

OPTIONS FOR ADDRESSING MORAL HAZARD

Abstract

Moral hazard is present in deposit insurance systems, as is true of other insurance settings. Greater efforts to contain its effects are needed in many countries if deposit insurance is to be effective. Various methods are available for this purpose, which may be grouped under three headings: (1) good corporate governance and management of individual institutions; (2) market discipline exercised by uninsured depositors and other creditors; and (3) regulatory discipline exercised by supervisors and deposit insurers. All of the methods for controlling moral hazard have potential advantages and disadvantages. Choices among them generally involve trade-offs among competing public-policy objectives and risks, and reflect a variety of factors existing in a particular country. Thus, in choosing among methods for reducing moral hazard, policymakers may wish to consider: (a) the primary objectives of deposit insurance in their country; (b) the conditions that determine the effectiveness of particular methods of curtailing moral hazard; (c) the commitment and the ability of the country to meet these conditions; and (d) progress in advancing a reform agenda to eliminate gaps in the country's ability to implement particular methods. Decisions relating to the design of deposit insurance systems need to take these considerations into account.

OPTIONS FOR ADDRESSING MORAL HAZARD

This paper represents the work of the Subgroup on Moral Hazard.¹ It is designed for deposit insurance practitioners and other interested parties, and draws on the experience of various countries that have addressed the moral-hazard issue, as well as on the extensive literature on the subject.

Moral Hazard and Deposit Insurance

Moral hazard refers to the incentive for increased risk-taking that is present in deposit insurance as well as in other kinds of insurance. To the extent that depositors are protected, they have little incentive—and in some cases limited access to the necessary information—to monitor the performance of insured institutions. As a result, in the absence of regulatory or other restraints, funds are available for weak institutions and for high-risk ventures at lower cost than otherwise would be the case. Unless effective steps are taken to curtail moral hazard, the deposit insurance system faces the possibility of increased losses and the economy as a whole may suffer from imbalances if more funds are channeled into high-risk activities.

Incentives for increased risk-taking are greatest under a system of blanket guarantees, whereby full protection is provided to all depositors and other stakeholders in response to a financial crisis that threatens the collapse of the financial system. Accordingly, a number of countries with blanket guarantees have moved, or are considering moving, to limited-coverage deposit insurance systems. Even in a limited-coverage system, however, moral hazard remains a concern. Greater efforts are needed in many cases to contain moral hazard by means of the design of the deposit insurance system and the actions of supervisory and deposit insurance authorities.

This paper addresses the following questions:

- What means of reducing moral hazard are available in principle and what trade-offs are involved in their use?
- What means of curtailing moral hazard have been adopted in particular countries and what can be learned from this experience?
- What conditions—political, legal, financial, supervisory, resource availability, *etc.*—may affect the suitability of specific measures to curtail moral hazard in particular countries?

¹ The members of the Subgroup on Moral Hazard are officials from the United States (coordinator), Chile, France, Germany, Italy, Japan, and The World Bank.

Incentive Effects of Deposit Insurance on Stakeholders of Insured Institutions

At the heart of the moral-hazard issue are the incentives provided by deposit insurance to stakeholders—depositors, other creditors, owners, managers and directors—and to bank supervisors and deposit insurers. These incentives differ considerably in different deposit insurance systems—blanket guarantee, implicit, and limited-coverage deposit insurance.

The effects on depositors

Depositors, as noted above, have little or no incentive to monitor the performance of insured institutions or discipline their risk behaviour in a system of blanket guarantees. A similar situation is likely to exist in an implicit insurance system, although depositors may exercise greater caution if there is uncertainty as to the willingness and capacity of government to provide *ad hoc* protection when an institution fails. In an explicit, limited-coverage system, on the other hand, uninsured depositors and other unsecured creditors are aware that they are likely to sustain losses in the event of the failure of an insured institution; they consequently have strong incentives to monitor the performance of their institution and keep their funds in institutions they regard as sound. However, such incentives may be lessened if depositors are able to diversify their holdings among a number of institutions while staying within insurance limits.

Whether limiting deposit insurance coverage provides effective depositor discipline depends, of course, on whether the limits are enforced when an institution fails. Also required are strong accounting and disclosure regimes and a financially sophisticated group of depositors able to distinguish between sound and unsound institutions on the basis of available data.

The effects on owners

Owners also have different incentives under blanket guarantees and limited-coverage deposit insurance. Blanket guarantees generally are issued in response to a financial crisis and often are designed to shield both institutions and their borrowers from losses. In these circumstances, there are few penalties for undertaking excessive risks. In limited-coverage systems, on the other hand, losses and failures are clear possibilities. Although benefiting from the low cost of insured deposits, owners may seek to control an institution's risk in order to protect their investment. Such incentives, however, are weakened if the institution is poorly capitalised or insolvent. Consequently, owners have little or no equity left to lose, and their liability if an institution fails is limited to the amount of their investment. They may then be tempted to put the deposit insurer's or the government's funds at risk.

The effect on managers and directors

Managers and directors also may benefit from having access to low-cost insured deposits to fund asset growth. However, because of concerns about their professional reputations and potential liability, they may exercise a restraining influence on excessively risky

activities at their institutions. This influence is likely to be greatest in limited-coverage systems when failures are a possibility, particularly if bankruptcy is viewed by the society with disfavour and has significant financial consequences, if inappropriate actions are subject to legal sanctions, and if compensation schemes are consistent with the safe-and-profitable operation of the institution.

The effects on supervisors and deposit insurers

Supervisors and deposit insurers may encounter serious difficulties in attempting to curtail excessive risk in a system of blanket guarantees adopted in a financial crisis. Actions by supervisors and deposit insurers are likely to be more effective in systems of limited-coverage insurance. Risky behaviour by insured institutions, and the losses that are likely to result from such behaviour, may be curtailed by various regulatory actions as described below. However, provisions may be needed to require, by statute or otherwise, early intervention by supervisors and deposit insurers in the case of troubled institutions. Otherwise, an insolvent institution may be allowed to continue to operate as a result of forbearance or political pressure, with the prospect that losses will be greater when it finally is closed.

Methods of Reducing Moral Hazard

In principle, various measures are available to curtail moral hazard. They generally fall under the following headings: (1) good corporate governance and management; (2) market discipline exercised by depositors and other creditors; and (3) regulatory discipline exercised by supervisory and, in some countries, deposit insurance authorities. For ease of exposition, these methods are discussed separately in this paper. However, many deposit insurance systems have elements of all three, and these methods are most effective when they work in tandem to curtail moral hazard. Depending on conditions in different countries, the relative importance of, and the reliance placed on, the three methods may vary considerably. As noted later in this paper, some countries may not have conditions that are conducive to controlling moral hazard.

Corporate governance and management

Among other things, good corporate governance encompasses internal standards, processes, and systems for ensuring appropriate direction and oversight by directors and senior managers, adequate internal controls and audits, risk management, evaluation of the institution's performance, alignment of compensation with sound business objectives, and management of capital and liquidity positions. Good corporate governance and management can help assure that business strategies are consistent with safe-and-sound operations, and thus can act as the first line of defense against excessive risk-taking.

However, the effectiveness of corporate governance and management may at times be weakened by competitive pressures or by other external forces that reduce earnings and capital positions. Institutions may then be tempted to reach for yield by undertaking riskier loans and investments. They also may be tempted to reduce expenses by reducing

resources for internal controls, audits, risk management, and other processes that help control risk. At the extreme, as noted earlier, owners of an insolvent or barely solvent institution may conclude that they have little to lose by engaging in high-risk activities. Accordingly, efforts to establish good corporate governance and management must be accompanied in most cases by market and/or regulatory discipline if moral hazard is to be contained.

Market discipline

Market discipline exposes some stakeholders—uninsured depositors, other creditors, and stockholders—to the risk of loss in the event an institution fails.² Efforts by these stakeholders to limit their exposure result in market signals such as shifts of funds from institutions perceived to be unsound to those perceived to be sound and movements in the prices of publicly traded securities issued by the institutions. Whether such market signals provide an accurate assessment of risk depends in large part on the availability of relevant information on the condition and performance of institutions. The assembly and analysis of such information are facilitated by the activities of rating agencies, security analysts, financial commentators, and other professionals. Ultimately, the effectiveness of market discipline depends on the existence of strong accounting and disclosure regimes to ensure the availability to the public of accurate and consistent information on risk.

The chief means of exercising depositor or creditor discipline include: limits on the amounts insured, exclusion from coverage of certain categories of deposits, coinsurance, depositor preference, mandatory subordinated debt, and other publicly issued securities.

*Insurance levels and the extent of coverage*³

Limits on the amount of a deposit that is insured expose some depositors to the risk of loss in the event their institution fails and provide motivation for shifting funds to institutions believed to be safe. A similar effect is achieved by excluding from coverage funds held by depositors thought to be capable of monitoring the performance of their institutions—such as interbank deposits.⁴ This assumes that uninsured depositors have the necessary information and financial sophistication to distinguish between sound and unsound institutions. It also assumes that supervisory and deposit insurance officials

² Losses sustained by uninsured depositors and other creditors generally refer to losses of principal. In addition, uninsured depositors in some countries are subject to substantial delays and uncertainties as to the timing and amount of recoveries, and to resultant liquidity strains. Payments to insured depositors in some countries also are subject to considerable delay. Although these conditions may tend to curtail moral hazard, they also may undermine the credibility of, and public confidence in, deposit insurance.

³ Discussions of insurance levels generally refer to the amount of insured balances that can be held by a depositor in individual accounts in a particular institution. Depending on applicable law in any particular country, an individual depositor may be able to own a considerably larger aggregate amount of insured funds in a single institution through the use of individual, joint-ownership, and trustee accounts.

⁴ In addition to interbank deposits, some countries exclude from coverage deposits of insiders and governments, deposits denominated in foreign currencies, illegal deposits—such as those made for the purpose of money-laundering—and high-rate deposits. Insurance levels and the scope of coverage are discussed in the paper on coverage.

have the authority to rehabilitate or close weak institutions and that they will respond appropriately. Finally, it assumes that deposit insurance limits will be uniformly applied to depositors of all failed insured institutions.

Ultimately, choices as to levels and scope of coverage involve trade-offs among risks and policy objectives. If set too high, there is the prospect of excessive risk-taking. If set too low, there is the risk of runs on both sound and unsound institutions, as well as more gradual shifts of funds out of depository institutions. Whether high or low levels, and broad or narrow coverage, are chosen may depend, in part, on the public-policy objectives sought by the adoption of limited-coverage deposit insurance. Although public-policy objectives may not always be clearly stated, it appears that low levels and narrow coverage may have been chosen by some countries whose primary objective is to protect households with small amounts of savings. On the other hand, it appears that other countries may have chosen higher levels and broader coverage because policymakers seek primarily to promote financial-market stability, encourage new entrants, or facilitate development of a domestic banking industry.⁵ As noted below, whether these objectives are actually realised depends on many factors other than insurance limits.

Choices on levels and coverage may depend on the nature and quality of safety-net arrangements in a particular country. Countries with strong supervisory, regulatory, and enforcement systems may rely heavily on such systems to curtail the moral hazard that may result from adopting relatively high levels and broad coverage. In each case, choices made by different countries with respect to levels and coverage involve a trade-off of moral hazard against the possibility of runs. Such choices are not made in a vacuum, but in the light of other features of the regulatory and deposit insurance systems that may mitigate the unfavorable consequences—whether increased moral hazard or increased possibility of runs—arising from the particular choices made regarding levels and coverage. Among the factors that may influence these choices are institutional conditions affecting a country's ability to utilise various methods of curtailing moral hazard, such as the strength of the legal, accounting, disclosure, and supervisory regimes. General weakness in these regimes makes control of moral hazard more difficult.

Choices between the two extremes also may reflect a country's past financial history; countries that have a history of instability may opt for higher levels and broader coverage because they may be more concerned about runs than countries with a record of stability. Cost considerations may be important and low levels and narrow coverage may be chosen in countries where the resources available to the deposit insurer are insufficient and supervisors and regulators do not or cannot take prompt corrective action with respect to troubled institutions. Still another factor may be the availability of deposit-like alternatives, such as money-market funds, or the presence of publicly owned institutions, that could siphon liquid funds from private depository institutions if levels and coverage

⁵ This discussion refers to primary objectives of deposit insurance. Many countries pursue multiple objectives—for example, financial stability and consumer protection. These issues are discussed in the paper on public-policy objectives.

are unduly stringent. Within the financial-services industry, unduly stringent levels and coverage may result in a shift of funds to institutions perceived to be too big to fail.

Finally, it should be recognised that countries may pursue various objectives through their choices of insurance levels and coverage—as well as other design features of the deposit insurance system—but may not achieve the outcomes they desire unless other features of the deposit insurance system and the overall safety net are in place. Thus, low levels and narrow coverage will not achieve the objectives of protecting small depositors while avoiding runs on both sound and unsound institutions, unless there is a high degree of transparency that permits financially sophisticated depositors to distinguish between sound and unsound institutions. Nor is it clear that low insurance levels and narrow coverage will avoid moral hazard if supervisors and deposit insurers are unable to rehabilitate problem institutions before they become insolvent and policymakers are unwilling to close insolvent institutions for fear of the financial and political consequences of imposing losses on a substantial number of depositors. By the same token, high levels and broad coverage may not achieve their objectives—financial stability, competition, development of a domestic financial system—unless countries have the supervisory arrangements and personal-liability incentives necessary to curtail moral hazard. With respect to financial stability it also is useful to distinguish between short- and long-run outcomes. High levels and broad coverage, like blanket coverage, may help to stabilise the financial system in the short run. In the long run, however, excessive risk-taking may result in instability unless other safety-net features, particularly regulatory discipline, serve to curtail moral hazard.

Members of the Subgroup reported on various measures to reduce moral hazard. With respect to limits on insurance, there are wide variations among the members' countries. Some countries protect virtually the entire amount on deposit and others have relatively high limits compared with other countries. These countries seek to reduce moral hazard primarily through means such as supervisory activity by public authorities, peer-monitoring by insured institutions, and, in rare cases, the imposition of unlimited liability on controlling stockholders of failed institutions. On the other hand, some countries use relatively low limits as an important means of controlling moral hazard. Most countries exclude interbank deposits from coverage, and a substantial number exclude foreign-currency deposits.

Coinsurance

Coinsurance generally provides that insured depositors are not protected in full, but only for a portion—for example, 90 percent—of their insured balances. The possibility of losses may induce some insured depositors to monitor more closely the performance of their institutions. Coinsurance also provides a means of sharing the cost of failures with depositors. Several forms of coinsurance are available that have potentially different implications for the moral-hazard issue, vulnerability to runs, and the treatment of small

and large deposits.⁶ Most countries with limited-coverage systems impose no losses on holders of insured balances, but a minority has implemented coinsurance features.⁷

Coinsurance, as well as low insurance limits, may pose equity issues because the size of insured balances is not necessarily correlated with depositors' total wealth. Retirees may have a disproportionate amount in balances at insured institutions. Some depositors have large balances only temporarily—for example, recipients of inheritances, legal settlements, or the proceeds of home sales—and suffer losses because their institutions happen to fail at that time. Moreover, many small depositors may lack the resources or the sophistication to evaluate risk and in periods of stress may run on both strong and weak institutions alike.⁸ Some of these issues may be addressed by protecting some minimum amount in full and imposing losses only above that amount.

Depositor preference

Although depositor preference can reduce moral hazard, it also has disadvantages.⁹ Under depositor preference, insured and uninsured depositors usually are made whole before other creditors receive any of the proceeds from the liquidation of a failed institution's assets.¹⁰ Depositor preference shifts the costs of failure to unsecured creditors and gives them stronger incentives to monitor risk. As a result, other creditors may act to protect themselves by adopting netting arrangements, collateral demands, and additional charges. At the same time, uninsured depositors have reduced incentives to monitor risk. Regulators also may have reduced incentives for prompt corrective action if the deposit insurer's claims have high priority. The net effect of depositor preference depends on the relative ability and willingness to monitor and control risk on the part of other creditors and those who rank ahead of them when an institution fails.

⁶ Several alternatives for coinsurance have been distinguished. First, there may be no protection up to a specified level (in a manner analogous to the deductible in many automobile insurance policies) and protection for a percentage of deposits above that level. Second, protection may be provided for a percentage of deposits—for example, 90 percent, up to a level—for example, EURO 20,000. Third, protection may be provided for a percentage of the amount on deposit, with the percentage declining as the amount increases. Finally, coinsurance can be applied selectively to specific deposit products; for example, one country has coinsurance for term deposits and 100 percent coverage for demand deposits.

⁷ Coinsurance exists in 20 of the 67 countries with explicit, limited-coverage deposit insurance systems for which data are available. See, Gillian G.H. Garcia, *Deposit Insurance: Actual and Good Practices*, International Monetary Fund, Table 11.

⁸ The Financial Stability Forum's Working Group on Deposit Insurance report noted that not all coinsurance systems are able to maintain depositor confidence when the financial system is under stress. See, Financial Stability Forum Working Group on Deposit Insurance, *A Consultative Process and Background Paper*, June 2000, p. 6.

⁹ These issues are discussed in detail in the paper on depositor priority.

¹⁰ Preference also may be given to a particular group of depositors, such as depositors with small balances. In some countries, the deposit insurance authority, standing in the place of insured depositors, has preference over uninsured depositors as well as other creditors.

Mandatory subordinated debt

In principle, subordinated debt is a potentially effective vehicle for exercising market discipline, because it is typically issued with long-term maturities and ranks below all other forms of insured-institution debt. Mandatory subordinated debt also may provide an additional cushion for the protection of the deposit insurer. Subordinated debt, required on top of existing equity requirements and sold to other than insured institutions, can provide protection analogous to reinsurance for the deposit insurance authority by transferring some of its risk to the capital markets.

Prices on such debt may provide an indication of the market's assessment of the condition of particular institutions. Unlike equity investors, holders of subordinated debt cannot gain on the upside from increased profitability and their attitude toward risk is likely to be similar to that of deposit insurers. Market signals may be particularly useful if such debt is issued on a continuous basis, although the effects might be distorted during periods of market turbulence. However, because of the relatively high cost of issuance and the need for market liquidity, mandatory subordinated debt may be feasible only for large institutions in countries that have highly liquid bond markets. Few countries have adopted mandatory subordinated debt requirements.

Other publicly issued securities

Market discipline also may be exerted by holders of other securities issued to the public by depository institutions—including senior debt and equity investments. Since they are unprotected, holders of unsecured senior debt are motivated to monitor performance. Equity investors also have similar incentives, although, as noted earlier, they may have a greater tolerance for risk than deposit insurers. Public issuance of securities exposes insured institutions to scrutiny from rating agencies and security analysts, which is helpful in assessing their performance and in strengthening support for greater transparency and disclosure of information on their risk.

Regulatory discipline

As indicated earlier, market discipline operates by building appropriate incentives in the design of the deposit insurance system and by relying on market forces to curtail excessive risk-taking. Regulatory discipline, on the other hand, generally involves intervention by public or private authorities to prevent market forces from producing results deemed to be socially undesirable, such as runs or excessive risk-taking. Regulatory discipline may take the form of statutory prescriptions, discretionary powers vested in public authorities, or agreements reached among participants in privately managed deposit insurance systems. As used in this paper, regulatory discipline is a generic term that encompasses actions to curtail moral hazard by all participants in financial safety nets, including supervisory authorities, deposit insurers, and central banks.

Although market discipline can be a valuable means of controlling moral hazard, many countries have placed primary reliance on regulatory discipline. This reflects the view that market forces may at times lead to unacceptable results, as well as the view that supervisors and deposit insurers have access to more comprehensive information on risk through on-site examinations and off-site monitoring than is contemporaneously available to the market. Supervisors and deposit insurers also may be successful in rehabilitating troubled institutions or limiting the cost of their failure, provided that they have the necessary legal authority and the incentives to act promptly before the problems become irreversible.

Regulatory discipline may be exerted in a number of ways. For example, privately funded and privately managed deposit insurance systems may rely on mutual monitoring by insured institutions. Mutual monitoring by privately owned institutions in a private deposit insurance system is facilitated if it is applied to a financial system, or a sector of the system, that is composed of a relatively small number of large institutions. In most countries, regulatory discipline is provided solely by public authorities. To be effective, regulatory discipline requires cooperation among all of the safety-net participants. The authorised powers of the safety-net participants differ in various countries, particularly in the case of deposit insurance, which includes both paybox and risk-minimising systems. However, all of the participants should have access to information on the condition of institutions.¹¹ An integrated approach to handling troubled institutions also is needed; for example, it is important in most situations to ensure that central-bank advances are not used to prolong the life of insolvent institutions.

Regulatory discipline has many elements. These include, among others, requirements for the establishment and insurance of new institutions, qualifications for managers and directors, authorised powers, regulatory approval of changes of control, risk management requirements, and provisions for adequate internal controls and external audits. Although not within the responsibilities of deposit insurers in many countries, these regulatory and supervisory requirements have significant implications for controlling moral hazard.

Among the various tools of regulatory discipline, particular attention may be paid to those that are specifically designed for, or have a direct bearing on, controlling moral hazard. These include, minimum capital requirements, differential insurance premiums based on variations in risk, early intervention and prompt corrective action, and personal-liability incentives. It should be recognised that regulatory discipline requires a well-developed legal system and substantial human and technological resources. Also, regulatory discipline can be intrusive from the standpoint of institutions and can inhibit moderate risk-taking if unduly stringent.

¹¹ These issues are discussed in the paper on interrelationships among safety-net participants.

*Capital requirements*¹²

Mandatory minimum capital requirements can be a powerful means of controlling moral hazard because owners have a greater stake in the sound operations of the institution if they have substantial equity at risk. Capital cushions also provide protection to the deposit insurer. However, if requirements are set too high and external capital is unavailable, institutions may be forced to curtail lending in order to improve capital ratios, and this may lead to a credit crunch if the economy is already weak. High capital standards also may lead to regulatory arbitrage by institutions that seek ways to take on additional risk without increasing capital. The level at which minimum capital requirements are set, the extent to which they are enforced, and the extent to which accounting regimes accurately portray equity positions, need to be taken into account in framing policy in other regulatory areas and in the general design of the deposit insurance system.

Differential premiums

Properly structured, differential premium systems may discourage excessive risk-taking by institutions by increasing their premium assessments. Effective use of such systems requires the availability to the insurer of detailed and timely information on the risk characteristics of individual institutions. Also needed are substantial analytical capability and technological resources to develop acceptable grounds for differentiating among institutions according to risk. Lack of such information and resources may lead to the adoption of a premium structure with comparatively little differentiation among institutions. The introduction of risk-based premiums perhaps is accomplished best if most institutions in the country are generally healthy so that the premium structure may discourage excessive risk-taking in the future. If, on the other hand, a substantial number of institutions are already weak, risk-based premiums may aggravate their condition and deposit insurers may choose not to charge premiums commensurate with the risk posed by these institutions.¹³ Most countries with limited-coverage deposit insurance systems have a flat-rate premium structure, but a minority has adopted risk-based premiums.¹⁴

Early intervention and prompt corrective action

Experience in a number of countries suggests that the problems of barely solvent and insolvent institutions tend to worsen over time, as operating losses accumulate and owners' incentives for risk-taking increase. Early intervention by supervisors and deposit insurers in such cases can reduce moral hazard. Among the requirements for early intervention is adequate legal authority to take remedial actions such as directing institutions to recognise losses, seek additional capital, cease and desist from specific

¹² Capital requirements for internationally active banks are being reconsidered by the Basel Committee on Banking Supervision.

¹³ These issues are discussed in greater detail in the paper on funding.

¹⁴ Risk-based premiums have been adopted by 24 of the 67 countries with explicit, limited-coverage deposit insurance for which data are available. See, Gillian G. H. Garcia, *Deposit Insurance: Actual and Good Practices*, International Monetary Fund, Table 10. Such premium systems differ widely among countries, from relatively simple systems with few risk categories to more-complex systems.

activities, change managers and remove directors, or comply with established requirements. Also crucial is the availability of comprehensive and timely information on the condition of institutions, as well as the authority, the incentives, and the financial resources to close institutions that are beyond rehabilitation. The importance of early intervention is highlighted by the ongoing consolidation of financial systems in many countries because of the potential effect of a large-institution failure on the financial position of the deposit insurer and on the economy as a whole.

Personal-liability incentives

Managers' and directors' incentives to control moral hazard can be reinforced by legal sanctions against improper activities that often increase institution risk, such as self-dealing, conflicts of interest, negligence, and failure to take required actions. Supervisory and deposit insurance personnel also should be subject to appropriate sanctions for improper official acts. However, they should be protected against the threat of litigation designed to intimidate them or otherwise influence their official actions.

Personal-liability incentives for managers and directors of institutions depend on the existence of a legal system that provides the basis for sanctions against inappropriate behaviour. Countries with such legal systems have adopted various sanctions. In some countries, the manager of a failed institution may lose his or her license to manage another financial institution and may be held liable for misconduct by the deposit insurer and the institution's creditors. As noted above, in a few countries, the controlling shareholder of the institution may face unlimited liability for any cost incurred by the insurance fund for that institution. In other countries, directors and the chief executive officers of institutions who are replaced by the supervisor cannot take a similar position in another institution for a stated period of time. In still other countries, the deposit insurer may sue to recover losses resulting from wrongful acts by directors, officers, attorneys, accountants, appraisers, and others who have provided professional services to an institution that subsequently failed.

Conclusions

The main conclusions of this paper can be summarised as follows:

- Moral hazard is present in deposit insurance systems. Greater efforts to curtail moral hazard are needed in many cases. In general, moral hazard may be difficult to contain in countries that have serious gaps in their legal, accounting, disclosure, and supervisory regimes.
- Various methods are available in principle for curtailing moral hazard. The moral-hazard issue may be addressed by ensuring good corporate governance and management of individual institutions, promoting market discipline exercised by uninsured depositors and other creditors, and instituting regulatory discipline exercised by supervisors and, in some countries, deposit insurers. These methods are most effective if they work in tandem to control moral hazard. Many financial

systems have elements of all three. Owners, managers, and directors also may have incentives to control moral hazard, but reinforcement by regulatory action may be needed. Regulatory discipline can substantially affect the incentive structure faced by owners, managers, and directors, and effectively reduce moral hazard.

- All of the methods for controlling moral hazard have potential advantages and disadvantages. Choices among these methods generally involve trade-offs among competing public-policy objectives and risks, and reflect a variety of factors existing in a particular country. Thus, in choosing among methods of reducing moral hazard, policymakers in a particular country may wish to consider: (a) the primary objectives of deposit insurance in their country; (b) the conditions that may determine the effectiveness of particular methods of curtailing moral hazard; (c) the commitment and the ability of the country to meet these conditions; and (d) progress in advancing a reform agenda to eliminate gaps in the country's ability to implement particular methods.