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Enhanced Guidance for Effective Deposit Insurance Systems:

Deposit Insurance Coverage

Guidance Paper

Prepared by the Research and Guidance Committee

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Executive Summary and Proposed Additional Guidance

This paper examines deposit insurance coverage and suggests additional guidance for effective deposit insurance practice as requested by the Financial Stability Board (FSB) *Thematic Review on Deposit Insurance Systems: Peer Review Report.* The FSB requested additional guidance on coverage issues, including striking the right balance between depositor protection, financial stability and market discipline; measures to address market discipline when coverage limits are extremely high (e.g. greater emphasis on regulation and early intervention); and ways of monitoring the effectiveness of coverage limits.

Traditionally, the scope and level of deposit insurance coverage have been set so as to balance the deposit insurer's objectives of financial stability and depositor protection with incentives for depositors to exercise market discipline to limit bank risk taking and moral hazard.[1] However, experience over the last twenty years—and especially during financial crises—suggests that there are substantial difficulties with this approach. Most depositors, if not adequately protected, will indiscriminately run from both sound and weak banks. Consequently, low coverage limits—level and scope—can create incentives for preemptive depositor runs that can undermine financial stability. In addition, most depositors—retail and corporate alike—are generally less able to exercise effective market disciple. Typically, only a small number of large-scale depositors are able to do so. Thus, moral hazard is best mitigated by the behavior of the small number of large-scale depositors and by the incentives affecting bank management and directors, shareholders and unsecured creditors.

A more nuanced view of deposit insurance coverage is emerging where the predominant function of coverage is to promote confidence, financial stability and prevent chaotic depositor runs. This can be accomplished by: 1) covering fully most, but not all, depositors and ensuring that depositors are informed on the limitations of coverage (that is, the level and scope of coverage); and 2) ensuring that a significant portion of the value of deposits are not fully covered. Since most depositors exercise little market discipline, fully covering a large portion of depositors while leaving a significant percentage of the value of deposits uninsured will not aggravate moral hazard.[2]

In cases where the necessary data can be accessed, an iterative process can be used to determine coverage limits. Authorities: 1) determine the coverage level and scope that

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[1] Moral hazard occurs when individuals are insulated from risk and behave differently than when exposed to risk. Moral hazard arises because an individual or institution acts less carefully than it otherwise would, which leaves another party to hold some responsibility for the consequences of those actions. In the case of deposit insurance, moral hazard occurs when depositors and other stakeholders ignore the risk-taking behavior of banks where they hold deposits or other liabilities. This behavior gives insured institutions an incentive to use lower-cost insured deposits to undertake higher-risk projects than would otherwise be feasible. See Enhanced Guidance for Effective Deposit Insurance Systems: Mitigating Moral Hazard, IADI draft December 2012.

[2] Moreover, it can be argued that the deposit insurance system can act as a proxy, to some degree, for the market discipline that would have been exerted by the insured depositors.

fully protects most depositors[3]; 2) estimate the value of deposits at risk and the likelihood of failure; and 3) evaluate the adequacy of available funding sources to ensure that whatever coverage limits are decided upon are credible.

Proposed additional guidance:

1. Deposit insurers should have access to timely, detailed and accurate depositor information allowing them to determine the number of depositors, depositor accounts and associated value of deposit liabilities for any specific coverage limit (level and scope).

2. The target deposit insurance coverage limit should be determined on the basis of a detailed analysis of the depositors (deposits) at risk of loss. Deposit insurance coverage limits should be set, given the policy objectives, so that most individual retail depositors in insured institutions that are at risk of being resolved are fully protected, while leaving a significant portion of the value of deposits unprotected.

3. With respect to the specific scope of coverage, the types of deposits covered should include those typically used by depositors—retail and corporate. Consideration should be given to excluding certain types of deposits (e.g. interbank deposits, deposits of government bodies) and depositors (e.g. directors, large shareholders and auditors of banks). However, the benefits of excluding certain types of deposits and depositors need to be weighed against any possible complications which may arise in quickly determining coverage and executing prompt reimbursements.

4. In cases where the necessary data can be accessed, an iterative process can be used to determine the appropriate coverage limitations.

   a. The coverage level that fully protects most retail depositors is determined. This may range upwards from 90–95 percent of the number of total depositors.

   b. The value of deposits at risk of loss and the likelihood of failure are estimated. Estimation methods may be technical (such as, value at risk or probabilities of bank failure) or more straightforward (such as, covering a given number of small- and medium-sized banks).

   c. Funding requirements to support coverage limits are examined to ensure that adequate funding for a typical loss is available, whether from an ex-ante deposit insurance fund or secured ex-post funding arrangements.

   d. If the resulting funding requirements are not realistic and the resources cannot be made available, coverage limits will need to be modified.

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[3] For example, if deposits are normally distributed, a jurisdiction might set a target coverage level of 90-95 percent of the number of total depositors. If the distribution of deposits was skewed, with a small number of depositors holding a very high value of total deposits, a higher target coverage level might better ensure that the majority of depositors were protected.

5. To qualify for deposit insurance coverage, the ownership, nature, and purpose of a deposit product (either existing or new) must be easily determined. If this information cannot be easily established, extending coverage to such deposits might be incompatible with the broad public-policy objectives of the deposit insurance system.

6. If foreign currency deposits are widely used in a country, it is an effective practice to insure them. If the host country needs to avoid foreign exchange risk in the event of bank failure, holders of foreign currency deposits should only be compensated in the local currency. An exception should be made for systems where a foreign currency plays a larger role than the local currency and where depositor compensation in the local currency could undermine confidence.

7. All banks, including banks considered systemically important and state-owned banks, must participate in the deposit insurance system. To avoid policy-induced competitive distortions, depositors in any given class of depository institution should be subject to the same coverage limit.

8. If a foreign bank participates only in the host country's deposit insurance system, it is an effective practice to determine coverage according to the host country system's regulations.

9. Coverage limits should be reviewed on a regular basis. In adjusting coverage limits, it is an effective practice for the deposit insurer to take into account inflation, changes in real income, the composition and size of deposits, stakeholder expectations, the development of new deposit products, additional funding requirements, and other factors that could affect the public-policy objectives of the deposit insurance system.

10. In order to have a credible and effective deposit insurance system, the public should be informed in advance on coverage limits (the level and scope of coverage) and how those limits will be applied.

I. Introduction and Objectives

In February 2012, the Financial Stability Board (FSB) completed a peer review of deposit insurance systems using the *Core Principles for Effective Deposit Insurance Systems* (*Core Principles*) as a benchmark.[4] The FSB *Thematic Review on Deposit Insurance Systems: Peer Review Report* (FSB *DI Peer Review*) took stock of FSB-member jurisdictions' deposit insurance systems and drew lessons from members' experiences on the effectiveness of reforms implemented in response to the recent financial crisis.[5] The FSB *DI Peer Review* identified certain areas in the *Core Principles* in need of more precision on how to achieve compliance or better reflect evolving best practices, including the effectiveness and adequacy of coverage limits.[6]

On the subject of deposit insurance coverage, the FSB *DI Peer Review* observed that since the financial crisis that began in 2007, the role of deposit insurance in promoting financial stability had been emphasized over concerns about moral hazard.[7] They requested that jurisdictions review deposit insurance coverage rules to ensure an appropriate balance between depositor protection and market discipline while promoting financial stability. In those jurisdictions where coverage levels are high, additional measures to mitigate moral hazard were recommended.

The FSB noted that differences in depositor coverage across institutions operating within a jurisdiction could adversely affect the deposit insurer's effectiveness and should be avoided. The FSB also noted that a banking system-wide coverage limit by the deposit insurer could create the perception in times of stress that some insured deposits would not be reimbursed in the event of a (large) bank failure and should be avoided. Alternatively, such a limit could be accompanied by explicit arrangements to deal with a payout above the limited amount.

Finally, the FSB emphasized the importance of monitoring the effectiveness and adequacy of deposit insurance coverage rules. Because relatively few FSB member jurisdictions regularly collect and assess the statistics necessary for this task, the FSB is seeking additional guidance—ideally an objective benchmark—for monitoring the effectiveness and adequacy of coverage limits.

Current guidance on deposit insurance coverage is found in the *Core Principles* (Principle 9 and Supporting Guidance Points). This guidance is intended to promote the sound determination of deposit insurance coverage for countries that are establishing or enhancing a deposit insurance system. The guidance is reflective of and can be adapted to a broad range of settings, circumstances, and structures.

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[4] See, the BSBC/IADI *Core Principles for Effective Deposit Insurance Systems* (hereinafter *Core Principles*) June 2009. http://www.financialstabilityboard.org/cos/cos_090618.htm

[5] See, FSB *Thematic Review on Deposit Insurance Systems: Peer Review Report* (hereinafter FSB *DI Peer Review*) 8 February 2012 http://www.financialstabilityboard.org/publications/r_120208.pdf.

[6] The topics identified in the FSB *DI Peer Review* are: monitoring the adequacy of coverage, addressing moral hazard, ensuring effective coordination and coverage in cases of multiple deposit insurance systems (DISs), conducting scenario planning to ensure payout readiness, exploring the feasibility and desirability of greater use of ex-ante funding, and developing appropriate mechanisms for public awareness.

[7] See, FSB *DI Peer Review*, p. 28-9.

> **Principle 9: Coverage:** Policymakers should define clearly in law, prudential regulations or by-laws, what an insurable deposit is. The level of coverage should be limited but credible and be capable of being quickly determined. It should cover adequately the large majority of depositors to meet the public-policy objectives of the system and be internally consistent with other deposit insurance system design features.
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> *Explanations and Supporting Guidance*: In defining what is an insurable deposit policymakers should consider the relative importance of different deposit products, including foreign-currency deposits and the deposits of nonresidents, in relation to the public-policy objectives of the system.
>
> The level of coverage should be limited and can be set through an examination of relevant data such as statistical information describing the size distribution of deposits held in banks. This gives policymakers an objective measure, such as the fraction of depositors covered, with which to assess the adequacy of a certain level of coverage. The same coverage limit should apply to all banks in the deposit insurance system.
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> Coverage limits may need to be reviewed and when necessary adjusted because of factors such as: inflation, the growth of real income, the development of new financial instruments, and the way in which these factors influence the composition and size of deposits.

Deposit insurance systems typically evolve the most during crises. After each major financial crisis, the role of deposit insurance is reconsidered and, often, strengthened. Banking crises bring to light limitations of the public safety net and lead to changes in the roles and mandates of safety-net agencies. At each stage of evolution, assumptions are revised and the interrelations among safety-net players are strengthened. As the *Core Principles* suggest, guidance on effective deposit insurance practices also should evolve.

Once crises are contained, policy concerns have tended to shift to limiting market distortions caused by depositor protection. If most depositors were fully covered, the argument went, then depository institutions might be willing to take on excessive risk. Such concerns led to a search for the optimal trade-off between protecting depositors and limiting moral hazard. Coverage limits were sought that adequately protected small-scale depositors but left sufficient deposit value at risk. In turn, limited coverage would impose depositor discipline on bank management and help to limit excessive risk to the financial system.

A number of mechanisms have been tried to identify the appropriate coverage limit.[8] An early approach was to examine the statistical distribution of coverage across a number of countries. While not a policy recommendation, researchers noted that, on average, coverage levels amounted to two times per capita GDP. A wide range existed around that average, however, reflecting different conditions in banking systems and differences in supervision and regulation. An effort to introduce a more robust policy

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[8] See, Hoelscher, Taylor and Klueh (2006) and Garcia, G. G. H. (2000) on the following and other approaches to and mechanisms for setting coverage limits.

approach was the suggestion for an "80/20" rule: fully cover 80 percent of the number of depositors but only 20-30 percent of the value of deposits. The analytical backing for the measure was limited but the emphasis was on the need to balance depositor protection and market discipline.

II. Methodology

This paper draws on research and publications on deposit insurance coverage and related issues and on the experiences of various countries regarding the effectiveness and adequacy of coverage limits in light of the recent financial crisis. The remainder of the paper is organized as follows. Section III discusses the impact of the global financial crises on deposit insurance coverage. Section IV examines the determinants of coverage and presents a methodology for determining appropriate coverage. Section V evaluates the impact of coverage on the role of deposit insurance in the safety net, and is followed by a concluding section.

III. Effect of Financial Crises on Deposit Insurance Coverage

Traditionally, coverage limits in deposit insurance systems have been set to balance the protection of small-scale depositors who are less able to monitor and evaluate the strength of a bank against the incentives such protection creates for greater risk taking by banks. The concern raised by both practitioners and researchers was that making depositors insensitive to risk (because they were protected) increased moral hazard. Depositors with balances exceeding the (relatively low) coverage level were exposed to risk of a bank failure and expected to exercise market disciple to limit bank risk taking. Deposit insurance systems, therefore, balanced the conflicting goals of protecting the largest number of depositors while keeping the total value of deposits fully protected low.

There are three substantial difficulties with this approach. First, experience has shown that most depositors will run if any portion of their deposit is subject to loss. Low coverage limits, therefore, can create incentives for preemptive depositor runs and undermine financial stability. Second, most retail depositors lack sufficient skill and access to necessary information to exercise market (depositor) discipline and effectively mitigate moral hazard. Third, corporate depositors may have the necessary expertise to exert discipline, but the cost of doing so may be high given their ties to the insured institution.[9] Effective depositor discipline typically will be imposed by a relatively small number of large-scale depositors.

[9] If a corporation's relationship with its bank is complex, encompassing a range of deposit, loan, and other services, there may be a high transaction cost of changing banks.

The recent financial crisis confirmed these views and focused attention on the need to review and reevaluate the determinants of coverage. It became clear that the objective of promoting financial stability outweighed concerns about limiting moral hazard. Many countries that had emphasized the importance of allowing markets to function freely and raised concerns about the moral hazard implications of deposit insurance, introduced measures that enhanced depositor protection arrangements, including expanded coverage limits—both level and scope—and modifications to their deposit insurance systems (see Annex A).[10] In many cases, coverage was sharply expanded to fully protect virtually all depositors, irrespective of the proportion of deposits fully covered. Many authorities concluded that coverage levels had been too low, even for stable periods, exposing most retail depositors to excessive risks and chose to permanently maintain higher coverage limits.[11]

The crisis also focused attention on depositors' ability to exert meaningful market discipline. One of the central tenets of deposit insurance design is aimed at limiting moral hazard. Deposit insurance systems have been designed to provide coverage to a majority of depositors (although perhaps not full coverage), while leaving a very significant amount of the value of deposits unprotected. The expectation is that uninsured depositors would monitor their banks' risk profile and exercise market discipline by shifting to less risky banks as warranted. However, the ability of most depositors and all but the largest creditors to do so is now recognized as limited and ineffective in a crisis.

Deposit insurance coverage limits are also more easily increased than decreased. During a crisis period, policymakers often increase coverage limits or introduce blanket guarantees. However, even if those levels are subsequently lowered post-crisis, it may be difficult to convince depositors and other creditors that higher coverage would not be restored if and when a crisis returns, thus affecting their incentives to impose discipline.

Essentially, all but the largest depositors and creditors face significant limitations in exercising market discipline for the following reasons. Specifically:

- Information about the financial condition of banks is not available in a timely manner (at very best quarterly) and is not easily accessed.
- Accounting rules require specialized knowledge that can make interpretation of public documents difficult.
- Even if risk is identified, transaction costs of changing banks are high and depositors do not move deposits frequently.

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[10] During the financial crisis, 48 jurisdictions adopted some form of enhanced depositor protection. Of these 19 jurisdictions provided full depositor guarantees, 22 permanently increased depositor coverage and 7 temporarily increased coverage. See, "Unwinding Temporary Deposit Insurance Arrangements," Report to the Financial Stability Board by the International Association of Deposit Insurers and International Monetary Fund, June 2010. http://www.financialstabilityboard.org/publications/r_1006.pdf

[11] As noted in the FSB *DI Peer Review*, many jurisdictions effectively protected all asset markets under distress, implementing a form of implicit blanket guarantee for the financial system. As jurisdictions have unwound their blanket protections, some have chosen to maintain higher coverage limits during normal or non-crisis times. Tables on the level and scope of deposit insurance coverage from the FSB *DI Peer Review* are reproduced in Annex B.

- Retail depositors find it easier to protect their deposits by keeping balances below the insurance threshold, for example, through the use of multiple (individual and joint) accounts in a given bank as permitted by the jurisdiction's coverage rules.

While the largest depositors and creditors may have close connections with bank management, the majority of corporate depositors and bank creditors face high transaction costs of changing banks. Creditors may have more complex and deeper business relations with the bank than most retail depositors. Changing banks in the face of growing risk can pose high operational costs that limit creditor flexibility. It is only after risk is wide-spread and broadly recognized that creditors begin to leave banks (the "silent runs" of systemic crises). At that point, however, market discipline has failed.

An additional concern highlighted in the crisis is that the discipline imposed by depositors could be a source of instability. In theory, banks will not take on risk levels that jeopardize their depositor base. However, depositors will tend to collectively react to market rumors rather than discipline specific institutions because bank risk-taking is inherently difficult to recognize and measure. The very discipline that depositors are expected to impose can become a destabilizing run on an institution, aggravating, not ameliorating, its financial condition. This can be exasperated by coinsurance and netting arrangements that have been used to expose all depositors to some risk and, in turn, increase their incentives for exercising market discipline on banks.[12] The collapse of the U.K. mortgage lender, Northern Rock Bank in 2007 and subsequent developments demonstrate how a sudden change in risk perceptions can trigger both the collapse of an individual institution and pose threats to the financial system.[13]

A very different view about the role of deposit insurance coverage has emerged from the global crisis. Full depositor protection for the vast majority of depositors (e.g. 90-95 percent or more of all depositors, depending on circumstances) is now seen as critical to overall financial stability.[14] Unlike previous guidance, the balance between the number of depositors fully covered and the value of deposits fully covered has clearly shifted.

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[12] As the crisis of 2008-09 demonstrated, coinsurance and netting have proven to be inimical to financial stability. Coinsurance is the practice of insuring less than 100 percent of all deposits regardless of the deposit amount. In a failure, every depositor, regardless of the size of the deposit, will suffer some loss. However, coinsurance creates incentives for preemptive runs by depositors in failing banks. Netting occurs when the liquidator offsets or nets the deposit against loans to the depositor. Netting clouds the level of depositor protection and makes payouts slower, as the receiver must determine for each depositor the net amount due them. (Although international experience is moving away from netting, many jurisdictions will still net deposits against past due claims. In liquidation, performing claims can be sold at closer to book value, while past due claims can only be sold at deep discount or simply written off. Thus, there may be value in netting deposits against past-due claims)

[13] In the case of Northern Rock, depositors were subject to coinsurance so all depositors suffered some loss in the event of a failure. Moreover, the U.K. deposit guarantee scheme also included netting, such that a customer's deposits were first used to payoff all claims by the bank. As a result, depositors were unaware of the real level of coverage. In the event, uncertainties about the strength of the bank resulted in massive deposit withdrawals.

[14] The proportion of depositors that should be fully covered will depend on country characteristics. If deposits by value are normally distributed, authorities may opt for fully protecting all depositors. If the distribution by value is highly skewed, depositors holding the highest value of deposits may not be fully covered.

The emphasis on protecting the majority of depositors does not overshadow the importance of mitigating moral hazard. Some moral hazard may be mitigated by creating appropriate incentives for large-scale depositors to monitor risk. Large-scale depositors—those whose accounts comprise a relatively small proportion of the total value of deposits in many countries—can be expected to monitor their assets and have adequate contacts with bank managers. The principle source of market discipline for mitigating moral hazard lies with a small number of large-scale depositors and unsecured creditors (especially senior and subordinated debt holders), managers, board members and shareholders. The risk of loss to these groups creates incentives for limiting risk taking by banks. For market discipline to be effective, shareholders and unsecured creditors must suffer losses in a bank failure. Moreover, board members and managers must lose their positions and, ideally, be subject to monetary penalties. Only then will they have incentives to limit the risk profile of their institution.[15]

IV. Determining Appropriate Coverage

The coverage rules must be consistent with the public-policy objectives of the deposit insurer. Importantly, they must be integrated into the deposit insurance system's relevant design features, including the payout process and public awareness efforts. The following provides guidance on striking the right balance between protecting depositors, contributing to financial stability and market discipline.

As noted in the *Core Principles*, coverage should be limited, but credible, and easily determined. Determining the appropriate coverage within the context of the deposit insurance system's policy objectives involves placing limits on the level of insurance coverage and the type of instruments eligible for coverage. Policymakers also set rules for applying the coverage limits. For example, a commonly used rule is to apply deposit insurance coverage on a per-depositor, per-institution basis.[16]

A. Setting Coverage Limits

As noted, jurisdictions are, increasingly, setting coverage at limits—that is, the level and scope of coverage—, that fully protect a majority of retail depositors (by number, but not necessarily the total value of deposit liabilities). That is, the focus is on insuring individual depositors at risk.

Determining the appropriate coverage level can then involve a process whereby the authorities' balance policy objectives against the cost of that policy. While all depository institutions that meet membership criteria and are subject to strong prudential regulation and supervision must be members of the deposit insurance system, they are not all exposed to the same risk of failure.[17] For example, in some

[15] See, Enhanced Guidance for Effective Deposit Insurance Systems: Mitigating Moral Hazard, IADI draft November 2012.
[16] FSB members typically use this rule. See Annex B, Table 1.
[17] Guidance on effective deposit insurance practice calls for compulsory membership in the deposit insurance system for all insured depository institutions subject to strong prudential regulation and supervision. See, Principle 8, *Core Principles*.

countries, banks that are systemically important or state-owned are at limited risk of intervention and liquidation.[18] Small and medium banks, on the other hand, are likely to be subject to the jurisdiction's resolution regime.

In setting coverage levels, the authorities will need to focus on deposits (depositors) at these banks. Coverage levels should be set so that, given the policy objectives, most depositors in banks that are at risk of being resolved are fully protected, while leaving the majority of the value of deposits exposed to market discipline. [19] Jurisdictions with an objective of protecting only small-scale depositors will identify the total amount of retail deposits at risk. Jurisdictions that do not cover corporate deposits but wish to pursue a broader stability framework may consider extending coverage to entities such as small businesses..[20]

The goal is to set coverage so that the majority of depositors (small-scale retail and corporate depositors) are sufficiently protected and do not have an incentive to preemptively run the depository institution, while keeping a meaningful percentage of the value of deposits uninsured so that the relatively few large-scale depositors will have an incentive to monitor the risk-taking activities of the depository institution. That is, set coverage rules so that financial stability is not threatened by preemptive runs and depositor discipline is exerted by those depositors who are able to monitor and discipline the depository institution.

The appropriateness of coverage levels must be considered within the context of the overall safety-net framework. To the extent that coverage rules are or become misaligned, distorting the desired incentives for small-scale and large-scale depositors, strong supervision and an effective bank resolution framework can mitigate some of the resultant negative effects.

Reviewing the distribution of deposits by size can be useful for evaluating coverage options. Using data on the number of depositors covered and the percentage of the total value of deposits covered at a series of different coverage levels (where all deposits/depositors are eligible), policymakers can set coverage levels to protect as many of the depositors as possible, while leaving a significant portion of the value of deposits unprotected. [21]

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[18] Increasingly, jurisdictions are seeking to develop resolution tools for systemically important institutions. In the United States, for example, the Dodd-Frank Wall Street Reform and Consumer Protection Act (Public Law 111-203—July 21, 2010) gives the FDIC authority to resolve such institutions.

[19] The relevant measure of deposits could be total domestic banking sector deposits (all deposits held by relevant institutions within a jurisdiction) or eligible deposits (deposits that meet the requirements for coverage under a deposit insurance scheme), depending on country-specific characteristics. For example, in the United States, total domestic deposits and eligible deposits are equivalent. This may not be the case in other countries. For example, under EU rules certain categories of deposits are not eligible for deposit protection, such as interbank deposits.

[20] In such cases, a system would have to be designed such that the personal funds of the small-business owner are not co-mingled with the business-related funds.

[21] Other methods for calculating coverage have been used, including setting coverage as a percent of per capita GDP or on the basis of historical trends (e.g., covering 80 percent of depositors but only 20-30 percent of the value of total deposits). Such methods may or may not consider local conditions and the strength or weakness of the overall safety net.

In addition to setting the level of coverage, the scope of coverage also should be considered. To qualify for coverage, the ownership, nature, and purpose of a deposit product (either new or existing) must be easily determined. If this information cannot be easily established, extending coverage might be incompatible with the policy objectives of the deposit insurance system. Efforts to mitigate moral hazard by restricting the scope of coverage need to be balanced against the potential to add complexity and possible delays to prompt reimbursement.

In particular, some specific types of deposits may be excluded or considered ineligible for protection. These may include:

- Interbank deposits, because typically other banks are expected to be among the creditors most able to provide market discipline;
- Deposits of government departments and of regional, provincial, and municipal governments and other public bodies;
- Deposits of individuals who are regarded as responsible for the deterioration of an institution, including deposits belonging to the directors, managers, large shareholders, and auditors of banks;
- Deposits that carry excessively high interest rates;[22] and
- Bearer deposits.[23]

If foreign currency deposits are widely used in a country, it is an effective practice to insure them. If needed to avoid foreign exchange risk in the event of bank failure, the host country should only compensate holders of foreign currency deposits in the local currency. An exception should be made for systems where a foreign currency plays a larger role than the local currency and where depositor compensation in the local currency could undermine confidence. Payment in local currency could imply that the central bank lacked sufficient foreign currency in reserve, which could in turn precipitate a run on the banking system.[24]

Other factors may affect the choice of coverage, such as the available funding, the stage of economic development, linkages with neighboring countries, or the existence of multiple deposit insurance systems in a given jurisdiction.[25] If the flow of funds among neighboring countries is significant, the level and scope of coverage in these

[22] Policymakers may choose to exclude these deposits in order to discourage weak institutions from being able to bid away deposits from stronger, more prudently managed institutions. However, it may be difficult to determine what rate of interest would disqualify a deposit from coverage. Alternatively, weak institutions may be prohibited from offering high-rate deposits through regulation and supervisory actions.
[23] Countries that provide per-depositor coverage generally exclude bearer deposits, which are deposits that are not registered to a particular owner, because there is no way of calculating the coverage limit or proving eligibility when the depositor is unknown.
[24] As the Argentine financial crisis of 2001-02 demonstrated, it will be difficult for the deposit insurer to perform all of its functions in a highly dollarized economy during a period of crisis. Specifically, dollarization prevents the central bank from producing the volume of dollars needed to maintain liquidity in the system. Under these circumstances, the deposit insurer may lack sufficient dollar reserves to pay out insured deposits in dollars.
[25] IADI has identified other issues to be reviewed in setting coverage rules. See, IADI *Handbook* p. 30.

countries should be taken into account when determining deposit insurance coverage rules. For example, differences in coverage levels between neighboring countries could lead to depositor flight. Similarly, in jurisdictions that feature multiple deposit insurance systems, differences in the level and scope of coverage across institutions operating could potentially undermine the systems' effectiveness.[26] The choice of coverage rules also may be influenced by a jurisdiction's history of banking crises. Following a crisis, for example, a jurisdiction may choose to maintain relatively high coverage levels until private confidence is fully restored. Similarly, high coverage levels may be maintained while authorities take actions to repair and strengthen the financial sector, e.g., implementing new prudential regulations and rules.

Once the maximum amount of deposits at risk is identified, the authorities must determine whether there is a credible funding structure to finance likely payouts. The authorities will need to develop some estimate of possible failure. A variety of techniques can be developed, ranging from a rule of thumb (covering for example, five or six small banks or several medium-sized banks) or more sophisticated techniques based on value at risk and the probability of failure.[27]

Given an estimate of failure rates, the authorities will need to develop funding mechanisms that ensure sufficient funding is available.[28] Most funding structures include some combination of ex-ante funding, ex-post funding mechanism and emergency backup funding. In an ex-ante scheme, the appropriate size of the fund and the premium levels needed to build the fund over time must be determined. In ex-post schemes, secured funding arrangements must include sufficient liquidity. All funding schemes should include emergency backup funding arrangements.

In cases where the necessary information can be accessed, an iterative process can be used to determine coverage. Authorities first determine the coverage limit that fully protects most depositors. A target coverage limit can range upwards from 90-95 percent of the number of depositors.[29] Authorities then estimate the value of deposits at risk and the likelihood of failure. With that information, authorities examine available ex-ante and ex-post funding sources. In an ex-ante funded scheme, the appropriate size of the fund and the premium levels needed to build the fund over time must be determined. Ex-post funded schemes must have an available source of funds for liquidity and working capital purposes. Emergency backup funding arrangements must be identified for all schemes.

If funding is not available or is considered excessive for the country, coverage limits will need to be lowered or scaled back. Lowering coverage levels or reducing the scope of coverage may reduce funding requirements. Authorities will need to keep in mind, however, that lower coverage limits also may result in higher risk of disorderly runs by depositors in the face of bank distress.

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[26] The FSB has requested additional guidance on multiple deposit insurance systems. See, FSB *Deposit Insurance Peer Review*, p. 7.

[27] These issues are addressed more comprehensively in the funding guidance under preparation.

[28] Credible funding is an essential element of an effective deposit insurance system (see, Principle 11).

[29] See footnote 2 above.

Finally, once the coverage limit and scope have been finalized there should be close monitoring of the number of depositors fully protected (i.e. covered depositors) as well as the total value of deposits protected on an ongoing basis.

B. Adjusting the Level and Scope of Coverage

Real, effective coverage limits may deteriorate over time and should be reviewed on a regular basis. Over time, inflation can diminish the real value of deposit insurance, the composition and the size of deposits may change, and new deposit instruments may be introduced. Periodic adjustments to the scope and level of coverage may therefore be necessary. Such adjustments may take place on an *ad hoc* basis or they may be made automatically, such as through indexing. Several considerations should be kept in mind.

When adjustments are made on an *ad hoc* basis, policymakers are in control. This may politicize the process. Indexed adjustments are automatic and avoid politicization but, if adjustments occur too often, it could lead to uncertainty as to the insurance limit. It also could be expensive to implement such adjustments, as the public would have to be informed about the new limits. Even within a system of indexing, the level should be reviewed periodically to account for changes in the size of financial markets and changes in the real value of deposit insurance.

Countries with histories of high inflation may define coverage levels in terms of indexing units to maintain the real value of their deposit insurance coverage.[30] This provides for automatic adjustment of the coverage level for insured deposits without the need to change the information available to public—coverage in terms of the indexing units is constant.

V. The Effect of Coverage on the Role of Deposit Insurance

The shift towards covering the vast majority of depositors strengthens the role of deposit insurance systems in the safety net. In many countries, deposit insurance systems have been set up to protect only the most vulnerable depositors and are tasked primarily to payout insured depositors after the bank has failed (paybox systems). As a result, deposit insurers have often been left out of discussions about maintaining financial stability or in reviewing resolution options.[31] The shift to protecting a significant majority of depositors puts the deposit insurer squarely in the center of safety-net considerations. Deposit insurers increasingly are seen as playing a key role in 1) ensuring overall depositor confidence, 2) protecting the resources of the fund, and 3) ensuring that bank resolution takes place in a least-cost manner. While many deposit insurers may have always held these roles, the expanded view of

[30] Some countries have used indexing units as a means to protect contracting parties from the effects of inflation.

[31] Although a growing number of deposit insurers are becoming "loss minimizing" deposit insurers, there remains a tendency within many safety nets to relegate deposit insurers to a supportive role.

coverage is leading to a growing consensus among other safety-net players as to the central role of deposit insurance.

Opting for broader coverage of depositors requires modification of design features of the safety net to mitigate moral hazard.[32] Moral hazard concerns remain and may even increase in a system focusing on financial stability. The mitigation of moral hazard must remain an essential element of safety-net design. However, the tools for mitigating moral hazard have evolved.[33] Less emphasis is being placed on depositors as a source of market discipline. Only a small number of very large-scale depositors—for example, the 5-10 percent of total depositors that hold 30-50 percent of the value of total deposits—are likely to have the ability to effectively discipline bank owners. Greater emphasis is being placed on large-scale depositors, shareholders and unsecured creditors (especially senior and subordinated debt holders) as sources for market discipline. When convinced that their investments will be lost in a resolution, these stakeholders have an incentive to act to limit bank risk taking. Market discipline from these stakeholders, in conjunction with regulatory discipline, good corporate governance and risk management are essential for mitigating moral hazard.[34]

VI. Conclusion

Deposit insurance systems typically evolve the most in the face of bank failures and financial crises, which often point to areas for reform and restructuring. The financial crisis that began in 2007 pointed out limitations in the ability of most retail and corporate depositors to exercise market discipline or mitigate moral hazard. In light of such experience, deposit insurance systems may choose to focus more intently on maintaining financial stability.

Financial stability considerations have led jurisdictions to increase significantly real coverage levels. Deposit insurance systems are increasingly adopting full coverage for the majority of depositors, exposing less of the total value of deposits to market discipline, as only those depositors holding only the largest deposits are likely to be willing and able to monitor and control bank risk taking. The best sources of discipline include depositor discipline from these large-scale depositors, and market discipline from shareholders and other unsecured creditors.[35]

Given these considerations, coverage limits—the level and scope of coverage—are set. Given the availability of necessary data, an iterative process based on clearly defined

[32] This topic is covered more extensively in Enhanced Guidance for Effective Deposit Insurance Systems: Mitigating Moral Hazard, IADI draft November 2012.

[33] Whether this policy extends to imposing creditor losses in an ongoing institution (creditor bail-ins or cocos) is a matter of continuing debate.

[34] See, e.g., Enhanced Guidance for Effective Deposit Insurance Systems: Mitigating Moral Hazard, IADI draft November 2012.

[35] Moral hazard concerns are best addressed through good corporate governance, market discipline from large-scale depositors, shareholders and other unsecured creditors, regulatory discipline, including early intervention and failure resolution mechanisms and certain deposit insurance design features.

objectives can be used. First, authorities determine the coverage level and scope that fully protects most depositors. Next estimates are made of the value of deposits at risk and the likelihood of failure. Finally, the adequacy of available funding sources is evaluated. It is important that the deposit insurance scheme is funded to meet its mandate. If adequate funding is not available or is considered excessive for the country, the scope and level of coverage will need to be reconsidered. Lowering coverage limits may reduce the optimal size of an insurance fund or the need for special premia on banks. Authorities will need to keep in mind, however, that lower coverage also may result in a higher risk of disorderly bank runs in the face of bank distress.

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Annex A

Actions Taken to Increase Deposit Insurance During the 2008-09 Financial Crisis

Full Depositor Guarantees	Deposit Insurance Coverage Increase	
	Permanent	Temporary
Austria 5/	Albania	Australia
Denmark	Belgium	Brazil
Germany 1/	Bulgaria	Netherlands
Greece 1/	Croatia	New Zealand
Hong Kong, SAR	Cyprus	Switzerland
Hungary 1/	Czech Republic	Ukraine
Iceland 1/	Estonia	United States 4/
Ireland 2/	Finland	
Jordan	Indonesia	
Kuwait	Kazakhstan	
Malaysia	Latvia	
Montenegro 5/	Lithuania	
Mongolia	Luxembourg	
Portugal 1/	Malta	
Singapore 1/	Philippines	
Slovakia	Poland	
Slovenia	Romania	
Thailand 3/	Russia	
United Arab Emirates	Serbia	
	Spain	
	Sweden	
	United Kingdom	
Total: 19	Total: 22	Total: 7

Notes: Full depositor guarantee consists of guarantees covering all deposits or the majority of all deposits in the banking system. In the case of Italy, no actual coverage increase has occurred; however, Law N.190 passed in December 2008 as a result of the international crisis, give the minister for economy and finance power to introduce a state guarantee for depositors for a period of 36 months. In the case of Saudi Arabia, a full guarantee in effect prior to the crisis was reaffirmed in October 2008 in response to the crisis.
1/Political commitments by the government.
2/Full guarantee provided for seven specific banks representing 80 percent of the banking system.
3/Existing full guarantee in effect since 1997, originally set to expire in 2008. During the 2008 crisis, full guarantee was extended by two years.
4/Temporary increase in coverage was made permanent in July 2010. An additional program provided temporary unlimited guarantees for non-interest-bearing transaction accounts.
5/Full deposit guarantee applied to individuals only.

Source: Report to the Financial Stability Board, June 2010, Note by the Staffs of the International Association of Deposit Insurers and the International Monetary Fund on Update on Unwinding Temporary Deposit Insurance Arrangements.

Annex B

Level and Scope of Coverage as of Year-end 2010

Table 1
Coverage Levels (year-end 2010)

Jurisdiction	Coverage Insurance Level 1/			Provision of Coverage			Total Domestic Deposit Base (US$ billion) 4/	Deposit Value (% of total)		Number of Fully Covered Depositors / Accounts (% of total)	
	US$	Set-off	Indexed	By depositor and institution	Local branches of foreign banks 2/	Foreign branches of domestic banks 3/		Eligible 5/	Covered 6/	Depositors 7/	Deposit Accounts 8/
Argentina	7,545	No	No	Yes	Yes	No	95	N/A	29	N/A	94.9
Australia	1,016,300	No	No	Yes	No	Yes	1,336	95	61	N/A	>99
Brazil	42,000	No	No	Yes 9/	No	No	933	77	22	98.9	N/A
Canada	100,000	No	No	Yes	No	No	1,803	64	35	N/A	97
France	136,920	No	No	Yes	Yes 10/	Yes 11/	1,742	92	67	N/A	N/A
Germany	136,920	Yes	No	Yes	Yes 10/	Yes 11/	7,195	~50 12/	N/A	N/A	N/A
Hong Kong	64,000	Yes	No	Yes	Yes	No	877	98	20	90	N/A
India	2,240	Yes	No	Yes	Yes	No	1,166	95	33	N/A	92.9
Indonesia	235,294	Yes	No	Yes	Yes	No	279	90	61	N/A	99.9
Italy	136,920	Yes	No	Yes	Yes 10/	Yes 11/	2,182	47 13/	33 14/	55.1	N/A
Japan	122,775	Yes[19]	No	Yes	No	No	11,101	90	71	NA	98.9
Korea	43,902	Yes	No	Yes	Yes	Yes	951	68	27	95.4	N/A
Mexico	146,606	No	Yes	Yes	Not applicable	Not applicable	178	100	58	99.9	N/A
Netherlands	136,920	No	No	Yes	Yes 10/	Yes 11/	1,202	59	48	80	N/A
Russia	23,064	Yes	No	Yes	Not applicable	No	692	47	32	96.5	99.7
Singapore	38,835	No	No	Yes	Yes	No	456	70	19	91	N/A
Spain 15/	136,920	No	No	Yes	Yes 10/	Yes 11/	1,963	65	47	64.1	N/A
Switzerland	96,830	No	No	Yes	Yes	No	1,481 18/	73	24	N/A	N/A
Turkey	32,341	No	No	Yes	Yes	No	399	59	25	86.5	88.7
United Kingdom	133,068	No	No	Yes	Yes 10/	Yes 11/	N/A	N/A	N/A	N/A	98
United States	250,000	Yes 16/	Yes	Yes	No	Yes 17/	7,888	100	79	N/A	99.7

N/A = not available.

1/ Using the exchange rate as of year-end 2010. Coinsurance is where all depositors must lose some percentage (e.g. 5-10%) of their deposit in a failure. Setoff is where the deposit is first used to pay off any claims the bank has on the depositor before payout. Indexation is to inflation.
2/ Whether the domestic DIS covers deposits held by local branches of foreign banks (the deposits of locally-incorporated subsidiaries of foreign banks are covered by the domestic DIS across all FSB member jurisdictions).
3/ Whether the domestic DIS covers deposits held by foreign branches of domestically-incorporated banks.
4/ Total domestic banking sector deposits held by relevant institutions (whether domestic- or foreign-owned) within a jurisdiction.
5/ Proportion of eligible domestic banking sector deposits to total domestic banking sector deposits. Eligible deposits are those deposits that fall within the scope of a domestic DIS, i.e. they meet the requirements for coverage under a DIS, which are based typically on the type(s) of depositor or deposit.
6/ Proportion of covered domestic banking sector deposits to total domestic banking sector deposits. Covered deposits are those eligible deposits that are actually covered or insured by a domestic DIS, i.e. they comply with the eligibility criteria for inclusion and the value of the deposits fall within the maximum coverage limit.
7/ Proportion of domestic banking sector depositors whose eligible deposits were fully covered by a domestic DIS. A depositor is considered fully covered if his/her total eligible deposits, aggregated across all deposit accounts in each institution, are within the protection limit of the DIS.
8/ Proportion of eligible domestic bank deposit accounts that were fully covered by a domestic DIS.
9/ By depositor for the entire conglomerate, no matter how many accounts are held in each bank in group.
10/ In the case of EEA member countries, the domestic DIS does not typically cover the deposits of domestic branches of credit institutions headquartered in other EEA countries since the home authority is responsible for providing deposit insurance coverage. However, domestic branches of credit institutions incorporated in countries outside the EEA must join the domestic DIS.
11/ Only the branches of domestically-incorporated banks in other EEA countries are covered by the domestic DIS.
12/ The proportion of eligible deposits for Germany is an estimated average across the entire domestic banking sector. Around 40% of total deposits of US$3,395 billion fall within the scope of the statutory guarantee schemes. The institutional protection schemes safeguard their member institutions, therefore all deposits are protected (approximately 68% of their total deposits of US$1,028 billion is held by households and enterprises).
13/ The proportion of eligible deposits for Italy is an average across both types of DIS in place (42% corresponds to the FITD and 5% corresponds to the FGDCC).
14/ The proportion of covered deposits for Italy is an average across both types of DIS in place (29% corresponds to the FITD and 4% corresponds to the FGDCC).
15/ The figures for Spain cover the DIS for banks, savings banks and credit cooperative banks (total deposits of US$846 billion, US$992 billion and US$125 billion respectively).
16/ Set-off is only applied to deposits above the coverage limits or in the case of a loan default.
17/ The FDIC only covers deposits collected by the foreign branches of domestic banks if these deposits are designated as being "payable in the United States".
18/ The deposit base includes only non-bank deposits. Transaction account deposits by other financial institutions and interbank placements/borrowings are not included.
19/ Deposits are set off only upon the request of depositors.

Source: FSB *DI Peer Review*, Table 5

Table 2
Extent of Coverage (year-end 2010)

Jurisdiction	Types of Deposits Covered							
	Demand	Fixed term	Foreign currency	Interbank	Non-financial companies	Public sector	Nonbank financial institutions	Non-residents
Argentina	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Australia	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Brazil	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Canada	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
France	Yes	Yes	Yes 1/	No	Yes	No	No	Yes
Germany 2/	Yes	Yes	Yes 1/	No	Yes 3/	No	No	Yes
Hong Kong	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
India	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Indonesia	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Italy	Yes	Yes	Yes	No	Yes	No	No	Yes
Japan	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Korea	Yes	Yes	Yes	No	Yes	No 4/	No 5/	Yes
Mexico	Yes	Yes	Yes	No	Yes	Yes	No	Yes
Netherlands	Yes	Yes	Yes	No	Yes	No	No	Yes
Russia	Yes	Yes	Yes	No	No	No	No	Yes
Singapore	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Spain	Yes	Yes	Yes	No	Yes	No	No	Yes
Switzerland	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Turkey	Yes	Yes	Yes	No	No	No	No	Yes
United Kingdom	Yes	Yes	Yes	No	Yes 6/	No	No	Yes
United States	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

1/ Only currencies of countries in the European Economic Area for France and in the European Union for Germany (in addition to deposits in Euro).

2/ The responses in each category correspond to the statutory guarantee schemes. As the institutional protection schemes safeguard the existence of their member institutions, all their deposits are completely protected.

3/ Only small non-financial companies are covered.

4/ The KDIC does not protect deposits made by government, local governments, the Bank of Korea, the Financial Supervisory Service and the KDIC. However, it protects deposits made by other public agencies.

5/ The KDIC does not protect deposits made by non-bank member institutions (i.e. securities firms, insurers, merchant banks). However, it protects deposits made by non-bank, non-member institutions (i.e. credit unions, Saemaul community banks etc.).

6/ The FSCS does not cover the deposits of non-financial companies if they are ‘large’ (as defined in FSA rules).

Source: *FSB DI Peer Review*, Table 6.