

Deposit insurance system design and considerations

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This paper will discuss deposit insurance and failed bank resolution systems: the role they play in a nation's financial safety net; the advantages and disadvantages such systems provide; the establishment, coverage and funding of such systems; the linkage with supervision and licensing; and failed bank receivership and resolution processes and considerations. While deposit insurance systems are in place in many countries throughout the world, this paper is based heavily on the principal features of the deposit insurance system in the United States and some of the lessons we have learned from it.

Introduction

Financial safety net

Before addressing the role of deposit insurance in a nation's financial safety net, it would first be beneficial to briefly discuss what is meant by a financial safety net and why such nets have been established for the banking systems of many nations.

A sound, competitive banking system is critical to a nation's economic vitality. Banks have traditionally performed the important function of intermediating between lenders and borrowers by using liquid, short-term liabilities to fund relatively long-term, illiquid assets. By providing a liquid savings vehicle for small and large investors alike and by developing specialised skills to evaluate and diversify the risks of their borrowers, banks have played an important role in funding economic growth.

Banks also generally play a central role in a country's payment and settlement systems, and can be an important element in the conduct of monetary policy, which works through financial institutions and markets to affect the economy.

Given these special roles played by banks, safety net arrangements are often provided by governments with the public policy purpose of promoting economic growth and financial stability. While the nature of these arrangements can take different forms, they typically include some combination of the following: (1) bank access to a lender of last resort; (2) final, riskless settlement of payment system transactions; (3) prudential supervision of banks; and (4) deposit insurance. The remainder of this paper will focus primarily on the role and effects a deposit insurance system such as the one in place in the United States has in such an arrangement as well as the necessary interrelationship it should have with a nation's supervision and regulation of its banks.

Bank runs

Earlier in this paper I discussed how the combination of holding illiquid assets with the holding of liquid liabilities by banks provides real economic services that in most cases could not otherwise be obtained by much of the nation's population. However, it is precisely this liquidity transformation which enables banks to provide these services that also serves as the source of banks' susceptibility to bank runs.

Bank runs are caused by a combination of two factors. As previously discussed, loans, the primary asset of banks, are illiquid in that they cannot be sold quickly without a loss in value. The second factor that causes bank runs is the ability of most depositors to withdraw their deposits either on demand or at short notice. These two factors virtually guarantee that a bank will be unable at any time to fulfil its potential obligation to convert all or most of its liabilities to cash. Of course under normal circumstances the bank would never be called upon to fulfil all of its obligations; this is what allows the bank to invest in illiquid assets.

If, however, a depositor believes that the bank will be called upon to fulfil more than the normal amount of withdrawals, that depositor would have the incentive to attempt to withdraw his or her funds. This is because once the bank has depleted its inventory of liquid assets, it must begin to sell illiquid assets to meet further withdrawal demands. In effect, each such sale means the bank is realising a liquidation loss on the asset. At some point the bank will have suffered enough losses to render it unable to fulfil its obligation to the remaining depositors.

It is this "first come, first served" nature of the process that provides depositors with the incentive to run. Those depositors at the beginning

of the withdrawal line lose nothing while those at the end of the line lose everything. A depositor who merely suspects that the other depositors are going to run will get in line whether he or she desires liquidity at the time or not. This can lead to "panic" runs.

Deposit insurance: its role in the safety net

Advantages and disadvantages of a deposit insurance system

By providing a guarantee that depositors are not subject to loss, deposit insurance has two somewhat contradictory effects. On the positive side it removes the incentive to participate in a bank run, while on the negative side it eliminates the need for depositors to police bank risk-taking.

Deposit insurance systems are designed to minimise or eliminate the risk that depositors placing funds with a bank will suffer a loss. Deposit insurance thus offers protection to the deposits of households and small business enterprises, which may represent life savings or vital transactions balances. With a deposit insurance system in place, these households and businesses can "go about their business" with some assurance that their funds are secure. This in turn supports the stability and smooth operations of the economy.

This sense of public assurance is important. Public concern about the safety of deposits – whether based on fact or only on rumour – can lead, and has led, to the aforementioned damaging bank runs that can cause banks that are otherwise sound to fail. Similarly, concerns about one bank have at times led to concerns about others, resulting in so-called "contagion runs". Public confidence in the safety of bank deposits, in contrast, promotes the stability of individual banking institutions. Public confidence reduces the likelihood that depositors at an individual bank will panic and withdraw funds suddenly if concerns arise about the condition of that institution. Thus, deposit insurance can enhance stability by preventing bank runs. No amount of prudential supervision can provide protection against runs that is equivalent to deposit insurance. In addition, as opposed to blanket guarantees provided in times of stress, the explicit coverage rules of a deposit insurance system provide clear incentives for risk-monitoring by certain creditors *ex ante* and, *ex post*, provide a basis for distinctions in the treatment of bank creditors. A

related effect of deposit insurance that may be important in some financial systems is that it levels the playing field to a degree for large and small institutions. Under a formalised deposit insurance program, all institutions have access to depositor protection in the amounts specified by the coverage rules. Finally, the explicit rules of the deposit insurance program provide added certainty regarding the resolution process for failed banks. This can be extremely important for maintaining stability when a banking crisis threatens. Deposit insurance thus works together with the other elements of the safety net to contain potential threats to individual institutions or groups of institutions. In this way, deposit insurance supports economic stability by helping to avert interruptions in bank liquidity and credit availability that could otherwise result from disruptive bank runs or bank failures.

While deposit insurance systems, as well as the other elements of a financial safety net arrangement, contribute to stability and thereby promote economic growth, they can also generate perverse effects. By providing protection to market participants, costs of pursuing riskier strategies are reduced and excessive risk-taking might be incentivised – the moral hazard problem. With their deposits protected against loss, insured depositors have little incentive to monitor bank risk-taking, and may simply seek the highest return possible on their deposits. Thus, deposits may tend to flow away from conservatively managed institutions towards those willing to pay higher returns by assuming more risk. Deposit insurance can thus exacerbate moral hazard by altering the normal risk-return trade-off for banks, reducing the costs associated with riskier investment strategies. These incentives are inherent to some degree in the nature of all insurance, and even the best structural designs for deposit insurance systems cannot be expected to eliminate moral hazard. As will be discussed later in this paper, supervision and regulation of insured institutions, as well as some degree of market oversight, are essential for controlling moral hazard in order to maintain safety and soundness.

Moral hazard can be expensive, as evidenced by the savings-and-loan crisis in the United States during the 1980s, the banking problems of the Scandinavian countries during the same period, and the current crises in Japan, Korea and other Asian countries. While moral hazard was not the only factor at work in these crises, most would agree that it contributed to the high cost of resolution in each case.

The distinction between maintaining stability and preventing failures should also be emphasised. A safety net that is structured to prevent all failures is likely to stifle innovation and reduce the responsiveness of the banking industry to changing customer needs and other developments in the marketplace. To avoid such rigidity, an exit mechanism needs to be formulated and incorporated into the system. A properly balanced deposit insurance program can provide order in winding up the affairs of a failing institution, and can thus facilitate the establishment of an effective exit mechanism.

It is easy to underestimate the value of deposit insurance when times are good. When times are bad, governments often re-evaluate the need for such arrangements. Typically, deposit insurance systems are adopted in the aftermath of severe banking crises or when industry conditions are deteriorating and unstable. A recent IMF survey of deposit insurance systems in 60 countries indicated that 40 of these systems were initiated during the 1980s and 1990s, largely in response to actual banking problems or the perceived threat of instability.

Organisation, coverage and funding of deposit insurance systems

As previously discussed, the creation of an explicit deposit insurance system is an expression of government support for a nation's banking system that in large part reflects a concern about the potential for costly bank runs. In the absence of deposit insurance, bank runs are an ever-present threat owing to the fact that banks typically fund illiquid assets with more liquid liabilities. Bank runs are costly because they interfere with the financial intermediation performed by banks. Credit availability and economic activity can be adversely affected if loans are liquidated prematurely in order to meet depositors' claims. Even if bank runs are not widespread, they can disrupt the communities in which they occur. Borrowers who may otherwise receive loans in a more favourable environment may not be funded as banks are forced to maintain high levels of liquid assets.

It must also be stressed that it is the financial capacity of the insuring entity that lends credibility to a deposit insurance guarantee, and thereby removes much of the incentive for bank runs. In many larger economies,

the taxing and borrowing authority of the national government provides the maximum financial capacity and government-provided deposit insurance.

Organisational structure

Another area that challenges policy-makers to maintain a proper balance involves the organisational structure of a deposit insurance system. To the extent that the structure facilitates the organisational and political separation of the deposit insurance system from other government operations, there may be less potential for incentive conflicts that compromise the effectiveness of the deposit insurance programme. For example, some argue that combining the insurance function with the chartering function in the United States thrift industry created incentive conflicts that proved to be a factor in the demise of the Federal Savings and Loan Insurance Corporation which was established to maintain the strongest possible protection against banking instability.

In general, experience suggests that times of crisis produce political pressures for decisions that may not be in the long-run interest of a sound and efficient banking system. An independent authority is in the best position to resist such pressures. However, it must be recognised that establishing a separate authority for deposit insurance requires careful attention to the balance of power among the various banking authorities, given the incentives towards conservatism on the part of the insurer. Different structures will be appropriate for different institutional settings but, in general, the United States experience suggests caution in creating structures with a high potential for incentive conflicts.

A related issue involving the appropriate responsibilities among bank regulators is whether the deposit insurer should also have direct supervisory authority. In cases where the insurer is not also a bank supervisor, the arrangement must provide the insurer with the necessary information on the current condition and practices of all insured institutions. When the deposit insurer also has supervisory responsibilities, the internal structure must provide for appropriate balance between these functions.

Another important issue in the establishment of a deposit insurance system is the extent to which the protection afforded is explicit or implicit. Explicit rules set clear boundaries on the protection that will be provided and thereby contribute to discipline during normal times.

However, during crisis periods, rigid adherence to explicit rules may contribute to instability.

Scope of deposit insurance

A related issue involves the scope of activities to be brought under an insurance protection scheme. It is important to avoid including activities unnecessarily, given the potential for government involvement to create distortions that may skew the decisions of market participants away from the most productive choices. Once the scope of the insurance system is determined, moreover, it is important to identify measures that can most effectively strike a balance among the considerations mentioned above. For example, basing deposit insurance pricing on market indicators or other timely triggers may restore some of the discipline that is forgone by placing bank activities under the government safety net.

The attempt to minimise unwarranted expansion of the deposit insurance safety net raises questions about where banking organisations should conduct non-banking activities, as well as what should constitute a banking activity for deposit insurance purposes. An important, related concern with government involvement in deposit insurance is the potential for market distortions that diminish productive capacity. When an activity is brought under the government safety net, the production process for that activity and the resulting set of choices available to consumers and businesses may be altered significantly. For example, certain investment and lending decisions of insured institutions may be based more upon regulatory considerations than market incentives, and such distortions may diminish social welfare or productive capacity, or both.

In some countries, these concerns have been addressed primarily by limiting the activities of insured institutions to traditional bank intermediation and closely related functions. In other words, banking and non-banking activities have been required to be carried out in separate organisations. A commonly cited reason for requiring such a separation is the fear that a non-banking operation could expose a bank to greater risk of failure. Although some non-bank activities may be less risky than traditional banking activities, certain risks may be difficult to detect or monitor without some degree of corporate separation. A related reason for requiring separation of non-banking activities is to prevent banks from using deposits insured by the government to fund these activities.

The concern here is that, to the extent that banks enjoy a funding advantage from access to government deposit insurance or other features of the financial safety net, this will be passed on in their non-banking activities and give banks an unfair advantage over non-bank competitors.

The potential concern regarding corporate separation, however, is that innovations in technology and information services have increasingly blurred the distinctions between banking and non-banking organisations. Financial institutions must be allowed to evolve in response to a dynamic marketplace in order to provide a level playing field for competition. The “universal bank” model is perhaps best suited to provide institutions with flexibility but may raise concerns about unwarranted expansion of the safety net. Moreover, this model must reconcile the different approaches to regulation that may be applied simultaneously to an institution with many business lines; for example, securities regulators may tend to focus on disclosure while banking regulators rely upon prudential supervision. Regardless of the structural model, however, the challenge is to provide a statutory and regulatory framework that allows financial evolution to occur while maintaining the safety and soundness of individual institutions and the stability of the financial system without causing significant market distortions.

Simply requiring all non-banking activities to be conducted in a separate entity will not, by itself, address all concerns. Without limitations on their exposure, banks could suffer significant losses if the non-banking activities conducted in a related entity are highly risky. If the non-banking entity were to suffer losses, the health of the insured entity could be threatened if, in the absence of adequate safeguards or clear disclosure, value was diverted from the bank to support the troubled organisation, or depositors withdrew their funds out of concern for the effect the losses might have on the bank. To the extent that a deposit insurance subsidy exists, it could be transferred to non-banking activities if insured deposits are used to fund a non-banking entity. In addition, if moral hazard affects the risk-taking decisions of a bank’s managers, significant management overlap also could corrupt the decisions of the non-banking organisation.

Among the measures used to enforce separation and safeguard the resources of insured banks against misuse for the benefit of affiliated entities are: (1) explicit funding limitations on the amount of loans a bank

may make to, or investment it may make in, affiliates; (2) collateral standards on loans or extensions of credit, as well as other standards for the quality of assets purchased from affiliates; (3) requirements that certain transactions between a bank and its affiliates be carried out at arm’s length, under terms and conditions comparable to those between unaffiliated entities; and (4) requirements that the bank and its affiliates be established and maintained as separate corporate entities under the law. Again, balance is important in designing the requirements for corporate separation, as there is a potential for rendering the banking organisation less flexible and less able to respond to evolving customer needs and market developments.

Deposit insurance coverage

Striking the right balance is also critical in establishing the coverage limit for insured instruments. Coverage must be sufficient to prevent destabilising bank runs, but not so extensive as to eliminate all effective market discipline on the bank’s risk-taking.

Deposit insurance schemes around the world vary widely in the amounts and types of coverage provided. Some systems protect deposits of all types, several exclude interbank deposits, and some protect only household accounts, reflecting the different emphasis on stability versus protection for small, presumably less sophisticated, savers. Coverage is limited to less than \$10,000 per account in some countries and is unlimited in others, with most systems falling between these extremes. Several countries provide only coinsurance, such as protection for 80% of the deposit account balance. Coinsurance provides an incentive for all depositors to monitor bank risk-taking by exposing them to small losses, but it thereby also provides an incentive for the depositors to run on banks. Institutional and cultural factors doubtless influence the tolerance for risk exposure among depositors, as well as depositor reactions to adverse financial news and economic shocks. Different schemes likely will be optimal for different countries, depending upon these factors.

The IMF uses one or two-times per capita GDP as the general rule in advising countries on appropriate limits for deposit insurance coverage. It is intuitive that deposit insurance coverage limits should bear some relationship to measures of income or wealth, so as to provide a relatively constant amount of protection to savers. However, coverage

limits have not been explicitly connected to income measures in several of the longer-standing deposit insurance systems, including the system in the United States. For example, the real value of United States deposit insurance coverage has declined significantly since its inception. In 1935, the \$5,000 coverage limit was almost 10 times per capita income, while the \$100,000 limit today amounts to less than four times per capita income.

Another significant issue in designing a coverage scheme involves the treatment of “foreign” deposits, which include deposits payable in foreign currency, deposits in domestic branches of foreign banks, and deposits in foreign branches of domestic banks. Again, there is great variety in the treatment of foreign deposits among deposit insurance systems. Most systems that cover foreign deposits protect themselves from foreign exchange risk in some fashion, usually by making payment only in domestic currency up to the coverage limit. Unlike the case envisioned for the European Union in its current deposit insurance directive, many depositors at branches outside a bank’s home country cannot depend upon receiving the same protection as the bank’s home-country depositors. Nor can depositors doing business with foreign banks depend upon receiving the same protection that is available in their own country for domestic deposits.

Too big to fail

No discussion of deposit insurance systems would be complete without a mention of the so-called “too big to fail” issue. When large banks become troubled and threaten the stability of a nation’s financial system, governments often intervene by providing guarantees that extend beyond the limits established by the deposit insurance system. This practice, which has become known as “too big to fail”, has been criticised for undermining market discipline and being unfair to small banks and their customers.

One approach to the too-big-to-fail problem is to create a class of creditors with clear incentives to monitor bank risk-taking and adjust their required yields accordingly. This would provide discipline directly, and pricing information could also be used to adjust deposit insurance premiums or trigger supervisory actions. This is the rationale behind proposals to require haircuts for large depositors and proposals to require large banks to issue some amount of subordinated debt. An

approach that could generate similar market information with potentially less interference in bank funding decisions might involve direct market pricing of the large-bank risks posed to the deposit insurance system. This could occur, for example, through reinsurance or through tradable risk-sharing contracts issued by the deposit insurer. The feasibility of this approach has yet to have been fully explored.

Another approach to the too-big-to-fail problem is to internalise some of the costs associated with extending special protections in the case of a large-bank failure. The largest banks as a group might be required to pay the extra costs associated with resolutions that are not least-cost, thereby creating stronger incentives for these banks to find market solutions to any large-bank problem while the institution is still viable. A similar approach is to implement prompt, increasingly severe supervisory sanctions as the bank’s situation deteriorates, in an effort to encourage a market solution. These approaches are not mutually exclusive, and several may be suitable for some banking systems.

In the end, however, the issue of government intervention to prevent systemic problems transcends the deposit insurance system. If the failure of a private firm were to threaten the stability of a country’s financial system – whether that firm was a bank, a financial services company, or a commercial entity – the decision to intervene would likely be made at the highest levels of the government. An important issue in designing a safety net is therefore whether the deposit insurance system is the appropriate vehicle for implementing too-big-to-fail determinations.

Funding the deposit insurance system

Another key issue to be considered is whether or not to establish a separate deposit insurance fund. In the absence of a stand-alone fund, there may be political obstacles to obtaining funds when they are needed for deposit insurance purposes. With a stand-alone fund, monies will be available when needed, provided that the premiums charged have reflected realistic assumptions regarding potential losses and other deposit insurance costs. A benefit of establishing a stand-alone deposit insurance fund financed solely through premiums paid by insured institutions is that these institutions may perceive a direct stake in the financial health of the insurance system, providing motivation for them to scrutinise deposit insurance operations and maintain industry self-policing.

If a separate deposit insurance fund is created, an important question is the appropriate target ratio of the fund balance to total insured deposits. The answer to this question is likely to vary over time, depending upon the strength of the banking industry and condition of the economy. Moreover, a potential function of a deposit insurance system is to spread risk over time as well as across insured parties. Fund “adequacy” ultimately depends upon the goals established for a deposit insurance system.

If maintaining solvency in the face of extreme outcomes were the only consideration, then the choice of a reserve ratio would, conceptually, be reduced to identifying the process that generates insurance losses and selecting the level of protection desired from an appropriate statistical loss distribution. In practice, this task is difficult, involving judgements on the basis of imperfect information about potential losses. The issue is complicated further by considering other relevant factors, such as economic costs associated with the premium volatility that may be required to maintain a given reserve ratio continuously. These considerations raise the possibility that flexibility in choosing a target reserve ratio, as well as determining the appropriate steps to achieve it, may provide better balance among the relevant objectives.

Deposit insurance premiums

A simple and relatively easy-to-implement system for assessing deposit insurance premiums is to assess all insured institutions at a given rate per unit of deposits or per unit of another assessment base that reflects the total coverage provided. Such a pricing system is aimed at maintaining adequate financial capacity for the insurer, and leaves the task of controlling moral hazard to the supervisory process and the market. A flat-rate system was employed in the United States for almost 60 years, during which institutions were charged a given rate per dollar of total domestic deposits.

Under a flat-rate system, participation of institutions in the deposit insurance programme generally needs to be compulsory in order to avoid attracting only the riskier entities – the “adverse selection” problem. A risk-related premium system can address adverse selection, but to the extent that risk-related premiums may not fully reflect all the risks posed by insured institutions, compulsory membership still may be warranted.

A risk-related premium system may also provide additional control over moral hazard. At a minimum, such a system can create stronger incentives for institutions to avoid actions that may result in a weakened condition. This is true of systems that charge higher premiums based primarily upon deteriorating financial performance. Although such systems can exacerbate banking problems if not designed with care, they function similarly to supervisory sanctions and may be regarded as an additional tool for traditional bank supervision.

Ideally, however, risk-based pricing of deposit insurance would influence bank decision-making well ahead of supervisory sanctions, providing incentives *ex ante* for institutions to avoid undue risk-taking. To be most effective, such a pricing system must be based upon the current practices of institutions, current market signals regarding changes in the risk profiles of institutions, or other forward-looking factors, as opposed to observed changes in financial conditions. To the extent that market information is incorporated, this may limit any divergence between market and regulatory incentives, thereby reducing the distortions associated with deposit insurance. Moreover, attention to market information may reveal inefficiencies or obsolescence in traditional approaches to risk assessment by regulators, and may suggest reforms that would reduce regulatory burden.

The liability structure of institutions should also be considered in establishing an effective risk-based premium system. An institution with a high percentage of liabilities that are secured may represent a high risk of loss to the insurer, given that such liabilities have priority in the order of receivership claims. In contrast, depositor preference may provide protection against insurance losses, given that all depositors (including the insurer, standing in the place of insured depositors) stand ahead of other unsecured creditors in the receivership. However, by shifting risk from the insurer to other creditors, depositor preference may create greater incentives for them to withdraw funds, secure claims, or convert claims to deposits.

Risk-based pricing has been adopted by at least 11 countries, and some systems – including Argentina, Canada and the United States – in an explicit attempt to incorporate forward-looking components. However, these systems have not yet been tested through an entire banking cycle and must be considered as still in the experimental stages.

The assessment base

A key consideration in designing a pricing scheme for a deposit insurance system involves the choice of an assessment base. While the risk of insolvency is probably most closely linked to the assets of insured institutions, deposit insurance premiums in most systems are tied in some fashion to the amount of coverage provided.

Many regard the amount of insured deposits as the most equitable assessment base, in that the insurer assesses only the amount that is explicitly insured. However, estimating the insured component of total deposits may be costly and impractical under some coverage schemes. Moreover, given the reality of “too big to fail” and other systemic risks, which suggest that protection likely would be extended beyond insured deposits under some circumstances, basing premiums on explicitly insured deposits could result in significant underpricing.

This dilemma may be addressed by using a broader assessment base, such as total assets or liabilities. In the United States, the law establishes a separate assessment base for recovering the additional costs associated with too-big-to-fail or other systemic risk determinations that extend protection beyond insured deposits. For such purposes, a flat assessment rate is applied to total liabilities, so that all large institutions pay more than smaller institutions, regardless of deposit amounts or explicit coverage provided.

Linkage between deposit insurance and supervision and regulation

To a large extent, prudential supervision and deposit insurance are complementary and their goals are closely aligned. Deposit insurance programs, to a certain degree, increase the need for governments to supervise and regulate banks. However, it is maintained that even in the absence of a deposit insurance programme, given the unique role played by banks in a nation’s economy, there is a need for a process for the prudential supervision and regulation of banks.

While the specifics of bank supervision and regulation will vary from nation to nation given their institutional, cultural, historical and legal differences, the basic goals are generally quite similar, namely: maintaining public confidence in the banking system, protecting

depositors’ funds, fostering an efficient and competitive banking system and insuring compliance with banking laws and regulations. In this regard, bank supervision, examinations and regulations provide effective mechanisms for limiting excessive risk-taking by banks.

Similarly, effective supervision is aimed at ensuring stability in the banking system, which, in turn, allows banks to perform their various roles effectively. Judicious supervision can also go a long way towards protecting savers without undue burden or market distortions. Both are also key goals of deposit insurance.

Bank examinations, which, at a minimum, entail an assessment of the financial condition of banks and their operating practices and controls, are essential to assessing the risk profile of banking institutions. Our experience in the United States has shown that simply monitoring financial statements is not sufficient to assess the condition of a bank.

Regulations have a purpose similar to the covenants that are found in virtually every debt contract, namely: to prevent bank management from undertaking activities that excessively increase risk to the detriment of existing depositors and creditors or the insurance fund. Regulations covering bank capital requirements similarly serve to limit a bank’s appetite for excessive risk-taking. Capital requirements serve to reduce the incentives of owners to increase risk since, the greater the amount of capital, the larger is the owners’ loss in the event of failure. As a critical element of assuring capital adequacy and to minimise market distortions, capital standards should approximate the level of capital that market discipline would require if there were no deposit insurance. In this way, standards for capital adequacy provide supervisory protection while achieving the benefits of a market-based system, that is, efficient allocation of resources, competitiveness, healthy innovation and stability.

Resolutions and receivership processes

As previously mentioned, a properly balanced deposit insurance system can provide an effective exit mechanism for winding down the affairs of a failed institution. When an insured institution fails, the deposit insurer must provide the public with ready access to insured funds so that stability and confidence in the banking system are maintained. The timely resolution of failed institutions reinforces systemic stability,

promotes public confidence in the system, and restores liquidity to the economy. To further minimise disruption associated with insured institution failures, every attempt should be made to dispose of failed bank assets quickly and cost-effectively so that funds can be disbursed to remaining creditors, including the deposit insurer, as soon as possible.

The legal framework will in part determine the type of resolution process that is most effective in achieving these goals. The priority of claims on the receivership, the rights of claimants, and the authority of the receiver to take control and dispose of assets are among the many statutory factors that play a critical role. A related issue is whether the legal framework for bank insolvencies should provide receivership powers that reach beyond those established in the normal bankruptcy code. Depending upon the specific characteristics of the deposit insurance programme and the legal environment, the deposit insurance authority may be well positioned to execute resolution and receivership functions efficiently. On the other hand, conflicts may arise between the roles of deposit insurer and receiver in the event of a bank failure, and this could complicate housing both responsibilities within one body.

Given the basic goals for the resolution process, some flexibility exists with respect to the choice between alternative resolution methods. Selecting the most suitable resolution method for a particular failure situation requires that several factors be considered. These include maintaining stability, minimising the volume of assets managed by the government, and ensuring that market discipline is not materially weakened.

In the United States, three basic techniques have been used to resolve failed institutions: the purchase and assumption transaction, the deposit payoff method, and the open bank assistance model. In a purchase and assumption transaction, a healthy insured institution purchases some or all of the assets of a failed bank and assumes, at a minimum, all insured deposits. Purchase and assumption transactions generally minimise disruption in the local community by avoiding interruptions of banking operations and allowing credit relationships to be maintained.

In the early 1990s, as the supply of failed bank assets in the United States expanded to unprecedented levels, getting these assets back into the private sector became increasingly important. In order to stimulate bidding during the resolution process, the FDIC modified the purchase and assumption transaction to include a loss-sharing feature whereby the

government agreed to cover a certain portion of potential losses on assets purchased by the acquirer. By shifting risk away from the acquirer, loss-sharing transactions were successful in increasing the demand for failed bank assets, facilitating more cost-effective resolutions, and keeping more failed bank assets in the banking sector.

One type of purchase and assumption transaction involves the use of bridge banks. A bridge bank is a temporary banking structure controlled by the government and designed to take over the operations of a failing bank and maintain banking services for the customers. As the name implies, the bridge bank structure is intended to “bridge” the gap between the failure of a bank and the time when the government can implement a satisfactory resolution of the failing institution. The bridge bank is particularly suitable for dealing with the failure of large banks with complex financial structures, because it affords the resolution authority sufficient time to evaluate and market the institution. A disadvantage of using a bridge bank is that it entails greater government involvement in banking operations than other resolution methods.

The second type of resolution method is the deposit payoff. In a deposit payoff, no liabilities are assumed and no assets are purchased. Depositors of the failed institution are paid the amount of their insured deposits as soon as the institution is closed; uninsured depositors are covered only if additional funds remain following liquidation of the assets. Deposit payoffs are used when an acquirer cannot be found, either because of a lack of interest in the banking franchise or in the event that the purchase and assumption bids received for the bank would be more costly to the insurance funds than a payoff. Deposit payoffs can be disruptive: customers are forced to find new banks and the local community may experience a decrease in the availability of credit due to the closure of the institution. In addition, deposit payoffs have proven more costly than other resolution methods used in the United States.

The third resolution method for failing financial institutions is open bank assistance, in which the resolution authority provides financial assistance in the form of cash contributions, loans, or asset purchases to a troubled institution to prevent its failure. Because open bank assistance transactions are negotiated, they can take many structural forms. Such flexibility may be attractive in systemic risk situations; in particular, where the failure of a large institution with a significant volume of deposits and correspondent bank relationships could threaten the stability of the

banking system. However, the use of open bank assistance creates concerns involving fairness, cost and moral hazard. Reflecting these concerns, recent legislation in the United States has restricted the FDIC's ability to provide open bank assistance to troubled institutions. Under current law, the FDIC must show that open bank assistance is the resolution alternative least costly to the insurance funds. In addition, insurance fund monies cannot be used to benefit shareholders of a failing institution. Given these requirements, it appears that open bank assistance will be used rarely, if at all, in the future.

It should be noted that a lack of funding for resolution initiatives can cause severe problems and impose significant additional costs. Without adequate funding, the resolution authority may select resolution techniques that provide needed liquidity, but ultimately do more harm to the banking system. In addition, if funding is inadequate, delays in resolution activity will likely occur. This creates two fundamental problems, both of which result in higher overall resolution costs. If a resolution authority must delay its resolution of an institution, asset quality is likely to continue to deteriorate, and the moral hazard problem becomes more pronounced.

Summary and issues for further consideration

Deposit insurance programmes can help to maintain financial stability, thereby enabling banks to intermediate effectively and support economic growth. As with other components of the safety net, however, deposit insurance can create perverse effects. The potential for moral hazard, misallocation of resources, and excessive regulatory burden point to the need for appropriate balance in designing deposit insurance systems. This paper has reviewed the major features of deposit insurance design to consider the types of trade-offs that must be confronted in striking a proper balance. The major considerations surrounding deposit insurance arrangements include the role they play in a nation's financial safety net, the advantages and disadvantages such systems provide, the organisation, coverage and funding of such systems, their linkage to supervision and regulation, and the processes for failed bank resolutions and receiverships.

It is important to note that there is not a "one size fits all" approach for any of the important elements in the deposit insurance system. Institutional, cultural, historical and legal differences among countries

will dictate certain differences in the design of the deposit insurance system as well as in the other elements of the nation's financial safety net.