

ESSAYS IN INTERNATIONAL FINANCE

No. 133, July 1979

A PROPOSAL FOR THE ESTABLISHMENT
OF AN INTERNATIONAL DEPOSIT
INSURANCE CORPORATION

HERBERT G. GRUBEL



INTERNATIONAL FINANCE SECTION

DEPARTMENT OF ECONOMICS

PRINCETON UNIVERSITY

Princeton, New Jersey

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Introduction

During the last ten years, the major banks of Western countries have established large numbers of branches, agencies, and subsidiaries in other countries, and the total amount of their deposits and loans has grown very rapidly. This financial innovation, known as multinational banking, has attracted much attention from financial analysts, lawmakers, and economists. I have recently tried to explain theoretically the causes and welfare effects of multinational banking and the issues surrounding the U.S. International Banking Act of 1978 (Grubel, 1977). The existing literature documents the growth in multinational banking and discusses fully the issues facing policy-makers as a result of this growth.¹

In this Essay, I assume that the reader is familiar with most of the issues surrounding the multinational banking phenomenon and focus my attention on the narrow problems raised by the fact that in most countries deposits in local branches of foreign banks are not covered by the deposit-insurance schemes of the host countries.

In the following section, I review existing policies designed to reduce the incidence of liquidity crises and bank failures for domestic banks. I consider

This Essay reflects the comments made on an earlier draft by Jane D'Arista, Professional Staff Member of the Committee on Banking, Finance and Urban Affairs, U.S. House of Representatives; E. E. Ehrlich of the Federal Reserve Bank of New York; Otmar Emminger of the Deutsche Bundesbank; Robert A. Johnston of the Federal Reserve Bank of San Francisco; Chris W. McMahon of the Bank of England; S. Vachon of the Bank of Canada; and Henry C. Wallich, Robert F. Gemmill, and Henry S. Terrell of the Board of Governors of the Federal Reserve System. None of these individuals or the institutions employing them endorsed the proposal made in this Essay. I acknowledge research support from the Canada Council under grant S75-1194.

¹ The literature on multinational banking seems to have grown even faster than the multinational banks and their deposits. My 1977 paper contains a bibliography of what I considered then to be the most important papers. To this list should be added the paper by Brittain (1977), who documents the interest-rate response of U.S. banks to cumulative past lending to the less developed countries. The U.S. Congress Committee on Banking, Finance and Urban Affairs *Hearings on International Banking Operations* (1977a) and *Hearings on the International Banking Act of 1977* (1977b) contain much useful institutional, empirical, and analytical material presented by many representatives of governments and the private sector. (The Act was actually passed in 1978, but the Congressional hearings show the date of the hearings, 1977.) The Federal Reserve Bank of Boston held a conference on multinational banking in the fall of 1977, and the published proceedings (1978) contain many useful papers. Finally, the *Federal Reserve Bank of San Francisco Economic Review* devoted its Fall 1977 issue to "Banking in the World Economy." In that issue, Cheng (1977) presents recent data on banks' international lending to national governments, and Johnston (1977) supplies an excellent analytical survey of issues surrounding U.S. regulatory policies and the risks from international bank lending and multinational banking. Since much of the business of multinational banks takes place in the Eurocurrency markets, the entire literature on Eurocurrency markets is relevant to an understanding of multinational banks. Little (1975) provides an exceptionally thorough and perceptive study of this subject.

how multinational banks are affected by each policy. Next I analyze the efficacy of deposit-insurance schemes for diminishing the impact of bank failures on the rest of the economy. I then discuss the arguments for and against the inclusion of local branches of foreign banks in national insurance schemes, concluding with a proposal for the establishment of a self-financing International Deposit Insurance Corporation.

Measures to Reduce Liquidity Crises and Bank Failures

To reduce the risk of bank failure, prudent policy calls for banks (a) to maintain part of their asset portfolios in liquid form, (b) to maintain an adequate equity base, (c) to charge interest on loans corresponding to the risk of default of the borrower so as to assure a normal rate of return net of such defaults, and (d) to diversify their loan portfolios to reduce the consequences of default by one or a few borrowers. Brittain (1977) analyzed the behavior of U.S. domestic and multinational banks and found that they were following prudent principles of interest-rate setting and diversification in their loans to developing countries' governments. Ruckdeschel (1975) found that the loan-loss ratios of U.S. banks have been lower on foreign than on domestic loans. Since most of the foreign loans are made by the branches or agencies of U.S. banks abroad, the empirical studies of Brittain and Ruckdeschel imply that U.S. multinational banks act in accordance with sound banking principles.

Nevertheless, the prudence of the international lending policies of U.S. banks has been questioned by a number of the persons mentioned in the acknowledgments above. Even though banks have strong incentives to prevent crises and failures, which diminish or wipe out the net worth of the banks' owners, there is evidence of imprudent investment decisions. Jane D'Arista has provided me with some facts useful in forming an opinion on this matter. She reports that the six largest U.S. banks have loaned in excess of 100 per cent of their equity capital to two countries, Mexico and Brazil. Furthermore, in 1975 the Comptroller of the Currency accused a leading U.S. bank of exceeding its legal lending limit of \$200 million by making a loan of \$400 million to the government of Italy. The Comptroller's case rested on the view that all of Italy's "legally independent" government agencies should be considered to be part of the government to which the lending limit applies, a view obviously not shared by the bank's counselors when the loans were made. In spite of the ambiguity of a legal definition of the Italian government, the facts cited raise some uncomfortable questions about the prudence of loan policies involving foreign governments.

Second, D'Arista argues that Ruckdeschel's calculation of loan-loss ratios provides an imperfect measure of prudent lending. In its place she proposes consideration of experience with nonperforming assets, that is, assets on which interest payments are in arrears or on which amortization had to be rescheduled. Using this yardstick, we find that both Citicorp and Chase Manhattan noted in their 1976 annual reports that nonperforming loans in international business (which include loans to foreign governments) were fractionally lower than in domestic business, but Citicorp also reported that nonperforming commercial and industrial loans in its international portfolio were proportionately larger than in its domestic portfolio.

Obviously, it would be impossible to establish conclusively that U.S. banks have been or are making international loans that are both profitable and prudent from the private as well as the social point of view, even if it were clear what the latter is. This same problem exists in connection with domestic loans. Multinational banks are not the only banks that have made large loans to foreigners. They are the ones, however, that are most likely to have large claims on foreigners and large obligations to foreigners. Thus, to the extent that their loans are risky, their depositors may be exposed to hazards larger than the hazards confronted by those who have deposits with domestic institutions. It is for this reason, among others, that special measures may be necessary to reduce the risks confronted by those who hold deposits with multinational banks.

As a result of experience and analysis of the negative externalities associated with bank failures, governments in all Western countries have erected two institutional safeguards for those who hold deposits with domestic banks. On the one hand, monetary policy is conducted and instruments have been designed to avoid liquidity crises, which can lead to bankruptcies when banks are forced to sell off long-term assets quickly. Ever since the Bank of England pioneered the development of the discount window in the nineteenth century, it has traditionally been the instrument for providing emergency liquidity when general policies have gone wrong. On the other hand, countries have established procedures for regulating and supervising banking procedures, most often in connection with the operation of deposit-insurance schemes. Both of these special ways of treating the banking industry are justified on the grounds that bank failures produce greater negative externalities than do the failures of firms in other sectors of the economy.

Multinational banks constitute an institutional innovation that was not foreseen by the drafters of domestic bank legislation in most countries. Yet the arguments about negative externalities arising from bank failures apply to both domestic and foreign-owned banks and operations. Furthermore, there is the additional problem that multinational banks can serve as con-

duits for the transmission of liquidity crises and bank failures from one country to another. For these reasons, it is important to understand how existing legislation treats multinational banks in those respects.

Liquidity and Discount Facilities

The branches of multinational banks typically have access to the discount windows at the central banks of their host countries, but only on loans made to domestic residents in the local currency. Such access is afforded foreign banks in the United States under the International Banking Act of 1978.²

However, such discounting facilities are not likely to be an important source of liquidity during a crisis, for two reasons. First, the overwhelming majority of loans made by the branches of multinational banks are in currencies other than that of the host country, and, second, these loans tend to be made in the interbank market to other foreign banks and therefore are not eligible for discounting. Mitigating the problems that might arise from this limited access to the national discount window is the efficiency of the international money market. Parent banks normally have ready access to their home-country discount window and can use the proceeds to provide liquidity to their branches and agencies abroad, while at the same time foreign-exchange markets efficiently permit the arbitrage of shortages and excess supplies of liquidity in different currencies.

Ultimately, the contribution to liquidity of borrowing at the home-country discount window is determined by the relevant central bank's willingness and legal authority to lend to the head offices of multinational banks—to advance amounts sufficiently large to counter an international crisis. In this context, H. S. Terrell in a personal letter stated:

While from a practical standpoint most Federal Reserve discount window credit is collateralized by Government securities, in an emergency where the liquidity problems of a single bank or group of U.S. banks threatened either the domestic or the international financial system, the Federal Reserve has broad authority to advance funds. Presumably other central banks would also extend discount window credit to institutions with head offices in their countries.

Existing institutions and practices thus appear to be adequate to assure the liquidity of multinational banks over a very wide range of foreseeable circumstances. Therefore, it does not seem to be necessary or desirable to create a new and special international discount facility for multinational banks. This conclusion suggests further that it is not necessary to change the basic character of the International Monetary Fund so that it can extend credit to multinational banks. I will discuss below in some detail the actual

² As Hutton (1975) has argued, U.S. legislation is likely to become a model for other countries.

and potential role of the IMF in assuring the stability of the multinational banking system.

Measures to Reduce Bank Failures

Four types of measures are designed to reduce the incidence of bank failures: bank regulation, bank supervision, informal aid to large debtors of banks, and informal pressures on banks by the government. The following discussion deals primarily with the U.S. institutions responsible for the four types of measures, but they have counterparts in nearly all Western countries.

Bank regulation. The regulation of U.S. banks, partly through federal and partly through state legislation, consists of (a) the requirement that banks maintain minimum reserves on deposit with the central bank if they wish to be members of the Federal Reserve System; (b) rules limiting competition with other financial intermediaries while maintaining competition among banks; and (c) a number of other less important requirements, such as an upper limit on interest rates on deposits. Many of these regulations have been criticized as unnecessary, leading to inefficiencies and loss of competitiveness. Some, such as the minimum-reserve requirement, have become important tools for the execution of monetary policy.

The local branches of foreign banks in the United States were exempted from a large number of these regulations until the recent passage of the International Banking Act of 1978, and similar preferential treatment is afforded local branches of foreign banks in other parts of the world. As many analysts have argued (for references see Dean and Grubel, 1978), exemption from domestic bank regulation has provided foreign multinational banks with a competitive advantage that distorts the efficient allocation of resources. Given the social merit of domestic banking regulations, efficiency as well as equity demands that local branches of multinational banks be subjected to the same regulations. This principle underlies the U.S. International Banking Act of 1978, which has made the local branches of foreign banks in the United States subject to the same regulations as U.S. banks.

Bank supervision. At the most fundamental level, banks must be supervised in order to assure that they obey banking regulations and that criminal elements do not use banks to defraud the public. Such supervision is equivalent to surveillance by law-enforcement agencies and in principle could be carried out by such authorities without any special knowledge of banking. In most Western countries, this is indeed the practice.

In the United States, however, the supervision of banks is carried out by the Comptroller of the Currency for federally chartered banks and by the Federal Deposit Insurance Corporation for banks not members of the Federal Reserve System. The supervision covers both U.S. parents and their

subsidiaries and branches abroad. The regulatory authorities have been charged not only with assuring compliance with regulations and the absence of criminal activities, but also with the supervision of the quality of assets, internal-control mechanisms, liquidity, adequacy of capital, and the competence of management. Supervisory responsibilities in these areas are highly controversial, since they cannot be carried out with the help of objective criteria and therefore simply amount to questioning the professional judgment of bank managers and directors.

These problems of subjective judgment have manifested themselves recently in the evaluation of bank loans to foreign governments. Such loans expanded rapidly in the wake of OPEC-induced payments deficits and the infusion of OPEC-owned liquid funds into the world's financial markets. Banks proceeded with their loans on the basis of presumably prudent principles of banking (see Brittain, 1977) and the best information available to them. Then, after some time, they were faced with risk evaluations of foreign countries made by the Comptroller of the Currency by drawing on intelligence resources of many federal agencies, which are unavailable to the private sector, and by using evaluation principles that are not discussed publicly and may or may not be applicable to the conditions confronting an individual bank. As a result of these *ex post* risk evaluations of borrowers, banks can find themselves in the embarrassing and potentially commercially harmful position of having in their portfolios many loans classified officially as "risky."³

Another problem with the official determination of country risk in foreign loans has been the need to identify individual countries. While this takes place confidentially, in practice it seems to be inevitable that the official views become public knowledge. As a result, political complications have arisen when ambassadors and ministers of countries branded as involving high-risk investments have argued the validity of such judgments with the U.S. Department of State and other agencies.

In recognition of the difficulties associated with the application of "official" country-risk assessments by U.S. supervisory authorities, efforts are underway to develop a new supervisory approach to foreign lending. This approach is based on the semiannual country-exposure reports that U.S. banks have been required to file with the Federal Reserve System since December 1977, covering all loans made to foreigners by U.S. banks and their foreign branches and affiliates. Exposure data are compiled for each bank and consolidated with data provided by the Bank for International Settlements Semi-Annual Report of the External Positions of Commercial Banks (*IMF Survey*, Sept. 4, 1978, p. 263). With this information, the Federal Reserve

³ See the papers and discussion of country risk in the Federal Reserve Bank of Boston Conference Proceedings (1978).

authorities and the Comptroller of the Currency can establish the magnitude and characteristics of loans to individual countries by U.S. banks. The balance of payments, debt service, and domestic conditions of these countries are surveyed continuously, and countries with potential problems are reviewed thoroughly.

Comprehensive studies would be prepared for the examiners' use in raising questions with the bank under examination and in appraising country risk in portfolio concentrations. Drawing on this analysis of exposure levels and the assessment of country conditions, the examiner would comment on those country exposures which appeared high in relation to the bank's ability to absorb risk and to the country's condition. Certain norms would be established to guide examiners in making critical comments on high concentrations by country. There would be no hard and fast rules. . . . The objective of any critical commentary would be to encourage appropriate diversification in a bank's international lending portfolio. Diversification remains a bank's best protection against risk in an uncertain world (*Federal Reserve Bank of New York Quarterly Review*, Spring 1978, p. 5).

It remains to be seen whether this new supervisory approach to foreign lending can overcome the difficulties inherent in the old approach, since it is still necessary to pit examiners' personal judgments, usually with the benefit of hindsight, against those of the banks' managers and directors.

However controversial U.S. bank-supervision practices may be, the facts are that they exist, have a long history, and are run by a bureaucracy that has created many vested interests. Given these facts, it seems both efficient and equitable that the branches of foreign banks in the United States be made subject to the same supervision as domestic banks. This is the intention of the International Banking Act of 1978, and the arguments for and against this policy parallel those made above in connection with equality of treatment under U.S. bank regulations.

Informal aid to large debtors of banks. During the last decade, the governments of Western countries have prevented the potentially serious consequences for banks arising from the bankruptcy of large corporations or other bank borrowers. The stories of the rescue operations of the Penn Central Railroad, the Lockheed Corporation, and the New York City government in the United States, of British Leyland and U.K. shipyards in Britain, and of BMW in Germany are well known and need not be retold here.

These cases of threatened bankruptcy of large enterprises confront governments with a dilemma. On the one hand, they endanger the stability of a country's financial system and of its banks in particular. Permitting such enterprises to go bankrupt could produce large enough negative externalities to justify government aid and intervention. On the other hand, rescues set precedents that encourage other enterprises to take greater than socially optimal risks and consequently increase the number of threatened bankrupt-

cies. This phenomenon of an increased incidence of losses that are covered by government policies or insurance is known as "moral hazard." Governments have tried to reduce moral hazard by being careful not to set any formal precedents or establish any rules for access to government aid. While governments in recent years have succeeded in preventing the bankruptcy of large borrowers or have contained the consequences and the spread of economic instability, it is difficult to estimate how successful they have been in avoiding encouragement of other firms to incur greater than normal risks. Only history can tell.

National government policies designed to prevent the bankruptcy of large debtors have their analytical counterpart in international efforts to develop facilities capable of assisting national governments unable to meet foreign debt payments. While governments cannot go bankrupt in the conventional sense, they may have temporary difficulties in raising funds internally, especially in the form of foreign currency to pay creditors abroad, many of which are multinational banks. The risks of national governments defaulting on external debt payments and causing bankruptcies among multinational banks have been reduced substantially by the establishment of general and special credit facilities at the International Monetary Fund in recent years. For example, the Fund has increased its lending capabilities beyond the basic gold tranches through medium-term loans to overcome "structural balance of payments maladjustments," the "supplementary" financing facility, the "compensatory" financing facility, and the "buffer stock" financing facility (*IMF Survey*, Dec. 12, 1977, p. 382).

The Fund dispenses the resources available under these programs, typically under conditions designed to minimize the problem that moral hazard may induce increased need for such assistance. It could be argued that through these facilities the Fund has become a "lender of last resort" to governments, since it provides liquidity that is repayable and is used only to overcome temporary shortages, somewhat analogously to the operation of the central-bank discount facilities, though the latter do not typically attach conditions to their cash advances. Through these operations, the Fund makes an indirect contribution to the stability of multinational banks that is consistent with its tradition of lending only to national governments. If the Fund wanted to assume the role of a lender of last resort to multinational banks directly, fundamental changes would have to be made in its Articles of Agreement. The preceding analysis suggests that such changes are not required: national discount facilities are available to serve the liquidity needs of multinational banks indirectly through the efficient operation of financial markets, while the Fund reduces the dangers to multinational banks emanating from the illiquidity of national states that are major bank debtors.

While these measures undoubtedly have succeeded in reducing the fre-

quency of bank failures, they have not eliminated them completely. Besides a sizable number of failures of small banks annually in the United States, in recent years several large banks have failed. The Franklin National Bank and the Herstatt Bank of Germany are the best-known examples in this category. Additional measures may therefore be needed.

One proposal has been made by Xenophon Zolotas, Governor of the Bank of Greece, suggesting the establishment of an international loan-insurance program (Zolotas, 1978). Under this program, the foreign loans of all banks would be insurable under sound banking principles; national governments, private financial institutions, or international organizations would serve as the guarantors of the insurance obligations. The scheme would be self-supporting, operating in much the same manner as national export-insurance schemes, which have been functioning successfully for many years in industrial countries. As we have seen, such a program would strengthen the international financial system and thus be very much in the interest of world economic stability.

Informal pressures on banks. The financial institutions of most Western countries are subject to informal governmental controls, the more so, the more oligopolistic the industrial structure. The Bank of England and the Bank of Canada, both of which have to deal with only a few large commercial banks, are known to be able to invite the heads of these banks for informal discussions about special problems. While there are few written records of the business transacted at these meetings, it is not difficult to imagine that, under the threat of special legislation or the loss of certain privileges, the governments can exact from these banks changes in business behavior deemed to be in the national interest. Even in the United States, the Board of Governors of the Federal Reserve System issues informal directives without the force of law to influence the behavior of commercial banks.

The multinational banking industry is also stabilized by such informal controls. For example, McMahon (1978) reports that during a crisis in 1974, "the Governor of the Bank of England sought from shareholders in the consortium banks in London and from the overseas parents of banking subsidiaries in London acknowledgements that they accepted a moral responsibility for their offspring in London that went beyond the narrow limits laid down by laws of limited liability and that extended in particular to the protection of depositors with these banks." When such acknowledgments were obtained and made known to the financial community, they helped to calm the crisis, which was prompted in part by fears about the bankruptcy of Eurodollar banks as a result of the possible default of major borrowers. Other such informal agreements undoubtedly have been reached in the past but are not generally known. And they can be expected to be used in future crises to deal with situations endangering the stability of multinational banks.

Information about Debtors

A final measure to reduce the frequency of bank failures is the collection and publication of data on total loan obligations incurred by borrowers. Such information is expensive for individual private institutions, especially smaller banks, to collect and keep current, so that official efforts in this field yield large positive externalities. Furthermore, the availability of reliable information benefits all potential lenders. Yet, because large-scale international loans by banks are a relatively new phenomenon, national and international agencies did not make a practice of collecting and publishing data on loans to individuals, firms, and official institutions in different countries, even after outstanding debts became very large.

The relative scarcity of data in this field may have been responsible for the flurry of anxiety among financial analysts and supervisory agencies about the risks of U.S. banks lending abroad. This scarcity has been overcome recently by the institution of surveys of the country exposures of U.S. banks and the publication of the results by the Federal Reserve System and the Bank for International Settlements, as described above in connection with bank supervision. Since these statistics are balance-sheet data, they provide reliable information about the total stock of past lending. In addition, the World Bank in recent years has collected and published data on external borrowing by public authorities in all countries of the world. Finally, in a recent publication, the Bank for International Settlements (1979) has surveyed all of the data-collection efforts by national and international agencies. The BIS study concludes that in spite of these large efforts there is still an important gap in information about the debts of individual countries. Information is lacking about short-term trade and other credits extended to foreigners by firms and nonbank financial institutions in connection with the export of goods and services.

These efforts to improve the quantity and quality of information about debtors will increase the efficiency of the world's financial system, and they deserve the full cooperation of all national governments.

Deposit Insurance as a Way to Deal with Bank Failures

National Deposit Insurance

In most Western countries, deposit-insurance schemes were designed to protect small depositors, who were deemed incapable of assuring themselves continuously that their banks were following proper business practices. Accordingly, deposit insurance typically is limited to relatively small sums for each customer. In the United States, this sum is now \$40,000. The large deposits of business firms and other banks are therefore excluded from insurance coverage.

It has been argued that deposit-insurance schemes have served a much more important function than the paternalistic protection of poorly informed small depositors. According to this view, for the financial community and the economy as a whole deposit insurance has reduced the negative externalities that traditionally have resulted from bank failures. Deposit insurance has virtually eliminated runs on banks that resulted from actual or rumored financial difficulties, thus reducing the incidence of bank failures and permitting a more orderly disposal of assets of banks that do fail. In addition, the preservation of the value of the many small deposits has protected their owners from the need to reduce expenditures, and this has tended to increase overall economic stability for the benefit of the entire economy.

In countries that have deposit-insurance schemes, such as the United States, Canada, the Netherlands, and Germany, insurance rates are set to assure the break-even operation of the insurance agency in the longer run. The agency typically has a close working relationship with the central bank, which assists it in the liquidation of the failed banks' assets and, just as important, is regarded as a ready and confidence-inspiring source of funds in case large obligations resulting from a series of bank failures exceed the agency's reserves. In effect, the agency is considered able to borrow on future premium income from a practically inexhaustible source should the need arise. Deposit insurance, like all forms of insurance, is subject to the moral-hazard phenomenon. Thus, to prevent banks with insured deposits from taking excessively large risks, the insurance is combined with regulation and supervision of the asset portfolios, as described above.⁴

The Treatment of Multinational Bank Deposits

Under the International Banking Act of 1978, deposit insurance to a maximum of \$40,000 has been extended to U.S. dollar deposits of U.S. residents in the local branches of foreign banks. Insured liabilities, moreover, must be secured by pledging dollar-denominated assets, such as U.S. government securities (a requirement that is not imposed on domestic banks). Even this limited extension was taken over the objections of the Federal Deposit Insurance Corporation (FDIC), which opposed the granting of any insurance to foreign banks in the United States on the following grounds:

1. Directors of the foreign bank are not usually subject to U.S. jurisdiction, and domestic branch personnel essential to explain certain transactions can be transferred beyond the reach of U.S. authorities. Also, essential records may be difficult to reach if they are kept at the head office or at branches in other countries.
2. The domestic branch may be subjected to requirements under foreign law or to

⁴ Edwards and Scott (1977) discuss the problem of moral hazard in the case of deposit insurance and suggest ways to minimize it.

political and economic decisions of a foreign government which conflict with domestic bank regulatory policies.

3. Administrative enforcement proceedings initiated by domestic regulatory authorities against domestic branch personnel may be frustrated or nullified as a result of lack of jurisdiction over the foreign banks' head office and head office personnel.
4. Many foreign banks are permitted under the law of their headquarter's country to engage in business activities abroad which would not be permitted to banks chartered in this country. Such foreign activities could give rise to antitrust, conflict of interest, and other legal problems under U.S. law.
5. In the event of insolvency of a foreign bank, it is possible that:
 - assets could be easily and quickly shifted *from* the U.S. branch and out of U.S. jurisdiction, while *deposits* could be shifted *to* the U.S. branch;
 - legal obstacles and transactions involving other offices of the foreign bank might prevent FDIC from obtaining the usual subrogation of claims it normally gets from depositors in failed U.S. banks before making payment. Even if adequately subrogated, FDIC's aggregate claim in the failed bank's receivership estate might be jeopardized by foreign laws and procedures;
 - creditors with claims against other offices of the failed bank—especially banks holding deposits of the U.S. branch—could attempt offsets against assets in the U.S. or seek preference based on foreign law (U.S. Congress, 1977b, pp. 561, 562).

In 1976, the "Einlagenversicherungsfond" was established in Germany to insure all DM deposits with the local branches or subsidiaries of foreign banks. In both the U.S. and German cases, the new arrangements cover the main types of deposit liabilities of the local branches of multinational banks. Deposits in foreign currencies do not bulk large in their total deposits. But banking conditions in these two countries are exceptional. In most other countries, local branches of multinational banks have large deposit obligations to nonresidents, and most of these deposits are denominated in foreign currencies (i.e., the main Eurocurrencies). Business of this type is of overwhelming importance in London, Paris, Hong Kong, the Caribbean, Singapore, and some other cities of Europe. The Eurocurrency deposits of multinational banks in these centers in recent years have grown to a size equivalent to between 50 and over 100 per cent of the deposit liabilities of domestic banks denominated in the home country's currency.

Any host-country deposit-insurance agency tempted to extend coverage to the local foreign-currency deposits in multinational banks has to face the problems noted above in the FDIC brief—the lack of jurisdiction over the personnel and behavior of corporate entities created by another nation. In the absence of such jurisdiction, the host-country insurance agencies expose their operations and assets to abuse through a form of moral hazard that does not occur in connection with their regular business and is especially difficult to control. Foreign branches in the host country, by means of decisions made abroad, can be used to make particularly risky loans, expand into other risky

operations, and grow rapidly by offering higher than normal rates of return on deposits, and yet the riskiness of such activities will not deter depositors because their assets are insured against loss. At the same time, the profits of the branch bank accrue to the foreign parent bank and possible losses from bankruptcy are limited strictly to the relatively small amount of capital invested in the branch bank. If the risky behavior does result in the bankruptcy of the branch bank, the host country's deposit-insurance scheme has to meet the cost. In other words, the benefits from increased risk exposure accrue to foreigners while the consequences are suffered by the host country's insurance fund and, through it, by other domestic banks. Furthermore, if the insured deposits are denominated in a foreign currency, bankruptcies will give rise to added complications because foreign-exchange risks and policies are involved in paying off insured depositors. Finally, branches of foreign banks may become involved in bankruptcy problems originating with the parent bank, whose operations are entirely outside the supervisory control of the host country's insuring agency.

It has been suggested to me by several of the persons noted in the acknowledgments that the type of behavior just sketched is unlikely to arise because (a) banks on their own tend not to make extraordinarily risky loans, (b) bank supervisors make sure that they do not do so, and (c) parent banks can be expected to bail out subsidiaries abroad even if they are not legally required to do so. I agree that substantial moral hazard and bankruptcies are unlikely, but at the same time their occurrence cannot be ruled out completely. Insurance is designed precisely to protect against the consequences of what on average may be an unlikely event. The more infrequent the incidence of any insured hazard, moreover, the lower are the insurance premiums. Low incidence of hazard is not a good argument against the creation of insurance affording protection against it.

In principle, national deposit-insurance institutions could deal with the problems raised in the FDIC brief and resulting from moral hazard by entering into bilateral agreements with the governments of the parent banks operating branches in their domestic markets. It would be necessary to settle in such agreements the problems of jurisdiction and responsibility of personnel in the two countries and possible conflicts in regulations between the national authorities. Given the large differences in national legislation governing banks and other financial institutions, however, such agreements might not be easy to reach.

Furthermore, national authorities may be reluctant to institute the same regulations and controls on branches of foreign banks that they impose on national banks as a condition for membership in the deposit-insurance scheme, because they do not want to discourage or drive away multinational banks. McKinnon (1977) has argued that the development of the Eurocur-

rency business in London especially is predicated on the freedom of multinational banks from the onerous regulations to which the domestic banking business is subject. Banks could be expected to shift their Eurocurrency business to centers free from or burdened by the least onerous of such regulations, since interest rates on deposits would adjust to make deposits with insured and uninsured institutions equally attractive.

Nations would incur these costs of negotiation and the possible loss of business without commensurate benefits in terms of increased domestic financial stability. Most of the benefits from insuring deposits of multinational banks in the Eurocurrency business would accrue to the world as a whole, and only a small proportion would accrue directly to individual nations participating in a network of bilateral agreements.

Proposal for the Establishment of an International Deposit Insurance Corporation

I have argued that national deposit insurance is a complement to discount facilities and bank supervision; as a package, they are designed to assure confidence in the national banking system. The need for deposit insurance arises from the fact that, in spite of discount facilities and supervision, banks occasionally do fail. Deposit insurance prevents runs on banks suspected of, or actually experiencing, an excess of liabilities over assets.

The multinational banking activities of the United States and other countries are to some extent covered by home and host-country discount facilities and supervisory-control mechanisms. However, the supplementing deposit-insurance coverage considered useful for domestic banking systems does not extend to most of the deposits of multinational banks, for the reasons discussed above. Of these, the main reason is that jurisdictional problems have made it impossible for national systems to assure that the insurance benefits do not accrue to foreigners who cannot be made to conform to the host country's laws.

Yet, if the history of banking is any guide for the future, there are likely to be failures of banks engaged in multinational activities, in spite of adequate discount facilities and national supervision extending across borders. Such failures could have serious consequences for the stability of both national financial systems and the global financial community. It therefore seems advisable to investigate the feasibility of establishing an International Deposit Insurance Corporation (IDIC), which would function much like existing national schemes but would serve the multinational banking community not now covered by national schemes. From an economic point of view, such an international effort would be appropriate, since it would lead to the

elimination of negative international externalities, which each country alone has inadequate incentives to combat by itself.

Problems to Be Overcome

The design and implementation of such an IDIC require more financial, economic, and political skills and knowledge than any one individual possesses. I am aware that even at the economic level there are three fundamental problems whose solution will be very difficult and perhaps impossible.

First, there is the problem of assuring participation in the scheme by all nations. If one or a small number of countries refused to join, multinational banks within their jurisdiction would not have to pay insurance premia and, in an industry characterized by very low margins, would have a competitive edge. As a result, banks would have an incentive to move to these countries and the entire purpose of the scheme would be defeated.

Such a scenario may be excessively pessimistic, however, since market forces would probably require uninsured banks in these countries to pay higher interest rates on their deposits to compensate depositors for the higher risk of loss. The higher interest payments would remove some of the competitive advantage brought about by the freedom from insurance premia. Also, domestic legislation in countries that are members of the IDIC could be designed to penalize branch banking in non-IDIC-member countries. Presumably, these measures could be used to persuade all countries to join the proposed scheme at the initial negotiating stage.

Second is the overwhelming problem of moral hazard. It is well known that the availability of insurance against a certain hazard tends to induce behavior that leads to increased incidence of that hazard. For the case under consideration, this implies that internationally insured banks would tend to be less prudent in their lending than uninsured banks, so that failures might be more frequent among insured than uninsured banks. However, the existence of moral hazard does not necessarily imply that a particular insurance scheme should not be created. After all, fire, health, and national deposit-insurance programs exist and are socially efficient in spite of moral hazard (see Grubel, 1970).

Moral hazard can be reduced decisively by institutional safeguards. For example, it is possible to set premia according to risk classes, so that the benefits from making a riskier loan are offset by the higher premium payment required. Another method is to institute substantial degrees of co-insurance. Depositors may be assured of receiving only 80 or 90 per cent of the value of their deposits if the bank fails. This induces depositors to avoid banks making imprudent loans and discourages such behavior by banks. At

the same time, the positive externalities from having the insurance still remain, since the catastrophic consequences of the full loss of deposits are avoided. As Edwards and Scott (1977) have shown, there are no completely successful methods for dealing with moral hazard in deposit insurance. But neither are there any in all the other forms of privately and socially profitable insurance. There is every reason to believe that an IDIC could be made to have the same desirable characteristics as all these other insurance programs.

The third fundamental problem arises from the need to create a credible insurance fund to back the potential obligations of the IDIC. To create such a fund quickly out of insurance premia, the rates would have to be set at such a high level that they would discourage, if not prevent, multinational banking. The solution to this problem lies in guarantees of sufficient insurance funds by the national governments that are signatories to the agreement. Advances of such funds by national governments would be repayable from premium income in the future, with rates set to reflect long-run loss experience.

Some Institutional Features

The following description of the characteristics of an IDIC is a tentative and speculative attempt to provide some further ideas and suggest some methods by which these and additional problems might be solved.

1. The IDIC would be created as an independent nonprofit corporation and located in either Basel, Switzerland, or Washington, D.C., depending on whether it operates in collaboration with the Bank for International Settlements (BIS) or the International Monetary Fund (IMF).

2. The capital for the IDIC would be provided by member countries in proportion to their contributions to the collaborating agency and by the collaborating agency. Most of the capital subscriptions would be conditional rather than actual.

3. The collaborating agency, such as the BIS or IMF, would provide the facilities for the advancement of funds on future premium income should losses at any time exceed accumulated reserves. These facilities would also be used to provide initial resources until income from premiums had built up a target level of reserves.

4. The IDIC would impose conditions on member countries designed to eliminate jurisdictional problems. For example, member countries would have to permit prosecution of persons and corporations by the IDIC for crimes and financial manipulation leading to the bankruptcy of multinational banks and their branches either directly under the authority of the IDIC or indirectly through a national representative of the IDIC appointed with national consent in every member country. The nature of fraudulent transac-

tions within multinational bank organizations would have to be spelled out and prohibited.

Once countries agreed to these conditions, the foreign branches of their national banks would be subject to compulsory insurance of deposits. Pressures could be brought to bear on all countries to join such a scheme either through the sponsoring organization during the negotiations or through purely national legislation by member countries that would prohibit or tax heavily the operations of uninsured foreign banks located within the member countries.

5. As is the case with national deposit-insurance systems, branches of multinational banks would have to submit to a certain amount of regulation and supervision by the IDIC. Regulations would cover the composition of asset and liability portfolios in order to determine their riskiness and to set the insurance premiums accordingly. Such definition of risk classes and premiums would be necessary to minimize the moral hazard that the presence of insurance might induce greater risk taking in portfolio choices. Supervision would assure that banks obeyed these portfolio requirements. The international agreements would have to provide for the opportunity to prosecute and fine violators.

Uniformity of the IDIC rules governing all multinational-bank branches in all countries would eliminate the elements of distortion inherent in national approaches to the insurance of deposits in local branches of foreign banks.

6. The IDIC could either insure all deposits not covered by national schemes or it could limit coverage to deposits of nonbanks and private wealth holders. The U.S. and German deposit-insurance schemes follow the second alternative and exclude coverage of deposits by other banks and official government agencies. The justification is that such depositors need not be relieved of the investment risk, which they are capable of estimating readily with their own large intelligence resources. Such an approach to the limitation of coverage is based on the view that deposit insurance is designed primarily to help the small, uninformed depositor. As I argued above, this view neglects the more important function of deposit insurance that has evolved historically, the reduction of negative externalities resulting from all types of losses due to bank failures.

According to evidence cited in a letter by Otmar Emminger of the Deutsche Bundesbank, about 13 per cent of the total foreign-currency liabilities of multinational banks in Europe are to private, nonbank customers. It is clear that if insurance were limited to these customers, it would cover a relatively small proportion of the deposit liabilities of multinational banks, albeit a large and growing absolute sum.

7. The IDIC could either forego the setting of any maximum on the amount insured per deposit or choose a very high maximum, say \$10 million.

Since private nonbank depositors in multinational banks are typically big corporations or wealthy individuals making deposits that are large by the standards of the usual domestic retail banking business, it makes no sense to apply the low limits on the maximum insurable amounts that are imposed by domestic insurance agencies.

If the view is adopted that the purpose of the insurance is to provide beneficial externalities rather than to protect small depositors, no limit on the size of deposits should be imposed. Some degree of co-insurance in the form of a percentage of deductible loss would protect the scheme against excessive moral hazard. Of course, further protection would be afforded by limiting the maximum insured deposit to some large sum, such as the \$10 million suggested above.

If the IDIC set a high maximum or no maximum on its coverage, large home-country customers of multinational banks would have an incentive to shift their deposits from branches located in the bank's home country, with the smaller insurance maxima, to the foreign branches of that bank covered by the IDIC. These incentives would be mitigated by (a) the convenience and other nonmonetary yields of banking in the home country and (b) the lower relative interest rates paid by the multinational banks on deposits in branches with higher insurance maxima. If, for some reason, such competitive interest-rate adjustments did not take place and large funds *were* shifted internationally to IDIC-covered branches, national insurance programs could be expected to adjust their own maximum-coverage provisions. They would then rely more on co-insurance for controlling moral hazard than on limitations in the size of covered deposits. In my view, such a change in the U.S. deposit insurance program would be desirable: the program has evolved historically from a device for the protection of small depositors to a vehicle for assuring overall financial stability, and this much more important function is hampered by the coverage only of small deposits.

Summary and Conclusions

In this paper I have analyzed how national institutions have helped to reduce the probability of domestic bank failures and how these institutions affect the liquidity and risk of bankruptcy of multinational banks. This analysis leads me to the conclusion that because of the efficiency and interdependence of national and international financial markets, existing institutions for the provision of liquidity, assistance to large debtors, and informal control of banks adequately serve to reduce the probability of multinational bank failures. Bringing U.S. branches of multinational banks under the same regulation and supervision as domestic U.S. banks, as is foreseen under the International Banking Act of 1978, can be expected both to eliminate inefficient

and inequitable distortions and to reduce further the probability of multinational branch-bank failures.

Nevertheless, preventive measures probably cannot and, for the sake of efficiency, should not eliminate altogether the possibility of failures of multinational banks. Yet there appears to be no adequate provision for dealing with the problems for the world economy that could arise from such failures. National deposit-insurance programs are not suitable vehicles for the insurance of foreign-currency deposits in local branches of foreign banks, because the authorities in the host country have no jurisdiction over the personnel and corporate entities of the parent banks. The parent banks can make all the decisions that lead to bankruptcy in the country in which the deposits are insured.

The absence of comprehensive insurance for multinational bank deposits abroad, the difficulties of negotiating jurisdictional issues between individual countries wishing to offer insurance coverage for foreign banks in their territories, and the global nature of the benefits accruing from such insurance are the main reasons for suggesting the establishment of an International Deposit Insurance Corporation.

The economic principles that should guide the operation of such an institution are simple and clear. Its main purpose should be the reduction of negative externalities accompanying bank failures, not the traditional purpose of protecting innocent small depositors. The economic costs of creating and operating an IDIC are likely to be small, judging from the experience of similar national institutions. The economic benefits are potentially large, though because the IDIC might prevent major crises, its full value might never be apparent. The greatest costs and difficulties are likely to arise from efforts to design universally acceptable regulations for portfolio composition, scales for insurance premia, and means for enforcement of the regulations. Whether the costs of overcoming these difficulties are less than the benefits and whether it is possible to persuade bankers and governments of the correctness of such a cost-benefit analysis involve judgments that are more political than economic and therefore outside the scope of this analysis.

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