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LETTER OF TRANSMITTAL

December 8, 1998

To the Members of the Joint Economic Committee:

Transmitted hereby is a *Compendium of Studies on International Economic Issues*.

The views expressed in this paper are those of the authors and do not necessarily represent the views of the individual Members of the Joint Economic Committee.

Sincerely,

Jim Saxton,
Chairman.

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IMF FINANCING: A REVIEW OF THE ISSUES



Jim Saxton (R-NJ), Chairman

**Joint Economic Committee
United States Congress**

March 1998

Executive Summary

This paper reviews key issues relating to IMF financing in the context of the recent Asian bailouts. Several major problems exist with current IMF lending practices. In particular, IMF lending promotes moral hazard, is overly dependent on taxpayer support, involves subsidized interest rates, and is often associated with conditions that are open to question. Furthermore, IMF operations are overly secretive or non-transparent in nature. Accordingly, continued unqualified support from the U.S. Congress is problematic. Whether or not financing is extended, ironclad guarantees are needed to ensure that IMF lending meet certain conditions mitigating the above-cited problems.

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IMF FINANCING: A REVIEW OF THE ISSUES

INTRODUCTION

The 1999 budget proposal submitted by President Clinton calls for an \$18 billion appropriation for the International Monetary Fund (IMF). This \$18 billion appropriation request consists of two parts: \$14.5 billion for a quota increase, and \$3.4 billion for a new IMF credit line called the New Arrangements to Borrow (NAB).¹ The proposed quota increase and NAB commitment represent the U.S. share of a larger package of the proposed IMF expansion. The great majority of IMF lending activities are financed out of the quotas provided by member countries.

The quota increase and NAB are not needed to complete the Asian bailouts already underway; current IMF funds are sufficient to complete this assistance. The new funding would be used to finance future loans in addition to those already announced. Even after the completion of the Asian bailouts, the IMF would hold \$30 billion in gold, retain some quota resources, and have access to an unused \$25 billion IMF credit line known as the General Arrangements to Borrow (GAB).

The key issue before Congress is whether the IMF should be expanded through government-financed contributions and credit lines. The IMF was established in 1945 to finance temporary balance of payments problems under the fixed exchange rate system in place for most of the post-WWII period through 1973. However, under the flexible exchange rate system existing during the past three decades, IMF objectives have become less clear and focused. To an increasing extent, longer term financing is used for purposes other than short-term external adjustment problems. Recent IMF loan packages, for example, have required long-term restructuring of major sectors of national economies and significant adjustments to economic policy.

This alteration in IMF lending underlines an important change in the nature of IMF objectives. According to Columbia University Professor

¹Office of Management and Budget, *Budget of the United States Government, Fiscal Year 1999*, 1998, p. 129.

Charles W. Calomiris, who has served as an IMF economist and World Bank consultant:

In the 1990s, the IMF has stretched the notion of liquidity assistance beyond any reasonable definition. IMF programs in Mexico and Asia are now *microeconomic bailouts that restore the solvency of clearly insolvent financial institutions*. That objective has nothing to do with bank or government liquidity, or with temporary imbalances in the balance of payments.²

Recently, IMF operations have been the center of growing controversy. Points of contention include:

- **Moral hazard:** IMF bailouts encourage investors to assume additional risk in pursuit of extra-normal returns in the expectation that losses will be absorbed by the IMF and ultimately the taxpayers of affected countries.
- **Exposure of taxpayer funds:** U.S. government funds are used directly and indirectly in subsidized bailouts that promote perverse incentives leading to a more vulnerable financial system.
- **Inappropriate conditions:** Counterproductive policies that undermine economic performance are sometimes imposed by the IMF as loan conditions.
- **Transparency:** The IMF is a closed and secretive organization that operates in a manner inconsistent with openness, as well as U.S. performance and accountability standards.

The lack of transparency makes analysis of the IMF and its performance problematic. As former World Bank Chief Economist (Latin America) Sebastian Edwards has noted:

For any outsider it is extremely difficult—utterly impossible some would even say—to fully evaluate the functioning of the IMF. Many of its decisions are confidential, as are most of the key documents that set the Fund's policy position. Moreover, the details of specific programs, including... memoranda of understanding, and other documents are also

²Testimony of Charles Calomiris before the Joint Economic Committee, Congress of the United States, February 24, 1998, p. 20.

confidential. This makes the evaluation of programs' performance very difficult.³

IMF PERFORMANCE AND RESULTS

Under the Government Performance and Results Act (GPRA), government programs are to be planned and reviewed using objective and measurable criteria whenever possible. Under the Act, the IMF's appropriation must be evaluated on the basis of its objective contribution to U.S. international economic policy. As the first quota increase to be considered after the GPRA went into effect, Congress has an important responsibility to review the current IMF appropriation with a focus on the performance and results of IMF activities.

The size of the current and future bailouts will reduce available IMF resources and ultimately lead to yet another request for more funding. The IMF has already suggested that an even greater quota increase will be needed relatively soon.⁴ The magnitude of the recent bailouts, as well as the pending quota increase, suggest that a fundamental reevaluation of the IMF, its operations, goals, as well as its financing, is needed. In recent months, a threshold has been reached in IMF lending that raises basic questions about IMF decision-making, openness, policy advice, performance, and over-reliance on direct government funding.

One diversion in an IMF performance review is the dubious contention that under existing budget rules the IMF appropriation is not a net outlay and therefore involves no taxpayer cost. Although current accounting rules mask the cost of the IMF quota increases to the U.S., economic analysis clarifies the true nature of the transaction: real economic resources are transferred at subsidized interest rates from the U.S. economy to other nations. It is doubtful that these resources will ever be fully recovered. The U.S. may hold a paper IOU or an IMF computer entry, but the nature of the IMF quota increase entails a transfer of economic resources from the U.S. economy. If this were not so, there would be no point in an appropriation in the first place.

³Edwards, Sebastian, "The International Monetary Fund and the Developing Countries: A Critical Evaluation," Carnegie-Rochester Conference Series on Public Policy 31, 1989, p. 9.

⁴Chote, Robert, "IMF Chief Calls for \$160 Billion Increase," *Financial Times*, December 13/14, 1997.

Additional costs of these IMF bailouts were delineated by Professor Charles Calomiris in recent testimony before the Joint Economic Committee:

Three kinds of cost figure prominently: (1) undesirable redistributions of wealth from taxpayers to politically influential oligarchs in developing economies; (2) the promotion of excessive risk taking and inefficient investment; and (3) the undermining of the natural process of deregulation and economic and political reform which global competition would otherwise promote.⁵

One additional reason for concern about IMF intervention is IMF's operations, which are based on below-market funding costs and below-market lending rates. As Sir Alan Walters has indicated:

By its very nature, IMF assistance [has been] given at a subsidized interest rate, in the sense that the rate charged was below that which the country could obtain on the international capital markets. The subsidies have both widened and deepened over time.⁶

Economic analysis indicates such taxpayer subsidies to IMF borrowers lead to inefficient results and a misallocation of economic resources. Part of the reason for this inefficiency was identified in the testimony of former Federal Reserve Governor Lawrence Lindsey before the Joint Economic Committee. As Lindsey argued:

... there is no real assessment of credit worthiness [in IMF lending]. Quite the contrary, an apparent requirement to get an IMF loan is that the borrower is not creditworthy, in that the borrower could not obtain private sector funding.⁷

The IMF's practice of loan subsidies and the resulting misallocation of resources raises serious policy concerns. The recent orientation of

⁵Testimony of Charles Calomiris before the Joint Economic Committee, Congress of the United States, February 24, 1998, p. 2.

⁶Walters, Alan. "Do We Need the IMF and The World Bank?," Current Controversies, No. 10, Institute of Economic Affairs, London 1994, p. 11 [brackets added].

⁷Testimony of Lawrence Lindsey before the Joint Economic Committee, Congress of the United States, February 24, 1998, p. 2 [brackets added].

IMF lending towards subsidizing loans to insolvent entities is troubling and qualitatively marks an important departure from past practices. Given this change and the significant increases in IMF loans, its compatibility with the objectives of U.S. international economic policy must be considered by Congress. Specific reforms of the IMF are discussed in a later section of this paper.

THE IMF AND ASIA

Important questions have been raised by the recent IMF bailouts of South Korea, Indonesia, and Thailand. These IMF loans are tied to a number of conditions in the form of policy changes, some of which involve improved supervision of financial institutions and efforts to eliminate corruption. Additional loan conditions often include tax increases, tight monetary policies, and other guidelines that foster austerity.

On November 20, 1997, a high U.S. Treasury Department official was reported to have designed a framework for future Asian bailouts referred to as the "Manila plan," named for the location of the formative meeting and modeled after the structure of the Indonesian bailout.⁸ The Manila plan calls for IMF loans to provide the initial lending support to a distressed economy, supplemented by backup funds contributed by major nations such as the United States. Almost immediately, the Koreans requested IMF assistance that quickly grew into the largest bailout package ever made by the IMF. The Treasury Department had a very public role not only in the general design of the bailout framework but also in the specific components of the Korean bailout.

Both the Korean government and the IMF have agreed to the bailout terms. An IMF package of loans amounting to \$21 billion will be supplemented by the World Bank, the United States, and others for a total of \$57 billion. Unfortunately, the first Korean bailout failed to restore confidence, and a second bailout based on debt restructuring was implemented. The IMF has enough resources on hand to cover the \$21 billion committed in the first bailout, and congressional action will have no bearing on whether these funds are disbursed. However, the Asian crisis does provide a useful point of departure for analysis of the major issues.

⁸Davis, Bob and G. Pierre Goad, "Asia Reaffirms U.S. Primary on Bailouts," *Wall Street Journal*, November 20, 1997.

Brief Background

In recent years, a number of Asian economies experienced rapid capital inflows brought about by the region's fast growth, high returns on investment, and desire for diversification on the part of investors in developed countries. Perceived exchange rate risk was minimized because many of these countries tied their currencies to the U.S. dollar. This capital, in turn, was often allocated by centralized, bureaucratic, and sometimes corrupt government-controlled banking systems into questionable long-term (e.g., real estate) projects.⁹ In other words, poorly regulated financial institutions in these countries made long-term loans that were financed by short-term foreign liabilities. The result was large amounts of short-term dollar denominated debt together with maturity and currency mismatches.

Risk Reassessment

For a number of reasons, lenders began to reassess risk. Dollar appreciation against the yen not only forced these economies to tighten monetary policy to defend their currencies but also significantly hurt their export markets. These developments encouraged speculation against the pegged exchange rate. Rapid disinflation, asset price deflation, and declines in collateral value further weakened poorly regulated financial sectors. Heightened exchange rate risk, capital outflows, and eventually exchange rate depreciation resulted.

Possible Contagion

As the exchange rate in these countries depreciates, debt denominated in dollars instantly becomes more burdensome (because the debt now must be repaid in dollars that are more valuable) and financial sector weakness is exacerbated. As a result, risk assessment worsens, leading to an increased demand for limited dollar reserves.

At this point, proponents of IMF intervention argue that if no assistance is provided in the form of short-term dollar loans, further capital flight will occur, resulting in accelerated currency depreciation, interest rate increases, and further asset price deflation. If the trend continues, they argue, these problems may spread: contagion can occur and capital flight can accelerate. The result may be competitive devaluations and the possible adoption of protectionist measures in affected countries that are export markets for the United States. Consequently,

⁹At this earlier stage, the IMF and World Bank should have criticized the banking practices of these countries and made recommendations for reform.

there may be a severe slowdown in the local economy and a sharp decrease in living standards. Additionally, the U.S. economy's investors, equity market, export sector, and employment could also be impacted.

IMF ASSISTANCE

Advocates of IMF intervention maintain that prompt IMF assistance in the form of short-term hard currency loans can temporarily bolster confidence by providing assurance that back-up lending or emergency liquidity provision is readily available. According to proponents of IMF bailouts, this can work to restore investor confidence and prevent worsening capital flight by guaranteeing a reliable source of foreign exchange reserve loans. IMF lending can temporarily stabilize the situation and stem contagion. In short, the case for immediate IMF lending is to keep the problem from getting worse and to reduce the size of the calamity.

PROBLEMS WITH THE IMF BAILOUTS

Despite potential stabilizing effects in the short run, there are a number of major problems with current IMF bailout practices:

- **IMF Lending Creates Moral Hazard.**

IMF bailouts not only fail to change incentives to correct reckless lending behavior, but also embody incentives encouraging this behavior. Existing lending practices persist because both borrowers and lenders recognize that if loan problems should occur, a bailout will readily materialize.¹⁰ To change such incentives, some lenders and borrowers should suffer losses and shoulder some of the risks of their poor decisions. Insolvent institutions should be allowed to fail. Necessary adjustments should be allowed to occur. Lending at

¹⁰Some economists argue that the Mexican bailout created incentives for future IMF bailouts and, consequently, is partly responsible for current problems in Asia. For example, Allan Meltzer said: "The IMF's programs drive a large wedge between the social risk – the risk borne by the troubled country – and the private risk borne by bankers. This is one source of moral hazard, and one reason we have a crisis-generating system. A common argument in its defense is that Mexico repaid its loans to the U.S. government and the IMF. That argument misses the point. If banks and financial institutions had taken losses in Mexico, they would have exercised elementary judgment about risks in Asia." Testimony of Allan Meltzer before the Joint Economic Committee, Congress of the United States, February 24, 1998, p. 3.

market-determined, non-subsidized interest rates would also work to minimize moral hazard.

- **U.S. Taxpayer Funds Are Overly Exposed.**

Current IMF (and Treasury) bailout practices often expose U.S. taxpayer funds. The Exchange Stabilization Fund (ESF) has been used to provide back-up financing for several IMF bailout packages. Since U.S. taxpayers do not participate in emerging market lending/borrowing decisions, the case for using their funds for these purposes is problematic. This use of the ESF circumvents the congressional appropriations process so that taxpayers have no voice regarding the Treasury's use of their funds. The IMF and Treasury have not seriously considered alternative sources or mechanisms of funding to minimize taxpayer exposure, such as IMF borrowing from the market (like the World Bank and other development banks) or IMF gold sales.¹¹ At a minimum, Treasury and the IMF should clearly explain why taxpayer-financed lending may be necessary.

- **The IMF Often Attaches Inappropriate Lending Conditions to Its Loans.**

The IMF ties several forms of conditions to its loans. Austerity conditions involving tax increases are often part of these lending programs, and these conditions are sometimes applied indiscriminately to countries facing different sets of circumstances. Critics argue that these conditions result from inappropriate use of economic models focusing principally on aggregate demand management and not on supply conditions. Despite rhetoric to the contrary, less emphasis is placed on government restructuring or downsizing as the important element of this conditionality. Additionally, IMF conditionality often impedes the necessary adjustment process, is frequently reactive rather than pro-active, and often involves an unspecified timetable, allowing loan recipients to backslide on required adjustments.

- **IMF and Treasury Policies Should Be More Transparent.**

Both IMF and U.S. Treasury bailout policies remain overly secretive, ambiguous, and ill-defined. Because these policies are

¹¹Proposals for IMF borrowing from capital markets have been made before. See, for example, The Brandt Commission, *Common Crisis North-South: Cooperation for World Recovery*, MIT Press, Cambridge, Mass., 1983, p. 14.

seldom explained to the public, unnecessary misunderstanding, resentment, and opposition often result. A good deal more transparency is called for from both of these taxpayer-financed institutions. Explicit specification of the IMF's objectives, for example, should be accompanied by clarification of the procedures and practices by which it accomplishes these objectives. At a minimum, full explanations of the conditions, lending terms, subsidies involved, and the rationale as to why such lending is necessary are essential. Additionally, those entities actually receiving taxpayer subsidies should be identified.

The notion that IMF policies can be counterproductive is not limited to IMF critics. A recent IMF internal study found that elements of its conditions imposed on Indonesia sparked a bank crisis that deepened the financial crisis in other Asian nations. This IMF analysis underscores the counterproductive potential of IMF policies and highlights its lack of transparency.¹²

OVERVIEW OF POLICY IMPLICATIONS

The Administration's IMF appropriation request may result in a number of alternative outcomes. The entire \$18 billion appropriation could be approved without any significant conditions being attached. Alternatively, the entire appropriation could be rejected due to concerns about the effects of IMF expansion, as well as IMF reforms required for continued U.S. funding. Intermediate alternatives could include a range of incremental funding options probably tied to a variety of conditions on the IMF.

Regardless of the status of new funding for the IMF, the recent transition of IMF lending from provision of short-term liquidity to subsidization of insolvency is troubling. Lack of transparency has permitted the IMF to make this transition without much public recognition in the United States.

The adoption of more transparent practices by the IMF is necessary if Congress is to be adequately informed about this important element of U.S. economic policy. Minutes of IMF board meetings should be publicly released (after appropriate editing of any proprietary and intelligence information), loan program documents and staff reviews of

¹²Sanger, David E., "IMF Reports Plan Backfired, Worsening Indonesia Woes," *New York Times*, January 14, 1998.

loan programs should be made public, and an independent advisory board should be established to annually review IMF activities.

Furthermore, the subsidization of IMF lending at below-market interest rates exposes the fallacy that there is no cost associated with quota contributions. Base IMF lending rates, currently under 5 percent, are, after all, below the rate at which the U.S. government can borrow. Although some IMF loans are made at higher rates, artificially low borrowing and lending rates characterize IMF lending operations. These below-market borrowing rates do not adequately reflect the potential risk posed by insolvent borrowers, and thereby exacerbate the moral hazard problem discussed above. The Congress must decide whether this policy of subsidized loans for insolvent entities is a desirable objective of U.S. international economic policy.

As Walter Bagehot, eminent former editor of *The Economist*, explained in his classic formulation more than a century ago, a lender of last resort should lend freely at a penalty interest rate. Subsidized loans are not necessary to assist illiquid borrowers and are counterproductive for insolvent entities. Economic efficiency would be promoted by IMF lending at market interest rates determined in international financial markets.

Accordingly, Congress could stipulate that U.S. funds should not be used to provide subsidized loans. This would help contain the moral hazard problem and encourage the IMF to operate on a more economically efficient basis. Another market-oriented reform would encourage IMF issuance of securities in the financial markets instead of relying so heavily on government funds.

RECOMMENDATIONS

In view of these many problems, any continued or additional U.S. financial support of the IMF should be accompanied by guarantees that the IMF itself meets certain conditions. In particular, to receive U.S. financial support, the IMF should:

- Work to minimize the moral hazard problem both by ensuring that some costs are borne by those lenders and borrowers initiating the ill-fated loans and lending more in accordance with market-determined interest rates.
- Explore alternative funding sources or mechanisms to minimize U.S. taxpayer exposure.

- Promote lending conditions that work to attract capital as well as to foster private sector economic growth, free markets, and smaller public sectors.
- Become significantly more transparent in a number of specific ways. Clearly identifying policy objectives as well as the procedures and practices used to achieve these objectives is essential.

CONCLUSION

This paper has reviewed some of the major issues on both sides of the debate over IMF funding. The concerns raised regarding moral hazard, transparency, taxpayer exposure, and conditionality are widely recognized. For example, the Treasury has acknowledged the validity of the moral hazard problem, the IMF has recognized the damage perverse conditionality may cause, and such IMF loan conditions are widely criticized from various points of view. Furthermore, almost all analysts recognize the benefits of a more transparent IMF. Consequently, it appears likely that any congressional action on IMF funding will include conditions intended to mitigate these concerns.

IMF reforms are needed irrespective of what happens to the Administration's IMF appropriation proposal now before Congress. Two IMF reforms are especially needed at this time: improved transparency and increased use of market interest rates. Improved transparency would require the public disclosure of IMF decision-making meetings as well as program documents and related material. Future IMF loans should employ market interest rates, not subsidized rates that exacerbate the moral hazard problem.

Robert E. Keleher
Chief Macroeconomist

FINANCIAL CRISES IN EMERGING MARKETS: INCENTIVES AND THE IMF



Jim Saxton (R-NJ), Chairman

**Joint Economic Committee
United States Congress**

August 1998

Executive Summary

Perverse economic incentives are key, important forces contributing to the increasing number and severity of financial crises in today's emerging market economies. A pernicious combination of factors works to create these incentives. Specifically, these factors include overly generous public safety nets (e.g., implicit or explicit public, uncircumscribed deposit insurance), risk-enhancing structural change in the financial system, and inadequate levels of owner-contributed equity capital. This combination contributed to produce the severe financial crisis in the U.S. thrift and banking industries in the 1980s.

This same combination is present in even more virulent form in many of today's emerging market economies. Recent IMF lending and prospects for additional IMF lending not only reinforce these risk-promoting incentives in emerging economies, but also foster additional risky lending by international financial institutions.

Recognizing these circumstances underscores a number of important policy implications and suggestions for policy action to minimize these adverse incentives.

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FINANCIAL CRISES IN EMERGING MARKETS: INCENTIVES AND THE IMF

INTRODUCTION AND SUMMARY

This paper argues that perverse economic incentives are an important factor contributing to recent financial crises increasingly plaguing many of today's emerging market economies. These incentives, in turn, are spawned by a pernicious combination of conditions, which all too often frequent these developing economies. In particular, the combination of overly generous public safety nets (e.g., implicit or explicit public, uncircumscribed deposit insurance), risk-enhancing structural change in the financial system, and inadequate levels of owner-contributed bank capital often promote excessive risk taking. These conditions contributed to producing the severe financial crisis in the U.S. thrift and banking industries in the 1980s and are increasingly present in an even more virulent form in today's emerging economies.

Recent IMF lending and prospects for future lending not only reinforce existing risk-promoting incentives in emerging economies but also create incentives for additional risky lending by international financial institutions.

These arguments highlight a number of interesting implications and suggest important policy recommendations to limit such adverse incentives.

THE U.S. EXPERIENCE

In the 1980s, the U.S. financial sector experienced changes that allowed more risk taking in the face of expanded public deposit insurance. As the financial sectors' equity capital diminished, this combination ultimately resulted in financial crises involving both banks and savings and loan associations (S&Ls). More specifically, U.S. financial markets changed in a number of ways. The elimination of most interest-rate ceilings and limited product deregulation, together with the subsequent erosion of geographic restrictions, enabled lenders to seek higher returns in new, unfamiliar, and higher-risk ventures. These risk-enhancing changes,

together with generous, expanded public deposit insurance guarantees and diminished capital bases, created the (perverse) risk-taking incentive structure cited above.¹³ Deregulation per se is not a problem.¹⁴ It is only when risk-enhancing changes are combined with overly generous public deposit insurance (or other public guarantees), and depleted capital, that the perverse incentive structure becomes especially relevant.¹⁵ Most analysts now agree that this pernicious combination was largely responsible for severe U.S. financial problems experienced in the 1980s and early 1990s.¹⁶

¹³ Lenders could reap the rewards of successful high-risk ventures and be assured depositors would be backstopped with taxpayer-supported funds in case such ventures failed. These perverse incentives are worsened when banks suffer losses and their capital base shrinks. Such banks then have little to lose by gambling.

¹⁴ As Charles Calomiris has eloquently stated, financial deregulation and liberalization are not inherently destabilizing. "Partial bank liberalization - where profits are private and losses are public - is the threat to stability. Privatization of both profits and losses produces very stable banking systems." Charles W. Calomiris, "The IMF as Imprudent Lender of Last Resort," May 20, 1998, p.6. For an excellent overview of this problem, see also Charles W. Calomiris, Testimony before the Joint Economic Committee, Hearing on the International Monetary Fund and International Policy, February 24, 1998; and Charles W. Calomiris, The Post Modern Bank Safety Net, American Enterprise Institute Press, Washington, D.C., 1997.

¹⁵ Deposit insurance is not necessarily a problem if it is narrowly circumscribed and (properly) limited. Otherwise, it can promote significant moral hazard.

¹⁶ Caprio and Klingebiel (1996) indicate that while "fewer banks failed in the 1980s than during the Depression ... depositor losses per dollar of deposits were higher." Gerald Caprio, Jr. and Daniela Klingebiel, "Bank Insolvency: Bad Luck, Bad Policy, or Bad Banking: Annual World Bank Conference on Development Economics," 1996, p. 82. Barth and Litan document that the savings and loan resolution costs in recent years exceeded the losses borne by all uninsured depositors in the 1920s and early 1930s. See James Barth and Robert Litan, "Preventing Bank Crises: Lessons From Bank Failures in the United States," paper presented at conference co-sponsored by the Federal Reserve Bank of Chicago and the Economic Development Institute of the World Bank, Chicago, June 11-13, 1997, p. 3.

EMERGING MARKETS EXPERIENCE

These same forces are largely responsible for the pervasive and unprecedented increase in both the frequency and severity of financial crises in the world's emerging economies.¹⁷ Conditions promoting perverse (risk-taking) incentives, however, are even more potent in modern emerging economies than in developed economies for a number of important reasons. Financial market risk-enhancing structural change in emerging economies, for example, is especially pronounced because it not only embodies the types of financial market change occurring in developed economies, but also takes on additional forms as well. Conventional structural change, such as the liberalization of interest rate ceilings, lowered reserve requirements, and lessened product restrictions, is quite common. But liberalization of capital controls and moves to privatize heretofore government-controlled financial structures make such structural change even more important in modern emerging economies than in developed economies. All of these changes have taken place in an environment with low levels of owner-contributed equity capital due in part to previous state ownership and restrictions on both domestic and foreign ownership of financial institutions.¹⁸

Combining this pervasive structural change with the widespread adoption of generous government-sponsored risk subsidies or public safety nets (such as explicit or implicit uncircumscribed deposit insurance), often without an adequate supervisory framework, provides

¹⁷ Documentation of this significant worsening of financial crises can be found, for example, in Carl-Johan Lindgren, Gillian Garcia, and Mathew I. Saal, Bank Soundness and Macroeconomic Policy, IMF, 1996, p. 20; and Morris Goldstein and Phillip Turner, "Banking Crises in Emerging Economies: Origins and Policy Options," B.I.S. Economic Papers no. 46, October 1996, p.5. Caprio and Klingebiel (1996) conclude that financial crises are "more costly in the developing world - losses tend to be larger relative to income than in the industrial world." Gerald Caprio and Daniela Klingebiel, "Bank Insolvencies: Cross Country Experience," World Bank Policy Research Paper 1620, July 1996, p. 10.

¹⁸See James R. Barth, R. Dan Brumbaugh, Jr., Lalita Ramesh, and Glenn Yago, "The Role of Governments and Markets in International Banking Crises: The Case of East Asia," paper presented at Sixth Conference on Pacific Basin Business, Economics, and Finance, Hong Kong, May 28-29, 1998, pp. 25-28.

all the ingredients for a substantial increase in perverse incentives promoting both excessive risk-taking and crisis-prone financial systems.¹⁹

Further exacerbating this situation is the fact that emerging economies' banking sectors are usually larger as a share of financial intermediation simply because their bond and equity markets are relatively underdeveloped. This absence of developed equity markets also works to foist more risk on bank-based intermediation. Factors causing banking crises in these countries, therefore, likely will create broader financial havoc than would otherwise be the case. And because emerging economies tend to be smaller, more open, relative to larger economies such as the U.S., the potential impact of perverse incentives on mobile, international capital and foreign exchange rates in these economies can be significant.²⁰

THE ROLE OF THE IMF

IMF bailouts work to solidify and fortify these perverse incentive structures in a number of ways. Since the IMF lends to countries promoting risk-taking incentives, IMF lending often supports and encourages the proliferation of these incentives. This is especially the case when, as currently, IMF lending works to help insolvent rather than illiquid banks. Moreover, by effectively creating another (international) layer of government guarantees, IMF lending serves to foster additional risk taking, particularly by large international financial institutions. IMF bailouts, after all, importantly shield these institutions from the high risk of lending to emerging economies with vulnerable banking systems.

¹⁹ Alexander Kyei documents that most IMF member countries surveyed began to establish deposit protection schemes in the 1980s. See Alexander Kyei, "Deposit Protection Arrangements - A Survey," IMF Working Paper, WP/95/134. See footnote 3 (above) for references documenting the worsening incidence of financial crises in emerging economies. Papers by Demirguc-Kunt and Detragiache show that (1) the presence of deposit insurance in emerging economies tends to increase the probability and severity of systemic banking problems, and (2) banking crises are more likely to occur in liberalized financial systems of emerging economies. See Asli Demirguc-Kunt and Enrica Detragiache, "The Determinants of Banking Crises: Evidence From Industrial and Developing Countries," World Bank Policy Research Paper No. 1828, September 1997, and Asli Demirguc-Kunt and Enrica Detragiache, "Financial Liberalization and Financial Fragility," unpublished, March 1998.

²⁰ In this case, perverse incentives can work to encourage an additional form of excessive risk taking, involving betting on the foreign exchange rate.

What emerging-market economies are left with, therefore, is a highly vulnerable, risk-subsidized financial system particularly exposed to foreign exchange risk. In short, IMF lending promotes both risk-taking incentive structures and foreign exchange mismatches in emerging economies.

It is now well known that the IMF (perhaps inadvertently) promotes such perverse incentives.²¹ This recognition is illustrated, for example, by recent statements of Federal Reserve Chairman Alan Greenspan, Bundesbank President Hans Tietmeyer, as well as members of the G-10, and others. Greenspan recently asserted, for example, that:

...an important contributor to past (financial) crises has been moral hazard...interest rate and currency risk-taking, excess leverage, weak financial systems, and interbank funding have all been encouraged by the existence of a safety net. The expectation that national monetary authorities or international financial institutions will come to the rescue of failing financial systems and unsound investments clearly has engendered a significant element of excessive risk-taking.²²

Similarly, Tietmeyer recognized the IMF's moral hazard problem:

The IMF should reevaluate its policies and should question itself on how far its policy generates moral hazard. The IMF should consider whether it is better to tackle problems with large sums of bailout money or whether it might be better to involve private sector creditors at an earlier stage.²³

²¹ Most analysts recognize that IMF monies inevitably find their way to assist politically influential entities. As these entities come to expect this assistance, their risk-taking behavior is altered, resulting in moral hazard. The IMF also provides political cover for affected governments to impose taxes on innocent parties (i.e., the middle class) in order to finance repayment of IMF loans. By enabling the initial risk-takers to importantly circumvent the costs of their miscalculations, this IMF cover helps to further solidify moral hazard.

²² Alan Greenspan's remarks before the 34th Annual Conference on Bank Structure and Competition of the Federal Reserve Bank of Chicago, May 7, 1998, p. 3. (parenthesis and emphasis added).

²³ Hans Tietmeyer, as quoted in *The Financial Times*, March 23, 1998.

The seriousness of the IMF's moral hazard problem also has been recognized in the recommendations of the G-10 countries' 1996 report as well as in other recent studies.²⁴

IMPLICATIONS

Since a root cause of recent international financial problems is perverse incentives created by a combination of overly generous public safety nets, risk-enhancing changes in financial structures, and depleted capital bases, a number of important policy implications merit attention:

- Financial change fostering risk taking in the presence of both generous public safety nets and low levels of owner-contributed equity capital is a reliable leading indicator of financial crises.²⁵
- Banking crises are a symptom and leading indicator of additional problems in the financial sector. Empirical studies of emerging economies show that banking crises are leading indicators for currency or balance-of-payments crises rather than the reverse.²⁶ Recent studies also find that variables heretofore considered "fundamental," such as fiscal and current account deficits, seem not to be associated with crises.²⁷

²⁴ See Group of Ten (G-10), 1996, *The Resolution of Sovereign Liquidity Crises: A Report to the Ministers and Governors, Basle and Washington, D.C.*, Bank for International Monetary Fund, May. See also Morris Goldstein's recent study which argues that finding a way to reduce moral hazard created by such international lending should top the agenda. Morris Goldstein, The Asian Financial Crisis: Causes, Cures, and Systemic Implications, Institute for International Economics, Washington, DC, June 1998; p. 46.

²⁵ See references in footnote 7 for empirical evidence supporting this argument.

²⁶ See Graciela Kaminsky and Carmen Reinhart, "The Twin Crises: The Causes of Banking and Balance-of-Payments Problems," *International Finance Discussion Papers 1996-544* (March 1996), for evidence supporting this argument. See also Roberto Chang and Andres Velasco, "Financial Fragility and the Exchange Rate Regime," NBER Working Paper No. 6469, March 1998; and Jeffery Sachs, Aaron Tornell, and Andreas Velasco, "Financial Crises in Emerging Markets: The Lessons from 1995," NBER Working Paper No. 5576, May 1996, for additional evidence supporting this argument.

²⁷ See, for example, Michael P. Dooley, "A Model of Crises in Emerging Markets," NBER Working Paper No. 6300, December 1997, pp. 6, 7 and references cited therein. It is "on budget" fiscal deficits that seem unrelated. If contingent liabilities (including expected bailout costs) were properly factored

- Studies have shown that international capital mobility is not necessarily a principal cause of recent financial crises.²⁸ Rather, sharp changes in capital flows are often symptoms or reflections of perverse underlying incentive structures facing financial institutions. Accordingly, policy recommendations to prevent financial crises by slowing capital mobility through taxing financial transactions, for example, may be inappropriate.
- Similarly, foreign exchange speculators are not the cause of recent financial crises. Rather, speculators recognize underlying unhealthy incentives, banking problems, and unsustainable financial conditions and take advantage of them.²⁹
- Exchange rate systems of one sort or another do not necessarily cause financial (banking, currency, or balance-of-payments) crises. Rather, sharp foreign exchange rate movements often reflect underlying perverse risk incentive structures (as described above). Stable exchange rate systems require stable underlying risk-taking incentive structures. Thus, successful exchange rate or international monetary reform must be preceded by (or at least accompanied by) reform of public safety net systems so as to minimize perverse incentives for risk taking.
- The proper ordering of economic liberalization or the sequencing of financial reform is important in many emerging economies. Structural reform of the financial system, for example, should only be undertaken once an efficient, competent supervisory/regulatory framework is in place to contain moral hazard.

in and accounted for, measured fiscal deficits would likely be significantly larger.

²⁸ See Graciela Kaminsky, Saul Lizondo, and Carmen Reinhart, "Leading Indicators of Currency Crises," IMF Working Paper WP/97/79, July 1997, p. 13; Frederic Mishkin, "International Capital Movements, Financial Volatility and Financial Stability," NBER Working Paper No. 6390, January 1998, p. 28.

²⁹ A recent study found no empirical evidence to support the notion that hedge funds were responsible for the Asian currency crisis of 1997. See Stephen Brown, William Goetzmann, and James Park, "Hedge Funds and the Asian Currency Crises of 1997," NBER Working Paper No. 6427, February 1998.

Similarly, the domestic financial system should be strengthened prior to capital account liberalization.³⁰

POLICY RECOMMENDATIONS

There are alternative ways to limit the above-cited ingredients creating perverse incentives for risk taking. One approach is to improve supervision of the banking system while maintaining public safety nets. Such enhanced supervision is often favored by the domestic and international regulatory bureaucracies because it increases their budgets and influence. To some extent, this approach is embodied in some forms of IMF conditionality. An unavoidable problem is that such an approach takes years to properly implement and would likely create a permanent, bureaucratic supervisory structure.

Another way to limit these perverse incentives is to restrict or circumscribe the public safety net (or public deposit insurance) in the face of a structurally changed financial system. Over the years there have been a number of such recommendations involving, for example, proposals for co-insurance, narrow banking, subordinated debt, risk-priced deposit insurance, and mechanisms for rapid closure and resolution of insolvent banks (to minimize regulatory forbearance). The IMF has not actively promoted this alternative. Like improved supervision, such proposals would take a substantial amount of time to implement.

Another institution promoting these perverse incentives, of course, is the IMF. Accordingly, restricting additional funding to the IMF would be one way to curtail expectations of future IMF financial assistance in financial crises and hence to limit these perverse incentives. Minimizing additional, redundant layers of moral-hazard-producing public subsidization of risk is an appropriate response to this problem. Clearly, limiting additional IMF funding and additional permanent expansions of the IMF is a viable policy option. But constructive IMF reform proposals that can work to modify these perverse incentives should also be considered.

³⁰ See, for example, Ronald I. McKinnon and Huw Pill, "Overborrowing: A Decomposition of Credit and Currency Risks," unpublished paper, November 1997, p. 25.

Proposals to minimize IMF interest rate subsidies, for example, can work to constrain risk-promoting incentives. And provisions to promote IMF transparency can help to foster better information and, therefore, objective analysis of IMF performance and risk-subsidizing activities. These features are central to the IMF Transparency and Efficiency Act of 1998 (H.R. 3331).

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U.S. DOLLAR POLICY: A NEED FOR CLARIFICATION



**Jim Saxton (R-NJ),
Chairman**

**Joint Economic Committee
United States Congress**

November 1998

Executive Summary

Congress has constitutional authority for regulating the domestic and external value of money. This paper describes how that authority was first implemented and later delegated to the Federal Reserve and U.S. Treasury earlier this century.

Since that time, however, the economic landscape has changed dramatically. The international monetary system has been transformed and capital mobility has substantially increased. No reliable, credible standard has anchored the price system and replaced the once reliable commodity standards of earlier periods. Dollar policy remains ill-defined and overly secretive. These new circumstances make the earlier, fragmented delegation of monetary power contradictory and inconsistent.

These inconsistencies need to be recognized and corrected. Congress should consider reorganizing monetary responsibilities to provide a more consistent, transparent, and credible overall monetary authority. Congress could reassert its constitutional authority and:

- Re-establish a reliable, credible anchor to the price system by mandating inflation targets for Federal Reserve monetary policy.
- Insist on a clarification of dollar policy; define what does and what does not constitute appropriate dollar policy. Delineate proper roles for both the Federal Reserve and Treasury Department.
- Insist on a more transparent dollar policy from those institutions charged with foreign exchange management responsibilities.
- Establish rigorous procedures and exacting criteria for congressional oversight of dollar policy.

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U.S. DOLLAR POLICY: A NEED FOR CLARIFICATION

INTRODUCTION AND SUMMARY

Ultimate constitutional authority over matters relating to money and its value rest with the U.S. Congress. Congressional power is clearly evident in pre-1930 legislation affecting the value of money and in subsequent congressional legislation delegating this authority.³¹ Executive Branch monetary powers are derivative, delegated to the Executive Branch by Congress.³²

For most of its history, the U.S. economy operated as a small, open economy adhering to an international commodity standard. In these circumstances, Congress defined the dollar's metallic content and, thereby, anchored the dollar's value in terms of both tradable goods and foreign currency linked to this standard. In defining the dollar's value, therefore, Congress simultaneously determined both the price level and the foreign exchange rate.³³ "Regulating" the domestic value of money and the foreign exchange rate was the same policy; monetary policy and

³¹ See, for example, Table 3.1 (p.15) in Lawrence Officer, *Between the Dollar-Sterling Gold Points*, Cambridge University Press, Cambridge, 1996.

³² See, for example, Stephen D. Cohen, *The Making of United States International Monetary Policy* (Third Edition), Praeger, New York, 1988, pp. 98-99; James M. Buchanan and T. Nicolaus Tideman, "Gold, Money and the Law: The Limits of Governmental Monetary Authority," *Gold, Money, and the Law*, edited by Henry Manne and Roger LeRoy Miller, Aldine Publishing Company, Chicago, 1975, pp. 29-30, 41.

³³ For a description of the operation of a small open economy under fixed exchange rates, see Thomas M. Humphrey and Robert E. Keleher, *The Monetary Approach to the Balance of Payments, Exchange Rates, and World Inflation*, Praeger, New York, 1982, chapters 5, 6.

dollar policy were not independent. Furthermore, dollar policy under these arrangements was relatively transparent; everybody understood it.

In 1913, while still operating under a fixed exchange rate, international commodity standard, Congress in effect delegated short-term responsibilities for managing money and credit as well as providing lender-of-last resort (LOLR) services to the (newly created) Federal Reserve. The Federal Reserve's role under these circumstances was to maintain convertibility of the currency by manipulating money and credit so as to keep the foreign exchange value of the dollar within its gold points.³⁴ In so doing, the Federal Reserve maintained fixed exchange rates and a price level anchored to the level of global prices. The Federal Reserve's role was limited; it was to operate within specific objectives circumscribed by the Congress.

In the 1930s, the Federal Reserve's ineptness in conducting monetary policy, failure to serve as lender-of-last resort, and seeming unresponsiveness to the public will led Congress to delegate important monetary powers to the Executive Branch and specifically to the Treasury.³⁵ Congressional legislation provided for Executive Branch power to devalue the currency, to intervene in the foreign exchange market (establishing Treasury's Exchange Stabilization Fund), and even to influence bank reserves.³⁶ This delegation of power to Treasury left the structure of monetary responsibilities fragmented and ill-defined, particularly since part of the rationale for this delegation subsequently was removed by legislation in 1935.

³⁴ See, for example, Lawrence Officer, *op cit.* Constraining the foreign exchange rate between its gold points means the central bank manages money so as to prevent gold flows from threatening the domestic currency's fixed-rate convertibility to the precious metal. These gold points form exchange rate bounds, outside of which profitable gold arbitrage opportunities exist. Should the exchange rate reach the gold export point, for example, gold would be profitably exported.

³⁵ In the 1920s and early 1930s, the Federal Reserve, and in particular the Federal Reserve Bank of New York, was seen as inordinately under the influence of bankers who were not responsive to the public will. This problem was to some extent corrected with the 1935 Banking Act, which redirected and concentrated Federal Reserve power to the Board of Governors in Washington, D.C.

³⁶ See, for example, G. Griffith Johnson, Jr., *The Treasury and Monetary Policy 1933-1938*, Russell and Russell, New York, 1939, pp. 201-207.

This fragmentation of monetary policy responsibilities left matters ill-defined under the postwar-Bretton Woods System. But confusion worsened with the breakdown of this System into an anchorless fiat money arrangement (under flexible exchange rates) in the early 1970s. Under floating exchange rates, the objectives of monetary and dollar policy change dramatically. Until a new, credible price anchor is re-established, a good deal of uncertainty will disturb financial markets; this situation requires that monetary and dollar policy be clarified and made consistent and transparent. In particular, Federal Reserve monetary policy should receive a congressional mandate for price stability as in the recent House Bill (H.R. 2360) sponsored by Joint Economic Committee (JEC) Chairman James Saxton (R-NJ).³⁷ But dollar policy also needs direction, definition and clarification so it is consistent with Federal Reserve policy. Congress must reassert its authority over these policies by reinstating vigorous oversight practices. If it does not, government bureaucracies will pursue self-interested and likely inconsistent monetary and dollar policies which can create further confusion and uncertainty.

After describing congressional monetary authority, earlier policy implementation, and congressional delegation of that authority to the Federal Reserve and Treasury, this paper describes inconsistencies of current dollar policy. The case for a clarified, transparent and consistent dollar policy is made. Enhanced congressional oversight responsibilities and efforts are called for.

CONGRESSIONAL AUTHORITY

The U.S. Constitution explicitly gives Congress powers over affairs relating to money, the dollar and the regulation of its value. Article I, Section 8 of the Constitution states: "The Congress shall have power...to coin money, regulate the value thereof, and of foreign coin...". While there are alternative interpretations of the meaning of this authority, congressional power is clearly evident in subsequent legislation affecting the value of money. All decisions relating to selecting the monetary standard (silver, gold or bimetallic), changes in the value of the standard (devaluation or revaluation), or resumption of the standard required acts

³⁷ For a discussion of the rationale for inflation targeting, see Robert E. Keleher, *Establishing Federal Reserve Inflation Goals*, A Joint Economic Committee study, April 1997.

of Congress.³⁸ Executive Branch decisions affecting the currency derived their legal basis from Acts of Congress; Executive Branch monetary powers are derivative and delegated to the Executive Branch by Congress.

CONGRESS AND REGULATING THE VALUE OF MONEY UNDER INTERNATIONAL COMMODITY STANDARDS

The significance of congressional monetary authority under international commodity standards is often not recognized by modern readers. For most of its history, the U.S. economy operated as a relatively small, open economy under a fixed exchange rate international commodity (e.g., gold or bimetallic) standard. Under these conditions, the domestic price level or the value of domestic currency in terms of goods was determined by the product of two important prices: 1) The dollar (or mint) price of gold, set by Congress and 2) the price of goods in terms of gold, determined by the world supply of gold relative to goods. This latter price was determined in world markets and outside the control of small open economies. This relationship is summarized in the equation below:

$$P_{\$/goods} = P_{\$/gold} * P_{gold/goods}$$

As long as the dollar price of gold remained fixed, the small open economy's inflation and price level were determined by world factors not under the influence of domestic policymakers. The only way for the small economy to change the price level (relative to that elsewhere) was to change the dollar price of gold. If other countries were tied to the same commodity (gold) standard, their currencies were simply different weights of the same international monetary standard. And so any decision to change the inflation rate relative to global inflation was also a decision to change the foreign exchange rate. Setting the mint price, therefore, determined both the internal and external value of money.³⁹ In short, there was no distinction between "monetary policy" and "dollar policy;" these policies were one and the same, not independent of one

³⁸ See, for example, Officer, *op.cit.*, p.15 (Table 3.1). Under the Bretton Woods regime, for example, the external value of the dollar was determined by statute; i.e., the dollar's par value could not be altered without congressional authorization (see I.M. Destler and C. Randall Henning, *Dollar Politics: Exchange Rate Policymaking in the United States*. Institute for International Economics, Washington, D.C. 1989, p. 99).

³⁹ For simplicity, this analysis of a small, open economy assumes an insignificant non-traded sector.

another. The power to make changes in the price level and the foreign exchange rate rested with the same authority, the U.S. Congress. Dollar and monetary policy under these circumstances were relatively simple and transparent; everyone understood them.

Historically, of course, decisions to change the commodity value or foreign exchange value of money were rare, but several monumental decisions relating to devaluation, resumption and bimetallic standards did occur over the years. Nonetheless, these prices were not considered discretionary tools of policy. The day-to-day management of the currency was not seen as in the realm of the country's monetary decision makers.

DELEGATION OF CONGRESSIONAL AUTHORITY

In the 19th and early 20th centuries, it was commonly assumed that international commodity standards (and fixed exchange rates) were the norm. Any suspensions of convertibility and episodes of floating exchange rates were thought to be a temporary phenomenon. In such cases it was believed to be only a matter of time before an international monetary standard (with fixed exchange rates) would be re-established.

THE FEDERAL RESERVE

With continued development of the economy and financial system, there came to be a perceived need for a lender-of-last resort to stem financial volatility associated with bank runs and associated panics. The 1907 financial crisis served as a catalyst in this regard. Accordingly, the Federal Reserve was established in 1913 and operated under an international commodity standard. In effect, Congress delegated limited operating responsibilities to the Federal Reserve. In particular, the central bank assumed LOLR responsibilities and eventually assumed responsibilities for managing money and credit within the parameters of the existing (congressionally mandated) international commodity standard. The Federal Reserve's role was to maintain convertibility of the currency by manipulating money and credit so as to keep the foreign exchange value of the dollar within its gold points. In so doing, the Federal Reserve maintained fixed exchange rates and a price level anchored to the level of global prices; i.e., the Federal Reserve assumed delegated monetary and dollar policy responsibilities to maintain both the internal and external value of the dollar.

During the 1920s, when a rejuvenated postwar international fixed exchange rate system was being reconstructed, the Federal Reserve Bank of New York actively participated in exchange rate management or dollar policy with other central banks; coordination of international monetary

policy occurred. Before the 1930s, therefore, dollar policy was well within the purview of the Federal Reserve.

THE TREASURY DEPARTMENT

During the Great Depression of the 1930s, however, monetary responsibilities were reorganized. Congress delegated significant monetary powers to the Treasury Department. This delegation occurred because of the Federal Reserve's ineptness in conducting monetary policy and failure to serve as LOLR, together with the perception that Federal Reserve policy was controlled (or heavily influenced) by bankers unresponsive to the public will. Congress passed legislation allowing the Treasury Department to change dollar gold prices (devalue the currency), intervene in the foreign exchange market, establish bimetallism, and even affect bank reserves. As one analyst of the period stated:

Perhaps the most startling aspect of (these) developments (in the early 1930s) is indicated by the extraordinary degree to which Congress has delegated to the Executive the power to make fundamental policy decisions... The President could double or triple member bank reserves, had complete discretion over the gold value—and consequently the foreign exchange value—of the dollar, and could establish bimetallism by proclamation; in other words, he could completely refashion the monetary system of the country⁴⁰...

Notably, the Roosevelt Administration used these powers to alter both the external and internal value of money. These changes were particularly important for dollar policy; they profoundly affected the relative powers of the Treasury vis-a-vis the Federal Reserve with regard to influencing the foreign exchange rate. In fact, the Treasury Department supplanted the Federal Reserve in a number of ways; it took over a number of duties that the central bank previously had performed.

By the 1930s, therefore, Congress had delegated responsibility for “actively managing” monetary and dollar policies to the Federal Reserve and Treasury, respectively. This delegation, of course, is important and carries with it congressional oversight responsibilities for both policies.

FRAGMENTED POLICY

This delegation of monetary powers to both the Federal Reserve and Treasury created uncertainties and inconsistencies. It left no single,

⁴⁰ G. Griffith Johnson, Jr., *The Treasury and Monetary Policy 1933-1938*, Russell and Russell, New York, 1939, pp. 201-2. (Parenthesis added)

unambiguous authority for conducting overall monetary policy and regulating both the internal and external value of money. Further, the passage of the 1935 Banking Act concentrated Federal Reserve powers in the Board of Governors (and away from the Federal Reserve Bank of New York), diminishing the role and influence of unelected bankers and, therefore, eliminating part of the original rationale for transferring power to the Treasury. Nonetheless, Treasury was recognized as having authority in the areas of international monetary policy, gold policy and foreign exchange policy. Yet, the Federal Reserve maintained money-creating and LOLR powers, especially after the Treasury-Federal Reserve Accord of 1951. As a result of this fragmented authority, to some extent "dollar policy" came to be thought of as separate and distinct from monetary policy.

Despite these inconsistencies, serious overt conflicts between the two authorities seldom emerged during the Bretton Woods era. This peaceful coexistence resulted partly from the fact that since foreign and not U.S. monetary authorities were responsible for intervening in foreign exchange markets to maintain their dollar parities under Bretton Woods, little direct U.S. intervention took place during this period.⁴¹

Nonetheless, during this era, U.S. monetary policy gradually reoriented itself toward shorter-term, cyclical domestic (e.g., employment) goals, potentially inconsistent with international (exchange rate) objectives. This inconsistency persisted for a time both because of the implementation of capital controls and the reserve currency status of the U.S. dollar. But eventually, the pursuit of such inconsistent goals brought about the breakdown of the Bretton Woods System.⁴²

BREAKDOWN OF BRETTON WOODS

The breakdown of Bretton Woods into an anchorless fiat money arrangement (under flexible exchange rates) in the early 1970s dramatically changed this situation. While overall authority for regulating the value of money was confused under Bretton Woods, this confusion worsened as fiat money and flexible exchange rates came into being. In these circumstances, the objectives of monetary and dollar policy significantly change. With the breakdown of both fixed exchange

⁴¹ See B. Diane Pauls, "U.S. Exchange Rate Policy: Bretton Woods to Present," *Federal Reserve Bulletin*, November 1990, p. 891.

⁴² Specifically, the monetary stimulation deemed essential to pursue domestic goals brought about the balance of payment deficits and eventually gold drains, making Bretton Woods objectives untenable.

rates and the linkage to a commodity anchor, the price system's anchor as well as dependable linkages to other currencies no longer exist. The objectives of Treasury and Federal Reserve policy are left ill-defined, confused and ambiguous. These agencies no longer operate within unambiguous goals set by Congress.⁴³

Until new goals are credibly established, a good deal of risk, uncertainty and price volatility likely will prevail in financial markets. Additionally, responsibility for stabilizing the price system and regulating the internal and external value of money is left entirely to the Federal Reserve and Treasury; these agencies are "on their own." If objectives are not clarified, these government bureaucracies will pursue self-interested and likely inconsistent monetary and dollar policies leading to further confusion and uncertainty.

Ultimate constitutional authority for establishing these new goals and for resolving the conflicts among alternative objectives rests with the U.S. Congress. These responsibilities not only involve the specification of clear, understandable, and consistent objectives for monetary and dollar policy, but important oversight responsibilities for these policies as well. These oversight responsibilities become critically important before a fully credible price anchor can be put in place.

⁴³ This is especially valid with the re-emergence of capital mobility and the consequent irreconcilable goals of rigid exchange rate management and other (independent) domestic goals for monetary policy. The limitations that capital mobility impose on monetary policy and exchange rate management are sometimes summarized in the concept of an "inconsistent trinity" or "open-economy trilemma." See, for example, Maurice Obstfeld; "The Global Capital Market: Benefactor or Menace?," National Bureau of Economic Research, Working Paper 6559, May 1998, p. 8. As Obstfeld (p. 8) describes it:
 ... a country cannot simultaneously maintain fixed exchange rates and an open capital market while pursuing a monetary policy oriented toward domestic goals. Governments may choose only two of the above. If monetary policy is geared toward domestic considerations, either capital mobility or the exchange rate target must go. If fixed exchange rates and integration into the global capital market are the primary desiderata, monetary policy must be subjugated to those ends.
 ... (In practice), the greater the attention given to the exchange rate, the more constrained monetary policy is in pursuing other objectives.

CONSISTENT AND TRANSPARENT MONETARY AND DOLLAR POLICY

Circumstances of fiat money regimes require that monetary and dollar policy be clarified and made consistent and transparent. Specifically, with the breakdown of Bretton Woods, Congress has an obligation to establish an understandable alternative anchor for the price system. In particular, Federal Reserve monetary policy should receive a congressional mandate for price stability as exemplified by the recent House Bill (H.R. 2360) sponsored by Joint Economic Committee Chairman, Jim Saxton (R-NJ).

The arguments favoring such a mandate are numerous, well-known, amply supported, and summarized in previous JEC reports.⁴⁴ They will not be reiterated here. Nonetheless, rigorous congressional oversight of an explicit price stability goal is important so that no doubt or uncertainties arise regarding price stability's primal importance to the Federal Reserve.

But as exchange rates continue to fluctuate, it is also incumbent upon Congress to clarify the role of dollar policy in our increasingly open and global integrated economy. To be sure, the dollar should not be ignored given its reserve currency status. More specifically, dollar policy should be defined, made transparent and receive rigorous congressional oversight. In so doing, it should be firmly established that dollar and monetary policy are not independent of one another. Rather, both are integral parts of an overall policy determining the value of money. Any Treasury Department involvement in dollar policy, therefore, must be closely coordinated and made consistent with the monetary policy of the central bank. To ensure consistency, consideration might be given to transferring dollar responsibilities to the Federal Reserve and eliminating the Exchange Stabilization Fund (ESF).

GUIDELINES FOR APPROPRIATE DOLLAR POLICY

With price stability the primary goal of Federal Reserve monetary policy, exchange rate policy must be designed to contribute to and not conflict with this price stability objective. The dollar, for example, should serve not as a policy target, but as an important monetary policy indicator helping to guide policy toward price stability. Since the foreign exchange rate measures the value of money in terms of foreign money, dollar

⁴⁴ See, for example, Robert E. Keleher, *Establishing Federal Reserve Inflation Goals*, a Joint Economic Committee study, April 1997.

movements signal both changes in inflation and expectations of future inflation relative to that in other countries. Such movements, therefore, are helpful indicators to price stability-oriented central bank policy. More specifically, the dollar exchange rate should be used together with other market price indicators of inflation (e.g., commodity prices and bond yields) in a strategy to achieve and maintain price stability.⁴⁵

The dollar can also serve as an important input in coordinated monetary policy action serving to promote price stability. Should prices be rising worldwide but the dollar appreciating sharply, for example, more restrictive monetary policies may be more appropriate in those countries whose currencies are depreciating rapidly.

Additionally, it is conceivable that unsterilized intervention may be appropriate under certain (limited) conditions; non-sterilized intervention may be a useful part of the central banks' tool kit. But any such intervention should always be transparent, with goals and methods spelled out in advance. So long as foreign exchange intervention does not interfere with the price stability objectives, for example, such intervention might be appropriate to minimize unnecessary foreign exchange volatility, overshooting or misalignments and, therefore, promoting smoother workings of the price system. Such unsterilized intervention may be acceptable so long as its criteria and objectives are carefully defined and spelled out ahead of time in a transparent manner,

The fundamental purpose of such dollar policy, however, should not be overlooked. Namely, the primary purpose of foreign exchange rate goals should always be to assist in (or be consistent with) stabilizing the value of money and achieving price stability.

In addition to recognizing what is appropriate dollar policy, it is also important to recognize what is inappropriate exchange rate policy. Since dollar policy can ultimately only contribute to price stability, dollar policy should not be used as:

- a tool to manage trade account (or current account) balances;
- a bargaining chip in trade negotiations; and/or
- a tool in multilateral fiscal or regulatory policy coordination efforts.

⁴⁵ For a description of such a policy, see Manuel H. Johnson and Robert E. Keleher, *Monetary Policy: A Market Price Approach*, Quorum Books, Westport, Connecticut, 1996.

TREASURY DEPARTMENT'S ROLE

Unlike under a fixed exchange rate commodity standard when dollar policy goals are easy to describe, there is little precedence for a well-defined Treasury dollar policy role under flexible exchange rates when the central bank operates to achieve price stability. In these circumstances, a well-defined, transparent dollar policy circumscribes the role of the Treasury Department. At a minimum, the Treasury Department certainly should not be pursuing dollar policies that conflict with the Federal Reserve's price stability objective; the policies of these two institutions should be fully consistent. On the other hand, Treasury's dollar responsibilities could be consolidated into a broadened, overall Federal Reserve function and the Exchange Stabilization Fund eliminated in such a restructuring.

In clarifying Treasury's dollar policy under floating exchange rates, however, a number of issues should be addressed. These issues, for example, might include:

- What are the purpose and objectives of Treasury foreign exchange intervention?
- Shouldn't Treasury dollar policy be transparent? Is sterilized intervention transparent?
- How is Treasury foreign exchange intervention financed? Is Federal Reserve "warehousing" consistent with the goal of transparent dollar policy?
- What is the purpose of the Exchange Stabilization Fund (ESF)? Shouldn't its operations be transparent? Shouldn't the funds used by the ESF be subject to the congressional appropriations process?
- If the Treasury Department was given powers because of Federal Reserve errors and institutional peculiarities in the early 1930s that have since been corrected and are no longer relevant, why does Treasury still have such powers?
- If the Federal Reserve fully controls monetary policy, what is the role of the Treasury in G7 negotiations relating to the dollar?
- Should the Federal Reserve assume complete control over dollar policy from the Treasury so that a consistent overall monetary policy can be implemented? Should the Exchange Stabilization Fund be eliminated as part of such a restructuring?

CONGRESSIONAL OVERSIGHT

Congress should not be a bystander in deliberations relating to dollar policy reform; it has ultimate constitutional authority to define such policy. It is for Congress to insist on a clarification of the role of dollar policy under a floating rate regime. Congressional participation in determining foreign exchange objectives obviously should not pertain to minute-to-minute operations or daily management decision-making. Rather, its involvement should be limited to establishing goals and ensuring transparency and accountability of those institutions charged with implementing dollar policy. In so doing, Congress has the responsibility to see that established procedures provide for the achievement of ultimate price stability objectives. In this regard, congressional oversight responsibilities are quite important. Congress should become involved in rigorous foreign exchange oversight to help establish appropriate and consistent goals. Should rigorous oversight not be adopted, those agencies charged with implementing dollar policy will likely pursue bureaucratic self interest, often resulting in secretive, ill-defined, inconsistent policies that often promote unnecessary market uncertainty.

Rigorous congressional oversight of dollar policy should include these important elements:

- Thorough oversight of the foreign exchange policies and operations of the Treasury Department and/or the Federal Reserve, including careful oversight of intervention activity, Exchange Stabilization Fund operations, as well as Federal Reserve warehousing activities. Such oversight should ensure that these policies are consistent with overall objectives of monetary policy.
- Insistence on a much more transparent dollar policy. Clarification of foreign exchange policy objectives and operating procedures can be fostered by insisting on improved, timelier reporting and more frequent and detailed congressional testimony of Federal Reserve and Treasury officials.
- Enhanced oversight of U.S. participation in international organizations such as the G7, IMF and others as this participation pertains to dollar policy and international monetary reform. This would include more transparent reporting of the meetings of

these organizations as well as the encouragement of more transparent communiques.⁴⁶

SUMMARY AND RECOMMENDATIONS

Constitutional authority over matters relating to money and its value rests with the U.S. Congress. Under the usual norm of an international commodity standard, Congress fixed the commodity content of the dollar and thereby defined the price level (internal value of money) as well as the foreign exchange (external) value of money. Dollar and monetary policy were one and the same. Under such regimes, Congress delegated monetary powers first to the Federal Reserve and later to the Treasury Department, leaving a fragmented structure of authority for monetary and dollar policy.

Since the collapse of the international monetary system in the early 1970s, no reliable, credible standard has anchored the price system and replaced the once reliable commodity standards of earlier periods. Dollar policy has remained ill-defined and confused. To remedy this situation, Congress could reassert its constitutional authority and:

- Re-establish a reliable, credible anchor to the price system by mandating inflation targets for Federal Reserve monetary policy.
- Insist on a clarification of dollar policy; define what does and what does not constitute appropriate dollar policy. Delineate proper roles for both the Federal Reserve and Treasury Department.
- Consider consolidating dollar policy powers in the Federal Reserve System and eliminating the Exchange Stabilization Fund.
- Insist on a more transparent dollar policy from those institutions charged with foreign exchange management responsibilities.

⁴⁶ Congressional participation or representation in meetings of these international organizations also might be appropriate. The rationale for such representation relates to important differences between governments elected under parliamentary systems and the U.S. system of separation of powers. Whereas the Legislative and Executive Branches of governments elected under parliamentary systems are fully represented in G7 or IMF meetings, the U.S. legislative branch is seldom, if ever, represented despite the fact that the Congress is charged with appropriating funds for some of these organizations.

- Establish rigorous procedures and exacting criteria for congressional oversight of dollar policy.

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BLUEPRINTS FOR A NEW GLOBAL FINANCIAL ARCHITECTURE



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**Joint Economic Committee
United States Congress**

October 1998

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Blueprints for a New Global Financial Architecture

Charles W. Calomiris*

October 7, 1998

I fear that I must not expect a very favorable reception for this work. It speaks mainly of four sets of persons...and I am much afraid that [none] will altogether like what is said of them...

Walter Bagehot, *Lombard Street*

I. Introduction

This paper considers current problems in what is often termed the “global financial architecture” and proposes a set of solutions to those problems. The solutions take the form of redesigning (in combination) rules governing domestic bank safety net policies, lending by the International Monetary Fund (IMF), international competition in banking, global capital flows, and government debt management policies.

Section II outlines the problems the proposal is meant to address. Section III describes the principles that should guide reform. Section IV discusses details of how to implement those principles, including specific rules governing domestic bank safety nets, IMF membership and IMF lending policy. These would replace not only the current IMF, but other lending programs including the Exchange Stabilization Fund (ESF) and ad hoc emergency lending by the World Bank the InterAmerican Development Bank. Section V discusses the political economy of the new set of rules and whether enforcement would be credible. Section VI concludes.

Economics normally provides rather dismal news, emphasizing tradeoffs among

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objectives and hard choices. In the case of redesigning the global financial architecture, however, such is not the case. It is not difficult to construct a set of mechanisms that resolve problems of illiquidity (by providing a responsive lender of last resort facility) while avoiding the governance and incentive problems attendant to counterproductive bailouts of risk takers. The claim that it is possible to deliver liquidity assistance without bailouts presumes an *economic* definition of liquidity assistance, a concept with clear and narrow meaning. Politicians and bureaucrats, in contrast, often define “liquidity” crises and “liquidity” assistance broadly and vaguely to disguise transfers of wealth that have nothing to do with true liquidity assistance.

In essence, my proposal would replace ex post negotiations over conditions for IMF lending with ex ante rules for IMF membership and restrictions on the manner in which the IMF lends to its members. These rules and restrictions would automatically constrain the circumstances under which assistance would be provided, and at the same time make potential assistance much more rapid and effective. Proposed membership criteria include rules that impose market discipline on banking systems and limit government abuse of liquidity protection.

A credible reform of bank capital regulation that ensures market discipline makes it possible to construct an effective domestic bank safety net in the form of a deposit insurance system, which addresses liquidity problems attendant to banking panics. These domestic safeguards ensure that IMF protection – if provided through an appropriate lending mechanism – will not be abused. Requiring that IMF members meet standards that ensure market discipline in their banking systems and protection against domestic banking panics makes it possible for the IMF to fulfill its proper role in global financial markets – preventing unwarranted speculative attacks on member countries’ exchange rates. Private market discipline, therefore, is the linchpin of effective domestic and international safety net reform.

While I argue that providing liquidity protection without bailouts is feasible economically, I recognize that the political economy of the global safety net poses formidable

obstacles to its rationalization. It will be hard to design effective rules that will not be fought by special interests, and hard to design mechanisms that ensure that those rules will be reliably enforced. The approach I advocate tries to come to grips with political challenges to reform and enforcement.

II. The Weak Foundations of the Current Global Financial Structure

Financial crises are the defining moments of the problems that confront policy makers. This section reviews and interprets the recent history of crises, and the factors that are alleged to have produced them. The list of problems includes (1) fundamental policy-design flaws in banking systems and in international assistance programs that subsidize risk and foment fundamental bank and government insolvency, and (2) inherent problems of financial systems that aggravate those shocks through four different channels (which are referred to collectively as “liquidity” problems).

The last twenty years, and particularly the last five years, have witnessed an unprecedented wave of financial collapses. The magnitude of the losses incurred by banks during these collapses is staggering. The negative net worth of failed banks in the U.S. for the years 1931-1933 was roughly 4% of GDP. Nearly a hundred crises with losses of this or higher magnitude have occurred over the past two decades. Twenty of those crises have resulted in losses in excess of 10% of GDP, and ten have produced losses in excess of 20% of GDP.

Another novelty of the new crises has been the simultaneous collapse of banks and fixed exchange rates. Exchange rate collapses historically were sometimes associated with banking system collapses, but historically the two occurred together much less often than today, and the historical exchange rate collapses were less severe.

What is driving these crises? The literature has produced a number of explanations, which are not mutually inconsistent. Since the purpose of this paper is to devise solutions (not

just for the sake of devising them, but also in the hope of fostering change) I do not pre-judge the weights that should be attached to the various views. For a proposed set of reforms to the global financial architecture to attract supporters, it must encompass a broad spectrum of views.

Problem 1: Counterproductive financial bailouts of insolvent banks, their creditors, and debtors by governments, often assisted by the IMF, have large social costs. Bailouts are harmful for several reasons.¹ First, they entail large increases in taxation of average citizens to transfer resources to wealthy risk-takers. Tax increases are always distortionary, and serve to accentuate the unequal wealth distribution. Second, by bailing out risk takers local governments and the IMF subsidize, and hence encourage, risk taking. Moral-hazard incentive problems magnify truly exogenous shocks that confront banking systems. Excessive risk taking by banks results in banking collapses and produces the fiscal insolvency of governments that bail out banks, leading to exchange rate collapse. Banks willingly and knowingly take on more risks – especially default risks and exchange risks – than they would if they were not protected by government safety nets.

Risk taking often follows a two-stage process. Initially, macroeconomic shocks (e.g., a decline in the terms of trade) reduce bank capital and raise the possibility of currency devaluation. That changes both the incentives for banks to take risks and their opportunities to do so subsequently. The incentives to take risk rise both because bank capital is lower and because banks seek to protect their loan customers (who sometimes also own the bank) from the effects of the adverse macroeconomic shock. The opportunity for taking on risk during a downturn is higher both because of increases in the credit risk of borrowers and because of increased exchange rate risk. Furthermore, a rising risk of depreciation lowers the relative cash flow cost of borrowing dollar-denominated funds, which can make borrowing in dollars attractive to distressed firms and banks. Banks that borrow short-term dollar-denominated funds

economize on the current cash flow cost of those borrowings, but take on a large risk of capital loss if the exchange rate peg collapses.

In the absence of safety net distortions that encourage risk taking, macroeconomic shocks would encourage the opposite behavior – a reduction in bank risk exposure to reassure bank debt holders.² But overly generous protection of banks insulates them from market discipline and makes them willing to increase their asset risk in the wake of adverse shocks. Banks are willing to do so because potential losses will be borne by taxpayers through government-sponsored bailouts of the banking system.

The risks in these banking systems constitute an off-balance sheet liability of their governments, since governments either explicitly or implicitly guarantee to bail out banks that fail. Thus bank risk and fiscal risk grow together and explain the simultaneity of banking and exchange rate collapses. The differences between emerging market financial crises of the last two decades and historical crises--the larger size of current banking system losses, and the coincidence of banking system and exchange rate collapses – are attributable to the new link between private risk taking and public financing of the losses produced by those risks.³

Banks are not the only entities protected by government safety nets. Large, politically influential firms other than banks often receive implicit protection from the government on their debts, which encourages a similar tendency to bear exchange risk and to rely on short-term dollar-denominated funds, particularly in the wake of shocks that raise the risks of devaluation.

¹ For more details, see Calomiris (1998a) and Meltzer (1998a, 1998b).

² For a discussion of the responses to loss by New York banks during the Great Depression, see Calomiris and Wilson (1998).

³ For details on the moral-hazard costs of safety nets over the past two decades, see Caprio and Klingebiel (1996a, 1996b), Lindgren, Garcia, and Saal (1996), Demirguc-Kunt and Detragiache (1997), Calomiris (1997, 1998a), Meltzer (1998a, 1998b), and Kane (1998) for summary analyses; De la Caudra and Valdes (1992) on the Chilean crisis of 1982-1983; De Krivoy (1995) on the Venezuelan crisis of 1991-1993; and Wilson, Saunders, and Caprio (1997) on the Mexican crisis of 1994-1995.

The moral hazard problem also can exacerbate the extent of devaluation during exchange rate collapses. Domestic banks that bet against devaluation prior to the exchange rate collapse (by borrowing dollars or entering forward exchange contracts) can magnify the extent of the collapse by adding selling pressure to the market once the collapse begins. As banks experience initial losses on their open exposures to exchange risk, they may be forced to sell their positions suddenly, which magnifies short-term devaluation pressures. In Mexico, this process of unraveling excessive bank (or non-bank) exposures to exchange risk (in the form of dollar-denominated borrowings and derivative positions) contributed to the severity of the exchange rate collapse in 1995. Garber (1997) argues that the dumping of derivative positions and the scramble for cash by Mexican banks in response to large losses on those positions led banks not only to liquidate their long peso positions, but also to dump their short-term government securities (tesobonos) on the market, which put added pressure on the peso in early 1995 and contributed to government problems in rolling over maturing treasury debt.

In addition to the immediate economic costs associated with bailouts (tax increases and moral hazard), there is also a longer-term cost from the way bailouts affect the political process domestically and internationally. Domestically, bailouts encourage crony capitalism in emerging market economies and thus help to stunt the growth of democracy and reform. Bailouts also undermine democracy and economic competition in industrialized countries. Bailouts (whether channeled through the IMF or the ESF) are often a means for the U.S. Treasury to provide subsidies to international lenders and foreign governments without Congressional approval under the guise of liquidity assistance.

IMF policies exacerbate all these problems.⁴ The IMF's role in bailouts is threefold. It provides a small wealth transfer (via the interest subsidy on its loan). Second, and more importantly, it pressures countries to bail out international lenders who are often complicit in

excessive risk taking. Third, the IMF helps to ensure that domestic taxation (to finance the bailout) will occur, by lending legitimacy to the bailout and by requiring increased taxation as a condition of IMF assistance.

So far I have argued that moral hazard is the key villain in the recent, unprecedented wave of financial system collapses. That is not to say that *all* the costly consequences of financial crises are an unavoidable consequence of moral-hazard-induced fundamental bank insolvency and its fiscal consequences.

If the only costs of financial system collapse were the *direct* costs of fundamental insolvency – that is, the amount of wealth lost directly through the actions of protected banks and borrowers – then the only threat to the global financial system would be safety net protection itself. In that case, the simple solution to redesigning the IMF arguably would be simply to abolish it, as Schwartz (1998) suggests. The argument for reforming the IMF, rather than abolishing it, revolves around the view that there are important indirect costs attendant to “liquidity problems” that magnify the direct costs to fundamental bank and government solvency. The potential importance of these indirect costs, and the potential for the IMF to mitigate them, underlies the argument for preserving the IMF. Concerns about liquidity costs can be divided into four additional problems, which are discussed separately below.

Problem 2: Asymmetric information about the incidence of observable shocks within the financial system, especially when combined with short-term debt finance can magnify the economic consequences of fundamental shocks by leading to a liquidity crisis. The historical

⁴ For details, see Calomiris (1998a) and Meltzer (1998a, 1998b).

evidence on banking panics in the U.S. and elsewhere suggests that panics resulted from observable economic shocks with unobservable consequences for individual financial intermediaries. The vulnerability of financial intermediaries to crises reflects the fact that the value of their assets are hard to observe (loans are not marked to market) and their debt is very short term (often demandable). Those characteristics are intrinsic to the value-creating functions of banks, but they also make banks vulnerable to crises. Small fundamental shocks to aggregate banking system solvency can promote widespread disintermediation from banks, leading to a contraction in credit, a decline in economic activity, price deflation, and “fire sale” losses as banks and their loan customers scramble to gain liquidity.

Asymmetric-information-induced runs on banks prompted by fundamental shocks to bank asset values characterized the panics of 1873, 1884, 1890, 1893, 1896, and 1907. The weeks and months prior to these banking panics witnessed *uniquely adverse combinations* of the growth of business insolvencies and declines in equity prices. Previous and subsequent financial panics, in and outside the United States, have been similarly traced to observable fundamental shocks with unobservable consequences for individual banks and bank borrowers.⁵

Because bank panics result from bank vulnerability to asset value shocks, bank diversification can be extremely useful in forestalling panics. The peculiar propensity for banking panics in the U.S. reflected the fragmentation of U.S. banks by location, which made bank loans less diversified than in other countries. That observation suggests that an important ingredient in reducing banking risk in today’s global economy is to encourage banks to operate branches throughout the world, and to hold an internationally diversified bundle of securities in

⁵ Calomiris and Gorton (1991) review models of banking panics and provide empirical evidence on their causes. See Mishkin (1991) and Wicker (1998) for complementary evidence. Bordo (1985), Calomiris and Schweikart (1991), Calomiris (1993, 1994), and Calomiris and Mason (1997) provide similar perspectives on the Panic of 1857, the Penn Central Crisis of 1970, historical banking panics outside the United States, and the Chicago Banking Panic of June 1932.

their portfolios. Lack of bank diversification has been shown to be a major contributor to bank instability in emerging market economies in recent times, as Caprio and Wilson (1997), Wilson, Saunders, and Caprio (1997), and Kane (1998) emphasize.

Problem 3: The expectations of speculators can exaggerate the effects of adverse shocks, and can even precipitate self-fulfilling financial collapses when weakened financial systems are also illiquid. Current IMF assistance is inadequate to deal with this problem because it offers too little assistance, and attaches too many conditions to that assistance at the time of the loan request, which delays the availability of funds. There is a "Sachs version" of this alleged liquidity problem, and a "Mahatir version." The Sachs version (outlined in Sachs et al. 1996, Cole and Kehoe 1996) recognizes that economic fundamentals still drive crises to some degree (which, for example, explains why Singapore has not come under speculative attack in the recent crisis). The Mahatir version, predictably, sees speculative attacks as conspiracies that victimize the innocent.

My own view is that the evidence does not support placing much weight on multiple-equilibria explanations of current financial crises. The Mahatir version has been contradicted by recent empirical studies of the behavior of hedge funds and other institutional investors (see Brown et al. 1998, Choe et al. 1998). The Sachs version is also very weak on empirical support. As a general theory of crises it should apply not only to the current wave of disasters, but to historical cases as well. But the evidence cited above on the history of financial crises, contrary to Radelet and Sachs's (1998) claim, does not support the view that historical crises are explicable as bad equilibria within the context of the Diamond-Dybvig (1983), or the Sachs, models of multiple equilibria. In other words, a model that would explain the current wave of crises as bad equilibria must also explain (as these models do not) why these purported bad equilibria are new. The moral-hazard approach can do so (since safety net protection and the

quasi-privatization of risk are relatively new phenomena); it is not clear whether the multiple-equilibria approach can.

Furthermore, Sachs and others search for multiple equilibria explanations mainly because they find little evidence of extreme fundamental weakness in macroeconomic *flow* indicators (e.g., conventional measures of government deficits or current account deficits). But, as argued above, they are simply looking in the wrong place for evidence of fundamental weakness. Expectations of future government expenditures often drive crises, not current expenditures. Financial sector imbalances (expected government costs of a bank bailout, or the bailout of an underfunded pension system) produce fiscal imbalance through the off-balance sheet contingent liabilities of the government, not through measured flows that show up in today's current account balance or current taxes and expenditures. In a world where banking sector collapses often produce fiscal costs in excess of 20 percent of GDP, and where government expenditures move smoothly compared to changes in off-balance sheet liability exposures of governments (since banking system losses can occur very quickly), a focus on macroeconomic flows as measures of fundamentals leaves the price out of the play.

Despite these objections, there surely is something to Sachs's argument if rephrased as the simple claim that a country with very low international reserves is more vulnerable to speculative attacks on its exchange rate or banking system than are others. Furthermore, as Garber (1997) points out, it is very hard to reject rational-expectations multiple-equilibria explanations econometrically. For these reasons, for the purposes of developing my proposed reforms I will assume that the Sachs and Mahatir views have some validity, and that it would be desirable for a global safety net to address the potential for self-fulfilling financial crises to emerge from a combination of small fundamental weaknesses and low liquidity (i.e., low bank and central bank reserves relative to short-term obligations).

Problem 4: "Contagion" across countries in securities and loan markets. Correlations in asset returns are much higher across emerging market countries during crises than at other times, and even government bond yields move together to an unusual degree during financial crises. There are several explanations for this "contagion." One is irrationality on the part of investors. A second is rational portfolio rebalancing by international investors; if portfolio investors (like banks) target a given default risk on the debt they *issue*, then they will *endogenously* shrink asset risk in one country in response to capital losses or exogenous increases in asset risk in another country. A third explanation revolves around linkages in international trade that can transmit economic decline, which is then reflected in asset prices. A fourth explanation revolves around multiple equilibria (either through changes in speculators' views about the probability of bad equilibria, or through reductions in central bank liquidity following a global flight to quality). To the extent that cross-country contagion reflects irrational speculation or multiple equilibria, policies that would solve those problems would also eliminate cross-border spillover effects.

Problem 5: Government debt management sometimes leans too much on short-term debt. There are good reasons (incentive compatibility) for governments to shorten their debt maturities during times of fiscal uncertainty. Indeed, governments have been doing so for centuries.⁶ But doing so might promote self-fulfilling attacks on currencies (following the multiple-equilibria reasoning of Cole and Kehoe 1996, and Sachs et al. 1996). Mexico's financial crisis is often held up as an example of such a problem. While I have argued that these authors likely overstate the empirical evidence in support of that view (particularly in Mexico, where weak fundamentals in the banking system and in central bank policy were clearly present by late 1994, and persist to the present), there is a version of this view that is reasonable: A short term structure of

⁶ For a review of the use of short-term debt finance by the United States historically, see Calomiris (1991).

government debt probably aggravates liquidity problems that have their origins in other fundamental shocks (fiscal risks associated with banking system collapse), as in Mexico during the tesobono selloff of 1995.

There is another reason to be concerned about the short-term structure of government debt. Governments suffer a moral-hazard problem with respect to the maturity structure of their debts because IMF protection removes the cost of taking illiquidity risk through the shortening of government debt term structure. In an environment where the IMF cannot credibly say no to bailing out governments who abuse its protection, the IMF may be encouraging financial fragility by not penalizing government debt structures that rely excessively on short-term obligations.

From the perspective of these five challenges to financial system stability, current IMF policies are woefully inadequate, and indeed, are part of the problem. When a country suffers a banking system-cum-exchange rate collapse, its government protects politically influential domestic stakeholders by bailing out banks, their debtors, and their creditors, all at the expense of taxpayers. IMF loans to countries suffering financial collapse serve as bridge loans to permit the rescheduling of debt. The conditions imposed by the IMF along with its financial support help to ensure that tax increases to finance the bailout will be forthcoming, making the IMF an accomplice to the transfer of wealth from taxpayers to domestic oligarchs and global lenders. Banking reforms, promoted by the IMF as a condition for assistance, are inadequate and there is no credible mechanism for ensuring that “mandated” reforms will be carried out.⁷

Furthermore, IMF assistance is provided only after an agreement is reached, and funds are released in limited amounts over several months. That way of providing assistance is not effective in solving liquidity problems, which require large amounts of funds to be available on

⁷ IMF conditionality is not always ineffectual. But banking reform is a protracted process, and cannot be accomplished easily through IMF pressure (see Calomiris 1998a).

very short notice. Thus current IMF assistance is a non-starter, both from the standpoint of limiting moral hazard problems and reducing the risks of liquidity crises.

We can do much better. Public policy cannot eliminate unavoidable shocks to the financial system. But thoughtful policy can reduce the five avoidable risks listed above, which magnify the costs of exogenous shocks that buffet banking systems and government finances.

III. Principles on Which to Build A Global Financial System

In light of Section II's discussion, *the central two-fold objective of policy is to avoid moral-hazard problems that give rise to imprudent banking practices while also protecting against the four "liquidity" problems that can magnify fundamental shocks.* A careless approach to providing liquidity assistance results in excessive and counterproductive assistance – a tendency to “throw money” at fundamental problems, which aggravates problems of imprudent banking and encourages unwise fiscal, monetary and debt management policies.

Finding the right balance between liquidity assistance and market discipline is the crux of the policy problem. A financial system safety net will not achieve that balance by making it impossible for banks to fail or for exchange rates to collapse. A system that would eliminate the possibility of collapse would also encourage poor management of private and public affairs. Banks should sometimes fail, exchange rates should sometimes depreciate, and governments should sometimes have trouble rolling over their debts.

While finding the appropriate balance requires care, I will argue that constructing a balanced safety net does not pose an intractable economic dilemma. It is not the case that policy makers confront an inevitable dismal tradeoff between higher incentive costs from the safety net and greater benefits from safety net protection against liquidity crises. It is possible to capture the benefits of legitimate “liquidity insurance” without suffering the costs of moral hazard.

How can financial system safety nets provide systemic insurance against illiquidity without engendering moral hazard? To achieve that goal credible ex ante rules must be devised that properly allocate ex post losses to private agents, local governments, and international agencies. *A global financial safety net, therefore, must define more than the IMF's lending policy, it must define the "tranches of risk" that are credibly assumed by parties other than the IMF, as well as the risks the IMF assumes.*

This goal is not new. In fact, it underlay Walter Bagehot's (1873) classic policy prescriptions for domestic central banking: to lend freely at a penalty rate on good collateral. Bagehot argued an elastic and immediate supply of liquidity was essential to an effectively structured lender of last resort, and that appropriate loss sharing rules in the form of collateral requirements and penalty interest rates would discourage abuse of the safety net.

Successful lenders of last resort historically have had in common an ability to set credible rules for defining the sharing of risk that minimize moral hazard while maximizing the ability of the system to provide liquidity during crises. In the United States prior to the Civil War, three states (Indiana, Ohio, and Iowa) successfully operated mutual insurance systems for member banks, which revolved around that principle (Calomiris 1989, 1990, 1993). These were imitated by the New York Clearing House, and by other private clearing houses (Cannon 1910, Gorton 1985). Member banks were constrained by rules and credible monitoring arrangements that limited the riskiness of their debts. Insolvent banks were ejected from coalitions that provided liquidity protection for solvent banks. Enforceable rules requiring the pooling of risks during crises to solve liquidity problems ensured sufficient collective protection. These systems provide examples worthy of imitation today. All successful historical safety net systems revolved around credible arrangements for limiting moral hazard by clearly defining how losses incurred by members would be allocated.

Defining the allocation of risk for the global safety net requires a segmentation of risk into three tranches: the private tranche (exposures to loss incurred by private claimants of individual financial institutions), the domestic government tranche (exposures to loss assumed by local government bank safety nets, and hence, local taxpayers), and the IMF tranche (exposures to loss assumed by the IMF). The other key design feature of the global safety net is determining how the IMF's financial positions are financed (how risks taken by the IMF will be passed on to other parties).

The role of financial system regulations, which include IMF membership criteria and the rules for IMF lending, is to clearly define when and how the IMF lends, and how losses are allocated within the financial system to maximize the effectiveness of protection against illiquidity, while minimizing the moral-hazard costs of protection. To be effective, those rules not only have to make economic sense, but must be *transparent* and *credible*. In other words, the rules governing the global safety net have to qualify not only as economically sensible, but also as politically robust.

IV. A New Institutional Structure for Credible Loss Sharing

Without a credible "first tranche" of private loss, moral hazard will plague any attempt to provide liquidity, either from domestic governments or the IMF. What is needed is a set of transparently credible rules that impose a margin of private loss on bank claimants, which limits the exposure of taxpayers to bailout costs *ex post*, and in so doing, limits banks' willingness to undertake risks *ex ante*. Putting those safeguards into place should be a requirement of membership in the IMF. Members would then be eligible for IMF liquidity protection – loans from the IMF that are specifically designed to resolve liquidity problems, not to bail out insolvent banks.

By setting these clear, credible criteria for IMF membership, and devising rules for IMF lending that guard against liquidity problems without providing bailouts (that is, without absorbing bank solvency risks), the IMF and its loan programs would help to stabilize global financial markets. What sorts of rules would work to accomplish these objectives? The rules divide into three types: (1) domestic regulations required as a condition for IMF membership, (2) rules governing IMF lending to members, and (3) rules defining the way IMF loans are financed.

Credible Bank Regulation: Subordinated Debt, Liquidity, Insurance, and Free Entry

The bank regulatory requirements that should be mandatory for IMF members include four components: (1) capital requirements (including, in particular, a subordinated debt requirement as part of the capital requirement), (2) “reserve” requirements (minimum ratios of assets in cash and in “global securities”), (3) the explicit insurance of bank deposits, and (4) “free banking” (unlimited chartering of banks conforming to common regulatory standards, and unlimited investment by foreigners in banks, conforming to the same standards as domestic investors).

A key function of capital regulations is to provide a credible first tranche of private loss by ensuring that uninsured bank claimants (stockholders and subordinated debt holders) will lose wealth when banks suffer adverse shocks to the values of their risky assets. Minimum cash reserve ratio requirements serve a similar function (effectively ensuring a margin of protection for insured debt), and also enhance bank liquidity. A minimum amount of “global securities” – domestic and foreign marketable instruments – adds to the transparency of bank balance sheets and helps to diversify bank risk. Thus restrictions on asset holdings and on the composition of bank liabilities provide crucial buffers that ensure the privatization of bank losses, and thus make it easier for local governments and the IMF to provide liquidity protection cost effectively.

These regulatory requirements are a first line of defense that reduces the risk of bank failure, the potential for costly bank bailouts, and the liquidity risk that banks face.

Free entry into banking by foreign investors provides an important source of capital (to meet regulatory capital requirements). It also helps to diversify both the ownership base of banks and their asset portfolios (since foreign banks naturally hold more globally diverse portfolios), which makes banks more resilient in the face of adverse domestic shocks. Finally, foreign banks provide important competitive pressure that improves the quality of domestic bank management (Demirguc-Kunt and Levine 1998, Kane 1998).

Because of the importance of *credibility* and *transparency*, bank capital and portfolio regulations must be designed carefully. Credibility and transparency require a reliance on *market discipline* to enforce bank regulations (Keehn 1989, Wall 1989, Flannery 1998, Berger et al. 1998). In capital standards, the devil is in the details. A key flaw in the Basle capital requirements to date has been their emphasis on government supervisory standards when measuring capital. Book value equity is measured by supervisors who often have little skill, and even less incentive, to report bank asset losses accurately. Second, the Basle standards imply an arbitrary link between their measure of asset risk and book value capital, while the true asset risk of the bank can differ from the Basle measure of "risk-weighted assets." The mandated 8% capital requirement is not sufficient if banks assume very high asset risk, and the measurement of risk-weighted assets under the Basle standards leaves much room for bank manipulation of risk.

The Basle capital requirements can be substantially improved by incorporating into the Basle framework a minimal (say, 2%) subordinated debt requirement, as a means to ensure a credible relationship between capital and asset risk via market discipline. This approach was first proposed by the Chicago Federal Reserve Bank (Keehn 1989) and the Atlanta Federal Reserve Bank (Wall 1989) in response to the U.S. S&L and banking crises of the 1980s. The approach outlined here is a modified version of the Chicago Fed plan.

As part of the existing 8% tier 1 and tier 2 Basle capital requirement, banks would be required to issue at least 2% of risk-weighted assets (as defined under the Basle standards) in the form of a new class of subordinated debt. That debt would be subordinated to (that is, junior to) other bank debts. Unlike equity holders, subordinated debt holders do not benefit from “asset substitution” (increasing asset risk in order to exploit the implicit put option value of deposit insurance). Thus subordinated debt holders would be a conservative force for restricting bank risk taking, and protecting relatively senior bank deposits. Because subordinated debt is easy to measure (unlike the book value of equity), a minimal subordinated debt requirement avoids the problems of relying on domestic bank supervisors to measure compliance with equity standards. Furthermore, the yields on the debt are observable, which provides a continuous and transparent market opinion about bank risk.

To be successful, however, subordinated debt issues should be restricted in several ways. To ensure that it serves its role as a source of market discipline, subordinated debt must be held at arms length, and therefore, cannot be held by any willing purchaser. I recommend that the debt be non-tradable, and held only by a group of approved and registered holders (which would differ for each issuer). Each bank’s group of qualified holders would be a subset of, say, 50 institutions pre-approved by both the domestic regulator and the IMF as reputable *foreign* financial institutions with no other financial transactions with the issuing bank. Placing subordinated debt in the hands of well-diversified foreign institutions also helps to ensure that subordinated debt holders will not be bailed out, which is necessary for subordinated debt to serve as a source of market discipline.

It is also essential that a subordinated debt requirement specify how increased bank risk (visible in the yields of subordinated debt) would be penalized by bank regulators. Perhaps the simplest procedure is to set a maximum yield spread over comparable maturity treasury instruments (say, 5%) and require that subordinated debt not be issued at yields in excess of that

maximum spread. Banks that fail to roll over their debts at or below the mandated yield spreads eventually would have to contract their risk-weighted assets to remain in compliance with the 2% subordinated debt requirement.

The maturity of subordinated debt should reflect the right balance between enhancing market discipline (by requiring that the debt be rolled over sufficiently frequently) and limiting the amount of rollover that can occur over short intervals (to avoid the risk of sudden illiquidity). For example, requiring that subordinated debt be issued in the form of 24 overlapping generations of two-year debt – one-twenty-fourth of which mature each month – would be a reasonable way to achieve discipline without leaving banks vulnerable to liquidity crises. That arrangement would limit the rate of decline of subordinated debt to roughly 4% per month. Given the required minimum ratio of subordinated debt to risk-weighted assets, that would also limit the maximum monthly decline of risk weighted assets mandated by the requirement to 4%.

The subordinated debt requirement is designed to encourage prudent behavior by banks *ex ante* (since, on the margin, they are always subject to market discipline), and to encourage appropriate adjustment of asset risk to adverse shocks *ex post*. Unlike many banks currently, banks subject to a subordinated debt requirement would not purposely increase risk in the wake of losses. Instead, banks would have strong incentives to reduce asset risk and cut dividends (or find alternative ways to raise capital) in the face of losses, much as banks did before safety nets changed their incentives to react appropriately to shocks.

Because subordinated debt holders bear risks that come from both on-balance sheet and off-balance sheet asset risks, they discourage attempts by banks to avoid regulatory capital standards by placing transactions off banks' balance sheets. Subordinated debt holders also encourage banks to develop clear reporting procedures and effective tools for risk management.

A banking system governed by a credibly uninsured subordinated debt requirement is self-equilibrating. Banks may have difficulty rolling over subordinated debt in response to

severe shocks (given the proposed yield spread limit on subordinated debt). The failure to roll over subordinated debt mandates a contraction of risk weighted assets (e.g., a contraction of loans). That contraction itself reduces asset risk, eventually allowing the market spread on subordinated debt to fall within the prescribed limits of the regulation.

Restrictions on bank asset composition are also desirable, both to promote liquidity for the system as a whole, and to provide a transparent safeguard against bank default risk in addition to requiring subordinated debt. Argentina's high reserve requirements were extremely useful in helping Argentine banks to weather the tequila crisis in early 1995. Argentina has also shown creativity in the way it allows banks to meet those reserve requirements. Banks are encouraged to hold up to 50% of their reserves offshore in private commercial banks, and may hold much of their reserves in the form of standby arrangements with foreign commercial banks (for which the Argentine banks pay a fee) rather than in the form of actual dollar deposits. Like a subordinated debt requirement (also a feature of the Argentine system) this arrangement rewards low-risk banks who are able to pay low fees for their standbys.

I propose a similar requirement as part of the mandatory minimum reserve requirement for banks – a 20% reserve requirement relative to bank debt, with half to be held offshore (partly to protect against government confiscation of bank resources). Banks can satisfy the 10% offshore reserve requirement by maintaining standbys in that amount with any AA rated international bank.

The "global securities" requirement would also be set at 20% of deposits. At least half of that securities portfolio must consist of foreign hard-currency-denominated (meaning denominated in dollars, yen, or euros) debt securities placed and priced in international public markets, with yield spreads at the date of purchase of less than 3% over the comparable maturity treasury instrument (of either the U.S., German, or Japanese governments denominated in their respective currencies). The other half of the required securities portfolio could consist of any

publicly traded debts (including local government and private bonds), so long as their yield spreads were less than 5% over comparable treasury securities at the date of purchase. The securities portfolio requirement serves the dual function of encouraging global diversification and providing an additional liquidity buffer for banks.

The final regulatory requirement is deposit insurance. All bank debt that is not included in subordinated debt should be explicitly insured by the local government. Doing so would eliminate the possibility of banking panics, either due to asymmetric-information problems (Section II's "Problem 2"), or multiple equilibria (Section II's "Problem 3).

The argument for government deposit insurance is primarily a political, rather than an economic, one. Arguably, private methods of protecting against banking panics may be superior to government deposit insurance. But since governments tend to be incapable of credibly committing not to provide insurance ex post, it is not possible to construct effective private systems.

Explicit government insurance is superior to implicit government insurance. While there are some theoretical and empirical arguments in favor of "constructive ambiguity" in deposit insurance that might favor implicit over explicit insurance, those arguments are not convincing. Implicit insurance does not provide as much protection against runs. Also, making insurance explicit allows governments to charge insurance premia for the protection, and helps government actions to conform better to stated government policy (surely a desirable principle in a world where reputation building has value).

In the presence of the other prudential regulations (the subordinated debt requirement and the portfolio requirements), deposit insurance should not be very costly. In a world where

market discipline constrains bank behavior, there are likely to be few bank failures, and small losses from insuring banks.⁸

These four regulations – subordinated debt requirements, minimum reserve and securities ratios, free banking, and deposit insurance are a *minimal standard*, which should be required as a condition for membership in the IMF. I would recommend that countries go beyond that minimal standard when devising their bank regulations, particularly in the areas of insider lending limitations, barriers between commerce and banking, regulations of market risk exposures, and more realistic definitions of risk weighted assets than those found in the Basle standards. For example, risk weighted assets should be defined in a way that is more sensitive to real risk than are the Basle standards. In Argentina, risk weights on loans are determined by the interest rate on the loan, and can be as much as 600% of the book value of the loan for very high interest loans.

While it is desirable to improve bank regulation by including requirements in addition to the four minimal standards, some regulatory standards should vary across countries. Furthermore, a subordinated debt requirement, and the market discipline it brings, arguably subsumes other regulatory standards, and makes additional measures less important. If banks have to satisfy market discipline, markets will informally “impose” safeguards against market risks, insider lending, and other potential problems, since banks will have to satisfy market perceptions about their overall risk profile.

By keeping the list of required regulations short and simple it will be easier for the IMF to credibly enforce the rules it sets (see Section V below). By vigorously enforcing these rules (e.g., ejecting countries from the IMF if they fail to enforce minimal requirements or if they bail out subordinated debt holders when banks experience losses) the IMF will return reason and

⁸ For historical evidence supporting this view, see Calomiris (1989, 1990, 1993).

balance to international banking, and prevent its own protection from being a source of financial instability.

A reformed global banking system will also reduce the riskiness of emerging market securities. Banking systems as a rule have been run inefficiently in emerging market countries, and banks often pursue opportunities more on the basis of insiders' interests than a proper valuation of loans. For that reason there are many viable projects that should be financed by banks rather than via securities issues (that is, projects that require ongoing monitoring and discipline by banks through concentrated local holdings of claims on borrowing firms), but are pushed into securities markets for lack of a local means of bank finance. In a properly functioning global banking system, those projects would be financed by banks, and banks would be more internationally diversified to permit them to deal with the risks that arise from those risky projects.

The four core banking regulations would ensure a properly functioning global banking system. Free entry, competition, and credible market discipline would encourage proper diversification, prudent management of risk, and an efficient allocation of bank capital. It would also make it possible for the IMF to do the job it was chartered to do – providing liquidity insurance – without the destabilizing side effects of moral hazard.

Other IMF Membership Requirements

Thus far I have focused on the structure of banking systems, and on proposed mandatory bank regulatory requirements for IMF membership. That emphasis is appropriate given the important role banking system losses and moral hazard have played in exchange rate collapses and IMF-sponsored bailouts. But there is more to the global financial architecture than the regulations governing banks.

In addition to the mandatory bank regulations, the IMF should impose restrictions on government recapitalizations of banks (or implicit subsidization of banks through a variety of other means), and set minimal standards for government debt maturity structure, and for a prudent fixed exchange rate policy. It is appropriate for the IMF to set standards for debt management and exchange rate policy, as well as banking practices, since the IMF will provide liquidity assistance to buttress fixed exchange rates or to facilitate debt rollover.

The main purpose of restrictions on government assistance to banks is to ensure that the market discipline brought by the subordinated debt requirement is not undermined by government assistance through channels other than deposit insurance. A detailed discussion of the limits on recapitalization policy are described below under the rubrics of “transition problems” and “large macroeconomic shocks.”

As in the case of mandatory banking regulations, the other rules should be as few and as simple as possible, and should be designed to make compliance with them easily observable to the IMF and to third parties. Countries should face a ceiling on the proportion of short-term sovereign debt they issue. For example, members could be required to maintain ratios of short-term debt that were no more than 25% of the previous year’s export earnings, and no more than 25% of total sovereign debt.

Countries should not be required to maintain fixed exchange rates, but if a country does peg its exchange rate, then it should be required to meet two additional requirements. First, it should have to maintain a minimum ratio of reserves to high-powered money. Economic theory has little to say about the “right” reserve ratio for a central bank to maintain, except that the right minimal proportion of reserves depends on the confidence the market places in fiscal and monetary policy. Countries operating currency boards maintain ratios of nearly 100%, but there are many examples of countries that have been able to maintain exchange rates for long periods of time with much smaller reserve ratios (the United States prior to 1933, for example). Rather

than requiring everyone to hold 100% reserves, or trying to set standards for reserves that depend on hard-to-observe fiscal and monetary fundamentals, I propose requiring a low minimal reserve ratio (25%), and encouraging countries to properly manage their reserve policies by making it clear (by enacting the aforementioned reforms) that the IMF will provide support only to resolve bona fide liquidity problems.

Second, member countries with fixed exchange rates should be required to permit banks to offer deposits denominated in both domestic and foreign currency. Doing so (as Argentina did when it adopted its currency board) helps to insulate banks from the risk of devaluation; funds can flow out of the domestic currency without flowing out of the banks. Bank deposit accounts in both currencies also provide continuous market information about the risk of devaluation. Domingo Cavallo, the Argentine finance minister, has argued that observing interest rates in both currencies gives domestic policy makers a valuable signal of market perceptions of government policies that bear on the maintenance of the exchange rate (Cavallo 1999).

Observing interest rate differentials prior to a speculative attack also gives the IMF valuable information which may be useful in judging the causes behind a speculative attack. If the perceived risk of devaluation (reflected in the interest rate differential) rises gradually over a matter of months, while the government makes little effort to diffuse market concerns through increases in reserves or fiscal reforms, then it is hard to blame the speculative attack on multiple equilibria or irrationality. In some cases, as discussed below, the IMF might wish to withdraw its support for an exchange peg that so obviously ignores market concerns over long-term fundamentals.

I do not include any membership requirements with respect to capital controls or devaluation policy. It would be too difficult to devise general rules to cover these areas; moreover, the appropriate policies with respect to capital controls and the appropriate circumstances for a devaluation should be left to governments to decide for themselves.

Many economists have rightly argued that the proper alternative to bailouts is a functioning bankruptcy code that can distribute loss according to clearly specified rules. I agree with that point of view, but do not attach it here as a condition for IMF membership for two reasons. First, it would be hard to specify the terms of that bankruptcy code in an uncontroversial way (the Swedish code is my personal favorite). Second, it is probably not necessary to add bankruptcy reform as an additional requirement of IMF membership. A banking system that is responsive to market discipline will be a powerful force for creating bankruptcy reform endogenously. The same can be said for the endogenous reform of commercial law, collateral registration procedures, and accounting standards.

I also omit any discussion of fiscal policy targets. It is too hard to design useful, credible, uniform rules about fiscal policy – for example, off-balance sheet exposures are often crucial to long-term fiscal health and are very hard to measure.

IMF Goals, Lending Policy, and Sources of Funds

Thus far, I have outlined the criteria for membership in the newly constituted IMF. IMF membership depends on satisfying four bank regulatory requirements (free banking, market-based capital standards, reserve and securities requirements, and deposit insurance), and three additional policy requirements (limits on short-term government debt, and two additional rules for fixed-exchange-rate economies: a minimal central bank reserve requirement, and the requirement that banks be permitted to offer accounts denominated in both domestic and foreign currency). Countries that do not satisfy these seven requirements would be ejected from the IMF; there would be no room for discretion in bending those rules.

Now I turn to the question of what function the IMF would serve, and how it would achieve its objectives. The goal of the IMF would be to mitigate problems of illiquidity that may arise when a country is pegging its exchange rate. Note that most of the problems listed in

Section II are addressed by IMF membership requirements. Problems associated with bailouts, and banking panics resulting either from asymmetric information about bank loan portfolios or multiple equilibria, are addressed by the requirements that limit abuse of the safety net and by mandatory insurance of bank deposits. Problem 5 (government debt rollover risk) is addressed by limiting short-term sovereign debt issues, which also prevents governments from free riding on IMF insurance against liquidity risk.

The systemic risk that remains to be addressed is the possibility that central bank illiquidity could produce a speculative attack on the exchange rate peg caused either by multiple exchange rate equilibria or irrational speculators, rather than by fundamental fiscal and monetary policy weakness. Preventing such attacks was the clear intent of the IMF's founders who sought to provide a safeguard against unwarranted currency depreciation that might result from sudden pressures on the balance of payments.

To provide liquidity protection I propose that the IMF operate a discount window to lend to central banks. The proposed discount window lending policy is based on Bagehot's (1873) rule: lend freely during crises on bona fide collateral at a penalty rate. By penalty rate I mean a rate higher than the preexisting market clearing rate, but not as high as the rate would be if no protection were offered. Bona fide collateral is defined as any government debt instrument held by the central bank that is priced in the market, so long as at least 25% of the amount of the collateral offered is in the form of *foreign* government securities.

To be concrete, a government that is a member in good standing would be able to have its central bank borrow dollars from the IMF for a short period of time (say, 90 days) if it posts 125% of the borrowed amount in securities. Collateral securities would be valued using prices from one week prior to the request. The borrowing interest rate would be two percentage points above the value-weighted yield on that bundle of securities one week before the request. Thus, since the bulk of collateral will consist of the borrowing countries' sovereign debt, by setting the

interest rate at a fixed amount above the lagged yield on the sovereign debt, IMF lending can successfully provide an elastic supply of liquidity, and can short-circuit a “bad equilibrium” in which self-fulfilling expectations produce a collapse in the value of government debt.

To ensure that bank regulatory protections remain in place, central banks would not be permitted to post as collateral securities they borrowed or purchased from their local commercial banks. IMF loans should not be rolled over for an additional 90 days without some form of special approval (say, a large supernumerary majority of IMF members voting in favor of extending the loan).

To avoid abuse of IMF protection, it may be desirable for the IMF to retain the option to turn down a request if it could provide evidence that the fundamentals driving the value of the collateral securities had deteriorated precipitously in the week before the request. For example, if yield spreads between bank accounts denominated in local and foreign currency had widened dramatically in response to political events that weakened fundamentals, then the IMF might reasonably refuse assistance. Russia’s experience during August 1998 is an example of such a precipitous fundamental deterioration.

The 125% collateralization, along with the requirement that 25% of the collateral take the form of government securities issued by foreign governments, and – perhaps most importantly – the banking reforms that limit member government fiscal exposure to bank losses all serve to limit the default risk suffered by the IMF and encourage central banks to maintain foreign government securities holdings in addition to cash reserves, which bolsters the credibility of the exchange rate. The collateral requirements, the short duration of the loan, and the penalty interest rate together limit the size of the credit subsidy received by the borrowing central bank, which discourages frivolous use of the IMF discount window. Countries that default on IMF loans should be barred from borrowing for some time (say, 5 years), and should not be permitted to re-enter as members until they have repaid their debts in full (including accrued interest).

The new IMF discount window would provide significant protection against short-term liquidity problems. Governments would be able to convert large amounts of their bonds into cash on short notice, provided that they also maintained sufficiently large holdings of foreign government securities to meet the 25% collateral requirement. Assistance would be available on short notice, and no conditions (other than membership) would be attached to it.

Of course, this discount window would not protect a country against persistent balance of payments outflows, and it should not attempt to do so. Persistent outflows, which would lower central bank holdings of hard currency and hard-currency-denominated securities, would be a sure sign of fundamental weakness. IMF lending should not try to lend to prop up unsustainable currency pegs. It should lend freely, however, to ensure that sudden “self-fulfilling” speculation does not undermine an otherwise sustainable peg.

It is worth emphasizing that a Bagehotian lender of last resort cannot provide much protection against banking panics that are caused by asymmetric information about bank loan quality, since lending against securities collateral makes the value of deposits more, rather than less, susceptible to declines in the value of bank loans.⁹ That is why it is necessary to combine a Bagehotian lender of last resort (like the reformed IMF discount window envisioned here) with credible protection against asymmetric-information problems in the banking sector. Deposit insurance eliminates depositors’ incentives to run banks when they become concerned about the value of loan portfolios. Credible market discipline (through a subordinated debt requirement and asset portfolio requirements) reduces the incidence of such asymmetric-information problems and provides strong incentives for banks to control loan risk, which eases the funding burden of providing deposit insurance protection, and fosters deposit insurance credibility. Thus the IMF’s ability to provide liquidity protection against speculative attacks on exchange rates will only be effective if combined with those other regulatory requirements.

How would the IMF finance its lending to central banks? The IMF would borrow cash from the central banks that issue it (in the U.S., Germany, or Japan). IMF borrowings from central banks would be fully collateralized by the government securities of the hard-money country of issue. Those collateral securities would be contributed by all IMF members, and held by the IMF to be used as needed. For example, if the IMF were borrowing dollars from the Fed, it would post 100% collateral in the form of U.S. government securities. IMF members would share the financial burden of supplying that collateral, and therefore would share the risk of the borrowing country defaulting on its IMF loan. IMF lending would not imply an increase in the aggregate supply of hard currencies, since the Fed, the Bank of Japan and the European Central Bank would all be free to sterilize the effects of their loans to the IMF.

Transition Problems

Some of the world is very far from meeting the conditions specified above for IMF membership. How difficult would it be for countries to satisfy the seven membership requirements, and what transitional policies could facilitate that process?

The central bank reserve requirement, the limits on government debt maturity, and the requirement that banks be permitted to offer accounts in domestic and foreign currency would be relatively easy to satisfy. The main difficulty is transforming the banking systems of many countries (including those in some Western European countries, as well as the vast majority of those in developing economies) into competitive, market-oriented systems. The problem is not mainly an economic one; if governments opened their banking systems to foreign entry and imposed the regulations suggested above, efficient banking systems would develop quickly. The problem, however, is the politics of banking – the resistance of entrenched special interests to

⁹ For further discussion, see Calomiris (1994), Calomiris and Mason (1997), and Mason (1997).

reforms that would erode the rents they currently enjoy. The challenge reformers face is to find a way to placate that political opposition.

The resistance to market discipline can be found even in relatively efficient banking systems (like that of the United States), where only recently some of the largest banks have begun to call for subordinated debt requirements to eliminate “too-big-to-fail” protection. Those banks consistently opposed such measures over the past decade, predictably preferring to maintain the implicit subsidy from the taxpayers. But now many of them (and, notably, The Bankers Roundtable, which represents the largest 150 U.S. banks) are calling for reform because they see credible market discipline, and a subordinated debt requirement in particular, as a means of permitting an expansion of bank powers (The Bankers’ Roundtable 1998).

Deregulation is one way of buying support for market discipline, but in many developing economies (where banks already enjoy broad powers, and where bank owners would have great difficulty in meeting market-enforced capital standards), it may be necessary to buy support more overtly through a government-financed recapitalization of existing banks. That recapitalization would make it easier to swallow the pill of market discipline, and if a one-time subsidy would set the stage for credible regulatory reform (on the lines described above), it would be well worth the cost.

Such a recapitalization must be carefully designed, however, so that it is cost effective, and does not undermine market discipline in the future. One approach to providing government subsidization of bank recapitalization without undermining the effectiveness of market discipline is proposed in Calomiris (1998b, 1999). Assistance would take the form of subsidized government purchases of bank preferred stock for a short period (say, five years). Those purchases would occur on a matching basis with arms-length public offerings of new common stock. To qualify banks would have to agree to other provisions, including the suspension of dividend payments on common stock during the period in which the government holds preferred

shares. The one-time recapitalization subsidy is designed automatically to target assistance toward the relatively strong, and to help make subordinated debt requirements feasible.

The World Bank, and other development banks, could help during the transition process in two ways: by providing financial assistance to encourage countries to implement credible market discipline (and thereby qualify for IMF membership), and by offering advice on how to structure complementary institutions and laws (including commercial laws, accounting codes, and bankruptcy laws). Too often World Bank loans have crowded out private lending and removed incentives for countries to adopt the fundamental reforms of property rights on which private lending depends. World Bank loans to China are the clearest example of such misdirected lending. But in some cases the World Bank successfully has targeted its assistance to encourage privatization of financial institutions and the creation of credible market discipline. Its loan subsidies to Argentina to help pay for the privatization of provincial banks are an example. The World Bank and other development banks could help ensure broad based membership in the new IMF by redirecting loan subsidies toward government programs that restructure banking systems to encourage adherence to market discipline.

Large Macroeconomic Shocks

No matter what the stated commitment to market discipline, time inconsistency problems will tempt governments to provide assistance to banks during severe macroeconomic downturns. Banking systems that respond properly to market discipline will necessarily magnify recessions by curtailing the supply of loanable funds when they experience losses on their loan portfolios. Governments will be tempted to relax market discipline to prevent the aggravation of cyclical downturns.

A better approach is to maintain market discipline through the subordinated debt requirement, but subsidize private bank recapitalization (using the preferred stock matching

subsidy described above) to counteract especially severe economic downturns. I am not arguing that bank recapitalization is desirable economically; rather, I am arguing that if government intervention into the banking system is politically inevitable, it is better to intervene to help banks meet the standards of market discipline, rather than simply repealing those standards.

It is also crucial that other forms of bank bailouts be forsworn. In particular, central banks of IMF member countries should not be permitted to operate discount windows that implicitly bail out banks. In the presence of deposit insurance, a private interbank market for reserves, and IMF liquidity assistance there is no need for a domestic discount window to implement monetary policy (Goodfriend and King 1988, Bordo 1990). If central banks insist on operating a discount window, they should be required to restrict potential abuse by employing in their domestic discount window lending the same Bagehotian principles advocated here for the IMF window.

V. The Political Economy of Financial Reform

Politics poses challenges for any attempt to bring economic reason and market discipline to bear on the regulation of the global financial system. Politicians and regulators are jealous of their power, tend to prefer systems that rely on discretion rather than rules, and are more comfortable managing cryptic decision making processes (the proverbial smoke-filled rooms in which IMF policies are determined today) than engaging opponents openly in public fora.

Thus the reforms I advocate – the abolition of the Exchange Stabilization Fund and a sweeping reform of the IMF – will likely not be very welcome in Washington or in the treasury departments or finance ministries of many nations. That does not mean that reform is impossible, but it certainly will be an uphill battle.

Consider, for example, the problem this proposal poses for the U.S. Treasury Department. It has frequently used the Exchange Stabilization Fund (Schwartz 1997, 1998) and

the IMF as means to provide foreign aid under the guise of liquidity assistance. These mechanisms have the advantage that they avoid the unpleasant and inconvenient requirement of seeking Congressional approval for such aid. The recent IMF assistance programs for Mexico in 1994-1995, and for Russia in 1998, were among the most unseemly recent examples of pushiness by the U.S. administration.

The political obstacles to rationalizing the current system are formidable. But the distortions in decision making created by those obstacles also are motivating a redoubling of effort in some quarters to reform the system. Simplifying the IMF's role and decision making process by setting simple, meaningful, and publicly observable membership criteria, and placing strict bounds on how and when the IMF provides assistance, would be a welcome means of reducing politically motivated distortions from the process of providing necessary liquidity assistance. These reforms would also remove the IMF from the uncomfortable position of dictating the details of macroeconomic and microeconomic policy to its member nations (see Feldstein 1998). Aside from IMF membership criteria, according to my proposal, no conditions would be attached to IMF liquidity assistance.

The prospect of a world where the power to allocate risk would be less abused, and where political puppeteers would find the strings of the financial system beyond their reach, fires the imagination and invites the effort to see such a project through. The recent failings of IMF-U.S. Treasury policies in Mexico, Asia, and Russia, and the chorus of criticism facing the IMF and the Treasury, provide a window of opportunity for reform. Congress is now poised – for the first time in U.S. history – to thoroughly evaluate the process of decision making within the IMF.

Yet, a deeper question remains unanswered. Assuming that something like this plan did succeed in being passed, and that it would perform as advertised, would the policies be politically credible? The key to credibility is the willingness to enforce market discipline in the banking system – which ensures that first-tranche losses from financial collapse are borne

privately by subordinated debt holders. Will member governments do so, and will the IMF be willing to eject members that fail to impose those losses?

It is not possible to predict political processes very exactly. At the same time, the subordinated debt plan has been designed to maximize the probability of political survival. Subordinated debt is a very thin sliver of private loss (2% of risk-weighted assets), and would be held (preferably, outside of the country of issue) by large, diversified international financial institutions for whom that sliver of loss should not be devastating. The vast majority of claims on banks are protected from loss by deposit insurance. Subordinated debt also is specifically earmarked ex ante for loss, and governments that do not bail out subordinated debt holders can point to IMF membership requirements that prohibit bailing them out. Furthermore, allowing for stock recapitalization during the most severe macroeconomic crises removes one of the main threats that might otherwise relax market discipline.

That said, it must be admitted that no economic plan is foolproof, and that much will depend on how the IMF reacts to attempts by members to undermine market discipline. The more economists and policy makers worry about this issue in advance, the better.

Other details of the plan must also be addressed to make it more politically survivable. Non-bank banks (intermediaries that operate as banks, but do not call themselves banks) and similar evasions of the spirit of the membership requirements must be guarded against. Small banks, who will find it hard to access global subordinated debt markets, and who may possess the political power to block regulatory reform, must be compensated as well. The easiest way to proceed might be to allow small banks (defined, say, as banks with less than \$1 billion in assets) to issue their subordinated debt in the form of interbank deposits held by large local banks.

A final political obstacle to reform might be called the "one world syndrome." I propose that the IMF charter prohibit loans to non-member countries. Because membership criteria will not be met by everyone, that implies that some countries will be excluded (by their own actions)

from IMF protection. For some, it will be awkward to devise a global safety net and an international lender that excludes countries from membership and protection. But this is necessary for two reasons.

First, restricting access to the IMF helps taxpayers worldwide to limit their own governments' abuse of IMF lending in support of bailouts that transfer resources to influential oligarchs. Policy makers should recognize that without the core institutions of a successful market economy – clear and credible private property rights, competition, and adherence to market discipline to ensure appropriate incentives toward risk taking – quasi privatization of banks and liberalization of capital flows builds a house of cards that will inevitably topple. It is counterproductive for the IMF to assist such economies or to encourage them to enter global capital markets. Helping oligarchs to preserve their power and status at the expense of local taxpayers only makes it harder for economies to build the foundations of successful liberalization.

Second, IMF membership rules are necessary to prevent member countries from abusing the protection offered by other members. As in all successful private and public arrangements that provide liquidity protection, regulations are necessary to prevent free riding. For a mutually beneficial liquidity insurance system to work, membership criteria must be meaningful and membership must be valuable, otherwise the ability to free ride will undermine the willingness to reform domestic banking systems and other policies.

Of course, the U.S. government, and others, would still be able to provide foreign aid to non-member countries for strategic or humanitarian reasons. But that assistance would not flow through the IMF or the ESF.

VI. Conclusion

A global financial architecture can be defined as the set of institutions, contracts, and incentives that determine how financial risks are taken and how losses and gains from taking those risks are allocated. This paper offers an ecumenical proposal for reforming that architecture. As a working assumption, I have assumed that there is some truth in virtually every argument that is made about the problems facing the global financial system, and have argued that it is possible to design a global safety net that properly allocates risk, eliminates (or at least significantly reduces) problems of moral hazard, and still provides protection against illiquidity problems. I have argued that the imagined system would be simple to operate, and would be more credible politically (more “time consistent”) than many alternatives. It would also permit the IMF to provide elastic liquidity assistance to help members defend their exchange rates from unwarranted attacks.

The proposed changes would also avoid IMF micro-management in the midst of crises, which has been criticized as an abuse of power (Feldstein 1998), an ineffectual means of financial system reform, and counterproductive to the provision of rapid liquidity assistance. Focusing the IMF’s mission on true liquidity assistance would transform it from an agency that balances political interests to one that solves well defined economic problems, which would do much to rebuild the shattered reputation of the Fund.

Others, no doubt, will find ways to improve this proposal. By being concrete – drafting “blueprints” rather than just outlining broad principles – I do not mean to suggest that mine is the only imaginable way to proceed, but rather I hope to have stimulated *specific* discussions, and to have pointed to the need to combine economic logic with political pragmatism when designing the rules that govern the global financial system.

Offering a plan for reform does not constitute an unconditional argument for keeping the IMF. Schwartz (1998) is right, in my view, to argue that in its current form the IMF does more

harm than good. Abolishing the IMF may be the right policy to pursue if it turns out that the path to reform, including credible IMF enforcement of meaningful membership criteria that limit safety net abuse, is blocked by those with vested interests in preserving the status quo.

Table 1

Elements of the Reform Plan**Membership Criteria for the IMF****Bank regulations:**

- Basle standards (but without restrictions on subordinated debt/tier 2 capital)
- 2% subordinated debt requirement (with rules on maturities, holders, and yields)
- 20% cash reserve requirement
- 20% “global securities” requirement
- Free entry by domestic and foreign investors into banking
- Bank recapitalizations are permitted, but strict guidelines must be met
(and must follow pre-established rules, as in preferred stock matching program)
- Domestic lenders of last resort avoid bank bailouts by following Bagehotian principles

Other membership criteria:

- Limits on short-term government securities issues
- If fixed exchange rate, 25% minimum central bank reserve requirement
- If fixed exchange rate, banks offer accounts in domestic and foreign currencies

IMF Lending Rules

- Loans are provided only to members in good standing (those following above rules)
- If a member defaults, it may not borrow for 5 years, and then only after arrears paid
- Loans are for 90 days
- Supernumerary majority of members required to roll over loans for another 90 days
- Loans are collateralized by 125% of value of loan in government securities
- 25% of the 125% collateral must be in foreign government securities
- The interest rate on the loan is set at 2% above the value-weighted yield on the collateral observed one week prior to the loan request
- The IMF reserves the right to refuse a loan to a member
- No conditions are attached to IMF loans

IMF Funding

- The IMF borrows from the discount windows of the Fed and other central banks
- IMF borrowings from central banks are 100% collateralized by government securities issued by the government of the lending central bank
- Government securities that serve as collateral for IMF borrowings from central banks are lent to the IMF by its member countries

Other Emergency Lending

- IMF, World Bank, IDB, and others would make no other emergency lending available
- The Exchange Stabilization Fund would be abolished

References

- Bagehot, Walter (1873). *Lombard Street*. London: Henry S. King.
- The Bankers Roundtable (1998). *Market-Incentive Regulation and Supervision: A Paradigm for the Future* (April). Washington D.C.: The Bankers Roundtable.
- Berger, Allen N., Sally M. Davies, and Mark J. Flannery (1998). "Comparing Market and Regulatory Assessments of Bank Performance: Who Knows What When?" Working Paper, Federal Reserve Board (March).
- Bordo, Michael D. (1985). "The Impact and International Transmission of Financial Crises," *Rivista di Storia Economica* II.
- Bordo, Michael D. (1990). "The Lender of Last Resort: Alternative Views and Historical Experience," *Review* (January/February): 18-29, Federal Reserve Bank of Richmond.
- Brown, Stephen J., William N. Goetzmann, and James Park (1998). "Hedge Funds and the Asian Currency Crisis of 1997," NBER Working Paper No. 6427 (February).
- Calomiris, Charles W. (1989). "Deposit Insurance: Lessons from the Record," *Economic Perspectives* (May), Federal Reserve Bank of Chicago: 10-30.
- Calomiris, Charles W. (1990). "Is Deposit Insurance Necessary? A Historical Perspective," *Journal of Economic History* 50 (June): 283-295.
- Calomiris, Charles W. (1991). "The Motives of U.S. Debt Management Policy, 1790-1880: Efficient Discrimination and Time Consistency," *Research in Economic History* 13: 67-105.
- Calomiris, Charles W. (1993). "Regulation, Industrial Structure, and Instability in U.S. Banking: An Historical Perspective," pp. 19-116, in M. Klausner and L.J. White (eds.), *Structural Change in Banking*. Homewood, IL: Business One-Irwin.

- Calomiris, Charles W. (1994). "Is the Discount Window Necessary? A Penn Central Perspective," *Review* 76 (May/June), Federal Reserve Bank of St. Louis: 31-56.
- Calomiris, Charles W. (1997). *The Postmodern Bank Safety Net*. Washington, D.C.: AEI Press.
- Calomiris, Charles W. (1998a). "The IMF's Imprudent Role As Lender of Last Resort," *The Cato Journal* 17 (Winter): 275-294.
- Calomiris, Charles W. (1998b). "Historical and Contemporary Perspectives on Banking Instability, Deposit Insurance, and Prudential Regulation and Supervision," Working Paper, Columbia Business School.
- Calomiris, Charles W. (1999). "Building an Incentive-Compatible Safety Net: Special Problems for Developing Countries," *Journal of Banking and Finance*, forthcoming.
- Calomiris, Charles W., and Gary Gorton (1991). "The Origins of Banking Panics: Models, Facts, and Bank Regulation," pp. 109-173, in R. Glenn Hubbard (ed.), *Financial Markets and Financial Crises*. Chicago: University of Chicago Press.
- Calomiris, Charles W., and Joseph R. Mason (1997). "Contagion and Bank Failures During the Great Depression: The June 1932 Chicago Banking Panic," *American Economic Review* 87 (December): 863-883.
- Calomiris, Charles W., and Larry Schweikart (1991). "The Panic of 1857: Origins, Transmission, and Containment," *Journal of Economic History* 51 (December): 807-834.
- Calomiris, Charles W., and Berry Wilson (1998). "Bank Capital and Portfolio Management: The 1930s Capital Crunch and Scramble to Shed Risk," NBER Working Paper No. 6649 (July).
- Cannon, James G. (1910). *Clearing Houses*. National Monetary Commission. 61st Congress., 2nd Session. Senate Doc. 491. Washington D.C.: U.S. Government Printing Office.
- Cavallo, Domingo (1999). "Comment," *Journal of Banking and Finance*, forthcoming.
- Caprio, Gerard, Jr., and Daniela Klingebiel (1996a). "Bank Insolvency: Bad Luck, Bad Policy, or

- Bank Banking?" in M. Bruno and B. Pleskovic (eds.), *Annual World Bank Conference on Development Economics, 1996*. Washington, D.C.: World Bank.
- Caprio, Gerard, Jr., and Daniela Klingebiel (1996b). "Bank Insolvency: Cross-Country Experience," World Bank Policy Research Working Paper No. 1620 (July).
- Caprio, Gerard, Jr., and Berry Wilson (1997). "On Not Putting All Your Eggs in One Basket," Working Paper, World Bank.
- Choe, Hyuk, Bong-Chan Kho, and Rene M. Stulz (1998). "Do Foreign Investors Destabilize Stock Markets? The Korean Experience in 1997," NBER Working Paper No. 6661 (July).
- Cole, Harold L., and Timothy J. Kehoe (1996). "A Self-Fulfilling Model of Mexico's 1994-1995 Debt Crisis," Staff Report 210, Federal Reserve Bank of Minneapolis (April).
- De la Cuadra, Sergio, and Salvador Valdes (1992). "Myths and Facts about Financial Liberalization in Chile: 1974-1983," pp. 11-101, in P. Brock (ed.), *If Texas Were Chile: A Primer on Banking Reform*. San Francisco: ICS Press.
- Demirguc-Kunt, Asli, and Enrica Detragiache (1997). "The Determinants of Banking Crises: Evidence from Developed and Developing Countries," Working Paper, World Bank.
- Demirguc-Kunt, Asli, and Ross Levine (1998). "Opening to Foreign Banks: Stability, Efficiency, and Growth," Working Paper, World Bank.
- Diamond, Douglas, and Philip Dybvig (1983). "Bank Runs, Deposit Insurance, and Liquidity," *Journal of Political Economy* 91 (June): 401-419.
- Feldstein, Martin S. "Refocusing the IMF," *Foreign Affairs* (March/April): 20-33.
- Flannery, Mark J. (1998). "Using Market Information in Prudential Bank Supervision: A Review of the U.S. Empirical Evidence," *Journal of Money, Credit and Banking* 30 (August): 273-305.

- Garber, Peter (1997). "Managing Risks to Financial Markets from Volatile Capital Flows: The Role of Prudential Regulation," Working Paper, Brown University.
- Goodfriend, Marvin, and Robert King (1988). "Financial Deregulation, Monetary Policy, and Central Banking," pp. 216-253, in W.S. Haraf and R.M. Kushmeider (eds.), *Restructuring Banking and Financial Services in America*. Washington, D.C.: AEI Press.
- Gorton, Gary (1985). "Clearing Houses and the Origin of Central Banking in the U.S.," *Journal of Economic History* 45 (June): 277-283.
- Kane, Edward (1998). "Capital Movements, Asset Values, and Banking Policy in Globalized Markets," NBER Working Paper No. 6633 (July).
- Keehn, Silas (1989). "Banking on the Balance: Powers and the Safety Net, A Proposal." Federal Reserve Bank of Chicago.
- De Krivoy, Ruth (1995). "Lessons from Financial Crises: Evidence from Venezuela," *Proceedings of the 31st Annual Conference on Bank Structure and Competition*. Chicago: Federal Reserve Bank of Chicago.
- Lindgren, C.J., Gillian Garcia, and M.I. Saal (1996). *Bank Soundness and Macroeconomic Policy*. Washington, D.C.: International Monetary Fund.
- Mason, Joseph R. (1997). "Reconstruction Finance Corporation Assistance to Banks During the Great Depression," Working Paper, Drexel University.
- Meltzer, Allan H. (1998a). "Asian Problems and the IMF," *The Cato Journal* 17 (Winter):
- Meltzer, Allan H. (1998b). "What's Wrong with the IMF? What Would Be Better," Working Paper, Carnegie-Mellon University.
- Mishkin, Frederic S. (1991). "Asymmetric Information and Financial Crises: A Historical Perspective," pp. 69-108, in R. Glenn Hubbard (ed.), *Financial Markets and Financial Crises*. Chicago: University of Chicago Press.

- Radelet, Steven, and Jeffrey D. Sachs (1998). "The East Asian Financial Crisis: Diagnosis, Remedies, Prospects," *Brookings Papers on Economic Activity* 1: 1-90.
- Sachs, Jeffrey D., Aaron Tornell, and Andres Velasco (1996). "Financial Crises in Emerging Markets: The Lessons from 1995," *Brookings Papers on Economic Activity* 1: 147-215.
- Schwartz, Anna J. (1997). "From Obscurity to Notoriety: A Biography of the Exchange Stabilization Fund," *Journal of Money, Credit and Banking* 29 (May): 135-153.
- Schwartz, Anna J. (1998). "Time to Terminate the ESF and the IMF," *Foreign Policy Briefing* No. 48, The Cato Institute, August 26, 1998.
- Wall, Larry D. (1989). "A Plan for Reducing Future Deposit Insurance Losses: Puttable Subordinated Debt," *Federal Reserve Bank of Atlanta Review* (September): 58-69.
- Wicker, Elmus (1998). *Banking Panics of the National Banking Era*. Manuscript, Indiana University.
- Wilson, Berry, Anthony Saunders, and Gerard Caprio, Jr. (1997). "Mexico's Banking Crisis: Devaluation and Asset Concentration Effects, Working Paper, New York University.



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9 0-16-057844-2