors to banks among the developing countries, have greater potential for disruptive effects, but as noted in Section II there is as yet no clear evidence of a generalized heightening of risk perceptions. Another threat to the continuity of international bank lending that has recently received much attention in other contexts is that losses on domestic lending could be so great as to force banks to carry out a general curtailment of activity, which could include international lending.

Bank behavior itself often displays a destabilizing pattern. At the aggregate level, smaller banks generally remained rather aloof from international lending in the mid-1970s, even after the tiering associated with the 1974 bank failures had dissipated and international lending had once again become highly profitable. The subsequent rise in international lending toward the end of the decade, paralleling the rush at its beginning, suggests the presence of bandwagon effects.

V. Prudential Safeguards for Bank Solvency 1/

The first line of defense for the stability of banking systems is that individual banks themselves act so as to reduce the risk of failure. Financial intermediation is inherently risky. What is necessary is that banks limit the risks they take to prudent levels.

1/ An excellent survey of prudential safeguards in a number of countries is provided by Dale (1982).

Beyond such basic requirements as the development of techniques of credit evaluation and internal controls to limit the potential damage from incompetence or fraud, prudential standards for banks include diversification of assets and liabilities to ensure that the problems of one or a few customers cannot be critical for a bank. They also include limitations on the extent to which banks carry out maturity transformation. Perhaps most importantly, they include maintenance of bank capital at such a level that the bank can absorb substantial losses without becoming insolvent. In each case there is a trade-off between prudence and profitability--the task of the banks and their supervisors is to strike a reasonable balance.

Prudential standards cannot be assessed in absolute terms, except insofar as certain sorts of risky transactions are absolutely prohibited. This section provides some broad qualitative indications of the adequacy of the standards currently in force to protect solvency in the face of problems in the international operations of banks.

1. Bank capital

A fundamental safeguard of bank solvency is the capital available to meet losses. While no amount of capital can assure a bank's solvency under all circumstances, 1/ the larger the capital, the larger the loss the bank can absorb. Abstracting from the risk of loss, however, increasing the amount of capital in relation to assets reduces bank profitability and the efficiency of financial intermediation.

In many banking systems there was until recently a secular trend toward lower ratios of capital to assets. In the United States, for example, the average ratio for FDIC insured banks declined from 8.12 per cent in 1964 to 5.99 per cent in 1977, while the average ratio for French banks declined from 3.94 per cent to 2.06 per cent over the same period. 2/ To some extent such declines may have been a natural evolution, which does not necessarily imply any change in prudential standards. Larger banks have greater scope for diversifying their assets and thus may bear less risk of catastrophic loss, so that the increase in the average size of bank balance sheets may, in a sense, have permitted lower ratios. 3/ The development of multinational banking itself is an example of such

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1/ Neither Franklin nor Herstatt, for example, was considered to be undercapitalized prior to its difficulties.

2/ These data are taken from Revell (1980). Because of conceptual differences and problems of data availability, data on capital asset ratios should be interpreted with caution; in particular, they cannot be used for cross-country comparisons.

3/ In most countries, moreover, supervisors give implicit or explicit recognition to the riskiness of a bank's portfolio in measuring capital adequacy. A change in the mix of assets could thus lead to a supervisory judgment that capital had become more adequate, even though the ratio of capital to unweighted assets had not changed.

diversification, which leaves banks less exposed to problems in a single economy. To the extent that banks have tightened their safeguards in other areas, moreover, banks may have reduced the risks against which capital needs to be held. It has also sometimes been argued that since the full resources of the state stand behind government-owned banks, such as most banks in France and community savings banks in the Federal Republic of Germany, explicit capital positions are incomplete measures of bank solvency for such banks. Nonetheless, the trend toward lower ratios has been less marked in recent years. 1/

While banks in many countries have increasingly come to recognize that their capital ratios should not be permitted to decline further, much of the pressure to maintain them has come from bank supervisors. In some countries, such as the Federal Republic of Germany and Switzerland, legal capital requirements ensured that ratios did not decline significantly in the first place, though where subsidiaries abroad were not included in the requirements there may have been some decline on a consolidated basis. In other countries, such as Canada and the United States, general exhortations by supervisors on capital positions have recently been replaced by explicit, albeit informal, guidelines aimed at preventing any future decline. At the same time there has been a tendency to permit banks greater latitude in choosing instruments to increase their capital. Most notably, recognizing the difficulty of raising long-term capital in the depressed capital markets of recent years, some supervisors have started to permit banks to count subordinated debt, generally with maturity in the 5-12 year range, as capital.

Two aspects of international banking that have had special implications for capital positions in recent years should be noted. One is the effect of exchange rate changes. Since banks normally maintain approximate balance between their foreign currency assets and liabilities, appreciation (relative to the home currency) of the currencies in which such items are denominated reduces capital asset ratios and increases the vulnerability of banks to losses on their foreign currency portfolio. The recent slowdown in the international lending of many European banks partly reflects the strains on capital positions produced by the appreciation of their dollar-denominated assets. For some banks this effect has been moderated by the denominating of some subordinated debt in foreign currency.

A second aspect of international banking that is important in relation to bank capital is the treatment of loan loss provisions. Part of bank capital takes the form of reserves against loan losses. Though practices vary from country to country, in all countries there is some tax benefit for earmarking part of earnings for reserves, and in some countries banks are permitted to create hidden reserves by writing down assets that in

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1/ International Monetary Fund (1982), p.57.

fact they are likely ultimately to recover. 1/ In many systems, however, provisions on loans to sovereign governments receive less favorable treatment, on the grounds that, unlike private debtors, sovereign debtors cannot go bankrupt, and only in the case of declared default or repudiation have loan loss provisions been required. Recently the need to protect bank solvency against country risk where large arrears have arisen and rescheduling negotiations have been protracted has been recognized. German banks, for example, are making partial provisions (10-20 per cent) against their Polish assets, and U.S. banks have begun to take sovereign "problem" loans into account in calculating their need to make provisions.

2. Control of country exposure

Diversification is a basic technique for reducing the risk involved in financial intermediation, and in many countries there are explicit limits, expressed in relation to capital, on the exposure of banks to individual borrowers. In some systems, bank supervisors have developed similar guidelines (usually not mandatory) to encompass total lending to borrowers in a given country. The EC's system of capital-asset observation ratios affects exposure indirectly by weighting loans differently according to the country of the borrower. In any case, banks normally establish internal limits, adjustable over time, on their country exposures.

Banks also carry out more or less sophisticated analyses of country risk, at least for their larger exposures. Supervisors, for their part, consider it their responsibility to see that banks' methods of analysis are adequate and that they make use of the best information that is publicly available. Supervisors do not, in general, advise banks on particular country situations, considering that banks need to take full responsibility for their own credit decisions, though recently supervisors in a number of countries have shown an increasing willingness to discuss country situations on an informal basis with their banks.

In carrying out their analyses, banks face major information problems. Data on the global debt of individual countries to banks do not become available until several months after the reporting date, and even then are not fully comprehensive. Knowledge of trends and policy developments in

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1/ At the same time, of course, such actions reduce reported bank profits, which may be awkward for bank managements when profits are poor. Hidden reserves provide bank management with a flexibility in declaring profits and hiding losses that do not exist in countries with more stringent disclosure requirements. Abuses have led to a recent tightening of procedures in Switzerland. The case of a bank declaring a substantial profit when, in fact, it had incurred large losses in silver speculation led to a requirement that banks disclose the extent to which they use hidden reserves to maintain the appearance of continued profitability. Hidden reserves nonetheless constitute an important addition to bank capital in a number of systems.

most countries is difficult to obtain, particularly in light of the scarcity of published data. While large banks that are active in a particular country may have some feel for the situation, others do not. Often, in fact, banks start lending to a country when they see other banks doing so, which might be just the wrong time. (In the latter stage of the development of Turkey's bank debt problems, for example, new banks were continuing to come in while those that were becoming aware of the situation were beginning to pull back.)

This discussion suggests three areas in which improvement could be sought: (1) availability to banks of more complete and timely data on aggregate bank lending to individual countries (the BIS and the IMF are both working on projects in this area) 1/; (2) provision of better information on developments in individual countries; and (3) guidelines on bank exposure which applied to changes in exposures, not just their levels. Improvements in the international coordination of bank supervision of country exposure are also needed; as with bank capital, the recent movement toward evaluation of exposures on a consolidated basis is a step forward.

In other areas of international risk there is little current evidence of potential threats to bank solvency. Supervisors have tightened their surveillance of foreign exchange exposure, which is now managed much more tightly in most banks than it was before the 1974 bank failures. The interest rate risk resulting from mismatch of maturities of assets and liabilities is generally limited by floating rate provisions on bank assets, though in some systems banks with substantial holdings of fixed rate international assets suffered large losses on that part of their business during the recent prolonged rise of interest rates, and individual banks in other countries have from time to time taken substantial losses from speculation on near-term interest rate developments.

The experience gained by banks and their supervisors over the years has resulted in continuously evolving standards for prudential behavior, which by and large must be considered much stronger now than in the past. Each bank failure, each new type of problem, carries lessons that can lead to modifications of prudential standards. Any system is established under a certain set of assumptions about the economic environment in which it operates, and changes in that environment can produce unexpected problems that can threaten bank solvency. The recent behavior of interest rates is a prime example: banks with large holdings of long-term assets at low fixed interest rates have been threatened by the high cost of funds in recent years. Many U.S. savings and loan associations, for example, have been technically insolvent because of their holdings of low-interest-rate, long-term mortgages, while many German banks have also suffered losses because of their holdings of long-term fixed-rate bonds and loans. It could be argued that such institutions and their supervisors should

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1/ Going a step further, the staff of the European Community have advocated an international extension of the systems maintained by a number of EC members for reporting large credits to individual borrowers.

have considered beforehand the possibility that interest rates would rise sharply, but no set of standards can protect banks under all circumstances--no degree of diversification, for example, could preserve a bank's solvency in the face of the simultaneous bankruptcy of a large number of its customers.

3. International coordination of bank supervision

A major force for improvement in supervisory standards has been the exchange of information between bank supervisors within the Contact Group of the European Community and within the Basle ("Cooke") Committee on Banking Regulations and Supervisory Practices, which functions under the auspices of the BIS.

The main thrust of the work on international coordination of bank supervision has been to try to ensure that no bank escapes supervision, and secondarily to work toward a degree of uniformity of supervisory standards so as to reduce incentives for banks to shop around for "easy" locations. Within the industrial world considerable progress has been made toward these goals, though it is recognized that differences in national banking systems mean that standards will never become entirely uniform. The Group of Ten countries and Switzerland are members of the Basle Committee, and several of the smaller industrial countries are effectively brought within its purview through their membership in the EC. For banks operating in other countries, particularly the offshore centers, only the first steps have been taken toward international coordination.

A major step toward closing the gaps in bank supervision among industrial countries was taken with the 1975 Concordat on international supervisory cooperation, in which it was agreed that for solvency controls there is

> ...some sharing of responsibility for supervision between host and parent authorities, with the emphasis varying according to the type of establishment concerned. For foreign subsidiaries and joint ventures, primary responsibility rests with host authorities; but, in addition, parent authorities must take account of the exposure of their domestic banks' commitments to those foreign establishments. For foreign branches, solvency is indistinguishable from that of the parent bank as a whole. It is therefore essentially a matter for parent supervisory authorities. 1/

The somewhat ambiguous phrasing of the Concordat with respect to foreign subsidiaries and joint ventures reflected the fact that the various national authorities were not entirely in agreement on the partition of supervisory responsibility. Since the adoption of the Concordat, the Basle Committee has attempted to give it more precise operational

1/ For the full text of the Concordat, see International Monetary Fund, (1981), pp. 29-32.

definition. The most important step in this direction came in 1978, when the BIS governors endorsed the Committee's proposal that the evaluation of the adequacy of bank capital by supervisors should be carried out on the basis of consolidation of the positions of subsidiaries, as well as of branches, with the position of the parent bank. While not diminishing the responsibility of the host authority in the case of foreign subsidiaries, this did increase the responsibility of the parental authority. Some countries whose banks are active internationally, such as the United States, have long evaluated solvency on a consolidated basis; most others have adopted the principle in the last few years. The major exceptions are the Federal Republic of Germany and France. Germany has not yet passed the necessary legislation, but has worked out a "gentlemen's agreement" with its banks, under which they are reporting their capital position on a consolidated basis but are not yet formally obligated to meet prescribed standards. In France, consolidation is not considered to be as important, since a relatively small proportion of loans to final borrowers (though not to other banks) is booked outside of France.

So far, consolidation has in most cases been limited to broad balance sheet aggregates, such as bank capital. Since supervisors in most countries have only recently begun to pay detailed attention to the country exposures of their banks, consolidation in that area is applied in only a few countries. The Basle Committee has been examining the question, and has endorsed consolidation of country exposure.

Supervision of bank solvency thus appears likely to be carried out increasingly on a consolidated basis. There have been some problems of implementation, however. The authorities in the United States, for example, feel that even with consolidation they still need to supervise closely the operations of foreign banks in the United States. This has led to a sort of "reverse" consolidation, as they requested parent banks to provide, on a continuing basis, certain information on their operations elsewhere. While this request was initially opposed by other authorities (they have now acquiesced in a modified version), it does not in itself conflict with the Concordat, which is aimed at ensuring that <u>some</u> supervisor takes responsibility, not at avoiding multiple supervision. Another problem of implementation lies with sharing of information among banks and their supervisors. Some authorities limit the extent to which banks chartered in their countries can provide information to their parent and the parental supervisors, which poses some obstacles to full consolidation. This issue has arisen between, for example, Luxembourg and the Federal Republic of Germany, but Luxembourg has now agreed that German bank subsidiaries can provide the information necessary for consolidation of bank capital positions. Luxembourg's recent revision of its banking law, moreover, permits banks to give to their parents details of large loans. Luxembourg law does not permit inspection by foreign supervisors, though audit reports can be submitted to them through the parent bank. There are also problems in the allocation of supervisory responsibility for consortium banks or other banks where minority holdings are significant.

Differences in supervisory practices, in the interpretation of the Concordat, and in application of consolidated reporting mean that there is some variation in the strictness with which banks are supervised in industrial countries; but the gaps that remain in those countries are being closed and in any event do not appear dangerously large. The major problems for coordination of bank supervision lie with the offshore centers outside the industrial countries.

Some offshore centers are less strict in bank supervision than are the industrial countries. As most banks in these centers are branches or subsidiaries of banks headquartered in industrial countries, full consolidated supervision in headquarter countries should eventually do much to make up for any weaknesses in offshore supervision. In the meantime, gaps remain, and bank secrecy regulations in a number of centers mean that it will be some time before full information will be available to parent supervisors. There is, moreover, need for stricter supervision in the offshore centers of some banks headquartered in the offshore centers themselves or elsewhere outside the industrial countries.

The Basle Committee has initiated contacts with offshore bank supervisors, who now have formed a coordination group that should eventually fill some of the remaining gaps. As banks of other countries, such as the rapidly growing Middle Eastern banks, become more important internationally, there will be a need for stronger supervision in those countries, and the Basle Committee is sponsoring contacts with supervisors in the developing countries.

VI. Prudential Safeguards for Bank Liquidity

Since no system of prudential control can eliminate the possibility of bank failure, depositors can never be certain that banks will be able to repay their deposits; and if doubts arise about the solvency of a bank, depositors will attempt to withdraw their funds. To protect themselves, banks maintain a prudent degree of liquidity. They keep part of their assets in liquid form (which, incidentally, may also reduce the risk of loss from interest rate fluctuations) and arrange for lines of credit with other banks. As with other prudential guidelines or controls, banks need to strike a balance between prudence and profitability: more liquid assets have lower yields, while charges apply to agreed lines of credit with other banks.

This section discusses the adequacy of international banks' prudential standards in three areas affecting liquidity: the degree to which the maturities of assets and liabilities are matched, the quality of the short-term assets banks can use to meet deposit withdrawals, and the extent to which banks arrange for backup lines of credit from other banks.

1. Maturity matching

As was noted above, banks limit their vulnerability to fluctuations in market interest rates in the international area by making floating rate loans, on which the interest rate is reset at regular intervals (usually either three months or six months) on the basis of market rates or continuously on the basis of domestic prime rates. They also, to a large extent, match the maturity of their liabilities to the rollover dates for their assets. The residual degree of interest rate risk is small enough that fluctuations in market rates are unlikely to cause major problems. This assumes, however, that funds are available to banks at the market rates which form the basis for the interest rates on bank assets. If banks have to pay premium rates to renew their liabilities because of a loss of depositor confidence, more serious losses could result, and, in extreme cases, banks could find themselves without access to funds at all.

One way to handle that problem would be to match final maturities, not just rollover dates. Part of the function of banking is to carry out maturity transformation, however, and much of the profitability of international banking comes from the ability of banks to provide depositors with short-term assets and borrowers with long-term liabilities. Full maturity matching would imply a very different sort of banking system.

For transactions in domestic currency, the clear availability of a lender of last resort provides banks with the assurance of the liquidity they need to meet unexpected deposit withdrawals, provided the banks are fundamentally sound. Most banks and supervisory authorities thus consider some degree of maturity mismatch on international operations in domestic currency not to be imprudent. Foreign currency mismatch, however, is a subject of concern in some countries. This concern seems to be felt most strongly in Japan, where banks maintain strict standards for maturity matching, presumably from a general sense of vulnerability to international economic shocks and memories of the tiering that Japanese banks encountered in 1974. French banks follow similar standards. Supervisors in other countries also encourage their banks to be cautious in maturity mismatch, but do not enforce strict standards, and their bankers consider a substantial degree of mismatch to be unavoidable.

2. Quality of short-term assets

A second aspect of bank liquidity is the encashability of the short-term assets maintained by banks. Most short-term assets denominated in foreign currency take the form of deposits with other banks. One potential source of contagion of banking problems is that banks with deposits in other banks that fail would have their liquidity impaired. In 1974, for example, some banks suffered substantial losses or delays in recovering some of their interbank deposits.

As a result of that experience, banks substantially tightened their procedures for controlling their interbank assets. Most banks now regularly review their lines of credit to other banks on the basis of detailed examinations of their balance sheets and other available information--a tightening of procedures akin to their tightening of country risk analysis. Exposure limits are established that cannot normally be increased without a detailed re-examination of the borrowing bank's situation. Monitoring of exposure can provide early warnings of potential problems, and a bank that tries to increase its borrowings rapidly, or that fails to reduce its borrowings from time to time, will be subject to special scrutiny.

Prior to the failures of Herstatt and Franklin, banks did not attach much concern to the "daylight exposure" that resulted from accepting payment orders from other banks against settlement later on. Most banks now impose limits on such overdrafts. One motivation for the recent change in the U.S. Clearing House Interbank Payments System (CHIPS) from next day settlement to same day settlement was to reduce the duration of such exposure. Banks are also moving to protect themselves from excessive exposure to an individual bank by developing "on-line" monitoring systems, through which they can quickly become aware of any change in their consolidated exposure. This monitoring capability allows the bank to give each branch the large exposure limit it needs for effective operation while preserving effective overall control.

3. Interbank operations and the availability of stand-by credit lines

Banks experiencing deposit runoff can try to supplement disposal of short-term assets by borrowing from other banks. As the discussion of asset management suggests, the extent to which a bank can normally increase its liabilities to other banks is, at most, the amount available within the credit limits set by such banks. These limits are seldom stated outright. To try to ascertain the limits, and to strengthen their image of reliability, banks run their borrowings from other banks up and down. While these credit lines provide assurances of funds to meet normal day-to-day fluctuations in other liabilities, their informality means that they could rapidly disappear if the bank were thought to be in difficulty. The counterpart of the ability of banks thought to be sound to increase their takings from other banks is the possible cutoff of funding for banks rumored to be unsound.

Many of the financial crises of the 1930s were exacerbated by withdrawal of interbank credit lines, particularly from Central European banks. A recent example of the effects on interbank confidence of a specific outside event is provided by the deterioration of Poland's situation. Many banks reviewed their limits on other banks thought to have large exposures to Poland. Some banks as a result encountered moderate tiering for brief periods. The current banking problems have occasioned a more widespread review of credit limits.

One way in which banks protect themselves against a runoff of deposits is by establishing confirmed stand-by lines of credit from other banks. Such lines, however, are costly and are used to only a limited extent, mainly by the smaller banks that are most vulnerable to funding cutoffs. Quantitative information on such lines is lacking, but one large U.S. bank reports that the stand-by credit lines it has extended to other banks are equal to 10 per cent of its current interbank placings. Reciprocal credit lines, without fees, are sometimes established between, say, large U.S. banks and large German banks to provide assurance of funding in each other's currencies. Confirmation of credit lines, however, provides no absolute assurance of availability, since they are often subject to certain caveats and, in any case, might not be usable if the granting bank itself were in difficulty.

Though, in general, domestic banking is characterized by a much smaller degree of dependence on interbank deposits than in international banking, in one respect interbank funding is perhaps more important domestically. When individual banks in domestic systems get into trouble, other banks tend to rally to their support in hopes of avoiding the contagious effects of a bank failure on their own operations; often such behavior is encouraged by supervisors. Internationally, the perceived danger of contagion from the collapse of a bank based in a foreign banking system is likely to be less, while supervisors are more likely to encourage their banks to minimize their exposures to troubled banks. The sharp cutback in interbank credit following the failure of Herstatt provides evidence of this tendency. This distinction should not be overdrawn. In any system, if a bank is really considered to be insolvent, as opposed to simply facing temporary liquidity problems, other banks are unlikely to extend credit to it.

VII. International Aspects of Official Support for Banks

Viewed from an international perspective deposit insurance plays a relatively minor role in bolstering depositor confidence, and there are a number of gaps in coverage by lenders of last resort, in terms both of providing support to individual banks and of providing liquidity to the international banking system. The nature of these gaps is the subject of the remainder of this paper.

1. Deposit insurance

A major feature of the safety nets for most domestic banking systems is deposit insurance. Table 6 summarizes the systems in force in a number of industrial countries, many of which have been installed only recently. In some banking systems, such as that of the United States, deposit insurance has virtually eliminated the danger that fears for the safety of deposits could prompt panicky withdrawals by small depositors. With a limit in the United States of US$100,000 per nonbank depositor per bank,

Table 6. Bank Deposit Insurance Schemes

Country 1/	Date of Establish-ment	Organizational Status 2/	Funding 3/	Nonbank Deposits Covered 4/	Limits of Coverage per Depositor	Membership Required
Belgium	5/	Joint	Pool	All 6/7/	Variable, case by case	Yes
Canada	1967	Official	Pool	All domestic currency 8/	Can$20,000	Yes
France	1979	Private	Unfunded	All domestic currency	F 200,000	Yes
Germany, Fed. Rep. of	1976	Private	Pool	All 7/ 9/	30% of bank's stated equity capital	No
Italy	-	-	-	-	-	-
Japan	1971	Joint	Small pool	All domestic currency 6/9/	¥ 3,000,000	Yes
Luxembourg	-	-	-	-	-	-
Netherlands	1979	Joint	Unfunded	All but company deposits	f 30,000	No
Switzerland	Under con-sideration	...	Pool	All	100% up to SwF 20,000 75% SwF 20,000-30,000 50% SwF 50,000-75,000	Yes 10/
United Kingdom	1982	Official	Small pool	All domestic currency	75% up to £10,000	Yes 10/
United States	1933	Official	Pool	All	US$100,000	No 11/

Sources: Various official; Dale (1982).

1/ Countries listed are the industrial countries whose banks are active in the international capital markets.
2/ Schemes organized by banks in most cases were undertaken on the initiative of the authorities.
3/ Unfunded schemes are supported by guarantees from the participating banks. Pools often include similar protection. In the United States, for example, the FDIC has a credit line with the Treasury.
4/ Liabilities to other banks are usually not covered. Coverage is usually limited to banking entities located within the country. In some cases certain types of deposits are not covered (e.g., "bons de caisse" in France, certificates of deposit in the United Kingdom).
5/ No formal system in effect, but the Rediscount and Guarantee Institute provides financial support to troubled banks, with further support available since 1975 from a supplementary special intervention reserve.
6/ Excludes domestic branches of foreign banks.
7/ Pay-out discretionary.
8/ Also covers interbank deposits.
9/ Includes foreign branches of domestic banks.
10/ Except for foreign banks with equivalent coverage from home country.
11/ However, U.S. branches of foreign banks doing retail business and by state law banks in all but three states must be members.

all but the wealthiest individuals and large businesses can easily arrange their deposits so as to have complete coverage. Some two thirds of bank liabilities in the United States are covered by deposit insurance. Deposit insurance in other systems is more narrowly focused on protecting the small depositor, as opposed to protecting banks from panicky withdrawals. Limits of coverage may be lower, corporations may be excluded, and in some cases the depositor must bear some fraction of any loss. The importance of deposit insurance in domestic safety nets thus varies substantially from system to system. It plays a particularly important role in systems like that of the United States, with its large network of small, independent banks.

This automatic underpinning for depositor confidence in many domestic banking systems is largely absent in international banking. While deposit insurance systems do not, by and large, make any distinction between domestic and international depositors, the fact that limits of coverage are low relative to the size of international deposits means that only a small fraction of international deposits is covered. The exclusion of interbank deposits by most systems further reduces the importance of deposit insurance.

2. Financial support for international banks

To help prevent the problems of individual banks from affecting the rest of their domestic banking systems, official agencies provide liquidity support for banks in difficulty. In many banking systems, a certain amount of official support is available almost automatically through, for example, central bank discount windows. Beyond that, however, the extent to which the authorities are prepared to assist an institution is left vague--purposely so, on grounds of moral hazard. 1/ Generally, however, they indicate their intention to intervene when they judge it to be necessary, and confidence in their capacity to do so has been generated by the success of their past interventions.

This system of support for domestic banks extends to their international transactions, although various complexities can arise. In the case of Franklin National Bank, for example, the Federal Reserve Bank of New York, which initially provided its support in U.S. dollars, was faced with the fact that holders of foreign exchange were not prepared to sell to Franklin for fear that they would not receive payment. Eventually, the Federal Reserve undertook to purchase foreign exchange on behalf of Franklin to permit the latter to meet its obligations. 2/

1/ Arthur Burns, when Chairman of the Board of Governors of the Federal Reserve System, reportedly was asked by a senior banker, "What would you do if my bank ran into problems?" The reply: "That, sir, is a question I would have to discuss with your successor." The dilemma faced by lenders of last resort has been described by Spero (1980) as "the problem of trying to making depositors feel confident without making bankers feel complacent."

2/ The main source for the description here of the events of 1974 is Spero (1980). It provides a thorough study of the Franklin case, with extensive allusions to Herstatt and the other bank failures of the period.

By the same token, the system of support extends virtually automatically to the foreign branches of domestic banks, since for most legal purposes the parent bank is fully responsible for meeting the obligations of the branch. 1/ In effect, therefore, the parent bank authorities have the ultimate responsibility. The authorities in that case could normally count on the cooperation of the host country's authorities, particularly with respect to liabilities in the host country currency. Franklin was the first case in which the U.S. discount window was used to cover outflows at foreign branches, and in that case the Bank of England helped the U.S. authorities obtain the collateral of Franklin's London branch, which was needed to secure the advances they made to Franklin.

The situation of subsidiaries is less clear. While the parent bank does not, in general, have formal legal responsibilities, it could normally be expected to support the subsidiary in order to preserve confidence in itself. Where subsidiaries have confirmed lines of credit with the parent, a common practice, the parent's obligation would be automatic to that extent. Beyond these considerations is the issue of the "moral" responsibility of the parent.

The bank failures of 1974, particularly that of the Israel-British Bank, focused attention on the question of moral responsibility. The U.K. authorities pressed for international understandings based on the British practice, under which the parents of a closely held subsidiary are virtually required to meet its obligations. In the case of the Israel-British Bank, the Bank of England argued that it had no lender of last resort responsibility for a British subsidiary of a foreign bank, though in an eventual compromise with the Israeli banking authorities the Bank of England contributed to the pool of assets created by merging the resources of the subsidiary with those of the Israeli parent. In the fall of 1974, the Bank of England asked for "comfort letters" from the owners of consortium banks and the foreign parents of U.K. subsidiaries, asking them to acknowledge their "moral responsibility," defined as "responsibility to support those investments beyond the narrow limits laid down by laws of limited liability and, above all, as responsibility to protect depositors with those banks."

Another means of reinforcing the idea of parental responsibility, adopted in Luxembourg, is to require subsidiaries to bear the name of the parent.

1/ The major exceptions are exchange or other restrictions applied by the host country that prevent the branch from meeting its obligations, though even these exceptions have been challenged in the courts in the United States. Legal responsibility, of course, does not mean that obligations are carried out in all cases.

Lenders of last resort in other countries have not, in general, acknowledged that they incur any obligations as a result of comfort letters or other understandings between host authorities and banks. (In 1976, however, the Federal Reserve Board indicated that in deciding on approval of applications by U.S. banks to open foreign subsidiaries it would take into account the possibility that the parent could be requested to provide support beyond its original commitment.) Thus, even more than in the case of supervisory responsibility, there is ambiguity about the obligations of lenders of last resort with respect to foreign subsidiaries. In this case, as supervisors are quick to point out, there is not even a concordat. 1/ Nonetheless, there appears to be an evolution toward informal understandings in this area. As in the case of supervision, the responsibility appears increasingly to be placed upon the parents' authorities. While some ambiguities remain (witness the recent dispute over support for Banco Ambrosiano Holding in Luxembourg), by and large when both the subsidiary and the parent are located in industrial countries the two authorities can be expected to arrive at a satisfactory division of their responsibilities as lenders of last resort. The complexity of ownership of consortium banks, however, might give rise to operational problems in the event of difficulty.

Other banking entities might not be so reliably supported. Particularly in question would be the status of subsidiaries of banks based outside the industrial countries, as the parent authority might lack the ability and willingness to provide support. The status of subsidiaries operating in offshore centers might also be in question, as there would be neither a local lender of last resort, nor, perhaps, a strong understanding on the moral obligations of the parent bank and its authorities. Such banks are in a sense on the fringes of the system and it is unlikely that failure of a few of them would, in itself, lead to major problems for banks in general. Nonetheless, a residual uncertainty will remain until such banks are firmly brought under the wing of a reliable lender of last resort.

3. Resolution of problems of failing banks

As with their role in providing financial support, the role of lenders of last resort in winding up the affairs of failing banks has special features when international aspects are involved. Even more than in domestic banking, an orderly conclusion of the affairs of failing international banks is important to minimize both the direct financial burden placed on bank creditors and the shock to depositor confidence which failures inevitably entail.

After the failures of the 1930s there were, until 1974, no failures of major international banks. Lenders of last resort, who inevitably play a major role in winding up the affairs of failing banks, thus did not have their capabilities tested. The contrasting experiences of Franklin and Herstatt in 1974 provide many examples of the special aspects of failures

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1/ See, for example, Cooke (1981), page 240.

of international banks. A difference in viewpoint at that time between the U.S. authorities and those in the Federal Republic of Germany accounts for much of the differences. 1/ The U.S. Federal Reserve intervened early to manage the Franklin crisis, while the Bundesbank argued in the case of Herstatt that it should not help banks whose problems resulted from illegal activities. Such differences in philosophy apparently still exist among lenders of last resort, but some common lessons about the need for orderly action seem to have been drawn from those experiences.

Despite the fact that Franklin was a much larger bank than Herstatt, the international repercussions of its failure seem to have been less. A major reason is that the U.S. authorities took special action to keep Franklin operating and to ensure that the bank met its immediate commitments, while the abrupt closure of Herstatt, even before the transactions of the day had been completed, resulted in great turmoil. The fact that not even spot foreign exchange transactions were completed meant that, for a time, most banks other than the largest international banks had difficulty dealing in foreign exchange. While Franklin's demise no doubt made a major contribution to the general loss of confidence at the time, the chaos in the markets appears to have been largely the result of Herstatt's collapse. Since then, a number of banking systems have adopted new ways of dealing with bank failures to avoid such problems.

A major question for international confidence is the treatment accorded to foreign creditors in the event of bank failures. Certain actions taken by the U.S. authorities following the failure of the United States National Bank of San Diego in 1973 had left foreign banks uncertain about their situation, and part of the rapidity with which foreign creditors withdrew their funds from Franklin may have reflected that experience. In any case the FDIC acted throughout to ensure that foreign creditors would receive no less favorable treatment than domestic creditors. More recently, when First Pennsylvania Bank was in difficulty, the Federal Reserve's public statement of support was reportedly aimed at preventing foreign creditors of other regional U.S. banks from withdrawing their funds.

This approach contrasts with the initial reaction of the German authorities to the Herstatt failure, which created some concern abroad that foreign creditors might not receive equitable treatment. Eventually, however, in what has been characterized as "essentially a political solution," Herstatt's foreign creditors in fact received a higher percentage of their claims than did most domestic creditors. 2/

International supervisory groups--the EC's Contact Group and the Basle Committee--have come to play an important indirect role in dealing with problems of failing banks through providing informal networks through which supervisors can consult each other about the problems of particular

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1/ Again, the main source for this description is Spero (1980).
2/ Spero (1980).

banks. This sort of consultative process has begun to be extended to the offshore centers through the establishment of a group of offshore supervisors.

Some problems of coordination still remain, as evidenced by the Banco Ambrosiano failure, discussed in Section II. A recent example involving a bank outside the industrial countries was the failure of Argentina's Banco Intercambio Regional. When the Argentine authorities declined to accept responsibility for claims on the bank's New York branch on grounds that they lacked the authority to do so, the New York State Banking Department took possession of the branch, which had the resources to pay off its own creditors. This action raises awkward questions about conflicting interpretations of the role of lender of last resort, with New York State authorities going against the normal practice of considering the branch an integral part of the parent and seemingly asserting that Argentina had an obligation to protect all foreign creditors. There may also have been concern that the Argentine authorities were not in a position to assure equitable treatment of the creditors of the branch if its assets were left under the parent's control. Perhaps such action would not have been taken in the case of an institution whose supervisors were in closer contact with the U.S. authorities.

4. The ability and willingness of lenders of last resort to provide system-wide liquidity

In domestic banking systems, lenders of last resort provide resources in one way or another to the banking system as a whole to preserve liquidity in the face of deposit withdrawals. Such actions can prevent undesirable changes in the money supply and the value of bank assets by preventing a rise in interest rates and, through their general macroeconomic effects, supporting the ability of bank debtors to be able to repay them. The decline in depositor confidence is thus arrested.

Where international banking is involved, however, implementation of such a policy might encounter balance of payments constraints, particularly if foreign depositors were less easily reassured than domestic depositors. Hence the emphasis, noted previously, on the need for fair treatment of foreign creditors of failing banks. Insofar as the funds withdrawn were reinvested in other instruments in the same country, no capital outflow would result, but in practice some net outflow would be likely. If the drain were large enough, the lender of last resort might decide to restrict its banks' repayment of foreign obligations, whether booked domestically or abroad. 1/

It thus is important that a lender of last resort faced with balance of payments difficulties resulting from banking problems be able to obtain balance of payments support. The Basle Committee has considered ways in

1/ The balance of payments constraint may have been one factor in Argentina's attitude on its responsibility to foreign creditors in the failure of Banco Intercambio Regional.

which central banks could cooperate in providing financial support to troubled banks. The major official statement in this area was contained in a communiqué following the September 1974 monthly meeting of the Central Bank Governors of the Group of Ten and Switzerland:

> The Governors had an exchange of views on the problem of lender of last resort in the Euromarket. They recognized that it would not be practical to lay down in advance detailed rules and procedures for the provision of temporary liquidity. But they were satisfied that means are available for that purpose and will be used if and when necessary.

This statement, which has been reaffirmed on a number of occasions, was designed to provide assurance of the availability of liquidity to deal with system-wide banking disturbances. It clearly was not intended to imply agreement on the provision of liquidity to individual banks, nor did it address the question of how to ensure a continued flow of international finance through banks. It is the possibility of an interruption of that flow which gives rise to questions about an international "lender of last resort"--not for banks, but for borrowers who have lost their access to bank lending.

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