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Recapitalizing Banks with Public Funds: Selected Issues

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Abstract

Recapitalizing banks in a systemic crisis is a complex medium-term process that requires significant government intervention and careful management at both the strategic and individual bank levels. This paper highlights the range of operational and strategic issues to be addressed and the institutional arrangements needed to foster an effective banking system restructuring and maximize the returns on government investment. The approaches to recapitalization have varied, with countries choosing different mixes of direct capital injections and asset purchase and rehabilitation. The choice of an appropriate mix is critical, to minimize the expected present value of government outlays net of recoveries.

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Contents Page

I. Introduction 4

II. Preliminaries 5

III. The Bank Restructuring Agency 6
- A. The Oversight Board 10
- B. Terms and Conditions of Assistance 11
- C. Subsidiaries of the BRA 13

IV. Key Decisions 13
- A. Asset Valuation and Forecasting 13
- B. Which Banks Should be Eligible to Receive Government Assistance? 16
- C. Which Banks Should be Chosen to Receive Government Assistance? 17
- D. Treatment of Existing Shareholders' Claims 19
- E. The Size of the Recapitalization 21

V. Modalities of Government Support: Capital Injections 22
- A. Tier 1 and Tier 2 Instruments 22
- B. Forms of Payment 26
- C. Giving Guarantees 27

VI. Supporting Banks by Rehabilitating Their Assets 27
- A. Do the Advantages of Asset Purchases Outweigh Their Disadvantages? 30
- B. Should the AMC Buy Assets from All Banks? 32
- C. Should the AMC Buy Only Impaired Assets? 33
- D. Should the AMC Warehouse Assets? 33
- E. The Purchase Price 33
- F. Institutional and Operational Arrangements 34
- G. Encouraging Loan Workouts 35

VII. Other Actions to Aid Bank Recapitalization 37
- A. Reducing Liabilities 38
- B. Improving Income 38
- C. Granting Regulatory Forbearance 38

VIII. Concluding Remarks 40

References 41

Tables

1. Government Agencies Associated with Bank Recapitalization 14
2. Actions by the Public Sector to Provide Tier 1 and Tier 2 Capital 25
3. Public Sector Loans and Guarantees to Support Banks 28
4. Public Support to Enhance the Value of Bank Assets 29
5. Other Actions by the Public Sector to Recapitalize Banks 39

Box

1. Capital Instruments in Use in Banks 24

Figures

1. Institutional Framework: Under the MOF 9
2. Expected Capital Ratios for Four Banks 18

Appendices

I. Glossary 43
II. Organizational Charts 47
Chart 1. Institutional Framework: Indonesia 47
Chart 2. Institutional Framework: Japan 48
Chart 3. Institutional Framework: Korea 49
Chart 4. Institutional Framework: Malaysia 50
Chart 5A. Institutional Framework: Mexico 51
Chart 5B. Proposed Institutional Framework: Mexico 52
Chart 6. Institutional Framework: Sweden 53
Chart 7. Institutional Framework: Thailand 54
Chart 8. Institutional Framework: the U.S. FDIC Model 55
Chart 9. Institutional Framework: the U.S. RTC Model 56

I. Introduction

A banking crisis has erupted and begun to intensify and spread. In response, the government has decided to restructure and recapitalize banks in order to overcome the negative effects of a malfunctioning banking system on economic growth and wealth. It has made the decision because weaknesses in the financial system and the extreme uncertainty that prevail during the crisis have limited the provision of private capital, and the government fears that banks will fail in large numbers. It hopes that injecting public funds to strengthen bank capital, together with additional financial and operational restructuring of banks, will restore public confidence in the banking system, reduce uncertainty, accelerate resolution of the banking crisis, and promote economic recovery by overcoming the disruption of banking and payment services, and by ensuring that viable businesses can fund their operations. These circumstances have recently confronted a number of countries in Asia, Central and Eastern Europe, the former Soviet Union, and the Americas.

In systemic bank restructuring, public funds may be needed to: (1) make payouts to depositors of closed banks; (2) compensate banks that agree to accept deposit transfers; and (3) facilitate an acquisition, merger, or purchase and assumption, and (4) to help recapitalize banks and restructure assets. This paper focuses specifically on operational and technical issues that relate to the last item: the granting of assistance through capital injections and asset rehabilitation to facilitate the continued operation of banks that are to be kept open. The paper examines, in sequential order, the choices that must be made and the steps that have to be taken to implement the decisions. The discussion draws on the experiences of five Asian countries, Mexico, Sweden, and the United States.

The paper discusses preliminary considerations in section II; it turns to operational issues, including the creation of a Bank Restructuring Agency (BRA) and its determination of the terms and conditions for government support to recapitalize banks in section III; decisions that must be made are covered in section IV; and the modalities and instruments of government capital injections and means of paying for them in section V. Sections VI and VII discuss other means of support. Section VI is devoted to rehabilitating bank assets, including through arranging debt workout; section VII focuses on reducing liabilities, improving income, and granting forbearance. Section VIII concludes. Appendix I contains a glossary of technical terms, and Appendix II presents a set of organizational charts for seven countries' restructuring agencies.[2]

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[2]The paper does not discuss in detail certain related matters, such as the rationale for the use of public funds, the deposit insurance agency (DIA), the need for, and methods of, taking legal recourse against criminal acts, and corporate restructuring. More in-depth discussions of forbearance and asset management corporations are subjects of separate papers.

II. PRELIMINARIES

Before making its decision, the government should assess the severity of the banking/currency crisis facing the country, make a preliminary estimation of the cost of restoring a functional banking system and honoring any guarantees in place, and weigh the advantages and disadvantages of using public money to recapitalize banks.

The government must then formulate a comprehensive strategy for systemic bank restructuring.[3] In developing that strategy, it should first analyze the range of the options available, taking into account macroeconomic considerations; institutional circumstances and, particularly, constraints on the government's budget; and the trade-off between aiding banks directly through capital injections and assisting them indirectly by other means.

Such a comprehensive strategy will encompass the following key elements: (1) diagnosis; (2) triage;[4] (3) prompt exit of nonviable banks;[5] (4) a well-designed recapitalization strategy for viable and essential banks; (5) operational restructuring of banks; (6) efficient management and recovery of nonperforming assets, supported by loan workouts; (7) equitable loss-sharing arrangements and containment of public sector costs; and (8) a strengthening of prudential supervision of banks to prevent further accumulation of losses.

This paper assumes that the government chooses a strategy that includes recapitalization using public funds.[6] Having made the decision to use public money, the

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[3]The design and sequencing of bank restructuring and prudential supervision reforms, taking into account their macroeconomic impact, are discussed in William Alexander, Jeffrey Davis, Liam P. Ebrill, and Carl-Johan Lindgren, *Systemic Bank Restructuring and Macroeconomic Policy* (Washington: International Monetary Fund, 1997); V. Sundararajan, "Prudential Supervision, Bank restructuring, and Financial Sector Reform," in *Sequencing Financial Sector Reforms — Country Experiences and Issues,* R. Barry Johnston and V. Sundararajan, eds. (Washington: International Monetary Fund, 1999).

[4]See glossary for definition of the term.

[5]The form of resolution for a problem bank—closure and liquidation, partial or complete merger, temporary "bridge bank,"or support to keep the bank operating—depends upon the bank's governance, its financial condition, and its franchise value.

[6]The rationale and appropriateness of the use of public funds in bank recapitalization warrants more detailed discussion, but this is beyond the scope of this paper.

government must then consider the availability of financial and human resources.[7] Funding constraints may limit the number of institutions that can be aided, while human resource and political/legal/social constraints will influence the organizational structures used to make, manage, and recover the investments. These constraints may be more binding in some countries than others, and this helps to explain some of the differences observed among countries' responses in terms of the financial and organizational decisions that have been taken. Thus, while this paper is directed to all countries undertaking banking sector restructuring, the role of public funds in the restructuring strategy will vary from country to country, bank by bank, according to macroeconomic conditions, legal frameworks, institutional capabilities, and the financial condition of individual banks and their governance structure. Nevertheless, certain general principles apply to all cases that are highlighted in this paper.

Putting a recapitalization strategy into operation will frequently require legal and institutional changes, including the possible creation of public bodies, such as a BRA to oversee the comprehensive restructuring strategy. The BRA must also establish the principles for selecting the banks that will be closed and those that will be recapitalized and restructured; establish subsidiaries, including a Bank Support Authority (BSA), and one or more asset management companies (AMCs) to implement those decisions; effect operational restructuring; manage and restructure the assets taken from intervened banks; communicate its plans to the public to restore confidence, and maximize recovery of, and return on, the funds the government has committed.[8] In the early stages of a bank restructuring process, provision of proper information to the public helps to restore confidence, and such information will include a brief description of the organizational structure that will be established to manage the bank restructuring and the legislative changes to be made in order to set up the BRA, and grant it the powers to successfully discharge its responsibilities.

III. THE BANK RESTRUCTURING AGENCY

The BRA needs to keep several broad considerations in mind when using public funds to recapitalize banks and administer restructuring plans. First, the restructuring strategy

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[7]The government should appoint independent, professionally competent executives and boards to manage banks that are taken over. If it proves difficult to find such individuals, the use of international bankers, accounting firms, and investment bankers becomes critical to fill part of the human resource gap. Otherwise, human resource constraints may influence the design of the restructuring and recapitalization program, and place a premium on identifying economies of scale in resolving banks, and on efficient clustering of problem banks.

[8]See Peter Nyberg, "Authorities' Role and Organizational Issues in Systemic Bank Restructuring," IMF Working Paper 97/92 (Washington: International Monetary Fund, 1997). Sometimes asset management functions are located within the bank restructuring agency.

should strive to minimize the amount of public funds used (expenditures net of recoveries) to achieve the objectives of restructuring, and ensure that these funds are dispensed in an efficient, equitable, and cost-effective manner, and that the government obtains securities in some form that support its right to future repayment in exchange for its investment. Second, the strategy must hold owners of a failing bank responsible for losses, and make managers accountable for their actions, and thus put in place an incentive structure for both the public and the private sectors that discourages a recurrence of banking problems. Third, the industrial structure of the rehabilitated banking system must provide core banking services, and consideration should be given to what is a desirable long-term structure of the financial services industry. Fourth, the BRA must take control of public funds that have already been expended, for example, by converting into equity the lender-of-last-resort assistance that the central bank has given in a number of countries to (not just illiquid but also) insolvent institutions that are to be recapitalized.[9] [10] Fifth, the strategy should aim ultimately to turn the government's investments back into cash and return the banking sector to private control.

Sixth, in addition to providing finance directly to recapitalize the bank, the BRA must also make a judgment on the extent to which some of the impaired assets of the bank should be taken off the bank's books (e.g., transferred or sold to a separate unit, such as an asset management company) so that the assets can be managed separately. Separation of these assets can help to normalize bank operations and maximize asset recovery, thereby improving the yield on funds invested in bank capital. When the problem bank is fully taken over and controlled by the government, this typically involves transferring an appropriate volume and type of assets to a separate AMC controlled by the government or the BRA. In some situations, the government finances only a part of banks' capital needs, with the private sector providing the rest and sharing ownership, while at the same time, it assists banks with purchases of some of the impaired assets (for example, by acting through an AMC owned or controlled by the government or the BRA); in these cases, the appropriate allocation of budgetary funds between direct recapitalization and financing (or facilitating) asset purchases becomes an issue. These decisions involve a number of considerations, including the degree of insolvency and government ownership, the nature of impaired assets, and the type of arrangements to manage these assets most effectively, taking into account internal governance of banks and the country's legal and institutional environment to enforce property rights and restructure assets; for instance, loans to the national airline may well be best managed centrally, while loans to local farmers may be best left on the books of the bank. Overall, a bank should not have all the problem loans taken off its books—it should be "normalized," not "supernormalized," both to ensure a level playing field with banks that do not receive assistance and to avoid excessive costs to the public sector.

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[9]For example, Thailand converted FIDF support into equity.

[10]Central banks rank in priority over a failed bank's assets according to whether they hold collateral against their loans to it, and the quality of that collateral.

The authorities must also make a number of organizational decisions relating to BRA. The first is whether to use existing agencies or create a new organization to oversee recapitalization and restructuring, take control of funds that have already been committed, make and manage additional investments in banks, and later sell them cost-effectively.[11] Where a deposit insurance agency (DIA) is already in place and can be expected to competently manage the crisis, it may be augmented to handle the challenge. This situation is relatively unusual. Often there is no DIA; in some cases the existing DIA is being blamed for allowing banking problems to deteriorate into the current crisis; and, typically, the magnitude of the problem in the crisis is exceptionally grave, so that a new agency will be needed.[12]

The second choice is whether to make the agency independent or an integral part of the government. The agency in charge of restructuring will need clear legal authority to determine, on the basis of universally applied and transparent criteria, which banks should receive public capital assistance and which should not. It should be autonomous to make and implement resolution decisions, and be accountable for its actions. After decisions are implemented, they need to be made transparent and explained fully. Full independence is unrealistic and inappropriate where a large percentage of GDP will be devoted to recapitalizing banks. It is also unlikely because accountability to parliament in most countries is achieved through a ministry. The Ministry of Finance (MOF), as guardian of the public purse, would be a suitable candidate among government agencies to manage restructuring. But the central bank or an independent bank supervisor are also possibilities. On the other hand, government agencies are not usually involved in the day-to-day business of running banks and when they have attempted to be so, the arrangement has frequently been not very effective due to governance problems. Consequently, while it is appropriate that the government's interest in the success of the BRA's operations is explicitly recognized in the agency's organizational structure, it should also protect the operating units from political interference in their day-to-day operations, and allow them to be functionally independent, and publicly accountable.

While there may be several ways to achieve a compromise between accountability and independence, one particular way is pictured in Figure 1. There, the BRA is an agency that is subordinate to the ministry of finance, and separate from an independent central bank, the

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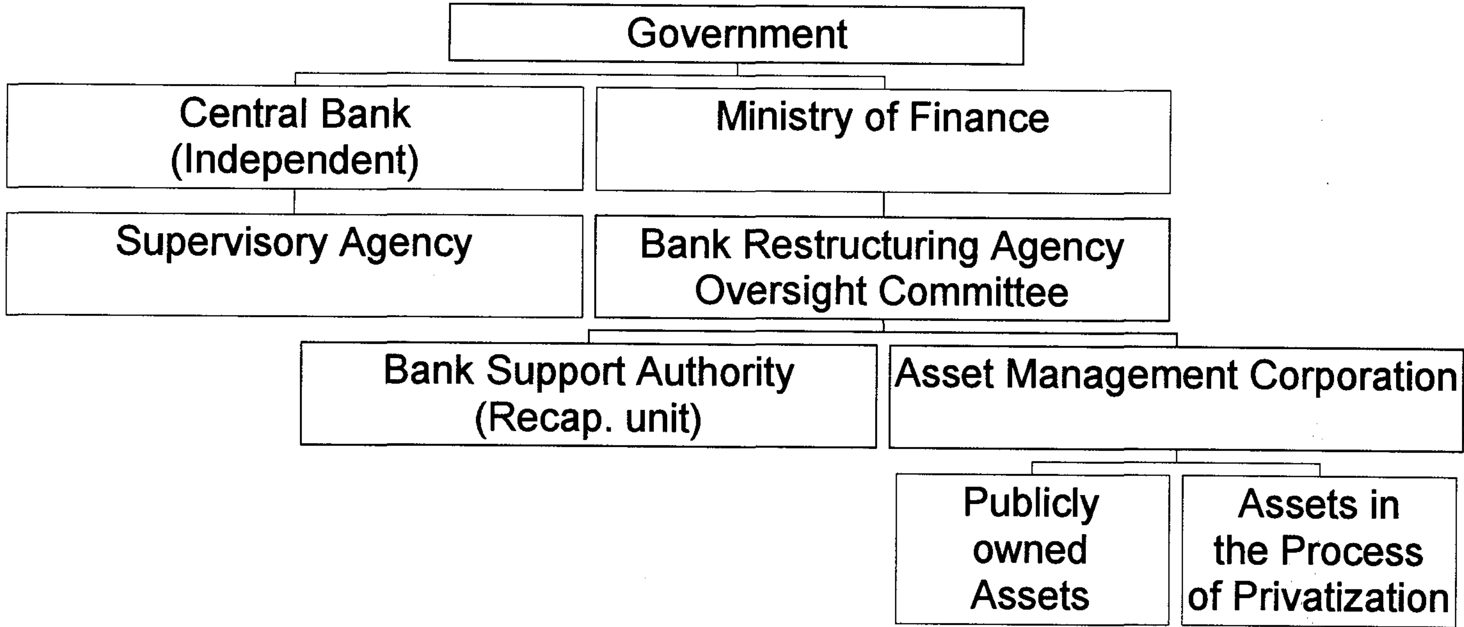
[11]See Nyberg, op. cit.

[12]Indonesia, Malaysia, and Thailand have no DIA and so required a special agency. Although it has an existing DIA, Korea has also created a special agency to handle its bank problems. During the bank and thrift problems of the late 1980s and early 1990s in the United States, the Bank Insurance Fund (BIF) was judged able to handle the banking problems and resolved 1,394 failed banks between 1984 and 1992. The thrift regulator and insurer, however, were replaced by a new regulator, and a special temporary agency, the Resolution Trust Corporation (RTC), was created to manage the crisis (Alexander, Davis, Ebrill, and Lindgren, op. cit., pp. 86–91).

Figure 1. Institutional Framework:
Under the MOF



supervisory agency, and the deposit insurance authority (DIA), where there is one.[13] It may be wise not to place the BRA within the central bank, so as to avoid incentives to finance restructuring through money creation. It can also be argued that the supervisor should not run the BRA because it has no sources of finance and may also be tempted to give preferential supervisory treatment to banks it owned. Moreover, while the DIA could handle nonsystemic banking failures, it may lack the financial and human resources and the authority to deal successfully with a systemic crisis.

A third decision relates to the organizational structure of the BRA. The crisis countries have typically created an Oversight Board for the BRA, with a separate BSA and an AMC as its subsidiaries. But these countries have relatively developed financial systems with considerable experience of operations in a market environment. Nevertheless, some have encountered shortages of financially skilled manpower to run these organizations. In other situations, such as in transition economies, a simpler structure may be appropriate. But clear lines of authority and accountability are essential.

A. The Oversight Board

Most countries find a need for an over-arching board to liaise with other elements of the government, and to coordinate and supervise subsidiaries' activities. The MOF and the central bank should be represented on the BRA's Oversight Board together with the agency's chief executive officer (CEO), and some knowledgeable and independent members of the public. Such a board would strike an acceptable compromise between including all interested parties on the board and confining membership to a manageable number. While neither the supervisory agency nor the DIA is formally represented on the Oversight Board, they would need to maintain close relations with its operational arms. The supervisor must keep the BRA informed on the condition of banks, especially those that are deteriorating toward consideration for closure or recapitalization.

The relationship of the DIA to the BRA depends in part on the breadth of the role the DIA has taken in the past. Where its role has been limited to compensating depositors in failed banks, it may continue to do so, but that task may be temporarily overridden by the comprehensive guarantee which must be funded by the government and may fall to the BRA

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[13]Indonesia and Thailand have placed their BRAs subordinate to the ministries of finance. In Malaysia, the BRA is run by the central bank, which is only quasi-independent of the MOF. Korea's BRA is a subsidiary of its independent supervisory agency. Japan and Mexico have involved their DIAs to some extent in bank restructuring and recapitalization. The United States created an independent agency (the Resolution Trust Corporation) to handle failed thrifts, but not failed banks. However, the RTC spent a smaller percentage of GDP (roughly 2 percent of GDP in the mid-1990s) on failed thrifts than the countries considered in this paper will incur in restructuring their banking systems. See Charts 1 through 8 in Appendix III.

to execute. Where the DIA has, in the past, acted as the receiver/liquidator of failed banks, it may continue to do so. However, one of many organizational possibilities is that its responsibilities are temporarily taken by the BRA and its staff may be reassigned there, while it itself temporarily becomes a subsidiary of the BRA. These relationships are illustrated for selected countries in Charts 1 through 8 in Appendix II.

The responsibilities of the Oversight Board would be to plan the restructuring and recapitalization exercises, assess the appropriate level of fiscal resources for restructuring and recapitalization, and strike a balance between these needs and the fiscal constraints faced by the government. It must not only liaise with the government, but also insulate its operational subsidiaries from political pressure, and keep the public informed of the agency's plans and its progress toward achieving them. Transparency should be a goal and it will be encouraged by auditing the BRA, at least annually, subjecting it to oversight by a national inspector general, and reporting to parliament in public hearings.

B. Terms and Conditions of Assistance

The principal operational responsibility of the Oversight Board is to approve the conditions for eligibility for government assistance and the terms of its granting. Eligibility conditions to qualify for access to public assistance in a bank recapitalization should reflect financial and operational criteria that help assess viability and good governance. More specifically, the **eligibility conditions** include that a bank:

- Has fit and proper owners and managers (including new ones) or is placed under conservatorship until they can be located;

- Recognizes the full extent of its losses, based on realistic valuation criteria;

- Submits an acceptable business plan that covers recapitalization to required capital levels and operational restructuring to assure future profitability; and

- Mobilizes private sector owners that put up, at least, a portion of the new capital in some agreed proportion and assumes responsibility for operation of the institution.[14]

The **terms accompanying the provision of public assistance** to an eligible bank should ensure adequate financial and operational restructuring and provide incentives to private owners to resume efficient and profitable operations rapidly. The terms of access to a public capital facility should, normally, include agreements with banks to: (1) restructure operations and balance sheets, with binding performance targets in a memorandum of understanding (MOU); (2) undergo due diligence scrutiny by special auditors if called for;

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[14]These partners need to have sufficient capital at risk to give them a strong incentive to stay with the institution and to work for its survival.

(3) accept specified restrictions on operations in case of noncompliance; and (4) make arrangements for the repayment of public assistance and the return of ownership to the private sector.

Although the scope and details of the terms would vary according to country- and bank-specific circumstances, these terms could include the following continuing obligations on banks:

- Suspend dividends, or be subject to other sanctions, whenever the bank is below the minimum CAR or violates specified performance criteria.

- Accept official oversight through regular and frequent reporting, off-site and on-site inspections to monitor compliance with time-specific performance targets for (1) achieving loan classification and provisioning standards; (2) making improvements to procedures governing credit-assessment, risk-management, loan workout, and collateral control; (3) streamlining operations; (4) cutting costs; (5) bringing excessive foreign exchange positions, connected lending, and other infringements into compliance with prudential standards; and (6) arranging government representation on the board of directors where it is deemed necessary by the BSA and the supervisor.

- Allow the public sector to obtain an increasing percentage of the bank's net income as time progresses as remuneration for its investment, and as an incentive for the bank to buy out the government's stake as soon as possible. With this design, public funds will become progressively more burdensome over time, so that the bank will seek to repay its obligation to the government and replace public funds with private capital.

- Participate in efforts to restructure corporate debt.

- Accept arrangements that would trigger an intensification of government control; for example, a conversion of preferred shares acquired by the government into common stock, under one or more of the following conditions: (1) when the CAR falls below a specified level; (2) when the supervisor judges that the bank has otherwise failed to comply with the terms imposed upon it, and when the violations were avoidable and material; or (3) when a previously specified point in time is reached. For example, under specified conditions, the interest of existing shareholders would be substantially diluted, and the government would obtain voting control, and the right to replace management.

To be equitable and to allow the government to cash out of its investment, if there are private owners left, they should be given an option to redeem the government's capital either throughout the period, or at a specified point in time. In general, the terms of recapitalization could also include incentives for new investors in the form of guarantee, such as stop loss and income maintenance agreements.

C. Subsidiaries of the BRA

The two main subsidiaries under the Oversight Board are the Bank Support Authority (BSA)—the recapitalization arm—and the AMC. Their roles, operational structures, and responsibilities are discussed further below in sections IV and VI, respectively. There will be a need to form other BRA units to handle centrally important matters, such as personnel, legal recourse against criminals, the creation and maintenance of a data base of banks and assets that are acquired, handled and sold. However, these responsibilities are not discussed in this paper. The responses of five Asian countries and Mexico to the need to create bank restructuring and recapitalization agencies are shown in Table 1.

IV. Key Decisions

To achieve the objectives for efficient restructuring set by the BRA, its operational arms—the Bank Support Authority (BSA) and the AMC—must jointly make decisions concerning certain operational issues related to granting capital assistance to banks. Issues discussed in this section include: (1) the valuation of individual banks' portfolios and prognosis of their future condition; (2) whether support should be uniformly available to all viable banks, or only to those institutions identified as having systemic importance; (3) the selection of individual banks that qualify for and will receive assistance; (4) whether support should be conditional on a full or partial write-off of existing shareholders' claims; and (5) the target level of capitalization that the facility should help the banks to achieve. Other operational issues such as the instruments to use and means of paying for them are discussed in section V.

A. Asset Valuation and Forecasting

While the government will have made a preliminary assessment of asset values before deciding to restructure and recapitalize the banking sector, a more detailed examination falls to the BSA. Realistic valuation of bank's balance sheets and off–balance sheet exposures is a prerequisite for an effective recapitalization strategy, and for an assessment of capital shortfalls. Such valuation is difficult in a crisis environment that is pervaded by uncertainty, because the usual indicators of value are not available, particularly in a crisis environment or in transition economies. Market prices do not exist where trading has ceased or been disrupted. In addition, the lack of a reliable basis for estimating cash flows owing to the high volatility of exchange and interest rates in a crisis impedes valuation based on appropriately discounted present values. The valuation of classified assets, in particular, can be especially problematic.

Table 1. Government Agencies Associated with Bank Recapitalization

Agency Type	Indonesia	Japan	Korea	Malaysia	Mexico	Thailand
Over-arching Bank Restructuring Agency (BRA)	New: Indonesian Bank Restructuring Agency (IBRA).	New: Financial Reconstruction Commission (FRC) (replaced the Crisis Management Committee).	New: Financial Supervisory Commission (FSC).	Only an informal Restructuring Steering Committee (RSC) under Bank Negara Malaysia (BNM).	Until 12/98: National Banking Commission and Fondo Bancario de Proteccion al Ahorro (FOBAPROA); now Institute to Protect Savings (IPAB).	From Aug. 1998, Financial Restructuring Advisory Committee (FRAC).
Bank Support Authority (BSA) (the recapitalization unit)	IBRA itself is the Bank Support Authority.	Existing DIC, with the approval of the CMC/FRC.	Existing: Korean Deposit Insurance Corporation (KDIC).	Danamodal: A government agency that is a subsidiary of Bank Negara.	FOBAPROA administered the PROCAPTE recap program); it has now been replaced IPAB.	(1) (FIDF) Financial Insts. Development Fund has capital for intervened banks and liquidity for open banks; (2) new FRAC.
Asset Management Company (AMC) or Asset Management Unit (AMU)	New: Asset Management Unit (AMU), a division of IBRA.	Resolution & Collection Corp. (RCC, includes the Resolution and Collection Bank (RCB) and the Housing Loan Administration Corporation (HLAC) buys bad loans from any bank.	(1) Korean Asset Management Corporation (KAMCO) since 1962; (2) new: Bridge Bank to deal with the good assets of closed merchant banks.	Danaharta: a government company that is a owned by the MOF, and is expected to have a life span of 5 to 10 years.	(1) FOBAPROA; (2) Valuacion y Venta de Activos (VVA) to appraise and dispose of assets acquired by FOBAPROA; (3) trust funds for bank loan workouts; (4) CRB proposed under the SHCP.	(1) Financial Restructuring Agency (FRA) and (2) Thai Asset Management Corporation only for bad assets of intervened insts; (3) private FIDF-funded AMC for Bangkok Bank; (4) private tax-free AMCs.
Debt Restructuring Agency (DRA)	New: Indonesian Debt Restructuring Agency (INDRA).	No.	(1) New: Corporate Restructuring Coordinating Committee (CRCC).	Yes: (CDRC) Corporate Debt Restructuring Committee to guide private negotiations for companies in receivership or liquidation and establish negotiation practices.	A number of programs: UDI, UCABE, FINAPE, and FOPYME.	Yes: Corporate Debt Restructuring Committee (CDRC)- uses the London Approach to establish formats for debt agreements for 200 major debtors.
Deposit Insurance Agency (DIA)	Not yet: IBRA currently administers the full guarantee.	Yes: Deposit Insurance Corporation (DIC).	Yes: Korean Deposit Insurance Corporation (KDIC, 2/1997)	No.	Yes : FOBAPROA: now IPAB, which is to replace the full guarantee with limited deposit insurance by 2005.	No, but is currently being designed.
Government-approved private initiatives	Government-set principles for loan workouts (Jakarta Initiative); the central bank issued regulations governing loan restructuring.	Cooperative Credit Purchasing Corporation (CCPC).	FSC established debt resolution framework; including the CRCC, which arbitrates disputes.	Banks and finance companies cooperate to acquire troubled institutions; central bank has issued regulations to govern loan restructuring.	Unidad Coordinadora del Acuerdo Bancario Empresarial (UCABE) to facilitate the restructuring of large, syndicated loans.	Yes: the central bank has issued regulations to govern loan restructuring.

Source: Staff analysis.

The valuation process is particularly challenging because what is needed is more than a static assessment of current conditions; a prediction of future viability is also essential for the identification of banks to be selected for recapitalization.[15] However, unless carefully managed, self-assessment invites self-serving adoption of favorable forecasting assumptions, and external assessments made may not be feasible or affordable.

Thus, given the uncertainty in times of banking crisis, alternative approaches to valuation have been used in practice to temper the assessments based on traditional valuation procedures. Banks have a continuing responsibility for valuing their assets and making provisions for losses to keep their capital intact, and external auditors and supervisors continue to challenge the banks' valuations. In an environment of banking crisis, however, the authorities in some countries have strived to ascertain realistic values for assets by requiring banks to undertake a special self-assessment of the value of their asset portfolio and future prospects, based on tightened regulations governing loan classification and provisioning, and clear guidance on the assumptions to be employed and the procedures to be followed. In other countries, the BRA has made or checked the assessment itself using, for example, discounted present values of projected income flows. Recapitalization units have also sought to obtain an independent valuation of bank portfolios by using international accounting firms or investment banks to complement supervisory assessments and external audits.

However, each of these approaches has drawbacks. Self-assessment may be biased due to conflicts of interest; other local assessments may not carry sufficient credibility in the market; government assessments may appear inflexible; and international assessors may have a less complete picture of local conditions. Moreover, additional problems have been experienced with the evaluations reported by the large international accounting firms (the "Big Five") in some crisis countries. Critics claim that the auditors place exceptionally low values on assets, perhaps in order to permit the international partners to sign the audits without fearing that they would later be sued for over-optimism in the uncertain environment.[16] In addition, the auditors may face a conflict of interests if other clients possibly become the major purchasers of the banks or their assets.

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[15]Sweden, for example, required banks to provide to the BRA data based on universally applied criteria on a common date. The BRA then fed the information obtained from banks and data from other sources (including macroeconomic data and predictions) into a forecasting model, which outlined each bank's likely development over the next 3 to 5 years. See Stefan Ingves and Göran Lind, "Loan Loss Recoveries and Debt Resolution Strategies," in *Banking Soundness and Monetary Policy: Issues and Experiences in the Global Economy*, Charles Enoch and John H. Green, eds. (Washington: International Monetary Fund, 1997).

[16]This criticism was made of the Big Five's work in Indonesia. Also, the Korean government wanted an assessment quickly, and the international partners of the international accounting firms declared themselves unable to sign the audits in the time frame allowed, which reduced their impact.

Therefore, the authorities making restructuring decisions have to adopt a pragmatic and transparent approach that strives to incorporate consistent assumptions about key economic variables and best-practice accounting standards, and that, on this basis, combines and reconciles alternative valuations to formulate their own realistic judgment. In addition, prospective private investors will wish to undertake their own due diligence valuations prior to their decision to acquire equity stakes in banks. Where the authorities believe that banks can and will value their assets fairly and realistically, they should require banks to do so. But these valuations need to be checked either by external assessment or by the BSA. Where banks cannot or will not conduct a fair assessment, international accounting firms should be hired to do the valuations. In turn, their credibility will need to be checked by the BSA. In all cases, the authorities must clearly specify that the same date for the assessment, the same assumptions, and the same procedures be adopted for assessing asset values and forecasting bank viability.

B. Which Banks Should be Eligible to Receive Government Assistance?

Fiscal constraints (faced by the MOF) may require that the eligibility conditions be stringent in order to limit the extent of recapitalization using public funds. With limited domestic funds, strategies will need to be adopted to: recapitalize a smaller number of banks than otherwise; impose heavier losses on the private sector; phase in the attainment of capital adequacy standards; choose longer maturities and later interest payments on bonds issued to finance the recapitalization, and/or to seek earlier and greater foreign participation in ownership and management than some would otherwise prefer. After choosing the mix from these responses, the BRA can estimate the extent of the assistance that can be given, which will determine the parameters for eligibility.

The first consideration is whether assistance should be confined to commercial banks or should spread to other types of depository institutions, such as savings banks and credit unions, and beyond to other financial institutions such as insurance companies, investment banks, and brokerage houses, etc. The answer depends partly on the importance of the role these institutions in each individual economy. As a general principle, commercial banks rank first in priority, as they can have systemic effects due to vulnerability to runs in a financial crisis because of the nature of their portfolios in which par valued deposits fund longer-term, nonmarketable loans. Savings banks, which are sometimes government-owned, and house the small savings of households, are usually also eligible for assistance for social and political reasons. Other types of financial institutions should, and usually do, have lower priority in claiming public funds.

The principle to be followed is that capital assistance should be available for a limited period to all (commercial and savings) banks that meet the established financial and operational criteria set by the BRA, and that are both willing and able to meet the terms of assistance (laid out in the previous section) so that they can attain a specified minimum capital adequacy ratio (CAR) and adequate operational restructuring. Capital assistance may also be

available to banks that meet certain critical needs—for instance, a bank that is the sole provider of payments services in a particular region.

Eligibility for recapitalization should be determined primarily, but not solely, on the basis of financial and operational criteria that indicate potential viability. Banks that have preserved their solvency but have insufficient capital to meet the minimum capital standards could, with justification, complain that it would be unfair not to offer them assistance while aiding banks that are in worse condition in terms of capital position. The complaint would be particularly telling if the weakest banks were aided solely because they were perceived to be "too big to fail."

However, countries sometimes decide that a classification based solely on financial and operational criteria would not provide a workable resolution for banks that are weak but deemed essential, or of systemic importance to the economy. For example, it may not be feasible to close a very large bank in an orderly fashion, or one that dominates a region of the country, underpins the payments system, or has a special niche in the credit markets. Such exceptions to resolution criteria on the grounds of "essentiality" should be made only under very limited and tightly managed conditions to thwart political pressures.[17]

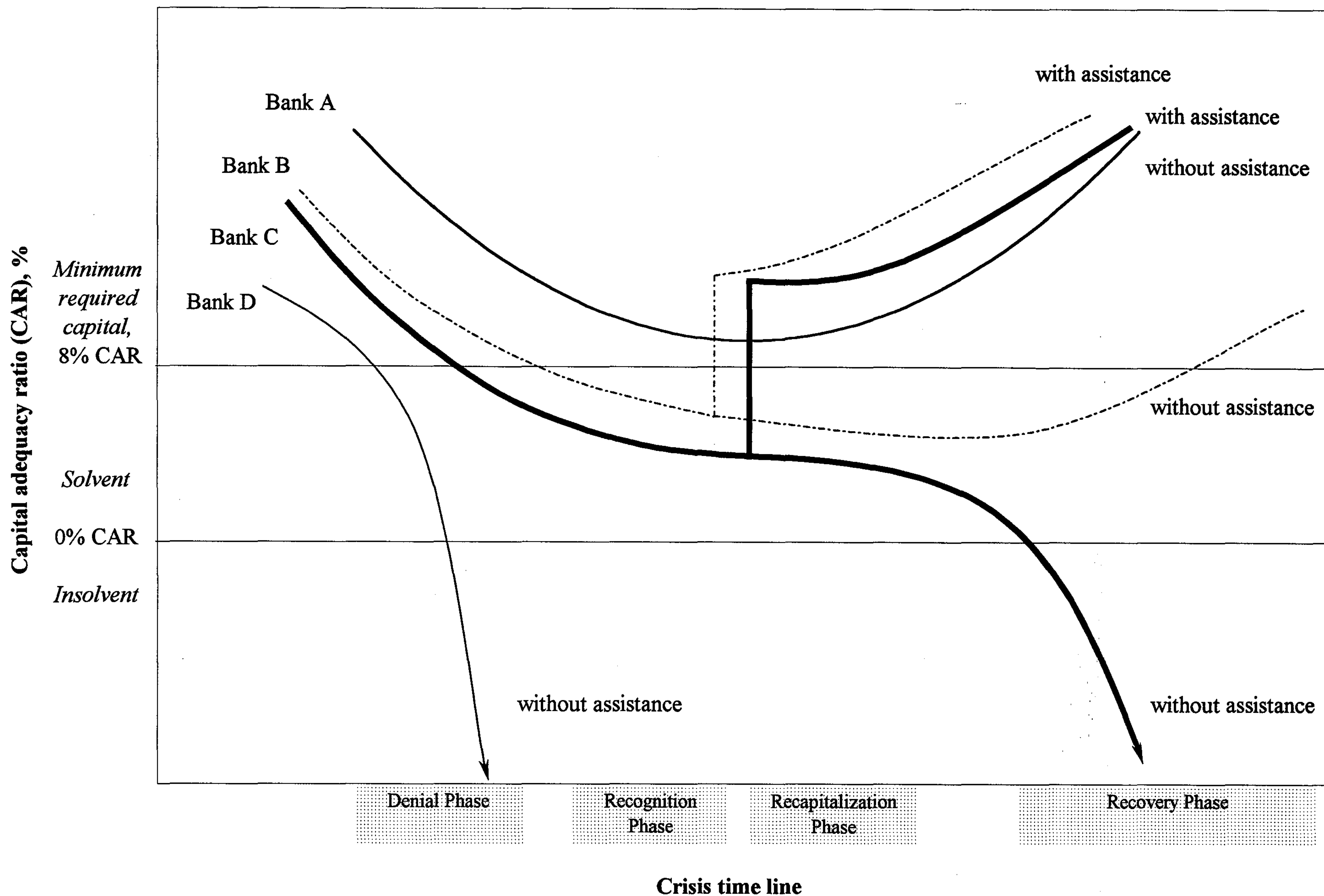
The resolution of both private and state-owned banks should be broadly governed by the same objectives and principles, although the resolution of state banks may often face special circumstances due to their size and credit exposures. As with the private banks, recapitalization of state banks should be linked to realistic valuation based on internationally accepted accounting standards, fit and proper management, and financial and operational restructuring to ensure viability and adherence to prudential standards.

C. Which Banks Should be Chosen to Receive Government Assistance?

The BSA needs to classify banks. One possibility is four categories: those least likely to recover; two groups that are expected to recover if given financial assistance; and a group that is capable of surviving without public money. In Figure 2, as an example, all four categories of banks begin from a position of measured capital above the required capital adequacy ratio (CAR). The worst category (D), however, is projected to deteriorate rapidly into deep and irretrievable insolvency, and there seems to be no reason for direct government assistance: where there is a blanket guarantee and the bank is small, it will be preferable to pay off the depositors and arrange to dispose of the assets, rather than recapitalize the bank. If the bank is large and systemically important, the least-cost solution may still be recapitalization. The second two categories—those banks being considered for direct assistance (B and C)—fall below the minimum required capital but ultimately are expected to recover if assisted.

[17]In some cases, the restructuring agency may come under pressure to extend public aid beyond banks to the nonbank financial system.

Figure 2. Expected Capital Ratios for Four Banks



Source: Adapted from "Loan Loss Recoveries and Debt Resolution Agencies: The Swedish Experience", S. Ingves and G. Lind, 1997.

Bank B might recover very slowly without assistance, but bank C would not. Both of these banks are able and willing to meet the terms for and conditions of assistance laid out in section III.B above. The fourth and best category (A) remains solvent unaided.[18] Unfortunately, in many cases, crisis management starts only after a substantial part of the banking sector has already deteriorated to categories B, C, or D.

A difficult decision is whether to aid bank B, which the valuation exercise predicts has a higher probability of recovering without aid than bank C, which is expected to become insolvent without financial assistance but could recover with aid. Other things being equal (the authorities consider neither bank to be essential), there are several options. If the BRA believes that the country is over-banked, it could close both banks. If it judges that the country is over-banked but that it needs to assist one bank in order to maintain sufficient competition among banks, it should aid the stronger bank and close bank C. If both banks are needed but budgetary resources are constrained, the BRA can seek to relax the fiscal constraint and spread out the necessary financing over a longer horizon or elicit greater private sector participation, including foreign investment.

An important lesson from this exercise is that one cannot specify in advance how the banks will be handled. Decisions will depend upon the financial position and prospects of each institution. The restructuring agency is equipped with a toolbox of measures that it can use. Full diagnosis of the state of the banks will determine which set of tools in the box will be appropriate in each case.

D. Treatment of Existing Shareholders' Claims

As a general rule, the financial claims of banks' existing shareholders and subordinated debtors should be written down in accordance with their seniority in the legal system in order to cover the losses an institution has incurred. Apart from reducing the contribution of public funds needed to eliminate possibly the negative net worth, this write-down also avoids setting precedents that can result in moral hazard. Where limited liability is not in force, shareholders may also be required to subscribe additional capital.

In crisis situations, such as those in Asia, banks can fail as a result of past directed lending and exogenous factors—macroeconomic instability—despite good management, "fit and proper" owners, and initially strong capitalization. In these cases, the government may face a moral or legal responsibility to repay the losses, and may take steps to keep existing owners and managers in place, and to persuade them to invest new capital.[19]

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[18]See Ingves and Lind, op. cit.

[19]For example, even where shares are written down to zero, human resource constraints might suggest that "fit and proper" shareholders be retained on the board of directors and be given

(continued...)

In some countries, writing down owners' capital reveals the bank's insolvency that triggers a supervisory action in which the bank loses its license, and is merged or closed and liquidated. In other countries, while shareholders are typically the first to bear losses, the legal system allows owners to remain in control of the bank even after their shares have been written down to nominal values. In fact, in some special cases it may also be necessary to allow existing shareholders to retain partial ownership rights in order to obtain their cooperation, and to avoid time-consuming and costly legal wrangles. Where the authorities are considering supporting an insolvent bank whose shareholders are protected, they should be encouraged to provide new capital as a condition for retaining partial ownership rights.

Experience has found that owners, especially new investors, may be induced to provide fresh capital if the uncertainty they face is reduced by instruments that guarantee outcomes. For example, the government may agree to share losses with the owner or new investor (in a "loss-sharing" arrangement); place a cap (a "stop-loss" provision) on the amount a bank may lose; agree to maintain bank income at a specified level (in an "income- or yield-maintenance" provision); or allow the bank to return some or all of the bad assets it purchases to the government (through a "put-back" provision). More specifically, such guarantees and options can be given, with appropriate safeguards, to limit an acquirer's losses during a review period during which additional "skeletons" may come to light. Such guarantees may cover asset values or yields that an institution will earn on certain assets specified in the recapitalization contract.[20] While these inducements to new investment have been used successfully in many countries, a government will need to be confident that they will convey good incentives for the new owners to maximize the value of recoveries and not abuse the guarantee by failing to make the maximum effort to maintain and improve the value of the assets acquired. Working with guarantees can create an illusion of private ownership; with guarantees, technically a bank can have private ownership while all the risk is borne by the government.

Finally, using the legal system to obtain redress for criminal acts or regulatory violations committed by owners and others may reduce the government's fiscal obligations, while preserving incentives for good governance.

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[19](...continued)
stock options tied to future performance. Alternatively, an insolvent bank might be closed and a new charter issued to the former owners conditional on their injection of new capital.

[20]These techniques have all been used by the Bank Insurance Fund (BIF) and the Resolution Trust Corporation (RTC) in the United States. Malaysia has provided asset guarantees to acquirers of merged finance companies, Korea has given put options to acquiring banks in P&As, and Thailand has provided stop-loss guarantees and yield-maintenance agreements to new investors taking over intervened banks.

New investment in banks may also be encouraged by government efforts to aid the restructuring of corporate and consumer debt so that loan quality can improve. For example, lengthening maturities or debt-equity conversions can enable some borrowers, who would otherwise default, to repay their debt and reduce uncertainty in the market.

E. The Size of the Recapitalization

When there is a blanket guarantee for depositors and other creditors, recapitalizing a bank to a zero CAR (bare solvency) is equivalent to honoring the guarantee without making a pay out to depositors and creditors. Where failed banks are small and few, the government may then require private acquirers to add to the now just-solvent bank sufficient capital to meet minimum capital standards or better. In systemic crises, however, recapitalizing to bare solvency, given the limited supply of private capital (domestic and foreign), may not be sufficient to establish credibility in the soundness of a recapitalized banking system, and it may well be desirable for the government to recapitalize selected banks to some positive minimum level. Where the fiscal situation permits, the government may recapitalize banks to Basel standards or even higher, while taking a commensurate ownership interest.[21] Where budget constraints are tighter, the government may recapitalize to a lower CAR and require banks to meet a series of time-bound capital targets, and to bring in private capital in some proportion to the government's contribution.

The amount of public funds needed to recapitalize the banking system depends in part on the willingness of private investors—existing and new—to put up a share of the capital needed. This willingness will depend in turn upon the distribution of ownership after recapitalization, and the guarantees and contractual terms designed to reduce uncertainty and apportion losses and profits.

Where the law does not call for limited liability for bank owners, shareholders may be required to recapitalize their bank. Even where limited liability is in place, it may be possible to design the recapitalization so that the shareholders are encouraged to reduce the call on government funds in certain ways.[22] They might be induced to: (1) bear losses beyond their original capital and share with the government the financial responsibility for "filling the hole" and bringing the bank up to bare solvency; (2) contribute additional capital to help meet the minimum CAR; and (3) receive recognition for their contributions above the line of solvency. However, this approach—persuading existing shareholders to "fill the hole"—is equivalent to

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[21]Korean banks have been recapitalized to 10 percent, to allow them to survive some further deterioration in asset quality.

[22]Unlimited liability is not uncommon. Before granting a license, supervisors frequently require shareholders to undertake, for example, in a comfort letter to keep their bank adequately capitalized.

denying limited liability, a provision that is frequently regarded as a protection to shareholders necessary to encourage them to invest in an enterprise or bank.[23]

In order to encourage new shareholders to participate in a recapitalization, it may be necessary to give them preference over existing shareholders. Such preference could provide that old shareholders shoulder the burden of additional depreciation of existing assets before the new shareholders are called upon to bear losses.[24] Any additional losses on certain specified old assets would then be underwritten by a government guarantee so that new shareholders are held responsible only for losses incurred on the other assets that are not guaranteed. Alternatively, new shareholders may receive, at least for a certain time period, a disproportionately large share of future dividends. In some countries, the law (for example, which governs rights issues) would need to be changed to permit such discrimination among shareholders. In other countries, it may be sufficient to persuade old shareholders to agree to the arrangement on pain of being dispossessed entirely.

V. Modalities of Government Support: Capital Injections

Having made the decision on which banks to recapitalize, the BSA must choose the best ways to provide the funding. In principle, there are a number of instruments that the government can use to strengthen a bank's capital adequacy: injecting capital with public funds; rehabilitating assets; reducing liabilities; and improving net income.[25] This section will focus on issues relating to capital injections, particularly the instruments to use and the means of paying for them. The other instruments are discussed in the following two sections.

A. Tier 1 and Tier 2 Instruments

An increase in paid-in equity or Tier 1 capital is the preferred form of recapitalization, as it improves the capital ratios, can enhance profitability, and is essential under the Basel Capital Accord. It does not involve immediate servicing costs, since dividend payments could and should be postponed until the bank's capital and income are fully and durably restored. In addition, the government's provision of Tier 1 capital can also facilitate the bank's efforts to

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[23]Nevertheless, this approach is being tried in Indonesia, where the capital support facility for private banks requires contributions from existing shareholders to "fill the hole" in return for the opportunity to buy back the government shares later and reacquire the bank under specified conditions.

[24]The published Joint Statement of August 14, 1998, from the Ministry of Finance and the Bank of Thailand imposes this condition.

[25]See Claudia Dziobek, "Market-Based Policy Instruments for Systemic Bank Restructuring," IMF Working Paper, No. WP/98/113, August 1998.

raise Tier 2 capital from private sources. The components of Tier 1 and Tier 2 that are recognized by the Basel Committee are listed in Box 1. The actions of six countries when providing Tier 1 and Tier 2 capital to recapitalize their banks are shown in Table 2, which reports the capital instruments used and means of payment adopted. Table 3 reports other financial actions, such as granting loans and issuing guarantees.

When recapitalization with public funds leads, in effect, to nationalization,[26] this should be regarded as a transitional arrangement designed to strengthen management and operations, and should lead to reprivatization in due course—preferably according to a specific time frame. Consequently, the BSA needs to choose its capital instruments with regard to its ability to redeem them later. Two financing decisions need to be made—which instruments to acquire, and how to pay for them. While the government could purchase common stock, which may be more marketable than other instruments when the government wants to recover its investment, the BSA may wish to avoid taking voting control in circumstances where it believes that operations under private direction are more efficient, or where it feels that abstaining from asserting such control would significantly increase the incentive for the private sector to bring in more capital. In this situation, it would prefer to purchase convertible preferred shares, which count as Tier 1 capital under the Basel Committee's rules, and may be constructed to convey voting rights under a variety of restricted arrangements. Nevertheless, the government could retain veto rights on identified strategic issues relating to bank portfolios and operations.

Where the government wishes to obtain control of the bank in case the bank's condition deteriorates, it should purchase preferred stock that can be converted into common equity under certain specified conditions.[27] Convertible, preferred shares count as Tier 1 capital, provided they are undated and noncumulative.[28] They carry a prior entitlement to any income earned, but they do not give the holder voting power in normal circumstances, and so they help to reduce any potential conflict of interest for the government. The trigger for conversion could, for example, be a decline in the CAR below some threshold value (4 or 6 percent, for example) or other material failure to meet the terms for continued assistance listed in section III. The rate for converting preferred into common shares should dilute the common stock and give the government control.

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[26]Nationalization is the usual outcome in cases where insolvency is deep and the bank is regarded as systemically important.

[27]The government could also retain specific rather than general voting powers, to allow it to approve the details of a merger, for example.

[28]They are popular among "white knight" acquirers because they allow the acquirers to rescue a corporation, while ensuring that they can exit first, if trouble occurs. Convertible preferred shares are being used by the Japanese government and also in Thailand and Indonesia.

Box 1. Capital Instruments in Use in Banks 1/

Tier 1 Instruments (Core Capital)	**Characteristics**	**Examples of Countries**
Issued and fully paid ordinary shares	Must be: (i) issued and fully paid; (ii) noncumulative; (iii) permanent; (iv) able to absorb losses within the bank on a going-concern basis; (v) junior to depositors, general creditors, and subordinated debt; (vi) neither secured nor guaranteed by the issuer; (vii) publicly disclosed; and (viii) immediately and fully available without limit to the issuing bank.	Many: including Mexico, Malaysia, Finland, Sweden
Disclosed reserves from retained after-tax earnings or other surplus		Many: Mexico
Perpetual, noncumulative preference shares		Thailand, Japan
Convertible, noncumulative preference shares		Thailand, Indonesia 2/, Japan 2/, Finland, Sweden
Minority interests in equity of less than fully-owned subsidiaries whose accounts are consolidated and that meet certain conditions and do not exceed 15% of Tier 1 capital		Malaysia
Innovative, synthetic, capital instruments Limited to <15% of consolidated Tier 1 capital	Not secured or guaranteed, callable by issuer only after a minimum of 5 years and with supervisory approval.	Portugal, Spain, Thailand 3/, U.S.A.
Tier 2 Instruments (Supplementary Capital)		Many
Undisclosed reserves	Unencumbered; immediately available	Japan, Mexico
Asset revaluation reserves	Prudently valued with a discount	U.K., Japan, Mexico
General provisions/loan-loss reserves 3/	<=1.25 % of risk-weighted assets	Many: Mexico, Malaysia
Hybrid debt/equity instruments including,	Must: (i) be unsecured, subordinated, fully paid-up; (ii) not be redeemable without the prior consent of the supervisor; (iii) be available to participate in losses without the bank having to cease trading; and (iv) allow servicing obligations to be deferred where the bank's profitability would not support payment.	Several
Cumulative long-term preference shares		Canada
Convertible cumulative preference shares		
Titres participants and titres subordonnés a durée indéterminée		France
Genusscheine		Germany
Perpetual subordinated debt		U.K., Thailand
Preference shares		U.K.
Mandatory convertible debt instruments		U.S.A.
Subordinated term debt instruments including: Conventional unsecured subordinated debt	Not normally available to share losses unless bank closes; thus, not to exceed 50% of Tier 1 capital.	U.S.A.; Finland
Convertible subordinated debt	Minimum original term to maturity of over five years with a discount of 20% in each of last five years to maturity.	Mexico, Thailand, U.S.A., Malaysia
Limited-life redeemable preference shares		
Deductions from Capital		
Goodwill		
Investments in unconsolidated financial subsidiaries		

Sources: *The Compendium of Documents Produced by the Basel Committee on Banking Supervision,* February 1999, pp. 1–16 and *Instruments Eligible for Inclusion in Tier 1 and Tier 2 Capital,* Press Release by the Basel Committee on Banking Supervision, October 27, 1998.

1/ The precise specifications vary from country to country.
2/ The Indonesian preference shares are nonvoting.
3/ Thailand, for example, issues Stapled Limited Interest Preferred Securities (SLIPS) which are attached to high-rate subordinated debt that pays interest even when there are no profits. US bank holding companies can issue "trust preferred" or " capital securities" and pass the proceeds to their banks as Tier 1 capital. European countries have issued "step-up callable preferred securities."
4/ Specific loan loss reserves are not countable as capital under the Basel Capital Accord, although some countries do so. Japan, for example, counts reserves against substandard, but not doubtful or loss loans, as Tier 2 capital.

Table 2. Actions by the Public Sector to Provide Tier 1 and Tier 2 Capital 1/

Instrument/ Payment	Indonesia	Japan	Korea	Malaysia	Mexico	Thailand
Provide capital	Yes.	Yes.	Yes.	Yes, for at least 10 banks.	Yes.	Yes.
Tier 1:	Yes.	Yes.	Yes.	Yes.	Yes.	Yes.
Common Stock	Yes.	Yes, but rare.	Yes: gov't and KDIC for development, intervened, and merged commercial, banks.	Yes.	BOM/FOBPROA in intervened and small fin. insts to end insolvency and permit private recap.	Only in intervened banks.
Pay in cash	No.	Yes.	Yes: through the KDIC; otherwise to development banks.	Yes: using proceeds from issuing Danamodal bonds.	No.	Financial Institution Development Fund (FIDF) converted some LOLR support into equity in intervened banks.
Pay with bonds	Yes.	Not yet. But DIC will probably issue short-term bonds soon.	Yes: stocks in public enterprises owned by the government to nationalized banks; gov't-guaranteed KDIC bonds.	No.	10-year, FOBAPROA zero-coupon, non-tradable bonds. IPAC will issue negotiable, gov't-guaranteed, bonds to replace FOBAPROA's.	No.
Preferred stock	No.	Yes; now mostly convertible; if bank raises private capital and makes new loans.	Yes: for acquirers in P&As for five commercial banks.	Yes: bought by Danamodal.	In intervened and merging banks.	Yes: up 2.5% Tier 1, then match private contributions 1:1.
Pay in cash	No.	Yes.	Yes.	Yes.	No.	No.
Pay with bonds	Yes: (1) indexed, (2) regular, both negotiable.	No: DIC issues gov't-guaranteed bonds and borrows from BOJ to raise cash.	KDIC sells bonds to provide cash.	No.	10-year, FOBAPROA zero-coupon, non-tradable bonds. IPAC will issue negotiable bonds to replace FOBAPROA's.	10-year, tradable, gov't, bonds with market- related interest rate.
Tier 2:	Yes.	Yes.	Yes.	Yes.	Yes.	Yes.
Subordinated debt	No: (LOLR support converted to sub. debt before the crisis).	Yes, more common than equity.	Yes: early P&As for five closed banks.	Yes: redeemable, subordinated debt issued to 9 institutions by end 1998.	Banks issued to gov't callable, 5-year sub. debt mandatorily convertible into equity after 5 years or when CAR is < 2	Yes: to 2% of risk assets if bank restructures corporate debt and makes new loans.
Pay in cash	No.	Yes.	No.	Yes.	Yes, but sterilized as increased reserves at BOM.	No.
Pay with bonds	No.	Not directly, but the government issues bonds to fund the cash injection.	Government-owned exchange-quoted stocks in public enterprises.	No.	IPAC will issue negotiable bonds to replace FOBAPROA's bonds.	Yes: government buys bank debentures with government 10-year bonds at lower market-related rate.
Memo: allow more **foreign ownership**	Yes: law amended to permit up to 99% foreign ownership of banks.	There are no restrictions on the foreign ownership of banks.	Yes: have eased legal restriction, and foreigners, including the IFC, have bought stakes in 4 banks.	Yes; for financial institutions and limits on purchase of real estate by foreigners relaxed.	Eased before, ended remaining restrictions on foreign participation in existing banks in December 1998.	Existing restrictions have been waived for 10 years.

Source: Staff analysis.

1/ The public sector includes the government, the central bank as lender of last resort (LOLR), the deposit insurance corporation (DIC), the asset management company (AMC), the restructuring agency, and any vehicle for recapitalizing banks.

2/ Aided banks must have sold their bad assets to Danaharta and have CARs below 10 percent.

The tension between satisfying the Basel Committee's requirement that capital instruments cannot qualify as Tier 1 capital if they are redeemable and the government's wish to recover its investment over time must be handled by ensuring that there will be a secondary market where the stock can be sold. The stock can be designed to give the owners the option to redeem them, with the consent of the government, if the bank is in good condition, and if the remaining Tier 1 capital would keep the bank above the minimum requirement after redemption. The government, however, would not have the power to redeem the shares from the bank because that would disqualify the shares from inclusion in Tier 1 capital.

B. Forms of Payment

In terms of payment, Tier 1 capital provided by private investors should be paid for by injecting cash; submissions in kind are not acceptable. The government may contribute cash and/or bonds (either negotiable or nonnegotiable). Bonds and cash immediately increase net worth, improve the capital ratios, liquidity, and potential profitability.[29] Bonds are often a convenient source of payment for the government. The downside to this convenient arrangement is that banks may prefer to retain the bonds as a risk-free source of income, rather than making loans and easing the crisis-induced credit crunch.[30] If bonds are to be used, they should pay market, not submarket, interest rates. It must be decided whether market rates will be denominated in nominal or real terms (with the principal indexed for inflation). Bonds paying fixed nominal rates will give banks greater liquidity during the early years of the life of the bond than bonds that pay real rates, but paying nominal rates increases immediate government outlays.[31]

For these reasons, direct placement of government paper with the banks is the most common practice when purchasing bank capital. As stated previously, these bonds should pay market rates. As market rates are likely to be high initially, due to uncertainty, the bonds should carry variable rates, so that the government's debt service costs will decline as rates fall.

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[29]CARs are improved because equity increases and the value of risk-weighted assets falls, as both cash and government bonds have zero risk weight under the Basel standards.

[30]Authorities sometimes place indexed bonds with banks to lower the initial costs of debt service and to mask the full costs of recapitalization. However, costs to the government could rise and banks could benefit if inflation escalates.

[31]Indonesia has used indexed bonds; see Table 2.

It might be expected that the government would opt to inject negotiable bonds which encourage market development and also facilitate liquidity management by banks.[32] However, there is a risk in supplying negotiable bonds that the recipient will sell the bonds and reinvest unwisely in unsafe assets in a gamble for recovery. Fit and proper owners and managers, and very close supervision, are necessary to limit this risk. It may, therefore, be appropriate to contain negotiability for an initial period when the management, governance, and operational restructuring plans are being strengthened as part of the terms of government assistance.

C. Giving Guarantees

During the recent crises, governments have frequently guaranteed bank assets, liabilities, and/or income streams (Table 3). Guaranteeing assets and income increases asset values, which improves the balance sheet and measured capital. Not only will guarantees raise the market value of the assets covered, but they also enable the bank to recover any provisions that it has previously made against the no longer impaired assets. Both boost capital.

Guaranteeing liabilities forestalls runs and prevents the potential losses from selling assets in a fire sale and from high-cost borrowing to repay depositors. Guaranteeing income allows banks to increase capital through retained earnings. Guarantees are appealing politically because they are a substitute for additional immediate expenditures on Tier 1 or Tier 2 capital. Although widely used, they are not a "free lunch" for the government, which carries contingent liabilities that it may have to honor.[33]

VI. Supporting Banks by Rehabilitating Their Assets

In addition to injecting various forms of capital with public funds, the government can purchase and rehabilitate bank assets and facilitate business- and household-debt workouts to aid banks. It can also reduce bank liabilities, raise income, and grant forbearance. Such actions by six countries are shown in Table 4. This section discusses asset rehabilitation and debt workouts. The remaining actions are reviewed in section VII.

Asset rehabilitation is an important concomitant reform that is either operationally linked to capital assistance programs or otherwise strongly influences the effectiveness of such programs in supporting economic recovery, thereby reducing the net cost to the government. It is both a substitute for, and complement to, capital injections. In principle, bad assets can either be: (1) retained and managed by banks themselves at appropriately written-down values, while receiving financial assistance from the government for recapitalization, or;

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[32]This has occurred in Korea and Thailand, and is in prospect in Indonesia.

[33]The Government of Thailand charges banks 0.4 percent of liabilities annually for the guarantee it is providing.

Table 3. Public Sector Loans and Guarantees to Support Banks 1/

Instrument/ Payment	Indonesia	Japan	Korea	Malaysia	Mexico	Thailand
Provide loans	Yes.	Yes.	Yes.	Yes.	Yes	Only to intervened banks and to honor the guarantee.
Long-term	No: but de facto short-term loans are rolled over.	No.	BOK to the Bridge Merchant Bank.	No.	To intervened and small banks.	No: but in fact short-term loans are rolled over
Short-term	Yes: by Bank Indonesia.	Yes: the BOJ with & with-out collateral.	Yes: BOK loans in foreign currency are rolled over.	Yes: by Bank Negara Malaysia.	Yes: BOM made LOLR loans in pesos and, via FOBAPROA, collateralized loans in dollars.	Yes: from the FIDF.
Place deposits	No.	The Trust Bureau places Postal Savings Bank and local government deposits.	Reported in the press.	Yes: of state-owned cos., and national pension fund.		No.
Guarantees	Yes.	Yes.	Yes: but not including off–balance sheet items.	Yes.	Yes.	Yes: including off–balance sheet items, but not sub debt.
Bank liabilities	Yes: from 1/98 for at least 2 years, with 6 months' notice of termination ; includes off–balance sheet items; not share- and sub-debt holders or connected parties.	Yes: from 1997 through March 2001, may be extended to cover subordinated debt.	11/97 until 12/00 on most liabilities (including some inter-bank claims) of all financial institutions.	Yes: from 1/98 indefinitely.	Yes: until 2005 IPAB replaces FOBAPROA's guarantee on all, including foreign exchange, debts but not sub. debt.	Yes: from 10/97 indefinitely.
Bank assets		Guarantee associations reinsure SME loans with the Small Business Credit Insurance Corporation (SBCIC).	Yes; (1) informal guarantee of foreign exchange debts; (2) Korean Guarantee Corp. (KGC); (3) Korean Technology Guarantee Fund (KOTEC); (4) up to 100% on loans to SMEs; 2/ (5) put options for acquiring banks in P&As.	Yes: for the bad assets of Banks Sime and Bumiputra.	Yes: via FOBAPROA, which lent to companies that were indebted to banks.	Profit & loss-sharing, stop-loss and yield maintenance agreements for new investors in intervened banks; e.g. loss-sharing for intervened Krung Thai Bank.
Borrowers	No: apart from long-standing export guarantee scheme.	No; direct government lending.	Yes: credit guarantees for SMEs.	The government guarantees Danaharta bonds.	Yes: many, such as UDIs and preferential exchange rates.	No.

Source: Staff analysis.
1/ The public sector includes the government, the central bank as lender of last resort (LOLR), the deposit insurance corporation (DIC), the asset management company (AMC), the restructuring agency, and any vehicle for recapitalizing banks.
2/ See Table 4 for the details.

Table 4. Public Support to Enhance the Value of Bank Assets 1/

Action	Indonesia	Japan	Korea	Malaysia	Mexico	Thailand
Aid assets	Yes.	Yes.	Yes.	Yes.	Yes.	No.
Revalue assets	No.	Yes: real estate, value shares at cost if market.	Yes: Korean Land Corp. buys land to support prices.	No.	Yes: mortgage principal indexed to inflation.	No.
Buy bad assets	Loss loans only in recapitalized banks; assets of closed banks.	Housing Loan Admin. Corp. (HLAC) and (RCB) Resolution Collection Bank.	Yes: initially from all banks; now less often and only to aid restructuring deals.	Yes: since 8/98 buying large bad loans from 18 banks by year-end 1998.	Yes; (1) FOBAPROA buys 2 pesos of bad loans for every peso of additional private capital; (2) banks' UDI loans and foreclosed real estate transferred to trust funds	In principle, the AMC buys only from intervened institutions.
Pays with	Buys at zero value.	Cash (obtained from bond issues)	70% in government-guaranteed KAMCO bonds, 30% cash.	Cash or zero-coupon, gov't-guaranteed, Danaharta bonds.	5-year or 10-year, variable-rate, non-negotiable, zero-coupon FOBPROA bonds.	5-year bonds without a government guarantee.
Other actions	(1) Loan Loss Provisions (LLP) made tax-deductible; (2) publication of list of large delinquent borrowers.	As no automatic tax deduction for LLP, banks created the Coop. Credit Purchasing Co. ; deferred taxes.	Removed limit on tax deductibility for LLP. Put options in P&As for acquiring banks.	LLP tax deductible; national pension fund bought "under-valued" shares; eased reserve & liquidity requirements & loan limits; credit floor.	(1) 25:75 loss-sharing (bank: gov't) on bad loans; (2) facilitate the creation of credit bureaus.	Tax deductibility for LLP, stop-loss and yield maintenance guarantees for new investors taking over intervened banks
Restructure debt	Yes: Indonesian Debt Restructuring Agency (INDRA); and the Jakarta/ London Initiative. IBRA and the state banks will embark on restructuring discussions, beginning with the 20 largest borrowers.	Can now tax-deduct debt forgiveness in a comprehensive restructuring plan. Limits on bank, ownership of equity have been raised to facilitate debt-equity swaps. There are also private initiatives; and restrictions on the foreign purchase of automobile companies, real estate, and brokerage houses have eased.	Yes: the FSC's Corporate Restructuring Agreement (CRA) uses a modified London Approach to guide restructuring. Private (Corporate Restructuring Coord. Committee (CRCC), arbitrates disputes for all but the 5 largest chaebols; for these, it is proposed to concentrate ownership where there is excess capacity under a Structural Improvement Plan. The CRA has been signed by 200 financial companies. Rescheduling involves interest rate reductions, debt forgiveness, and exchanging debt for equity or convertible bonds.	Yes: Corporate Debt Restructuring Committee (CDRC) had received 42 applications for aid by end-1998; more in 1999; works with creditors and debtors to effect workouts. Banks threaten to sell delinquent loans to Danaharta which has extensive powers over the borrowers of any loans it buys.	(1) Unidad de Inversion (UDI) converted floating rate peso and dollar loans into long-term fixed-rate loans denominated in UDIs—for household mortgages, loans of corporations, states and municipalities and development banks; (2) Programa de Apoyo Inmediato a Deudores de la Banca (ADE), provided an interest subsidy to small borrowers that remained or became current; (3) assistance for highway concessionaires that restructured their loans in UDIs; (4) discount on payments to mortgage debtors that restructured their loans in UDIs and remained or became current; (5) FINAPE's discount on monthly payments for borrowers in the agricultural and fishery industries that restructured their debts or remained current; (6) FOPYME gave assistance to micro, small, and medium-sized firms; (7) the Punto Final offers rebates on mortgage loans to borrowers whose loans are current.	Corporate Debt Restructuring Advisory Committee (CDRAC) uses the Bangkok/ London Approach for workouts; classification standards for restructured loans were relaxed and tax impediments removed temporarily; tax exemptions are granted; a draft law establishes centralized credit bureaus; legal amendments will facilitate greater foreign ownership of property; bank ownership of equity easier to permit debt- to-equity swaps; the BOT is trying to facilitate loan workout for the 200 largest debtors; the state-owned Bank of Agriculture and Cooperatives permitted to give debt relief on a case-by-case basis.

Source: Staff analysis.
1/ The public sector includes the government, the central bank as lender of last resort (LOLR), the deposit insurance corporation (DIC), the asset management company (AMC), the restructuring agency, and any vehicle for recapitalizing banks.

(2) relocated or sold to one or more decentralized "bad banks" or loan recovery companies or privately owned AMCs that specialize in the management of impaired assets; or (3) sold and transferred to a centralized AMC, which is typically state-owned.

While asset purchases can play a valuable role in recapitalizing banks under appropriate conditions, they can create serious incentive problems, if done poorly. The effectiveness of institutional arrangements for dealing with problem assets of banks, including purchase and resale assets, as well as arrangements for debt workout and corporate restructuring, determine the success of bank recapitalization, in terms of extent of recovery of government funds and relief of any credit crunch.

The government can purchase some or all of banks' impaired assets outright. This can help under certain conditions. The value of loans (good or bad) on the bank's books will decline and the amounts of cash and government (or government-guaranteed) bonds will rise. This substitution lowers the value of risk-weighted assets and rises the risk-weighted CAR.[34] Asset purchases should, however, be supported by appropriate institutional arrangements for the resale of assets, debt workouts and loan recoveries, so as to maximize the market value of purchased assets. The crisis countries have typically created a special agency—an asset management company—to acquire and handle bad assets (see Table 1).

Certain decisions must be made before the creation of such an AMC. For example, (1) Do the advantages of asset purchases by a government agency outweigh the disadvantages and warrant establishment of a centralized AMC? (2) Should it buy only from banks that are to be liquidated, or also from banks that are being assisted, or from any bank that wishes to sell its assets, regardless of that bank's condition, and whether the government has taken over the bank? (3) Will the AMC buy both good and bad assets? (4) Should the AMC warehouse assets? (i.e., hold them over a longer period without trying actively to restructure or dispose of them) (5) What prices should it offer for the assets it purchases? (6) What are the best institutional and operational arrangements for the AMC? (7) Should the government encourage corporate debt workout and restructuring? Countries are taking different positions in answering these questions; and in this section some aspects of the above issues that have a direct impact on the success of bank recapitalization are touched upon.

A. Do the Advantages of Asset Purchases Outweigh Their Disadvantages?

Asset purchases by a separate government agency may have a number of advantages that can aid bank recapitalization and restructuring, and if supported by proper incentives for loan workout and recovery efforts, could control fiscal costs. They may achieve economies of scale in asset management, particularly by centralizing scarce human resources, and foster the development of secondary markets for bank assets, and allow the bank to focus on managing

[34]Under the Basel Capital Accord, loans carry a 100 percent weight, while cash and government bonds carry a zero or 20 percent weight.

its good assets during its recovery. A centralized AMC is most useful to handle the assets of closed banks and to buy assets from open banks where the assets are large, the bank has no specific expertise in managing them, and where many banks may have claims on the same entity (for instance, a national airline or a major conglomerate).[35] In addition, asset purchases (and recapitalization with public funds generally) can be made conditional on participation by banks in debt workouts for borrowers and the achievement of performance targets for loan recovery for the assets retained in banks. Indeed, asset purchases/transfers complement a recapitalization package, for reasons already mentioned in section III, with the allocation of funds between asset purchases and direct recapitalization varying among countries, according to specific institutional circumstances.[36]

Problem assets should be purchased—with bonds or cash—at realistic and fair prices, and such transactions can raise bank income and enhance capital adequacy. As pointed out above, cash and bonds have lower risk-weights than loans and will thus raise the bank's risk-weighted CAR. A swap of classified assets whose yields are uncertain for bonds that carry market rates may not only raise income but also reduce bank's funding costs by decreasing uncertainty. An exchange for cash or bonds, which are negotiable or can be discounted at the central bank, improves bank liquidity and permits banks to make loans or other investments, and increase income.[37]

Asset purchases by a separate AMC have several important potential disadvantages, however. First, they do not raise banks' net worth unless the operation is done at above market prices, which should be avoided as discussed in section VI.E below. Asset purchases do **not** solve a problem of lack of capital in the banking sector. Second, the government needs to consider the overall cost of this form of assistance, as the expenses it incurs in disposing of the troubled assets or guaranteeing assets retained in banks may be high and difficult to estimate, depending upon the legal and operational environment for loan recovery and the

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[35]Legal deficiencies may also be handled more easily through a centralized agency. See, "Corporate Debt Restructuring in East Asia: Some Lessons from International Experience," by Mark R. Stone, IMF PPAA/98/13, October 1998.

[36]By mid-1996, Mexico had spent two-thirds of its projected net outlays to purchase bad loans and support debtors; only one-third went to recapitalize banks. See pp. 114–16 in Takatoshi Ito and David Folkerts-Landau, *International Capital Markets: Developments, Prospects, and Key Policy Issues* (Washington: International Monetary Fund, 1996). Countries typically purchase bad loans and support debtors when banks' internal governance is weak and property rights are poorly defended by the legal system.

[37]The bank will no longer need to make provisions against the assets the government purchases. However, the bank will not gain from regaining provisions that have already been made because they will be written off against the sale to the government at less than book value.

likelihood of being subject to political pressure. Third, asset purchases may provide liquidity if purchased, for example, with cash or negotiable bonds. Such additional liquidity would, however, need to be managed in order to avoid any potential conflict with the monetary stance. Moreover, asset purchases can distort incentives if banks come to expect that the government will bail them out in the future by repeatedly buying their bad assets. Again, in this case, the pricing of the assets is the key issue.[38]

The advantages of asset purchases by a separate AMC can outweigh the disadvantages: structurally, they should increase the bank's ability to move quickly and resume normal operation. However, certain conditions must be met, including the following: the AMC should be staffed by financial experts that are both honest and skilled in asset management and sale; its operations should be transparent and cost-effective for the government. It should have, if necessary, special legal powers to expedite loan recovery and loan restructuring. It should be constructed as a temporary agency for handling a special situation, and not as a permanent arrangement, in order to preserve a good incentive structure.

B. Should the AMC Buy Assets from All Banks?

Some countries have chosen to acquire and sell assets only from banks that are being resolved by liquidation or merger.[39] Other countries also provide assistance to banks that are to remain open by buying their bad assets.[40]

When the AMC purchases assets from open banks, a potential conflict arises between economizing limited resources and being fair to all banks. To buy bad assets only from troubled banks that are to receive government assistance could prejudice the survival of those better banks that are still struggling unaided to handle their portfolio of bad loans. One way for the government to resolve this dilemma is to buy some, but not all, of the bad assets of assisted banks. The assisted banks should be left with roughly the same proportion of bad loans as the rest of the surviving industry.[41]

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[38]If the centralized AMC is dealing with private banks, it is particularly important to determine transfer prices that do not involve an implicit subsidy, and such determination is quite complex in times of uncertainty, as discussed earlier.

[39]Thailand and the United States have taken this approach.

[40]Indonesia, Japan, Korea, Malaysia, and Mexico have bought bad assets from open banks.

[41]This was the compromise adopted by Sweden. See Ingves and Lind, op. cit.

C. Should the AMC Buy Only Impaired Assets?

The answer in general is "yes," given the purpose of the exercise, which is to restore banks to health and promote corporate restructuring. Good assets left with banks, and those transferred to banks in exchange for bad assets are the means to rehabilitate bank profitability and soundness.

D. Should the AMC Warehouse Assets?

There is disagreement on this issue. Some believe that selling assets as soon as they have been catalogued and adequately serviced in preparation for sale will establish a floor for asset prices in the economy. Establishing that floor will provide a turning point for economic recovery. They argue that warehousing assets prevents price adjustments particularly where markets have ceased to function in the crisis, and the overhang of the stored assets impedes price discovery and market recovery, and prolongs the recession. Finding the price floor, on the other hand, will promote a speedier recovery. Proponents of prompt sale also point to the danger of asset deterioration while under government control and claim that restoring assets to the private markets will ensure better maintenance. Others disagree: they believe that a "fire sale" will accentuate the depth of the recession. Thus, they argue assets should be warehoused and released for sale slowly so that they do not flood the market. Such warehousing, they assert, will increase the net present value of the amount that the government will receive when it sells the assets and reduce the taxpayers' ultimate costs. The balance struck between these two possibilities varies from country to country.

E. The Purchase Price

The authorities should, in general, refuse to buy assets at their book value to help recapitalize the institution, which, in effect, conceals the cost of recapitalization from the public.[42] [43] Such a transaction will subsidize banks, can be used to bail out owners and

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[42]An exception to the general rule may occur where the government buys banks' loans to public enterprises. Where these loans have received an explicit or implicit public guarantee, the government may, with justification, choose to buy the loans close to book value.

[43]A question arises concerning provisions that have been taken against assets that are purchased by the government. If the provision is greater than the loss, if any, on the sale of the asset to the government, then the bank will benefit from the transaction. If the excess provisions are reversed in the profit and loss accounts, the government may recoup some of its outlays in the form of additional taxes on bank profits. This would happen, for example, when provision had been made for an asset which the government buys at book value.

managers, and violates the principle of transparency and accountability.[44] A realistic valuation/pricing of assets based on market pricing, sound accounting norms, strong loan classification and provisioning standards, and/or discounted present values, is crucial, as discussed in section IV.A above. The rigorous recognition of loan losses is the first and most important element of an effective strategy for dealing with problem assets, as it creates the right incentives for banks to restructure their loans, foreclose on collateral, and precipitate bankruptcy reorganizations. The sellers of problem assets may be persuaded to accept conservative valuations if the asset purchase contract allows them to share unexpectedly good recovery values.

F. Institutional and Operational Arrangements[45]

There are a variety of institutional structures that will permit the asset management component of the BRA to accomplish its tasks. Institutional arrangements to work out or recover problem assets could involve a mixture of roles for governments to ensure adequate flexibility to respond to different bank circumstances and market requirements.[46] As discussed in section VI.A, a proactive and centralized role for governments (e.g., government-owned asset management units) could be desirable in some circumstances (e.g., to deal with a large volume of problem assets acquired in facilitating mergers, bank closures, and recapitalizations, or to deal with large, legally complicated exposures). In contrast, an enabling role for governments that involves decentralized arrangements (e.g., debt workout units within banks themselves, or separately capitalized loan recovery and asset management companies) is the most appropriate in many circumstances. For example, most impaired loans where the borrower itself has value as a going concern, and there is a likelihood that the borrower can pay after some financial restructuring, should remain with the originating bank or its successor. However, some small- and medium-sized loans or some insider loans where value lies mainly in recovery from underlying assets or collaterals are often handled by separate loan recovery companies outside the banks.[47]

Operational aspects of the AMC are largely beyond the scope of this paper; however, they are pertinent to the curtailment of the government's costs in bank recapitalization. In its

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[44]There are examples in Asia and elsewhere where assets have been purchased at inflated prices. However, in Indonesia and Malaysia, the asset management agency has stated that asset purchases would be based on realistic values.

[45]Arne Berggren discusses establishing and operating AMCs in his unpublished paper, "Establishing Asset Management Companies."

[46]See Nyberg, op. cit.

[47]Existing bank-client ties may in fact reflect a "cozy" relationship that could impede an aggressive liquidation process.

activities, the AMC will rely on the valuation that has already been made of bank assets, the prognosis previously made for recovery by individual banks, and the identification already made of those banks deemed eligible for government assistance. The AMC's tasks are to ensure performance of the loans; take control of the assets, including legal title to collateral; protect real assets from deterioration; improve them if possible; prepare them for marketing; sell them at the best possible price; and go out of business when it has fulfilled its obligations. There are two extreme approaches to asset management. One is to treat each asset separately, selling real property item by item and holding individual loans to maturity while pursuing legal options to force borrowers to service their debts.[48] The opposite end of the spectrum on approaches is to package the assets and sell them by auction in bulk.[49] This distinction reflects the choice whether the AMC should **own** the assets or merely act as **agent** handling the assets. The latter approach was used by the FDIC in the United States, but in other countries the authorities have preferred direct ownership so as to be able more fundamentally to regroup and reorganize the assets before selling them. Again, no overall preference can be determined ex ante. Different tools may be appropriate in different cases.[50]

Contractors from the private sector can assist regardless of which approach is adopted; they can ensure performance of the loans. They can design and maintain a computerized data base of assets acquired and an electronic system for tracking loan condition and disposition. Investment bankers and other financial experts can design classification criteria for packaging assets, prepare the assets for marketing as securities, and conduct asset auctions.

G. Encouraging Loan Workouts

AMCs and banks can facilitate debt workouts and debt restructuring of potentially viable corporate borrowers. Countries have taken widely disparate approaches to this tool. During the course of bank restructuring, some leave it to banks themselves and to the private sector.[51] Other countries have been more active in working out and restructuring loans, especially where they believe that the legal system is inadequate to support purely private

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[48]This is the approach adopted in Lithuania as described in the presentation "Asset Disposition in Lithuania," by Eugenius Maldeikis at the FDIC International Conference on Deposit Insurance, September 1998.

[49]This approach is being used in Thailand, as described by Vicharat Vichit-Vadakan in "Thai Financial Crisis and Reform," presentation to the FDIC International Conference on Deposit Insurance, September 1998.

[50]For instance, it may be particularly productive to hold and repackage property companies before seeking to sell them.

[51]Japan and the United States have followed this approach.

negotiations or there are market failures.[52] However, if carefully constructed, debt-workouts can support recapitalization efforts, whether done through capital injections or asset purchases. They should reduce debt or debt service burdens and improve borrowers' ability to repay their loans, thereby reducing the volume of nonperforming assets on banks' books, without destroying, in the long run, the incentive structure that expects borrowers to repay their loans.

The enabling role of governments in facilitating loan-workout arrangements can take several forms, and can be an important component of bank recapitalization. Appropriate legal frameworks for bankruptcy and dealing with collateral are, of course, necessary whatever the institutional mechanisms for handling problem assets. Possible governmental actions range from the informal and decentralized to the formal and centralized.[53] In the informal, decentralized approach the government provides incentives to encourage and offers guidance on conducting loan workouts. Taking a more active stance, it might arbitrate disputes among private negotiators. The ultimate interventionist action is to form a centralized AMC and have the government buy banks' bad debts in order to renegotiate, manage and sell them. The proper choice varies depending on the seriousness of the problem. In cases of deep insolvency and ultimately government ownership of banks, a government-owned AMC (or AMCs) is the likely outcome, while in less severe cases, a privately owned AMC is more likely. In many cases, both types of AMCs will be needed to maximize loan recovery in addition to building up effective loan workout capacity within banks themselves to deal with normal credit risks.

Governments have, often, played a catalytic role in fostering corporate debt restructuring, either as a component of bank recapitalization or as a separate complementary policy in times of banking distress.[54] One framework for debtor-creditor negotiations in which the government encourages corporate restructuring is the "London Approach," which does not have any direct linkage to capital support facilities.[55] When advising the parties or

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[52]Indonesia, Korea, Malaysia, Mexico, and Thailand have assisted in the restructuring of private debt. The Government of Mexico has been particularly active in providing support to households, small- and medium-size businesses of all sizes. Corporate restructuring is being done privately with government encouragement.

[53]See Stone, op. cit.

[54]Examples of the former approach include bank recapitalization schemes linked to bank conciliation agreements in Poland, or to debt workout and restructuring in Thailand. See "The Polish Experience with Bank and Enterprise Restructuring" by Fernando Montes-Negret and Luca Papi, The World Bank, FSDD, January 1997, and the capital support schemes announced by the Ministry of Finance in Thailand, on August 14, 1998.

[55]See "Corporate Workouts: A U.K. Perspective," by Pen Kent, in *Crisi d'Impresa e*

(continued...)

arbitrating disputes between private negotiators, the government can encourage banks or other acquirers to restructure loans, and retain and recover impaired loans of uncertain value through government guarantees under income-maintenance, loss sharing, stop-loss, or put-back provisions during a specified period.[56] There could also be arrangements for acquirers and sellers to share profits, if assets are sold or recovered for more than a specified amount.

Proper design of these arrangements influences the value of problem assets the government acquires in the course of bank restructuring—or the excess of recoveries over provisions in the case of the government acquiring banks that retain the problem assets—and, hence, the ultimate resolution costs for the government. Successful corporate restructuring can also reduce the need to inject public funds into troubled banks. Proper design also fosters corporate restructuring, and orderly and expeditious disposal of loans and collateral, and through these mechanisms it influences the effectiveness of bank recapitalization in relieving the crisis-induced credit crunch, and in promoting economic recovery.

In summary, the choice of institutional and regulatory arrangements for asset management, loan recovery, and corporate debt restructuring is among the most critical aspects of successful bank recapitalization. The design of these arrangements should ensure realistic valuation of impaired assets, prompt recognition of loan losses, and a balanced and pragmatic approach to asset disposition that is neither too rapid nor too delayed to avoid losses on assets; specific institutional choices to achieve these goals will depend also on the legal and governance constraints, the nature of the problem assets, and the size and distribution of these assets among banks. As indicated above, one cannot state ex ante which specific measures should be adopted. The authorities will need to choose from their toolbox on a case-by-case basis.

VII. Other Actions to Aid Bank Recapitalization

Governments frequently try to aid banks in recapitalizing by reducing their liabilities, improving their income, and granting forbearance. Many of the techniques employed disrupt monetary and fiscal management, distort incentives, and reduce transparency. When they do so, they should be adopted only cautiously, if at all. Nevertheless, they are being used (see Table 5).

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[55](...continued)
Risanamento, Milan, 1997, and Pen Kent, "International Debt: A Case-by-Case Strategy," *Banking World*, No. 5, (May 1996), pp. 13–16.

[56]These techniques have been used, for example, in Malaysia and in the United States.

A. Reducing Liabilities

Rather than increasing the assets of a bank to match its liabilities, the authorities may seek to reduce the liabilities to the level of the assets. Such a program is, however, often constrained by the comprehensiveness of guarantees already given to depositors and creditors (e.g., in the Asian crisis countries and Mexico), and the legal framework governing their rights under bank-bankruptcy laws. However, even where there is a comprehensive guarantee by the government or the central bank, it may be possible to reduce the size of the bank's balance sheet by converting liquidity support from the central bank into bank capital.

B. Improving Income

The authorities sometimes assist banks through measures to improve the income stream of banks, which include: more lenient tax treatment of banks, in various forms; and public sector loans or deposits at below-market interest rates to improve income and liquidity. Such measures are not transparent and do not adequately address the problem of capital shortage, while distorting monetary and fiscal management.

C. Granting Regulatory Forbearance

Measures of regulatory forbearance adopted in six countries are shown in Table 5. They range from counting certain items as capital in violation of the Basel Capital Accord, to relaxing loan classification and provisioning standards, to phasing in the minimum CAR. Forbearance can be hidden or explicit, and concealed forbearance should be eschewed. Forbearance that allows banks to disguise their losses and recognize them only slowly over time is particularly objectionable. However, in a crisis one form of explicit regulatory forbearance—phasing in prudential and regulatory standards— can be a useful tool that facilitates recapitalization. The capital adequacy standard can be explicitly and temporarily reduced to some positive number below the desired standard, such as the Basel Committee's recommended 8 percent or a larger ratio. Banks, under closely monitored conditions, can then be allowed to raise capital over time on a specified and uniformly applicable schedule toward a desirable CAR.[57]

Sometimes countries choose to tighten loan loss provisioning standards gradually over time, rather than opting for a gradual approach to reaching desired capital ratios combined with full compliance with provisioning rules. The gradual approach to desired capital ratios is

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[57]For example, Chapter 6, "Other Resolution Alternatives" of the FDIC's *Resolutions Handbook: Methods for Resolving Troubled Financial Institutions in the United States* 1998, takes the position that regulatory forbearance can be a useful tool when recapitalizing banks. A number of Asian countries are transparently allowing their troubled banks to temporarily fall below minimum capital standards, while adhering to a schedule for restoration of capital standards.

Table 5. Other Actions by the Public Sector to Recapitalize Banks 1/

Action	Indonesia	Japan	Korea	Malaysia	Mexico	Thailand
Burden-sharing	Shareholders and connected lenders	Shareholders, and some junior creditors	Shareholders	Shareholders	Shareholders	Shareholder
Assume debts (full guarantee)	Yes.	Yes: regular and call deposits, trusts, bonds.	Yes.	Yes.	Yes.	Yes: to honor the guarantee.
Reduce claims	The losses imposed on depositors in 16 closed banks were later retroactively fully guaranteed.	Shares, convertible bonds & subordinated debt.	All shareholders in intervened banks.	Shareholders.	Maturities extended.	For some closed finance companies.
Other actions	Loan-loss provisioning (LLP) made tax deductible	No automatic tax deduction for LLP: so banks created the Cooperative Credit Purchasing Co.; loan loss carry forwards.	Removed limit on tax deductibility for LLP. Put options in P&As for acquiring banks.	LLP already tax deductible; national pension fund bought "undervalued" shares; lowered reserve and liquidity requirements.	25:75 loss-sharing on bad loans.	Tax deduct LLP, profit & loss-sharing; stop-loss and yield maintenance guarantees for new investors in intervened banks.
Forbearance	Yes	Yes	Yes	Yes.	Yes.	Yes.
CAR	CAR temporarily lowered to 4%; will gradually increase to 8%; have limited to 1.25%the general provisions to be included in Tier 2 capital (previously all general and specific provisions were allowable in Tier 2.	(1) Permit international banks to convert to domestic status to lower their CAR to 4%; (2) grace period for compliance with even this low CAR; (3) excessively count deferred taxes and (4) some provisions against substandard loans as capital; (5) can value securities at book not the lower of book or market.	(1) Phased for commercial and merchant banks; (2) for others 8% will rule only in year 2000; (3) loan losses deferred for 3 years for merchant banks; (4) additional provisions required as a result of forward-looking criteria can be phased over 2 years.	Loan classification & provisioning firmed, then relaxed; then firmed again; CAR remains at 8%; supervision tightened; watch lists formalized.	The tightening in 1997 was reversed in 1998: restructured loans now count as performing even when nothing is paid up front; bonds have been reclassified from the trading to hold-to-maturity portfolio; sub. debt counts as base capital and specific provisions as regulatory capital; write down on banks 25% in loss-sharing can be phased over 8 years.	In exchange for restructuring corporate debts; either LCP to be phased in gradually until year 2000 or cost of debt restructuring can be deferred over 5 years.
Other	International loan classification and provisioning rules have improved, but recognition of the loss (in excess of provisions) on special-mention and substandard loans can be deferred for up to 4 years; losses on other loans are recognized immediately	Accounting; LCP tightened, but not always enforced; unconsolidated subs. hold bad loans; some banks do not classify or provision until loan is overdue 6 months and they may lend unpaid interest to enable the borrower to keep the loan current; banks have been allowed to revalue property and equities.	Yes: for merchant banks; otherwise accounting is improving and the timetable for phasing in the regulations serves to accelerate the process; ceased including special provisions for NPLs in Tier 2 capital in 1/1999.	For loans sold to Danaharta, banks have up to 5 years to recognize the difference between book value and selling price.	(1) Grace period for loan repayment; (2) the limit on shareholding raised from 10% to 20% of capital; (3) market share limitations were waived; (4) interest rate swap engineered in 9/98 to pay banks higher rates on their treasury securities; (5) banks could pledge non-negotiable FOBAPROA bonds as collateral; (6) IPAB notes are negotiable.	No.

Source: Staff analysis.

1/ The public sector includes the government, the central bank as lender of last resort (LOLR), the deposit insurance corporation (DIC), the asset management company (AMC), the restructuring agency, and any vehicle for recapitalizing banks.

preferable to the gradual increase in provisioning because it is more transparent. Moreover, the latter can reduce incentives for prompt recognition of asset values that are needed to support loan workout and efficient asset management arrangements.

VIII. Concluding Remarks

Recapitalizing and restructuring banks in the aftermath of a systemic crisis is a complex process that typically requires significant government intervention and takes several years to design and implement. To be effective, it must be carried out in a coordinated, prompt, but carefully prepared manner that reconciles financial and human resource needs with resource constraints, and provides an incentive structure that will foster financial stability in future years. It requires careful management both at the strategic level and at the individual bank level in order to ensure that government investment in banks yields the maximum return and that an efficient and sound banking system emerges at the end of the process.

The achievement of the objectives above requires effective institutional and organizational arrangements to make recapitalization and restructuring decisions, to manage impaired assets, and to foster rapid corporate restructuring. The approaches to recapitalization have varied, with countries choosing different mixes of direct capital injections and asset purchase and rehabilitation. In an effective recapitalization process, the two approaches are generally complementary, but a balance between the two approaches (which differs from country to country) becomes necessary in order to minimize the expected present value of government outlays net of recoveries.

As the restructuring and recapitalization proceeds, and financial stability is restored, the activities of the agencies established to handle these functions will change. They will shift from planning and implementation to preparation for cessation and closure. The BRA, BSA, and AMC will complete their assigned tasks and close down. As their termination approaches, the authorities must prepare to replace the full guarantee, if any, with a limited deposit insurance system, and ensure the traditional mechanisms for effective corporate governance are firmly in place to preserve financial stability.

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GLOSSARY

Asset-backed bonds. Income from a homogenous bundle of assets can be used to pay the interest on collateralized bonds sold to pay for the purchase of the assets. The bonds may be sold in several tiers depending on the priority of their claim over the income from the assets. The claims with the highest priority have the least risk, and those holding residual claims after all other bond-holders have been paid, are the most risky. Financial institutions have widely used this technique to sell their mortgages to a mortgage banker who securitizes the loans. It is now being adapted for marketing impaired assets. The issuer of the bonds may offer an interest guarantee on some tranches of the debt.

Asset management company (AMC). A separately capitalized institution, owned privately, publicly or jointly, that is established for a limited period of time to restructure, manage, and sell the problem assets acquired during bank closures and restructuring. A country may establish one centralized AMC or a number of decentralized ones.

Bad bank. The portion of a troubled bank that represents the "bad" assets. Sound assets and often some of the liabilities, particularly the insured deposits, go to the "good bank," for example, in a purchase and assumption transaction. The nonperforming assets go to the "bad bank," which typically does not accept deposits from the public. The bank's principal liability is likely to be the equity of its public or private owner.

Bank restructuring agency (BRA). A lead agency, often created specifically to design and coordinate the implementation of the comprehensive strategy for bank restructuring and recapitalization. This agency coordinates with other government agencies and is accountable to the government for the restructuring process.

Bank Support Authority (BSA). The subsidiary of the BRA that provides financial support to banks that continue to operate.

Bridge bank. A newly chartered, nationalized bank established and operated by the authorities on an interim basis to acquire the assets and assume the liabilities of failing institutions, until final resolution can be accomplished. The use of bridge banks is generally limited to situations in which more time is needed to permit the least costly resolution of a large or complex institution.

CAMELS rating. The quality rating for banks that typically ranges from 1 for the best banks to 5 for the worst. CAMEL stands for capital, asset quality, management capacity, earnings, liquidity, and systemic risk.

Centralized approach to asset management. One centralized AMC, which is common to all banks and may be government- or privately owned, recovers value from troubled assets

individually or in bulk through debt servicing, debt renegotiations, asset swaps, liquidations, and sales of collateral. The AMC may also be involved in corporate restructuring.

Comfort letter. A letter from the owners and managers indicating their willingness to perform certain actions required by a supervisor, such as being prepared to recapitalize a bank when instructed.

Debt auction. A debtor asks individual creditors to submit bids indicating the percentage repayment they would be willing to accept in settlement of their debts. The debtor then repays those submitting the smallest percentages, probably paying a uniform, cut-off price.

Debt workouts. Agreements between borrowers and lenders to restructure the debts of heavily indebted borrowers. Restructuring a loan for a financially distressed borrower can be more productive for a bank than foreclosing on the collateral or initiating lawsuits to collect on the debt.

Decentralized approach to asset management. Each banks retains financial responsibility for working out its problem assets. Its workout unit may be run as a separate department of the banks or as a wholly owned subsidiary.

Due diligence. The on-site inspection of the books and records of a failing institution. Before an institution's failure, the authorities invite potential purchasers to the institution to review pertinent files so they can make informed decisions about the value of the failing institution's assets. Such potential purchasers must sign a confidentiality agreement. In addition, contractors may be hired to perform due diligence on assets that are earmarked for multi-asset sales initiatives.

Essentiality. An exception to the financial criteria that should usually govern eligibility for recapitalization with public funds may be made when a bank provides essential, irreplaceable services to the economy and/or is too large to be closed.

Fit and proper test. An evaluation of the competence, integrity, qualifications, and experience of the owner, senior managers, and directors of a bank. This evaluation involves background checks on whether previous activities, including adverse regulatory or judicial decisions, raise doubts concerning competence, sound judgment, or honesty.

Franchise value. The franchise value is the discounted present value of the bank's future profits. Thus, a bank with zero net worth could have a positive franchise value, which an acquirer would be willing to buy. Deposits that can be invested at a positive profit have a positive franchise value.

Good bank. A bank whose bad assets have been removed.

Income (or yield) maintenance agreement. A resolution method used by the authorities to guarantee a market rate of return on certain assets of troubled banks. For example, the authorities may pay the holder the difference between the current yield on assets and the bank's average cost of funds. These agreements can also be used to facilitate mergers and Purchase and Assumptions (P&As) between troubled banks and healthy institutions.

Intervention. The intervention may take several forms: an insolvent bank may be closed; an undercapitalized bank may be nationalized, placed in conservatorship, or given capital assistance while under close supervision.

Loss sharing agreement. An agreement between the acquiring bank and the authorities regarding the sharing of losses in a failed bank. Loss sharing aims to sell as many assets of a failed bank as possible to the private sector and align the interests and incentives of the acquiring bank and the authorities so that the assets are well-managed and maximum recoveries are obtained. Under loss sharing, the authorities agree to absorb a significant portion of the loss—typically 80 percent—on a specified pool of assets while offering even greater loss protection in the event of financial catastrophe. The acquiring bank is liable for the remaining portion of the loss.

Memorandum of understanding (MOU). A written statement indications agreement between a bank and its supervisor that the bank perform certain actions.

Noncumulative preferred shares. A perpetual component of Tier 1 capital that provides the owners with special voting rights as well as a fixed amount of dividends, where the bank's financial results permit.

Open-bank assistance. A term used especially in the United States to indicate financial assistance to a bank that will be allowed to continue in business. That bank may be briefly closed and its shareholders wiped out to be reopened a temporary bridge bank or, as in the case of Continental Illinois National Bank, shareholders may be allowed to retain some residual ownership rights.

Options. A call option gives the right, but not the obligation to purchase an asset at an agreed-upon price at a specified date (European option), or within a specified period (American option). A put option conveys a similar right, but not the obligation to sell.

Profit-sharing. Gives the government an opportunity to share in the upside potential when the economy recovers. A government-owned asset management company (AMC), for example, may lend funds to a private sector acquirer to enable him to purchase restructured assets. In addition to paying interest, the acquirer may agree to convey, for instance, 20 percent of the profits he earns on the acquisition, to the AMC.

Purchase and assumption (P&A). An acquiring bank purchases the assets and assumes the liabilities of a failed bank. The transaction may cover all of the assets (whole bank P&A), or the best part of the assets ("good bank" P&A).

Put-back provision. A provision under which an assuming institution has the option of returning to the authorities, within a specified time period, certain assets that have been transferred to the acquiring institution.

Risk-weighted capital adequacy ratio. The Basel Capital Accord assigns risk-weights to on- and off–balance sheet exposures, according to broad categories of relative riskiness. The Accord sets minimum capital ratio requirements for internationally active banks of 4 percent for Tier 1 capital and 8 percent for total capital in relation to risk-weighted assets.

Securitization. The AMC can hire an expert investment bank to set criteria for packaging a bundle of impaired assets into a relatively homogeneous group. Asset-backed bonds are then sold to finance the asset purchase. These assets will be serviced either by the AMC or by a company expert in this task and the income received will be used to pay the interest owed on the bonds.

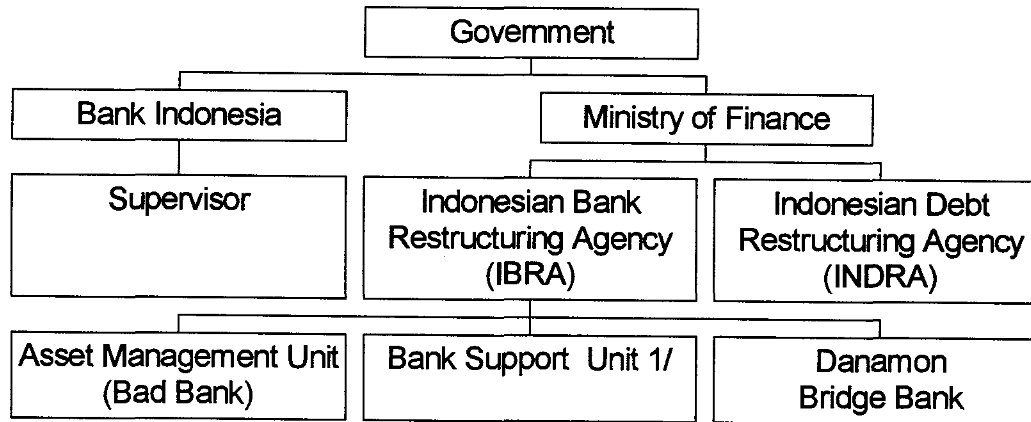
Stop-loss agreement. A "stop-loss" agreement imposes limits on the acquirer's exposure to unanticipated losses on the shared loss-assets. If asset losses exceed the authorities' best estimate of the loss, their percentage coverage is then increased, for instance, to 95 percent, and the acquiring bank's exposure is reduced to 5 percent of the loss.

Triage. The division of institutions between those that need no help, those that are worth helping, and those that are beyond help.

Warrants to purchase. Securities that give their holders the right to purchase a certain number of the shares of common stock in a corporation, at a pre-set price and under pre-defined conditions.

Yield maintenance agreement. See income-maintenance agreement.

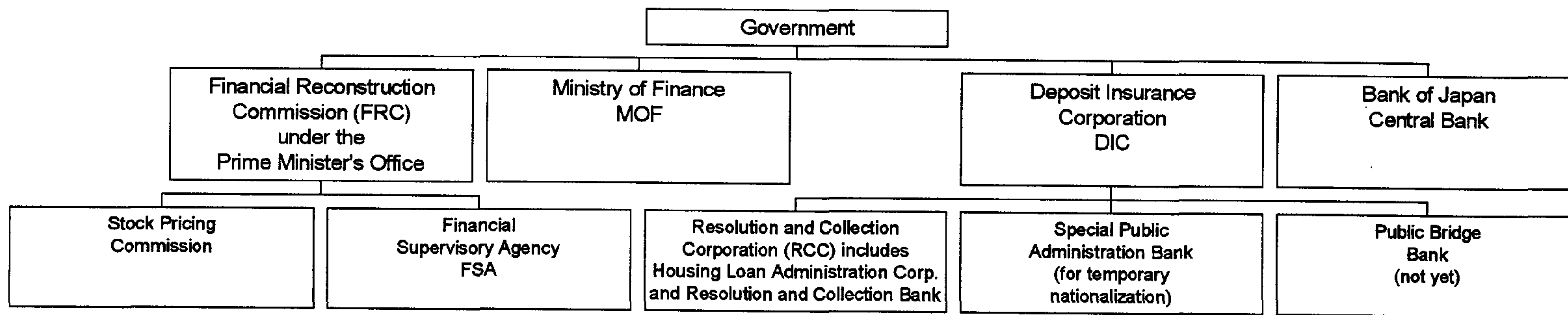
Chart 1. Institutional Framework: Indonesia



Source: Staff analysis

1/ In principle, the IBRA should be independent; in practice, it is not.

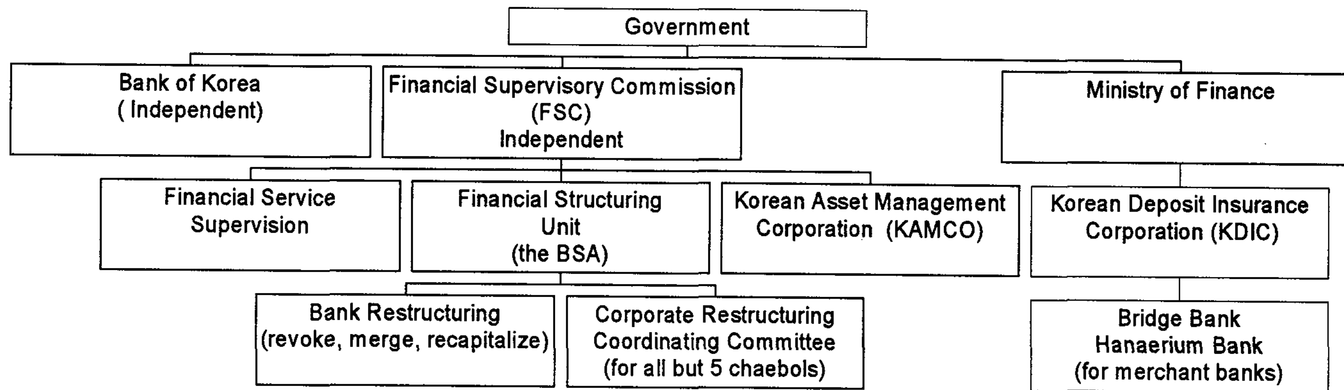
Chart 2: Institutional Framework: Japan /1



Source: Staff analysis

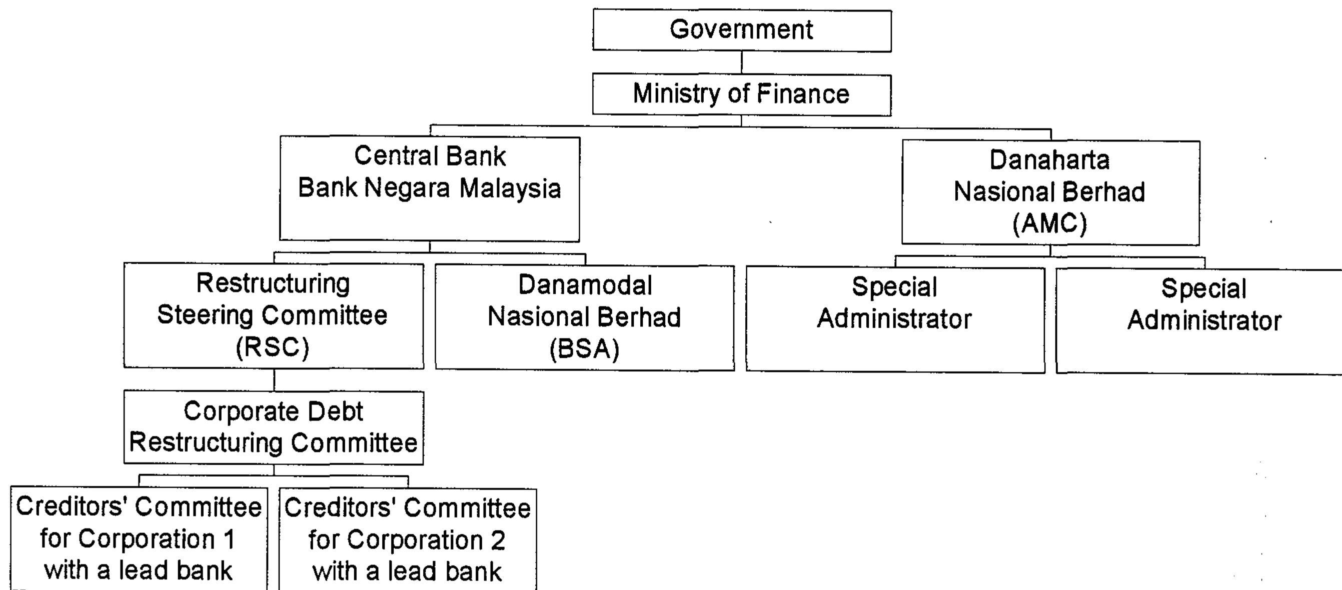
1/ Since April 1, 1999

Chart 3. Institutional Framework: Korea



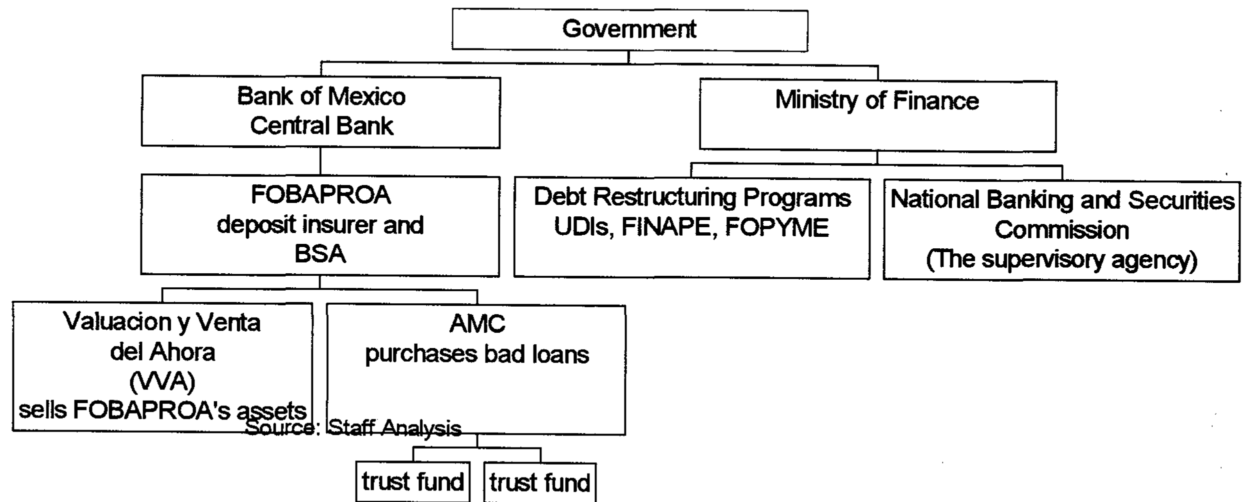
Source: Presentation for the SEANZA Forum of Banking Supervisors, November 1998; staff analysis.

Chart 4. Institutional Framework: Malaysia



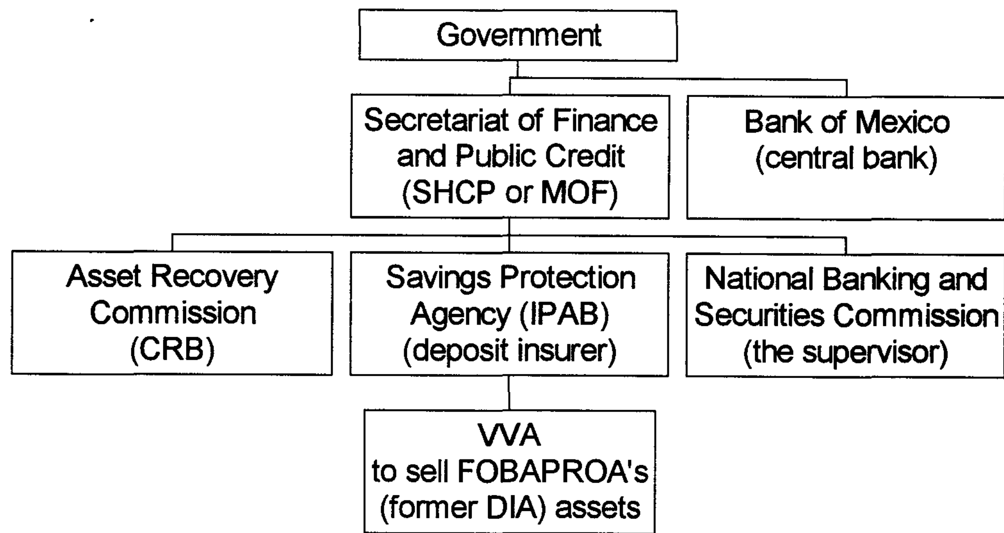
Source: Presentation to the SEANZA Forum of Banking Supervisors, November 1998; staff analysis.

Chart 5A: Institutional Framework: Mexico before December 1998



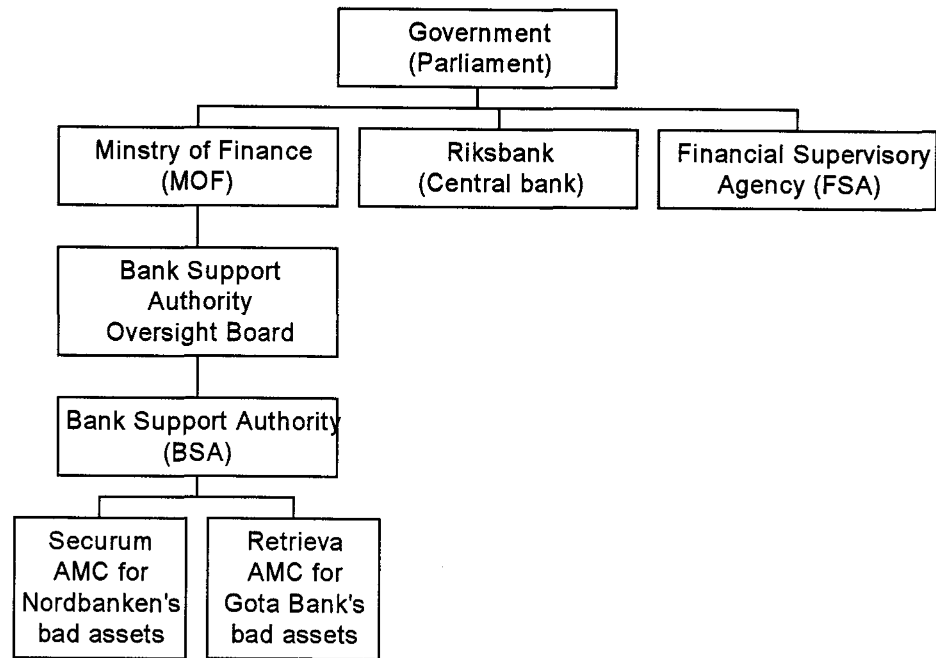
Source: Staff analysis

Chart 5B: Institutional Framework: Mexico in 1999



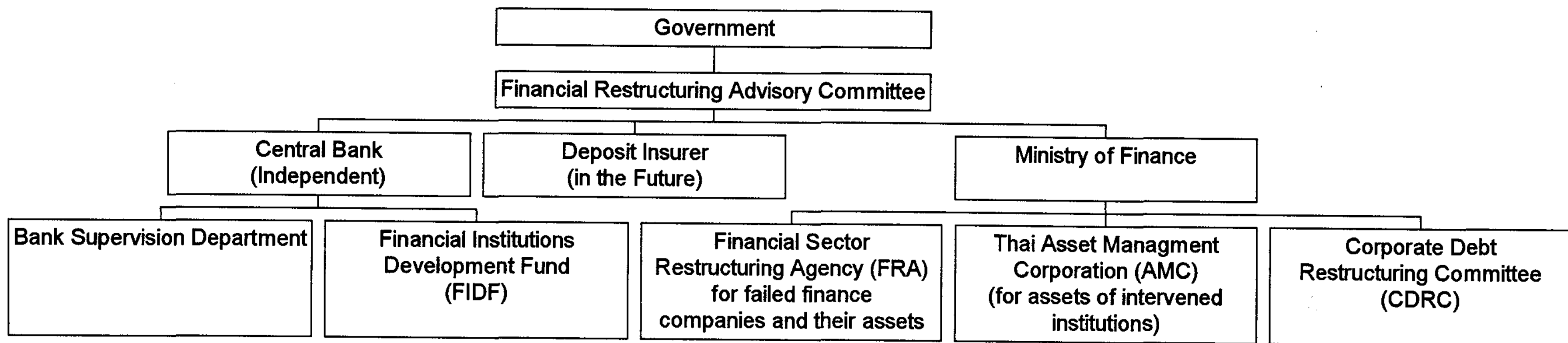
Source: Staff Analysis

Chart 6. Institutional Framework
Sweden



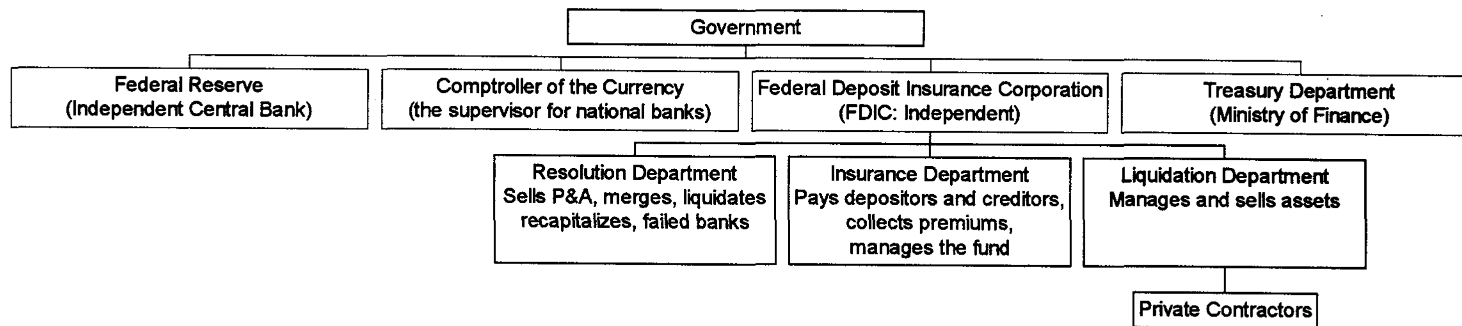
Source: Staff Analysis

Chart 7. Institutional Framework: Thailand



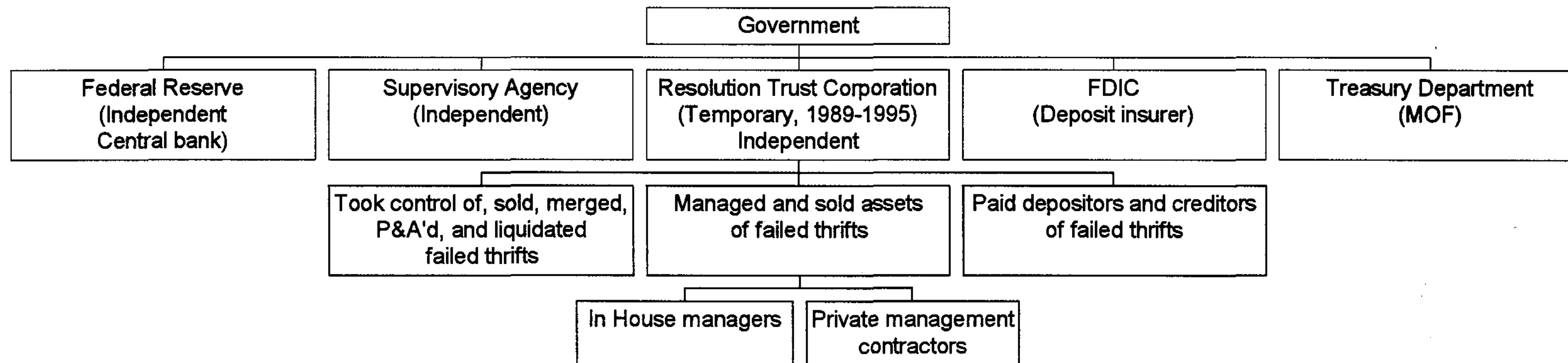
Source: Staff Analysis

Chart 8. Institutional Framework: the U.S. FDIC Model



Source: Staff Analysis

Chart 9: Institutional Framework: the U.S. RTC Model



Source: Staff Analysis