DM/83/5

INTERNATIONAL MONETARY FUND

Exchange and Trade Relations Department

National Lenders of Last Resort in an Internationalized Banking System

Prepared by Richard K Abrams*

Approved by Richard C. Williams

January 25, 1983

The purpose of this paper, which was originally prepared as background for "Aspects of the International Banking Safety Net" (DM/82/85, 12/15/82) by G.G. Johnson, is to examine how the national role of the domestic lender of last resort (LOLR) is modified in the presence of large scale international banking ativities. The paper is limited to a survey of concepts and practices, and thus does not attempt to deal with such important questions as the appropriate global response to the banking problems associated with the current strains in the international economy.

The presentation is divided into five sections. The first defines lender of last resort. The second section examines the need for providing LOLR services in an internationally oriented banking system, concluding that there is in fact a need for LOLRs in international banking. The third section outlines the requirements for LOLRs to be effective. These include sensitivity to the full costs of inaction, effectively unlimited resources, and the ability to offset the undesirable effects the presence of an LOLR may tend to create.

The objectives of LOLRs in providing their services are examined in the fourth section. While LOLRs are naturally concerned with maintaining the world's payments system, their primary motive will be the protection of the domestic financial system. They may also wish to support their banks in the export of international banking services, or to encourage foreign banks to locate domestically. As the various national LOLRs may attach different weights to these objectives, there might well be certain banks or groups of banks that would not receive direct LOLR support in the event of banking difficulties. However, the operation of the world's payments system may be protected indirectly as national LOLRs pursue their primary goal, protection of their domestic financial systems. The fifth section examines the available information about the provision of LOLR services, in actual or hypothetical situations.

* G.G. Johnson and Richard Williams provided significant insights and counsel in the writing of this paper. Helpful comments were received from colleagues in a number of departments in the International Monetary Fund. Particular thanks go to A.D. Crockett and D. Mathieson.

1. The lender of last resort defined

Banks, as financial intermediaries, take on liquid short-term liabilities and use them to create less liquid, longer term assets. Outflows of liabilities are normally offset by cutting back new lending or liquidating existing assets. However, when the financial system comes under severe stress, large-scale deposit liquidations may occur. When this happens, otherwise solvent banks may fail as a result of large losses taken in the process of liquidating their assets, and bank customers may be forced into bankruptcy by the ensuing monetary and credit contraction.

The role of the LOLR is to stand ready in times of stress to provide credit to solvent, but temporarily illiquid institutions. While LOLRs have at times assisted foreign intermediaries or foreign financial systems, in general their efforts have been directed to the protection of the domestic financial system. Certain classical writers, such as Thornton and Bagehot 1/, believed the LOLR should direct its efforts at assuring the liquidity of the banking system as a whole rather than supporting individual banks. 2/ In practice, however, LOLRs have also undertaken to provide liquidity to individual financial institutions whose solvency was endangered by liquidity problems.

Lender of last resort services have been provided by a variety of official institutions with the power, the resources, and the disposition to do so, such as monarchs and government treasuries. 3/ However, in the last century, this responsibility has become largely consolidated in the hands of central bankers.

2. The need for lenders of last resort

The argument for the provision of official LOLR services is based on the notion that the social cost of bank failure (or multiple bank failures) significantly exceeds the private costs. This in turn is based on the notion that the financial system is inherently fragile and one bank's problems may easily spread to other banks. Guttentag and Herring have observed that in most industries, one firm's failure will not hurt the credit standing of the other firms. 4/ But in banking, interbank credit extensions may cause one bank's failure to damage the solvency of other banks. Many banks, especially large ones, also hold similar assets in their portfolios, so one bank's weakness may raise suspicions about other banks. On either ground, failure of one bank may result in deposit outflows from other banks. Deposit insurance, where it exists, may reduce depositors' propensity to withdraw, but in no banking system does such insurance cover all deposits.

1/ Bagehot (1924) and Thornton (1939).
2/ For a good survey of the classical theory of LOLR, see Humphrey (1975).
3/ Kindleberger (1978), pp. 165-174.
4/ Guttentag and Herring (1981), p. 8.

Large scale deposit withdrawals impair the liquidity of the system and ultimately could treaten bank solvency. To the extent that bank assets are not highly liquid, when large-scale withdrawals occur asset liquidation is difficult and expensive, impairing the capital bases of the banks involved. Such withdrawals may also result in a potentially dangerous monetary contraction should the deposits be moved into assets with higher required reserve ratios or into cash. The associated shortages of loanable funds may force customers into bankruptcy. The resulting loan losses may, in turn, further threaten bank solvency.

Disruption of financial intermediation by banks, of course, entails major problems for the real economy. Many authors have thus argued that an LOLR is thus needed to stem potential crises by providing sufficient funds, at a price, to offset the liquidity problems caused by a major funds outflow. In this way, solvent banks may survive, depositor confidence in the safety of their funds may be restored, and the social costs of a banking crisis may be avoided.

These arguments probably apply with even greater force where banks have an international involvement. The role played in international banking by interbank credit is especially large. There is also a strong degree of similarity in many banks' international bank portfolios, given the large share of international loans taken up by, or with the guarantee of, a few large sovereign borrowers and a small number of major multinational corporations. Information problems, moreover, may make it especially difficult for international depositors to distinguish between sound and unsound banks. The large size of individual deposits also implies not only minimal coverage by deposit insurance but also the possibility of abrupt deposit outflows.

A general finding of the Kindleberger study of the history of bank crises and financial panics was that the existence of an LOLR can forestall many potential panics and that the crises that do occur with an effective LOLR present tend to be shorter and milder than ones that take place with no effective LOLR available. 1/ The central banks of most countries appear to accept the need to act as LOLR for their domestic banking system, and have generally supported the need for international cooperation in acting as LOLRs.

3. Criteria for an effective lender of last resort

Guttentag and Herring have explored the criteria for the effectiveness of lender of last resort at some length and this section is largely based on their findings. 2/ According to them, an effective LOLR must meet three criteria. First, for its actions to be timely and effective, it must be sensitive to the full range of social costs resulting from

1/ Kindleberger (1978), pp. 218-226.
2/ Guttentag and Herring (1981), pp. 13-23.

its inaction. Second, the LOLR's resources should be either unlimited or greater than its largest conceivable needs. Third, it must be able to limit socially unacceptable forms of risk taking, which the presence of an LOLR may tend to promote. The last of these points refers to the fact that the presence of a LOLR may encourage banks to pursue less prudent policies than if there were no LOLR available. Troubled banks actually being supported by the LOLR, moreover, may engage in imprudent investments, following what Guttentag and Herring have called "go for broke" strategies in the hope of averting failure. 1/ Effective bank supervision is essential to meeting the third requirement.

International banking poses special problems for LOLRs in meeting these requirements. First, the social costs of international bank failures extend beyond the purview of any single country's LOLR. International banking problems pose a danger to the international payments system which could cause losses to all users of international banking services. A crisis in one region may cause losses to depositors in other regions as well as hurting current and potential borrowers in other parts of the world. Thus, no single LOLR may be willing to save a given international bank from a liquidity crisis, because the domestic consequences of inaction do not appear to outweigh the potential cost of LOLR support, even though the global consequences may.

Second, even when an LOLR has effectively unlimited resources in domestic currency, the fact that international bank deposits may be denominated in foreign currencies can pose problems. If the domestic LOLR does not have large foreign exchange holdings, supporting its banks' international operations will be effective only so long as currency convertibility is maintained. Such an operation could result in downward pressure on the LOLR's home currency in the foreign exchange markets. If the country were unwilling to allow such a depreciation, it would have to either cease its LOLR support, borrow foreign exchange, or undertake domestic adjustment policies.

Another aspect of the availability of resources is collateralization. Most LOLRs protect themselves against the troubled bank defaulting on advances by requiring specified types of collateral against all lending. In some cases, foreign assets may not be acceptable as collateral. In others, needed collateral may be at foreign locations and possibly legally unavailable for pledging against LOLR advances. If it can be pledged, official international cooperation may be needed to perfect these assets. 2/

1/ Guttentag and Herring (1981), p. 11.

2/ In the case of Franklin National Bank, the Bank of England quickly and effectively aided the Federal Reserve Bank of New York by accepting in trust assets of Franklin's London branch. This enabled Franklin to use these assets as collateral for discount window borrowings at the Federal Reserve Bank of New York. Spero, J. (1980), pp. 148-149.

Third, an international bank's LOLR may also be unable to assure the prudent behavior of the troubled bank. To the extent to which the troubled bank has offices in foreign jurisdictions, the LOLR may not be in a position to supervise the activities of all of the offices of a troubled bank or even be able to gauge its overall solvency.

Even if ways are found to deal with these problems, so that national lenders of last resort are effective in providing LOLR services to international banks, one of the chief arguments for the provision of such services might not be met. One implicit assumption in domestic LOLR operations has always been that banks will use the proceeds of the LOLR support to continue their intermediary role, an assumption which may not be applicable to international banking. International banking is not always marked by close customer relationships, so protecting the solvency of an international bank may not guarantee the bank's continued role in international intermediation, or that important international borrowers will not lose their access to credit.

4. Motivations for the lender of last resort in particular situations

The world's payments system is a common good, with its benefits accruing to all users of international banking services. In the absence of an ultimate lender of last resort, which is fully sensitive to these costs, the provision of LOLR services to a particular bank in a particular situation will be based on the benefits seen to each potential LOLR. If one or more of a country's internationally-oriented banks experiences problems, the major consideration for a potential LOLR is likely to be the implication of any action or inaction for its domestic financial system. Since international banking problems would tend to fall most heavily on some or all of a nation's large banks, the protection of the domestic financial system could provide sufficient impetus to warrant the provision of LOLR services to domestic banks as well as their foreign branches.

Frankel has suggested that LOLRs could be motivated to provide support based on either nationality of bank charter or on residence of facility. 1/ An LOLR may support the foreign branches of domestic banks, and possibly their foreign subsidiaries and joint ventures, to enhance the "brand name" capital of domestically chartered banks. Domestic banks could thus compete more effectively in the international market, and export more international banking services. Support may also be extended to foreign subsidiaries and joint ventures, since the profits from these operations, as well as corollary business, accrue to the bank's domestic parents.

Support based on residence of facility, on the other hand, would enhance the "brand name" capital of a potential banking jurisdiction, to encourage more foreign banks to locate in that region. The local authority

1/ Frankel (1975), pp. 122-123.

would benefit from this in the form of increased licensing fees, higher tax revenues, and increased local employment. An LOLR pursuing this policy would protect domestically located subsidiaries and joint ventures as well as branches of foreign banks.

The possibility of differing motivations among LOLRs suggests the possibility of gaps in coverage. An LOLR seeking to protect its domestic financial system would not necessarily support its country's foreign subsidiaries and joint ventures. On the other hand, if the LOLR's goal was to support the expansion of domestic international banking by domestically chartered banks, all foreign offices could be supported, but local subsidiaries of foreign banks might not be supported. By the same token, however, multiple motivations could also lead to multiple coverage by LOLRs.

5. Evidence in the provision of lender of last resort services

Given the requirements of an effective LOLR and the reasons for an LOLR providing its services, who then will provide international LOLR services for a given bank in a given situation? The question is a difficult one, as LOLRs are generally unwilling to specify in advance the situations in which they would provide LOLR services. Official statements on the subject have been rare. However, some generalizations may perhaps be made from statements by individual LOLRs as well as their responses to recent events involving international banks.

The problem for LOLRs is that any indication of even the possible provision of LOLR services, or any apparent generalization from cases where LOLR services were provided, may reduce bank prudence. This view has been publicly espoused by central bankers. According to Federal reserve Board Governor Wallich (1977, p. 95), for example, "There are dangers in trying to define and publicize specific rules for emergency assistance to troubled banks, notably the possibility of causing undue reliance on such facilities and possible relaxation of needed caution on the part of all market participants." Bank of England Executive Director (now Deputy Governor) McMahon (1977, p. 108), expressed the same view: "...banks might be tempted to sail too close to the wind with the presumption that support would be automatically forthcoming if they got into difficulty." Central bankers attempt to minimize this potential by generating uncertainty about the availability of LOLR facilities. When facilities are provided, LOLRs go to great pains to stress the specificity of the case and to warn bankers that such services will not necessarily be available in the future.

Guttentag and Herring have contended that this lack of assurance may not necessarily be socially optimal. First, they argue that it falls primarily on smaller banks, since large banks are perceived by depositors to have more reliable access to LOLR facilities, and therefore are able to attract more funds more easily, independently of their riskiness.

(Against this view, however, it should be noted that following the failure of Herstatt much of the tiering of interest rates that occurred was directed against banks of particular nationalities, even when such banks were large; and the tiering after the Penn Square failure in 1982 was particularly pronounced for some very large banks.) Second, Guttentag and Herring argue that such statements may make uninsured depositors more likely to panic in the event of systemic problems. 1/

Despite the general secretiveness of LOLRs, some information is available about possible LOLR support. According to Andrew Brimmer, at the BIS meeting of the Group of Ten plus Switzerland in July 1974 following the Herstatt collapse, a general LOLR agreement was reached in principle. In deference to one member's objections, no explicit commitment was made. 2/

However, on September 11, 1974, the BIS released the following communique on behalf of the Central Bank Governors from the countries of the Group of Ten plus 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.

Some observers have speculated that behind this broad statement was an agreed plan with respect both to the allocation of LOLR responsibilities and the circumstances under which such support would be provided to banks experiencing difficulties. While such speculation is interesting, subsequent developments with respect to individual banks, as in the case of Banco Ambrosiano, cast doubts on whether such firm commitments exist. Nonethless, central bankers, e.g. Wallich (1977) and McMahon (1977), while noting the impropriety of making definite advance commitments, stressed that the infrastructure for providing international LOLR assistance was in place.

Some analysts have contended that the Concordat on banking supervision of the Basle Committee could be applied to the allocation of LOLR responsibilities. There is, however, no direct link between the two, and it has often been pointed out that the work of the Basle ("Cooke") Committee involves supervision, not financial support. The coordination of LOLR responsibilities lies with the BIS Committee on Euromarkets. Moreover, a number of the country representatives on the Basle Committee are not central bankers.

1/ Guttentag and Herring (1981), pp. 27-28.
2/ Brimmer, (September 16, 1976), pp. 28-29.

Empirical evidence on the division of responsibility among LOLRs in the event of an international banking crisis is lacking, given the fortunate absence of such crises in recent years. Beyond their primary function of directly or indirectly providing liquidity to illiquid but solvent institutions, however, LOLRs generally acknowledge a related responsibility for ensuring an orderly resolution of the affairs of failing banks, as disorderly failures could lead to uncertainty about other banks and a consequent demand for LOLR services in the narrower sense. Few banks with significant international operations have run into trouble in recent years. Four cases seem worthy of note: Herstatt, Franklin National, Israel-British, and Banco Ambrosiano.

The failure of Herstatt clearly fell within the sphere of responsibility of the German authorities and thus did not raise significant jurisdictional questions. However, the treatment of foreign creditors was an issue for a time. Initially, some questions were raised as to whether foreign creditors would receive treatment comparable to that accorded to domestic creditors, but in the end their treatment of the former was at least as favorable as the latter. This appeared to demonstrate an awareness on the part of LOLRs of a need to be particularly careful about international aspects of bank failures. 1/

Responsibility for resolving the affairs of Franklin National was equally clear-cut, but provides an example of international cooperation in providing financial support. The Federal Reserve permitted discount window borrowings to support Franklin's branch in London from the time problems were announced until the bank was merged, effectively accepting responsibility for Franklin's foreign branches. In doing so, it received the cooperation of the Bank of England. 2/

Partly as a result of fraud at its parent bank and partly as a result of the post-Herstatt difficulties, the London subsidiary of Israel-British Bank of Tel Aviv failed in July of 1974. After the collapse, both British and Israeli authorities maintained they had no lender of last resort responsibilities for the failed bank. In the end the Israeli authorities accepted responsibility. As a compromise, but not as a precedent, the Bank of England contributed £3 million to Israel-British's pool of assets. 3/

The Italian Banco Ambrosiano failed in the summer of 1982. Under the guidance of the Italian authorities the parent bank was closed and reorganized, with full protection provided to depositors. Banco Ambrosiano Holding of Luxembourg, a 65 per cent controlled subsidiary, however, was allowed to fail with no guarantee of depositor protection. The Luxembourg authorities and the creditors of Banco Ambrosiano Holding objected to

---

1/ Spero (1980), pp. 110-113.
2/ See p. 4, footnote 2.
3/ Spero (1980), pp. 156-157.

this course of action. The basic issue was obscured by certain technical questions, 1/ but it nonetheless points up the possibility of gaps in LOLR coverage.

1/ Banco Ambrosiano Holding was technically a holding company, not a bank. The Italian authorities cited this as one reason for their inaction. The Luxembourg authorities, at the same time, pointed out that they had no supervisory responsibility for holding companies, implying that they could certainly not be expected in that case to share in LOLR responsibilities.

References

______________, "What Was Agreed in Basle," Euromoney, October 1974, p. 5.

Bagehot, W., Lombard Street: A Description of the Money Market, London: John Murray, 1924.

Brimmer, A., "International Finance and the Management of Bank Failures: Herstatt vs. Franklin National" presented before American Economic Association, Atlantic City, N.J. Winter 1975, pp. 120-127.

Frankel, A., "The Lender of Last Resort Facility in the Context of Multinational Banking," Columbia Journal of World Business, Winter 1975, pp. 120-127.

Guttentag, J., and Herring, R., "The Lender of Last Resort in an International Context," Rodney L. White Center for Financial Research, Working Paper No. 9-81, University of Pennsylvania.

Humphrey, T., "The Classical Concept of the Lender of Last Resort," Federal Reserve Bank of Richmond, Economic Review, January/February 1975, pp. 2-9.

Kindleberger, C., Manias, Panics and Crashes: A History of Financial Crises, New York: Basic Books, 1978.

McMahon, C.W., "Central Bankers as Regulators and Lenders of Last Resort: A View from the United Kingdom," Federal Reserve Bank of Boston, Key Issues in International Banking, 1977, pp. 102-110.

Spero, J., The Failure of Franklin National Bank, New York, Columbia University Press, 1980.

Thorton, H., An Enquiry into the Nature and Effects of the Paper Credit of Great Britain, (1802), New York: Rinehart and Company, Inc., 1939.

Wallich, H., "Central Bankers as Regulators and Lenders of Last Resort; Federal Reserve Bank of Boston, Key Issues in Monetary Policy, 1977, pp. 91-98.