General Guidance for Developing Differential Premium Systems

First Issued in February 2005
Updated in October 2011

Prepared by the Research and Guidance Committee of
International Association of Deposit Insurers

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I. *Executive Summary*

The International Association of Deposit Insurers (IADI) was established in 2002 with a mission to "contribute to the enhancement of deposit insurance effectiveness by promoting guidance and international cooperation". As part of its work, IADI undertakes research to provide guidance on deposit insurance issues. The objective of this paper is to develop general guidance for countries considering the adoption of differential premium systems. This paper is designed for deposit insurance practitioners and other interested parties.

Deposit insurers collecting premiums from member financial institutions which accept deposits from the public (hereafter referred to as "banks") usually choose between adopting a flat-rate premium or a system that seeks to differentiate premiums on the basis of individual bank risk profiles. Although flat-rate premium systems have the advantage of being relatively easy to understand and administer, they do not take into account the level of risk that a bank poses to the deposit insurance system and can be perceived as unfair in that the same premium rate is charged to all banks regardless of their risk profile. Primarily for these reasons, differential premium systems have become increasingly adopted in recent years.

The following points of guidance summarize the main conclusions and recommendations to help policymaker's design, implement and continually assess differential premium systems. These points are reflective of, and adaptable to, a broad range of circumstances, settings and structures.

- ***Objectives:** The primary objectives of differential premium systems should be to provide incentives for banks to avoid excessive risk taking and introduce more fairness into the premium assessment process. Differential premium systems are effective at achieving these objectives when they provide good incentives for banks to manage their risks and when they are accompanied by effective early warning systems and prompt corrective supervisory action to deal with problem banks.*

- ***Situational analysis:** Before establishing a differential premium system it is important to undertake a situational analysis to self-assess the state of the economy, current monetary and fiscal policies, the state and structure of the banking system, public attitudes and expectations, the strength of prudential regulation and supervision, the legal framework, and the soundness of accounting and disclosure regimes. It is important to identify gaps between existing conditions*

and more desirable situations and thoroughly evaluate available options.

- **Approaches used to differentiate bank risk:** *The approach used to differentiate risk among banks and assign premiums should be: (1) effective at differentiating banks into appropriate risk categories; (2) utilize a variety of relevant information; (3) be forward looking; and, (4) be well accepted by the banking industry and financial safety-net participants.*

- **Authority, resources and information:** *The adoption of differential premium systems requires policymakers to ensure that the deposit insurance authority has the necessary authority, resources and information (i.e. consistent, accurate and verifiable) in place to administer the system appropriately.*

A balance needs to be struck between requiring necessary information for the classification of banks into premium categories and concern that the demands for information not be unduly burdensome to banks.

In cases where the deposit insurance entity does not directly gather information but relies on the supervisor, formal agreements need to be in place to ensure that information required for administering the differential premium system is collected, verified for accuracy, and transmitted on a timely basis.

- **Premium categories:** *There should be different premium categories to ensure that there is a meaningful distinction between premium categories to act as an incentive for banks to improve their risk profile.*

- **Assignment of premium rates:** *Premium rates applied to risk categories should be set to ensure that the overall funding requirements of the deposit insurance system are met and to provide effective incentives for the sound risk management of banks.*

- **Transition process and period:** *A well-managed transition process can help contribute to the success and acceptance of a differential premium system. An effective transition plan should set out the transitioning objectives, responsibilities, resource requirements, timetable and deliverables. The plan should be communicated to all interested parties prior to the beginning of the process. The use of a transition period for banks and the deposit insurance entity can help facilitate the transition process.*

- ***Transparency, disclosure and confidentiality:*** *The bases and criteria used in a differential premium system should be transparent to banks and all other participants. Designers of differential premium systems (as well as all other financial safety-net participants) need to determine the appropriate balance between the desire to promote accountability, discipline and sound management through disclosure and the need to ensure the confidentiality of information.*

- ***Review, updating and fine-tuning:*** *Given the potential financial impact of differential premium rates for banks, it would be expected that banks might wish to provide amended information or even disagree with or contest their assigned scores. Therefore, a formal process to review potential disagreements should be implemented to resolve any disputes.*

Differential premium systems need to be regularly re-assessed on their effectiveness and efficiency in meeting their objectives. If necessary, they should be up-dated and/or revised to meet changing conditions or requirements.

II. Introduction and purpose

The **International Association of Deposit Insurers** (IADI) was established in 2002 with a mission to "contribute to the enhancement of deposit insurance effectiveness by promoting guidance and international cooperation". As part of its work, IADI undertakes research to provide guidance on deposit insurance issues.[1] The objective of this paper is to develop general guidance for countries considering the adoption of differential premium systems.[2]

Deposit insurers collecting premiums from member financial institutions which accept deposits from the public (hereafter referred to as banks) usually choose between adopting a flat-rate premium or a system that seeks to differentiate premiums on the basis of individual bank risk profiles. Flat-rate premium systems have the advantage of being relatively easy to understand and administer. However, they do not take into account the level of risk that a bank poses to the deposit insurance system and can be perceived as being unfair in that the same premium rate is charged to all banks regardless of the risks posed. Primarily for these reasons, differential premium systems have become increasingly adopted in recent years.

This paper: (1) discusses issues for deposit insurance systems that are associated with developing and implementing differential premium systems; (2) examines the advantages, disadvantages and trade-offs associated with various approaches to these systems; and, (3) provides guidance with respect to these issues.

This paper is designed for deposit insurance practitioners and other interested parties. It is based on the judgment of IADI's members, associates and observers and the experiences of various countries that have developed differential premium systems. It also draws on relevant literature available on the subject.

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[1]In 2004, IADI's Research and Guidance Committee developed a research plan setting out study areas for developing future guidance on deposit insurance. In 2010, a further research plan was developed setting out study areas to validate and/or update the 2005 Guidance.

[2] The initial IADI Subcommittee on Developing Guidance for Differential Deposit Insurance Premium Systems was made up of members from: Argentina, Canada (Chairperson: Mr. David Walker), Brazil, France, Hungary, Japan, Jordan, Korea, Mexico, Nigeria, Philippines, Ukraine and the United States. The 2010 IADI Subcommittee to Update the General Guidance for Developing Differential Premium Systems (Chairperson: Ms. Sandra Chisholm, Canada) included as well the following members: Bulgaria, Colombia, Kazakhstan, Malaysia, Poland, Russia, Taiwan, and Turkey, a representative of IADI's partner organization - the European Forum of Deposit Insurers (EFDI), and a representative of the Joint Research Centre Financial Crisis Task Force.

III. Background

Sound funding arrangements are critical for the effectiveness of a deposit insurance system. According to the Financial Stability Forum Working Group on Deposit Insurance (2001), a deposit insurance system should have available all funding mechanisms necessary to ensure the prompt reimbursement of depositors' claims when required to do so. Funding can be assured in many ways, such as through loans, guarantees, levies or premium assessments, market borrowings, or a combination thereof.

Most deposit insurance systems initially adopt an *ex-ante* flat-rate premium system because they are relatively simple to design, implement and administer. However, these systems are open to criticism in that they do not reflect the levels of forward looking risk that banks pose to the deposit insurance system. Flat-rate premium systems are viewed as being unfair as "low-risk" banks are required to pay the same premiums as "higher-risk" banks. [3]

The first step in designing a differential premium system is to identify the objectives that it is expected to achieve.   The primary objective of most differential premium systems is to provide incentives for banks to avoid excessive risk taking and to introduce more fairness into the premium assessment process. Introducing more fairness into the system can help bolster industry support for deposit insurance in general.   It is also important to ensure that the goals of a differential premium system are consistent with the stated public policy objectives of the deposit insurance system.

The first recorded differential premium system was introduced by the **Federal Deposit Insurance Corporation** (FDIC) in 1993. Since that time, the number of systems has grown steadily and it is estimated that there are currently systems in operation in twenty-four countries including: Argentina, Canada, Colombia, Finland, France, Germany, Kazakhstan, Malaysia, Peru, Portugal, Romania, Taiwan, Turkey and Uruguay. [4]   As well, many countries considering the adoption of or an enhancement to their existing deposit

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[3] Prior to making the decision to adopt a flat-rate or differential premium system, policymakers will need to choose between *ex-ante*, *ex-post* or some combination of these types of funding. *Ex-ante* funding is more amenable to differential premium systems as *ex-post* funding tends to be used infrequently and unexpectedly. In an *ex-post* funding environment, differential premiums could only be applied on certain occasions and only if the banks risk profiles are available.

[4] See Appendix II for further details.

insurance systems have expressed interest in eventually transitioning to differential premium systems.[5]

Nevertheless, differential premium systems may not be appropriate for all deposit insurance systems at all times. The overall nature of the intermediation process of banking makes risk measurement and pricing a complicated task. In addition, it is difficult to find appropriate and acceptable methods of differentiating risk; obtain reliable, consistent and timely information; and, ensure that rating criteria are transparent. As well, differential premium systems require resources to administer the system appropriately.

Therefore, before establishing a differential premium system it is important to review the state of the economy, structure of the banking system, public attitudes and expectations, the strength of prudential regulation and supervision, the legal framework, and the soundness of accounting and disclosure regimes. Policymakers have a wider range of options available for designing a differential premium system if these regimes are sound. In some cases, country conditions may not be ideal and, therefore, it is important to identify gaps between existing conditions and more desirable situations and thoroughly evaluate available options, since the establishment of a differential premium system is not a remedy for dealing with major deficiencies.

For instance, sound accounting and financial reporting regimes are necessary for an effective deposit insurance and differential premium system. Accurate, reliable and timely information reported by these regimes can be used by the deposit insurer and other safety-net participants to make decisions regarding the risk profile of a bank. Attributes of a sound accounting regime include accurate and meaningful assessments of information in areas such as asset valuation, the measurement of credit exposures, loan-loss provisioning, measurement of non-performing loans, the treatment of unrealised losses, off-balance-sheet exposures, capital adequacy, and bank earnings and profitability.

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[5] The BIS/IADI Core Principles for Effective Deposit Insurance Systems issued in 2009 addresses differential premium systems in Principle 11 wherein it is stated: "For deposit insurance systems (whether ex-ante, ex-post or hybrid) utilizing risk-adjusted differential premium systems, the criteria used in the risk-adjusted differential premium system should be transparent to all participants. As well, all necessary resources should be in place to administer the risk-adjusted differential premium system appropriately." Further, in July 2010 the European Commission issued a Proposal for a Directive on Deposit Guarantee Schemes that will require the introduction of risk-based premiums by each of its Member States.

It is important to understand that even when it is decided that conditions are appropriate to introduce differential premiums, such systems are most effective at achieving their objectives when they provide good incentives for banks to manage their risks and when they are accompanied by effective early warning systems and prompt corrective supervisory action to deal with problem banks.

IV. Approaches used to differentiate bank risk

One of the most challenging aspects of developing a differential premium system is finding appropriate methods for differentiating among the risk profiles of banks. A number of approaches are available and in general they encompass methodologies which emphasize mainly objective or quantitative factors and/or those which rely on more subjective or qualitative information. Although difficult to accomplish, the approach used to differentiate risk and assign premiums should be as forward looking as possible.

The following section describes some of the most commonly used criteria or factors for differentiating the risk profiles of banks for premium assessment purposes and some of the advantages, disadvantages and trade-offs associated with their use.

a) Quantitative Criteria Approaches

Quantitative criteria approaches generally try to use measures that are factual or data driven to categorize banks for premium assessment purposes. Some quantitative systems rely on only one factor to assess risk while others combine a number of factors. Information is usually gathered through on-site or off-site data collection and supervisory processes. Factors that are commonly considered for such systems usually include:

- a bank's adherence with regulatory capital requirements or other measures of the quantity, quality and sufficiency of a bank's capital;

- the quality and diversification of a bank's asset portfolio both on- and off-balance sheet;

- the sufficiency, volatility and quality of a bank's earnings;

- a bank's cash flows (both on- and off-balance sheet) and ability to generate and obtain sufficient funds in a timely manner and at a reasonable cost;

- the stability and diversification of a bank's funding; and

- a bank's exposure to interest rate risk, and where applicable, foreign exchange and position risk.

Usually, one or a combination of quantitative factors is used to differentiate risk among banks. The most common factor used is capital adequacy. Capital is the primary cushion against adverse changes in a bank's asset quality and earnings. Although capital is extremely important, other quantitative criteria are usually taken into consideration such as earnings, which can contribute to the ability of a bank to sustain its capital. The information is often collected directly from the bank based on industry-accepted accounting principles and banks are rated or categorized based on various criteria or peer group comparison.

Another quantitative approach, which can be used to calculate differential premiums, is expected loss pricing. The expected loss price for a bank depends on the probability of default for the bank, the exposure of the deposit insurer to that bank, and the size of the loss that the deposit insurer might incur should that bank fail.

In addition to using traditional quantitative measures and expected loss pricing, a number of theoretical models have been proposed for use in differentiating bank risk. Merton (1977) likened deposit insurance to a put option written by regulators on the value of a depository institution's assets where the value of deposit insurance can be calculated using a Black-Scholes (1973) option pricing model. Marcus and Shaked (1984) and Ronn and Verma (1986) applied option pricing to estimate insurance premiums. Although quantitatively based and theoretically appealing to some, difficulties in obtaining suitable data and finding agreement on the methodologies employed among member banks, deposit insurers and other safety-net participants have so far prevented many of these models from being adopted.

The advantage of using primarily quantitative approaches to differentiate bank risk is that they rely on relatively objective factors and data and are viewed as being transparent and less open to argument than more subjective approaches. But the principal drawback is that their effectiveness is heavily dependent on high quality, consistent, reliable and timely data – which may

be difficult to obtain in many financial systems. For example, in the case of using expected loss pricing models, most countries simply do not have enough historical default and loss experience to accurately calculate parameters. Another shortcoming is that most quantitative techniques tend to provide information on the past financial condition of the bank. They are less effective at providing leading indications of the future risk profile of banks.

Finally, even when suitable data is available and the methodology employed is widely accepted, systems which rely mostly on quantitative criteria do not allow for consideration of important qualitative factors about a bank - such as the quality of an institution's governance and risk management practices – which may contain valuable information on the management and mitigation of risk.

b) Qualitative Criteria Approaches

Qualitative criteria approaches generally rely on a number of qualitative factors to categorize banks into different categories for premium assessment purposes. The primary method used is reliance on some form of regulatory and supervisory judgment or rating system and information such as adherence to guidelines, standards, compliance measures or other supervisory or deposit insurance requirements. The assessments are usually designed to provide an indication of the current financial condition of a bank, its key business practices, and some indication of its future financial and risk profile. [6] Examinations are performed "on-site', "off-site" or some combination thereof and the information collected is usually treated confidentially by the safety-net participants.

Examination criteria vary across countries but commonly include methods such as the CAMEL approach.[7] Although these approaches may include

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[6] Key business practices looked at by examiners usually include an assessment of a bank's corporate governance, strategic management, risk management and external environment.

[7] Under CAMEL, each bank is subject to an on-site examination and is typically evaluated on the basis of five common factors. These are Capital, Asset Quality, Management, Earnings and Liquidity. In an effort to make the rating system more risk-focused, a sixth component relating to sensitivity to market risk was added to the CAMEL rating, making it CAMELS. Each of the component factors is rated on a scale of 1 (best) to 5 (worst). For more information see Sahajwala and Van den Bergh (2000).

The French Banking Commission's Organization and Reinforcement of Preventive Action (ORAP) system is a multi-factor analysis system for individual institutions. The system works within a standardized and formalized framework, with specific ratings on 14 components related to prudential ratios, on- and off-balance sheet activity, market risk, earnings, and various qualitative criteria (shareholders, management and internal control). Each component is rated on a scale of 1 (best) to 5 (worst).

quantitative elements, a high level of judgment is usually employed in determining weights and qualitative factors such as the quality of management may be heavily emphasized.[8]

A differential premium system can also use additional qualitative information, which can be classified as "other information". This can include: information received from supervisors about a bank or about other companies to which the bank is related (such as regulatory directives, letters of compliance, etc.); independent agency ratings and information; the views of industry analysts and other experts; parent company ratings; interest rates offered by banks and rates charged on the interbank market; market indicators such as stock price movements; and other information which may be considered relevant.

However, using "other information" to help categorize banks is relatively subjective. The deposit insurer would be required to use its judgment in determining whether or not the evidence might materially affect the operations and safety and soundness of a bank. Another issue is that consistent and comparable information may not be available for all banks.

The advantage of qualitative approaches are that they can provide important information on the current and future risk profiles of banks, which may not be captured by quantitative factors alone. However, such systems have drawbacks in that they are generally less transparent and utilize a higher degree of judgment and discretion compared to quantitative techniques. This may increase the number of requests for appeals of assigned rating categories and may be more difficult to defend should a bank question its categorization. Also, qualitative approaches by themselves do not give sufficient consideration to important quantitative factors (e.g. such as the bank's capital adequacy).

c) Combined Quantitative and Qualitative Criteria Approaches

Component ratings are converted to a composite rating similarly scaled between 1 (best) and 5 (worst).

[8] In recent years, many supervisory authorities have been moving to more "risk-based" supervisory examination systems. These are designed to identify key business areas and risks and be more forward looking than more traditional examination techniques. Although these systems often incorporate both quantitative and qualitative factors they can be even more subjective than traditional ratings as judgment is required to identify key risk areas and determine the appropriate supervisory period. And, in some cases, they rely heavily on self-assessment which requires quality assurance and appropriate incentives to work effectively.

Combined approaches use both quantitative and qualitative measures to categorize banks. From the submissions received for this paper, combined quantitative /qualitative systems were the most common differential premium systems seen. For example, Argentina, Canada, Kazakhstan, Malaysia, Taiwan, Turkey and the United States utilize this approach in their differential premium system methodologies.[9]

In **Argentina**, all institutions contribute a basic premium to the deposit insurer with additional premiums determined by a combined qualitative/quantitative differential premium system. The differentiated additional premium for each institution takes into account factors such as a CAMEL rating assigned by the supervisor and indicators which measure the excess or deficiency of capital over the required minimum capital levels and the quality of the loan portfolio.

The **Canada Deposit Insurance Corporation**'s differential premium system was introduced in 1999 and underwent a comprehensive review in 2004. It incorporates 13 individual quantitative and qualitative measures. Quantitative indicators such as capital adequacy, income volatility, asset growth and concentration ratios make up 60 per cent of the score while qualitative measures such as examiner ratings and other information make up the remaining 40 per cent. The system has four premium categories with category 1 being the best rated and category 4 the worst rated institutions.

The differential premium system adopted by the **FDIC** in the United States was introduced in 1993. It initially incorporated a 3 by 3 matrix and ratings were determined by a score for capital adequacy and a supervisory rating. It was the longest running differential premium system in operation until it was modified in 2006. Further modifications were made as a result of legislation passed in 2010. Now small institutions (generally those with less than $10 billion in assets), are placed in one of four risk categories. Institutions in Category I (the lowest risk category) are further differentiated on the basis of risk to determine their assessment rate, whereas those in risk categories II, III and IV pay premiums at a uniform rate. The new system for large and complex institutions dispenses with risk categories altogether and instead uses a scorecard approach for risk differentiation.

The **Central Deposit Insurance Corporation** of Taiwan adopted a differential premium system which also utilizes a 3 by 3 matrix. The rating

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[9] The subcommittee received descriptions of differential premium systems from: Argentina, Canada, Columbia, France, Germany, Kazakhstan, Malaysia, Nigeria, Taiwan, Turkey, the United States and Uruguay.

factor used is capital adequacy and an examination data rating composite score which incorporates the CAMEL(S) framework.[10]

An important consideration in systems which combine both quantitative and qualitative factors is the relative weighting between these factors. In some systems quantitative criteria receive an equal weight to more subjective criteria such as examination ratings. In other countries, such as Canada, qualitative criteria are weighted less than quantitative criteria. In fact, the tendency among the systems studied seems to be to weight more heavily quantitative elements than qualitative factors. This may reflect less comfort on the part of many banks with subjective assessments – even in situations where a subjective or qualitative assessment such as the quality of management may be one of the more effective leading indicators of risk.

The advantage of combining both quantitative and qualitative indicators is that it can be a highly effective and comprehensive way to assess the risk profile of banks. Of all the general approaches discussed, this takes into account the widest range of information to help assess a bank's risk profile. The main drawback is that it may impose a higher level of information requirements on banks and could be more open to challenges compared to approaches using mostly quantitative criteria.

Consideration should also be given to the state of the economy when setting the thresholds for each category as more institutions should find themselves in the better categories in good times with more in the worse categories in bad times (i.e. a differential premium system is inherently pro-cyclical). However, the deposit insurer has the opportunity to strike a balance among criteria chosen, or in the weights assigned to the measures chosen, that could mitigate the effects of procyclicality within the system, if any. Nonetheless, there is a need to balance the desire to address procyclicality with the primary goal to effect differentiation of banks on the basis of risk and provide incentives to control risk.

In summary, although there are a wide variety of approaches to differentiate risk among banks and assign premiums, the approach chosen should: (1) be effective at differentiating banks into appropriate risk categories; (2) utilize a

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[10] Another deposit insurer - the **Institutional Protection Scheme of German Cooperative Banks -** has implemented a two-step approach. The first step classifies all member banks using a quantitative approach (the member contributions are based on this step). Depending on an institution's ranking, the second step analyzes in more detail using qualitative elements those institutions that have been identified as being riskier under the first step.

variety of relevant information; (3) be forward looking; and (4) be well accepted by the banking industry and financial safety-net participants.

V. Authority, resource and information requirements

The adoption of differential premium systems requires policymakers to ensure that the deposit insurance authority has the necessary authority, resources and information (i.e. consistent, accurate and verifiable) in place to administer the system appropriately. One of the areas that needs to be addressed is whether or not the information to be used is already produced and collected. One view is that the required information should be limited to that already provided to safety-net participants.[11] This, however, may not be sufficient for the needs of an effective differential premium system. Obviously, a balance needs to be struck between requiring necessary information for the classification of banks into premium categories and concern that the demands of the system not be unduly burdensome to banks.

In cases where the deposit insurance entity does not directly gather information but relies on the supervisor, formal agreements need to be in place to ensure that information required for administering the differential premium system is collected, verified for accuracy, and transmitted on a timely basis.

Another issue to be considered is whether the information used for differential premiums has been validated to ensure that it is accurate and consistent among banks and over time. This may require that reporting standards are established and that information be verified through on-site means. The use of previously audited information can also help contribute to the accuracy of the differential premium system and reduce unnecessary administrative and reporting burdens on member banks.

As for the timing of the information, the period for premium assessment should, as far as possible, reflect the most current bank risk profile determination. Given that the risk profile of a bank is always changing it would be ideal to constantly be assessing the factor measures. However, the resource requirements and administrative and reporting costs of such a

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[11] Although information may not be collected by safety-net participants (i.e. supervisory, regulatory, monetary or deposit insurance authorities) it may already be collected by banks for financial reporting purposes, or risk management purposes.

system make this an unrealistic option. Therefore, many differential premium systems rely on a single risk profile determination period, such as a bank's fiscal year-end audited financial information, as their cut-off date.

Other issues include whether the deposit insurance system should apply the same assessment methodology to different types of member institutions covered such as banks and other financial institutions, and whether to apply a different methodology to those banks of a certain size and/or complexity deemed to be systemically important from that applied to smaller less complex institutions. In addition to ensuring that each type of bank receiving deposit insurance is well regulated and supervised, policymakers should take into consideration differences in accounting and information reporting systems for different types of financial institutions included in the deposit insurance system.

VI. Premium categories and assignment of premium rates

Deciding on the number of premium categories is an important consideration when designing a differential premium system. Some insurers use up to nine premium categories[12] while others (e.g. Canada) use four categories. In Argentina and France, discrete categories are not used. Instead, the premium charged is a continuous function linked to the risk profile of the bank.

Using a large number of categories has the advantage in that it may result in less significant premium distinctions between categories and could provide greater risk differentiation between banks. This can allow the insurer to more easily differentiate banks according to their rating and can be beneficial in situations where there are a large number and variety of banks to categorize. In addition, using more premium categories (with smaller rate differentials between them) could potentially result in fewer requests for category review from banks. On the other hand, a large number of premium categories can increase the complexity of the system. As well, it may reduce the significance of, and therefore the incentive for, banks to move from one premium category to another.

Another issue related to the number of premium categories is the range of results that determine each category. It is acknowledged that any range selected must be arbitrary to some degree. However, banks receiving the best category (low risk) should be placed in the lowest premium categories

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[12] German BVR – Protection Scheme of German Cooperative Banks

and those receiving the worst results (high risk) should warrant classification into the highest. The remaining categories should be distributed between the highest and lowest.   In summary, the objective should be to have different premium categories – given the size and number of banks – to ensure there is a meaningful distinction between premium categories to act as an incentive for banks to improve their risk profile.

In determining premium rates to apply to categories, rates should be set to ensure that the funding requirements of the deposit insurance system are met and to provide effective incentives for the sound risk management of banks.   An initial step would be to determine the overall funding requirements of the deposit insurer and the premium revenue required.[13] In most instances, countries implementing a differential premium system have had as the primary objective the introduction of better incentives for banks rather than using the system to increase overall premium revenue. In fact, the total premium revenue required may even be lower in the long run under a differential premium system due to the expected positive incentives provided to banks to improve their risk management practices.   As part of this incentive process, all banks should be charged a premium, even if very low, as all banks should pay the cost of deposit insurance since they and their clients directly benefit from having an effective deposit insurance system and every bank, no matter how healthy and strong, poses some risk to the deposit insurer.

In order to help assess the correct premium rate to charge for each category, some differential premium systems have conducted simulations, which apply rates to the different categories to determine the impact on overall premiums collected and the relation this has to the total funding requirements of the insurer. Finally, the spread between the various premium categories should be as wide as possible to provide a meaningful incentive for banks to improve their risk management practices.[14]

A remaining issue is whether each bank should be rated individually or the same category should be assigned to all parent/subsidiary member banks in a group.   Under a number of differential premium systems, the bank

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[13] For more information in this area, please refer to the Financial Stability Forum, <u>Guidance for Developing Effective Deposit Insurance Systems</u>, Final Report of the Working Group on Deposit Insurance, Bank For International Settlements, Basel, 2001and to its supporting <u>Discussion Paper on Funding, September 2001,</u> and to the May 6, 2009 IADI Guidance paper titled <u>Funding of Deposit Insurance Systems</u>.

[14] In cases where a high proportion of insured deposits are with a small number of large banks, the movement of a bank between categories could lead to substantial changes in total premium revenue for the insurer. Thus, in order to reduce this variability the premium spread between categories may have to be limited in such circumstances.

subsidiaries receive the same category as the parent bank. However, where two or more related banking institutions are controlled by a shareholder that is not a deposit insurance system member, their categories should be determined separately.

VII. Transition issues

A well-managed transition process can help contribute to the success and acceptance of a differential premium system. One of the first steps in ensuring a successful transition is to have a clear plan which sets out the transitioning objectives, responsibilities, resource requirements, timetable and deliverables. The transition plan should be communicated to all interested parties. As part of the plan, a number of deposit insurance systems have provided for a consultative process to accompany changes to the policy or legislative framework affecting the scheme. This can be done as a matter of law or as a matter of administrative process. The consultation process and resulting period is most often influenced by the complexity of the proposed differential premium system.

With respect to timing, a transitional period can enable banks to familiarize themselves with the elements of a differential premium system and provide an opportunity to further improve their financial results and risk management practices. A transitional period can also provide the deposit insurance entity with time to validate or fine tune the differential premium system. Transition periods generally range from one year to a number of years. The advantage of a longer transition period is that it gives banks more time to adjust to the new system (e.g. develop new reporting systems where necessary and improve performance on the measurement criteria) and the deposit insurer to adjust and fine tune its own resources, skill sets, and information systems. Generally, the more complex the differential premium system and the more demanding are its information requirements, the greater the adjustment period required.

Lastly, the adoption of differential premium systems may raise the issue of the potential destabilizing effects of imposing higher premiums on already troubled banks. One approach to dealing with this issue is to implement the differential premium system in stages with advance warning of when and how the stages will be introduced. To cushion the adjustment for banks in weak categories, a transition period where virtually all banks receive favourable treatment to place themselves in better premium categories, could be considered. This has the advantage of reducing the initial impact of

a premium increase for troubled banks but it still provides them with incentives to improve their category ratings over time.[15]

VIII. Transparency, disclosure and confidentiality

The degree of transparency, the extent of public disclosure and confidentiality of ratings need to be addressed when developing a differential premium system. Practices in these areas vary between countries and can be influenced by the culture, legal system, the size, state and level of development of the financial system and prior experience with troubled banks.

Transparency refers to the process by which information on a system and its actions is made available and understood by participants. Ensuring that the differential premium system is as transparent as possible and disclosing information on a timely, consistent and accurate basis can enhance accountability, sound management and the functioning of the system.

The extent of public disclosure of premium categories or ratings can have a major impact on the system's effectiveness. Disclosure can have negative consequences such as those associated with disclosure of bank-specific information to the public and associated premium categories. In cases where a bank is encountering serious problems (i.e. and this is reflected in its differential premium assessment) such disclosure could exacerbate resolution efforts and erode confidence in the financial system. Although insured depositors may not have strong incentives to use such information, uninsured depositors and other creditors may withdraw funds from an institution suffering a poor rating. It should be recognized that the information used for assigning differential premiums is usually based on a specific point in time. Thus, it would be misleading to depositors and others, as well as unfair to the bank, to imply that a premium classification assigned perhaps months earlier is an accurate reflection on a bank that may have already taken steps to improve its premium classification in the next assessment cycle. Disclosure could also increase the legal liability of the deposit insurance entity, and supervisory and regulatory authorities. On the other hand, disclosing the results of a bank's differential premium category

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[15]   To facilitate the adoption of its differential premium system, CDIC (Canada) introduced a transitional mechanism for the first two years of its scheme. In the first year of the transition period, the total quantitative score of each bank was adjusted upward by 20 percent. In the second year, the total quantitative score of each bank was adjusted upward by 10 percent. In the third year and thereafter, there were no such adjustments.

rating publicly can enhance discipline and provide additional incentives for banks to improve their future results.

On the opposite end of the spectrum, highly rated banks may use the disclosure of their ratings to attract more deposits and other business to themselves. And, faced with the prospect that their rating (and individual components) may be disclosed, they may be reticent to support the introduction of such a premium scheme.[16]

In addition, many deposit insurance entities do not collect directly the information that is needed for the differential premium system and must rely on supervisors or regulators to provide them with this information. In these cases, decisions on disclosure will have to take into account the policies of the authorities and any confidentiality provisions related to the disclosure of information which has been received from banks.[17]

For these types of reasons, designers of differential premium systems need to determine the appropriate balance between the desire to promote accountability, discipline and sound management through disclosure and the need to ensure confidentiality. Some systems have sought a balance with a policy of partial transparency (e.g. Taiwan, the United States and Canada). That is, at a minimum the basic framework of the system and the factor criteria used are disclosed to the public but the actual ratings or premium categories are only disclosed to the board of directors and management of the bank. In such cases, banks are prohibited from disclosing their premium category and any rating (or rating component) on which that classification is based. At present, no deposit insurance system publishes these ratings.

IX. Review, updating and fine-tuning of a differential premium system

Given the potential financial impact of differential premium rates for banks, it would be expected that some banks may wish to provide amended

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[16] The use of coinsurance by a deposit insurance system has implications for disclosure and confidentiality. It can be argued that in situations where only a pre-specified proportion of deposits are insured, extensive information needs to be provided to the public regarding the financial condition of banks.

[17] It should be noted that in some countries securities regulators may require the disclosure of deposit insurance premium payments and any material increases in such payments. Thus, sophisticated individual investors and rating agencies may be able to surmise differential premium categories and changes in ratings from such disclosed information.

information or even disagree with or contest their assigned categories or ratings. While ensuring that the system is transparent and well accepted by industry may lessen the potential for disagreements, a formal process to review potential disagreements should be implemented to resolve any disputes.

An approach used in some countries is for banks wishing to have their category reviewed to submit their requests for review. An administrative law process can be followed to formally review information and results. If a case can be made based on the evidence, then the category could be amended.[18] Other countries may choose to use informal approaches to review categories. The degree to which a formal or informal review process is used, and the nature of the process, will depend on the specific characteristics of the country and its legal system.

It should also be recognized that no differential premium system is ever perfect and experience gained operating the system can provide opportunities for improvement and fine-tuning. A differential premium system can benefit from the continuous and regular review of operational experiences. Some countries even conduct scenario testing.

Lastly, changes in the objectives of a differential premium system, industry structure, reporting requirements, approaches to supervision and examinations and international developments, may require a system to be updated and modified over time. For instance, indicators of risk can and do gain or lose significance over time and thus may be dropped, added or be weighted differently. As an example, changes in international standards in areas such as capital measurement (e.g. Basel II and III) can also lead to a reassessment and modification of differential premium systems employing such measures. Thus, differential premium systems need to be regularly re-assessed on their effectiveness and efficiency in meeting their objectives. If necessary, differential premium systems need to be up-dated and/or revised to meet changing conditions or requirements.

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[18] This process would typically include the deposit insurance entity and may include the supervisory or regulatory authority depending on the role they play (e.g. the provision of examination ratings or information) in the differential premium system.

X. Conclusions and key points of guidance

The following points of guidance summarize the main conclusions and suggestions arrived at by IADI to help policymaker's design, implement and continually assess differential premium systems. These points are reflective of, and adaptable to, a broad range of circumstances, settings and structures.

1. Objectives of a differential premium system

The first step in designing a differential premium system is to identify the objectives that it is expected to achieve.   The primary objectives of differential premium systems should be to provide incentives for banks to avoid excessive risk taking and introduce more fairness into the premium assessment process.

Differential premium systems are most effective at achieving these objectives when they provide good incentives for banks to manage their risks and when they are accompanied by effective early warning systems and prompt corrective supervisory action to deal with problem banks.

2. Situational analysis against conditions

Before establishing a differential premium system it is important to undertake a situational analysis to self-assess the state of the economy, current monetary and fiscal policies, the state and structure of the banking system, public attitudes and expectations, the strength of prudential regulation and supervision, the legal framework, and the soundness of accounting and disclosure regimes.

Policymakers have a wider range of options available for designing a differential premium system if these regimes are sound. In some cases, conditions may not be ideal and, therefore, it is important to identify gaps between existing conditions and more desirable situations and thoroughly evaluate available options, since the establishment of a differential premium system is not a remedy for dealing with major deficiencies.

3. Approaches used to differentiate bank risk

The approach used to differentiate risk among banks and assign premiums should be: (1) effective at differentiating banks into appropriate risk

categories; (2) utilize a wide variety of relevant information; (3) be forward looking; and, (4) be well accepted by the banking industry and financial safety-net participants.

4. Authority, resources and information requirements

a) The adoption of differential premium systems requires policymakers to ensure that the deposit insurance authority has the necessary authority, resources and information (i.e. consistent, accurate and verifiable) in place to administer the system appropriately.

b) A balance needs to be struck between requiring necessary information for the classification of banks into premium categories and concern that the demands of the system not be unduly burdensome to banks.

c) In cases where the deposit insurance entity does not directly gather information but relies on the supervisor, formal agreements need to be in place to ensure that information required for administering the differential premium system is collected, verified for accuracy, and transmitted on a timely basis.

d) The information used for differential premiums needs to be validated to ensure that it is accurate and consistent among banks and over time. This may require that reporting standards be established and that information be verified through on-site means. The use of previously audited information can also help contribute to the accuracy of the differential premium system and reduce unnecessary administrative and reporting burdens on member banks.

e) The period for premium assessment should reflect the most current bank risk profile.

5. Premium categories and assignment of premium rates

a) With respect to deciding on the number of premium categories, the objective should be to have different premium categories – given the size and number of banks – to ensure there is a meaningful distinction between premium categories to act as an incentive for banks to improve their risk profile.

b) In determining premium rates to apply to categories, rates should be set to ensure that the funding requirements of the deposit insurance system are met and to provide effective incentives for the sound risk management of banks.

6. Transition issues

a) A well-managed transition process can help contribute to the success and acceptance of a differential premium system. An effective transition plan should set out the transitioning objectives, responsibilities, resource requirements, timetable and deliverables. The plan should be communicated to all interested parties prior to the beginning of the process.

b) The use of a transition period for banks and the deposit insurance entity can help facilitate the transition process. Generally, the more complex the differential premium system assessment criteria and the more demanding are its information requirements, the greater the adjustment period required.

7. Transparency, disclosure and confidentiality

a) The bases and criteria used in a differential premium system should be transparent to banks and all other participants.

b) Designers of differential premium systems (as well as all other financial safety-net participants) need to determine the appropriate balance between the desire to promote accountability, discipline and sound management through disclosure and the need to ensure confidentiality of information.

8. Review, updating and fine-tuning of a differential premium system

a) Given the potential financial impact of differential premium rates for banks, it would be expected that banks might wish to provide amended information or even disagree with or contest their assigned scores. Therefore, a formal process to review potential disagreements should be implemented to resolve any disputes.

b) Differential premium systems need to be regularly re-assessed on their effectiveness and efficiency in meeting their objectives. If

necessary, they should be up-dated and/or revised to meet changing conditions or requirements.

. **XI**. **References**

1) Basle Committee, <u>Consultative Paper on On-Balance Sheet Netting</u>, Bank for International Settlements, 1998.

2) Black, F. and M. Scholes, <u>The Pricing of Options and Corporate Liabilities</u>, Journal of Political Economy, No. 81, 1973.

3) Canada Deposit Insurance Corporation (CDIC), <u>International Deposit Insurance Survey 2003</u> and <u>International Deposit Insurance Survey 2008</u>, Ottawa, Canada (see: <u>http://www.iadi.org/Research.aspx?id=58</u>).

4) Canada Deposit Insurance Corporation, <u>CDIC Premium By-Law: Description of Revised Premium System and Review of Comments Received</u>, Ottawa, Canada, 1998.

5) European Forum of Deposit Insurers (EFDI): <u>Deposit Guarantee Systems: EFDI's First Report</u>, October 2006.

6) European Forum of Deposit Insurers (EFD<u>I): Development of common voluntary approaches to include risk based elements for Deposit Guarantee Schemes</u>, Working Group Report July 2009.

7) Financial Stability Forum, <u>Guidance for Developing Effective Deposit Insurance Systems</u>, Final Report of the Working Group on Deposit Insurance, Bank For International Settlements, Basel, 2001 and its supporting <u>Discussion Paper on Funding, Background Documents,</u> September 2001.

8) Garcia, G., <u>Deposit Insurance: A Survey of Actual and Best Practices</u>, IMF Working Paper, April 1999.

9) Laeven, L., <u>Pricing of Deposit Insurance</u>, World Bank Draft Working Paper, World Bank, Washington, 2002.

10) Marcus, A. and I. Shaked, <u>The Valuation of FDIC Deposit Insurance using Option-pricing estimates</u>, Journal of Money, Credit and Banking, No. 16, 1984.

11) Merton, R.C., <u>An Analytic Derivation of the Cost of Deposit Insurance and Loan Guarantees,</u> Journal of Banking and Finance, No. 1, 1977.

12)Ronn, E. and A. Verma, <u>Pricing Risk-Adjusted Deposit Insurance: An Option-based Model</u>, Journal of Finance, No. 41, 1986.

13)Sahajwala, R. and P. Van den Bergh, <u>Supervisory Risk Assessment and Early Warning Systems</u>, Basel Committee on Banking Supervision Working Papers, No. 4, December 2000.

APPENDIX I

Country Submissions on Differential Premium Systems

The IADI Subcommittee on Developing Guidance for Differential Premium Systems received the following country system profiles for use in the preparation of this guidance paper.

1. Argentina

SEDESA (Seguro de Depósitos S.A.) – Argentina: The deposit insurance system of Argentina currently in force was established by Law No. 24.485 and organized by Presidential Decree No. 540/95 and its amendments.

The implementing authority of this system is the Central Bank of Argentina (BCRA).

Section 1 of Presidential Decree No. 540/95 establishes the creation of the "Deposit Guarantee Fund" (DGF), which is created for the purpose of covering the banking deposits within the scope foreseen in this Decree.

According to Section 6 of the above mentioned Presidential Decree, all financial institutions authorized to operate in Argentina shall be obliged to deposit with the DGF a normal monthly assessment to be determined by the Banco Central de la República Argentina between a minimum of 0.015% and a maximum of 0.06% of the average of the daily balances of deposits in pesos and foreign currency with the financial institutions.

In turn, pursuant to Communication A2337 (May 19, 1995) the Central Bank informs financial institutions about the implementation of the rules of the system, and includes the description of Additional Contributions which institutions would have to make.[19]

This communication confirms that financial institutions must remit the additional contribution, which results from the following factors:

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[19] Differential Premiums in Argentina are called "Additional Contributions". Additional contributions are set by the Central Bank for each institution, based on risk indicators it may deem appropriate.

1) The rating is assigned to the financial institution according to the evaluation made by the Superintendence of Financial and Exchange Institutions (CAMELS). To determine the additional premium, the normal premium is multiplied by an index ("I") based on the preceding factors and has a value between 1 and 2. Said index is estimated as follows:

$$I = \{(A + B + 2\,C) / 4\} - D$$

   A. ratio of regulatory credit risk provisions required by the regulations included in Annex II to Communication "A" 2216 from the BCRA and the total financial operations included in this Annex. The index value is between 1 and 2.5.

   B. ratio of risk assets of the Institution and total assets. The index value is between 1 and 2.

   C. Indicator of the rating assigned to the entity according to the evaluation made by the Superintendence of Financial and Exchange Institutions. The value arising from the following table will be considered:

Rating	Index
1	1,00
2	1,33
3	1,66
4	2,00
5	2,00

   D. ratio related to the relationship of computable excess of the compilation of liability with respect to the minimum capital requirement. The value arising from the following table will be considered:

Value RPC/ minimum capital requirement	Index
Below 0,90	-0,5
more than 0,90 to 0,95	-0,25
more than 0,95 to 1,00	-0,1
more than 1,00 to 1,10	+0
more than 1,10 to 1,20	+0,05
more than1,20 to 1,30	+0,1
more than1,30 to 1,50	+0,2

Over 1,50	+0,3

2) The relation between the compilations of computable regulatory capital with respect to the minimum capital requirement.

3) The quality of loan portfolio measured by:
   a. Regulatory credit risk provisions/loans.
   b. Computable Assets for determining the minimum capital, provisioned according to (the provisions of) Communication "A" 2136/ total assets.

The additional contribution arising from the implementation of the aforementioned factors shall not exceed the normal contributions.

2. Canada

The Canada Deposit Insurance Corporation ("CDIC") Act allows CDIC to assess premiums at a maximum rate of one-third of one percent of insured deposits (i.e. 33 basis points), or such a smaller rate as may be fixed by the Governor in Council on the recommendation of the Minister of Finance.

Throughout most of its history, CDIC charged all its member institutions the same deposit insurance premiums on their insured deposit base, regardless of the risk of loss posed by a member to the deposit insurance fund.[20] In 1995, CDIC was instructed by the Government of Canada to amend the CDIC Act to replace CDIC's flat rate premium system with a system which would classify member institutions into different risk categories, in large part reflecting the risks posed to CDIC, and charging varying premium rates based on these categories.

The design, development and consultation process associated with CDIC's Differential Premium System occurred from 1996-1999 and the Corporation introduced the system in 1999.

Although not actuarially based, introducing a premium spread between high risk and low risk institutions is intended to provide a meaningful incentive for member institutions to avoid excessive risk taking. The implementation of risk-adjusted premiums was co-ordinated with existing and proposed supervisory stages of intervention and will not preclude prompt intervention

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[20] Prior to the introduction of the differential premium system the premium rate was 16.6 basis points charged on insured deposits for all members.

and, where circumstances dictate, early closure of institutions known to be in trouble.

CDIC's differential premium system categorizes member institutions into one of four premium categories based on how they score according to a series of quantitative and qualitative criteria.   The premium rates for the four categories are based on a percentage of the rate determined by the Governor in Council, and are set by the CDIC Board of Directors, with the approval of the Minister of Finance. When introduced in 1999, the premium rates assigned to the four categories were 4, 8, 16 and 33 basis points of 1% of insured deposits. In 2002, the rates were adjusted down to 2, 4, 8 and 16 basis points respectively. The reduction reflected the elimination of CDIC's deficit and a consequent reduced need for funds. In 2004 the rates were reduced further to 1.4, 2.8, 5.6 and 11.1. However, by 2011 the rates had been increased to 2.8, 5.6, 11.1 and 22.2 basis points.

Approach to system design and development

In developing a differential premium system, CDIC reviewed a number of potential approaches that would enable it to classify member institutions into different categories for differential premium rating purposes. These included single quantitative and qualitative factor systems and a range of combined quantitative and qualitative factor systems – including the risk-based premium approach used by the Federal Deposit Insurance Corporation (FDIC) in the United States, the Bank of England TRAM model and the methodologies used by rating agencies. CDIC also took into account comments from regulators of CDIC member institutions, other supervisory agencies and a committee of senior executives from representative CDIC member institutions.

General system description

Based on the results of development work, CDIC concluded that its system should be relatively simple to implement yet rigorous enough to effectively classify members into different categories. Accordingly, CDIC's differential premium system scores members according to a number of criteria or factors grouped into three broad categories: capital adequacy, other quantitative measures and qualitative measures.

CDIC Differential Premium System Summary	
• Criteria or Factors	Maximum

- Measures	Score
Capital Quantitative:	

• Capital Adequacy
   - Assets to Capital Multiple
   - Tier 1 Risk-Based Capital Ratio
   - Total Risk-Based Capital
	20

Other Quantitative:	

• Profitability
   – Return on Risk-Weighted Assets
   – Mean Adjusted Net Income Volatility
   – Stress Tested Net Income
	
	5
	5
	5

• Efficiency – Efficiency Ratio	 5
• Asset Quality – Net Impaired Assets (Including Net Unrealized Losses on Securities) To Total Regulatory Capital Ratio	 5

• Asset Concentration
   – Three Year Moving Average Asset Growth Ratio
   – Real Estate Asset Concentration
   – Aggregate Commercial Loan Concentration Ratio
	
	5
	5
	5

Sub-total: Quantitative Score	60
Qualitative:	
• Examiner's Rating • Other Information	35 5
Sub-total: Qualitative Score	40
Total Score	100

The score assigned to capital adequacy indicates the importance CDIC attaches to regulatory capital as a cushion against adverse changes in a member's asset quality and earnings. Likewise, the weighting of a regulatory rating reflects the reliance placed by CDIC on the views of regulators or examiners for its assessment of member institutions.

Although capital is important as a cushion, even sizeable capital would not save an institution with significant problem assets or a high risk profile. Accordingly, other quantitative criteria or factors should be taken into consideration. CDIC's system incorporates a number of other quantitative factors and criteria that are intended to assess the ability of a member institution to sustain its capital. Although no single criterion or factor in this category would represent more than a score of 5 out of a possible total

quantitative score of 60, a possible cumulative total of 40 for this category of criteria or factors is, in the view of CDIC, appropriate to supplement the capital adequacy measures.

The examiner rating is provided to CDIC by the institution's supervisor ranked on a scale of one to five. The examiner rating takes into account its internal supervisory rating [21], any intervention status applicable to the institution, and any other matter that the examiner deems relevant to its rating of the institution. As the supervisors assess in depth the risks posed by the institution and its risk management, CDIC has assigned a significant score to the examiner rating.

Finally, 5% of the total score is allocated for other information that may be relevant in the scoring of a member institution. This criterion or factor would permit information that comes to the attention of CDIC about a member to be taken into consideration. Such information could include, e.g., rating agency ratings or whether the member is a recipient of CDIC assistance.

Premium Categories

One of the objectives of the Differential Premium system is to send a message -- with financial consequences -- to the managements and boards of directors of CDIC member institutions. Accordingly the system is not concerned with capturing subtle differences between institutions, but rather with providing an incentive to low-scoring members to make improvements where necessary. CDIC considers that a four-category system is appropriate. The premium categories, related scores and charge on insured deposits are set out in the above table. It is to be noted that the premiums charged double between categories.

Premium Categories		
Score	Premium Category Insured Deposits	Charge on
>= 80	1 points	2.8 basis
>= 65 but < 80	2 points	5.6 basis
>= 50 but < 65	3 points	11.1 basis
< 50	4	22.2 basis

[21] Similar to the CAMELS system.

	points

Using more premium categories would result in less significant premium distinctions between categories, but also would reduce the significance of, and therefore the incentive for, moving from one category to another. On the other hand, more premium categories with smaller rate differentials between them potentially would result in fewer requests for review from member institutions.

With fewer categories and greater premium differentials, member institutions would have more incentive to obtain higher scores. At the same time, members falling just short of achieving the score necessary to move into a better premium category may have a greater incentive to question individual criteria scores.

Another factor to take into consideration is the likely number of CDIC member institutions. For example, the CDIC Opt-out provisions (which allow federal financial institutions not accepting retail deposits to withdraw from CDIC membership), combined with increased concentration of member institutions in parent/subsidiary groups, and foreign bank branching, provide less reason to have a premium system with a large number of categories.

In arriving at four categories, CDIC reviewed the nine-category system used by the FDIC -- a system designed for over 10,000 institutions. CDIC concluded that a system using four categories should be sufficient given the size and number of CDIC members, while at the same time providing a meaningful differentiation between premium categories.

Another issue related to the number of premium categories is the range of scores that determine each category. It is acknowledged that any range selected must be arbitrary. However, it seems reasonable that any institution receiving a score of less than 50 out of 100 should be placed in the highest premium rate category and that those with a score of 80 or better would warrant classification into the lowest. The remaining two categories are proportionally established between the highest and lowest.

With respect to concerns that the system puts too few companies in category 1 and thereby may create the impression that there is something wrong with the Canadian deposit-taking financial system, it is the view of CDIC that the information that feed the factors and criteria are sufficiently transparent to the public so that the placing of a member institution in one category or another should not represent any fundamentally new information about that member institution. Moreover, to reduce the score

necessary to achieve Category 1 might create the impression that the quality of the Canadian deposit-taking financial system has been diluted.

As for the size/range of category 4, CDIC recognizes the wide range of riskiness within it, but CDIC (and the regulators) have other intervention tools at their disposal besides the setting of premium rates, and these tools can be used in conjunction with the Premium By-Law.

Premium Spreads

Although not actuarially-based, the spread between the various categories (i.e. between 2.8 and 22.2 basis points of insured deposits) is intended to provide a meaningful incentive. This is achieved in two ways:
- through negative financial incentives in the form of higher premium rates charged to lower scoring institutions; and

- perhaps more importantly, through discipline brought to bear on an institution's management by the board of directors from its knowledge of the premium category assigned.

Another important determinant in fixing the premium rate for each category is the revenue needs of CDIC. It was the intention of the government when it directed CDIC to establish such a system that the premium level be based on CDIC's financial planning objectives and loss experiences.

Disclosure of Ratings

Each member is advised by CDIC of its assigned premium category and its scores on the criteria and factor measures. The Board of Directors has concluded, as a matter of policy, that a member institution should be prohibited from disclosing the premium category in which it is classified and from disclosing any rating or rating component on which that classification is based.

Consolidated Scoring

An important issue in implementing a Premium By-Law is whether each CDIC member should be rated individually or the same score should be assigned to all parent/subsidiary CDIC member institutions in a group. Under the system, subsidiary member institutions receive the same score as the CDIC member parent. Parent/subsidiary status would be determined by voting control (50.1% or more, and subsidiaries of subsidiaries would be included). Where two or more related member institutions are controlled by a

shareholder that is not a CDIC member, their scores are determined separately.

Transition and New Member Provisions

To facilitate the adaptation of member institutions to the new system a transitional scoring mechanism was built into the system, to operate for the first two years.

In the first year of the transition period, the total quantitative score of each member institution was adjusted upward by 20%. In the second year, the total quantitative score of each member institution was adjusted upward by 10%. In the third year and thereafter, there were no such adjustments.

Any adjustment, however, could not result in the member institution's total quantitative score exceeding 60. For example, if a member institution's pre-adjusted quantitative score was 55 in the first year, its adjusted score would be 60, not 66.

For members with a limited history, the differential premium system was designed so that member institutions which do not have sufficient operating history for those measures requiring numerous years of data, are given a score based on the average of their other quantitative scores.

Review Purpose

Given the significance of differential premium rates for member institutions, any institution not satisfied with its assigned premium category has the opportunity to request a review of its scoring by CDIC.

Member institutions wishing to have their scores reviewed are required to submit requests in writing to CDIC. As part of the premium-setting process, CDIC will be involved in gathering or receiving information and making determinations and calculations as to each institution's score. There is an annual cut-off date for the determination of relevant information, and if information obtained in advance of that date is revised between then and the cut-off date, the revised information will be used.

Filing Requirements

Members are required to file, by April 30 of each year, the requested quantitative information based on the latest available audited financial statements. If member institutions do not have audited financial statements

by April 30, they will have to file the quantitative information based on unaudited financial information with the proviso that the information filed would be subject to revision. If member institutions do not provide the required information, they will be assigned the maximum premium rate pending receipt of the information.

All member institutions are required to provide quantitative information on a standardized basis using as much as possible (and where applicable) the type of information reported under the federal system. Quantitative scoring is based on consolidated financial information.

CDIC uses the latest examiners' ratings and other information as at April 30 of each year in determining the qualitative score for the coming premium year.

Review, updating and fine-tuning of CDIC's differential premium system

CDIC annually reviews the system to ensure it remains up to date and every five to seven years undertakes a more comprehensive review. The scope of the 2004 review included:

- a quantitative analysis of data collected;

- review of environmental changes, such as Basel II and new accounting standards and their implications for the system;

- matters relating to process;

- analysis of individual criteria and benchmarks; and

- the allocation of scoring among criteria or factors.

It was determined early on in the process that capturing the full impact of Basel II on the system would be left to the next comprehensive review when sufficient data would be available for analysis.

Extensive consultation with members, their associations, supervisors, other agencies and interested parties took place throughout the review. Amendments were in place for the 2005 premium year.

For more information on CDIC's differential premium system and the comprehensive review consultation process, please refer to the CDIC web site at: http://www.cdic.ca

3.   Colombia (Fondo de Garantias de Instituciones Financieras)

FOGAFIN (Colombian Deposit Insurance Agency) was created in 1985 as a consequence of the financial crisis at the beginning of the 1980´s. Before 1998, FOGAFIN charged all its bank member institutions the same deposit insurance premium, regardless of the risk of loss posed by a member to the deposit insurance fund. In 1998, the flat rate system was complemented with a risk criteria based on the credit risk rating given by the risk rating agencies. In 2000 this scheme was modified using a CAMEL score calculated by the Colombian Financial Supervisory Authority. In 2009 FOGAFIN established its own CAMEL score.

Today FOGAFIN has a hybrid premium scheme in which there is a flat rate premium charge over eligible deposits and a variable premium based on the risk profile of the member institution.

The flat rate premium is paid by the member institutions quarterly through the year. The level of risk of the member institutions is evaluated monthly using a CAMEL model. This CAMEL evaluation gives a score between 1 (for those institutions with the highest risk profile) and 5 (for those institutions with the lowest risk profile).

The next table summarizes the main aspects of the CAMEL evaluation.

CAMEL[22]

	Weight	Ranges	Score
Capital:		< 8%	1
		>= 8% y < 9%	2
Solvency	25%	>= 9% y < 10%	3
		>= 10% y < 12%	4
		> 12%	5
Asset:		> 8%	1
		> 6% y <= 8%	2
Non performing loans / total loans	20%	> 4% y <= 6%	3
		> 3% y <= 4%	4
		<= 3%	5
Management:		> 80% o < 0%	1
		>= 70% y <= 80%	2
Operational expenses / Gross financial margin	20%	>= 60 % y < 70%	3
		>= 50% y < 60%	4
		< 50%	5
Earnings		< 0%	1
		>= 0% y < 1%	2
Return over assets (ROA)	25%	>= 1% y < 2%	3
		>= 2% y < 3%	4
		> =3%	5
Liquidity:		<= -10%	1
		> -10% y <= 4%	2
(current assets - current liabilities) / total deposits	10%	> 4% y <= 6%	3
		> 6% y <= 15%	4
		> 15%	5

It is important to highlight that the evaluation gives a higher weight (25%) to the capital and earnings variables.

In order to have an annual score of the risk performance, at the beginning of the next year a monthly average CAMEL score is calculated using the following equation:

$$Annual\ Score - x - \frac{1}{12}\sum_{i=1}^{12}\sum_{j=1}^{5}D_{ij}w_{j} \qquad (1)$$

Where:

D_{ij} is the score of the month i and indicator j.

w_j is the weight of indicator j.

This CAMEL score is the key element to differentiate the member institutions and sets the differential premium among them. This score determines an additional payment that risky institutions have to make or the reimbursement that the member receives in cases of a low risk profile. The

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[22] The ranges of each indicator were found taking into account the empirical distribution of each indicator and divided in five percentiles.

amount of the payment or refund is a percentage of the premiums paid in the previous year and is determined using the equation number (2).

$$z(x) = \left[\frac{1}{48}(0.15x^3 - 1.35x^2 + 4.75x + 5.625)\right] \times 100 \qquad (2)$$

Where:

x is the annual score
$z(x)$ is the percentage refunded given the score x

If the score of a member institution is higher or equal to 3, this member institution gets back a percentage between 0% and 50% of the premium paid in the previous year. If the score is lower than 3, the member institution has an additional payment of the premium paid in the previous year up to 50%.

The next graph shows the shape of the function and the percentage given by the CAMEL score.
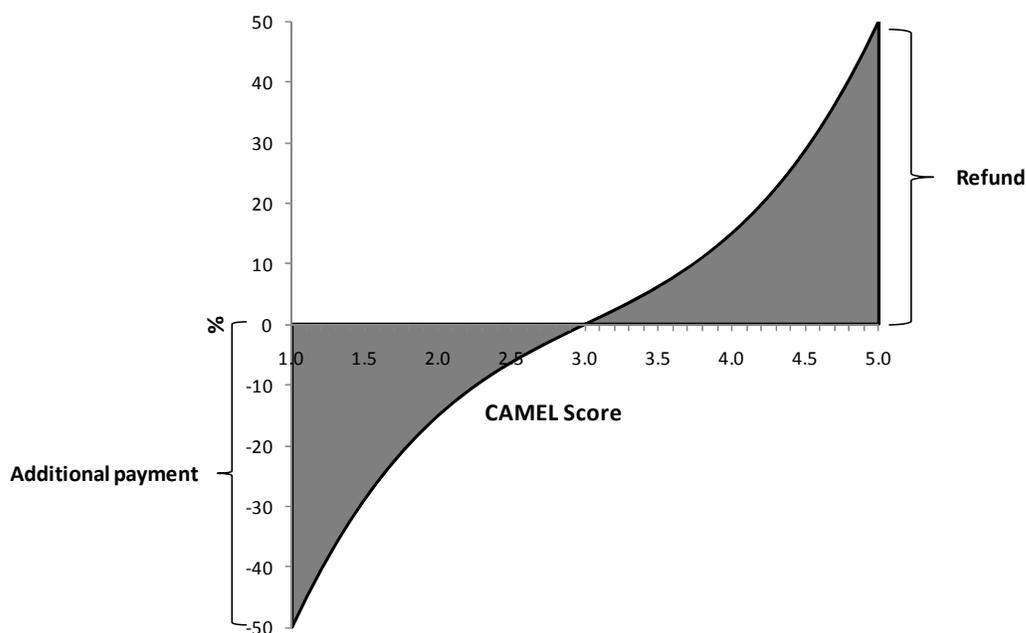
4. France

The Autorité de Contrôle Prudentiel (the French banking supervisor) is responsible for calculating each Fonds de garantie des depots (FGD) member's premium contribution. It advises each member institution of the amount it owes and provides the opportunity for these institutions to request a revision. It then (after around 2 weeks) advises the FGD of the amounts owing so that a formal request to members can be submitted.

There is no premium grid as such in the French system. First, a global contribution is determined for the banking system as a whole. This amount is allocated among banks according to their own deposits and risk indicators.

The determination of the FGD members' contribution (premium) uses the following information items:

The Annex to Regulation 99-06 establishes minimum amounts for the annual contributions and for the certificates of association (CA). These are €4000 for the annual contribution and €4000 for the CA. These apply to institutions that have zero deposits, i.e, institutions licensed as credit institutions that do not actually take deposits within the meaning of Regulation 99-06.

Each member's contribution is based on an assessment of the member's contribution to overall system risk. Overall system risk is the sum of all members risk amounts. Each member's risk profile is determined with reference to a number of risk indicators based on a combination of prudential and financial risk analysis ratios and applied to the amount of deposits of each member.

First, to determine the contribution of each member to overall system risk, the amount of deposits for a given member is increased by an amount equal to 1/3 of outstanding loans (within a limit equal to the amount of deposits). Then, the result is weighted in a 75%-125% range by taking into account a synthetic risk indicator. The synthetic risk indicator is evaluated pursuant to four indicators:

- Solvency
- Risk diversification
- Operating profitability
- Maturity transformation.

Each indicator is scored on a scale of one to three, with one being the best score. The institution's overall score is the arithmetic average of the individual scores. To the extent the score is better than average (2), its contribution is reduced, while a score higher than 2 results in an increase in

the amount of this institution's contributions, both within a range of 25%. With a synthetic risk indicator of 'one', an institution would have its base reduced by 25%, (the weighting factor is equal to 75%). With a 'three', the base is increased by 25% and the weighting factor is equal to 125%. Between these two limits, the reductions or increases are linear.

Details about the Indicators:

- Solvency: the solvency indicator is a basic prudential ratio
- Operating profitability looks at the institution's margin (it's operating coefficient)
- Maturity transformation: this indicator evaluates the institution's medium term risk with respect to refinancing its uses of funds.
- Risk diversification: a higher level of concentration (ten largest risk exposures) is considered more risky.

5. German BVR – Protection Scheme of German Cooperative Banks

BVR (National Association of German Cooperative Banks) operates the Institutional Protection Scheme. It has been in operation for over 70 years (first by-laws dated May 14, 1934) and protects 1,152 cooperative banks (as of December 31, 2010). Its corporate mission is to:

> 1) safeguard the credit standing / solvency of all member banks and the financial stability of the cooperative banking group; and
> 2) safeguard the trust of the clients and the money and capital markets,

by institutional protection and complete deposit insurance.

Through the by-laws, extensive information and sanctioning rights are found. The main objective is to prevent or solve imminent or existing economic difficulties of banks. Sanctioning rights include:
- initiate a change to the business policy of a bank;
- demands regarding development of a rescue concept
- demands regarding personnel matters
- lastly in rare cases: right to exclude banks from the BVR Protection Scheme

There is a Guarantee Fund which is the accumulation of contributions, return flows and interest income. The assessment base for most member institutions is lending to customers and there is a uniform assessment base for some special institutions (e.g. the Cooperative Central Banks).

Contribution rates established yearly by the BVR differ between 0.5 basis points to a maximum of 2.0 basis points of the assessment base of the corresponding bank. Since 2004, banks pay 90 to 140% of the contribution rate depending on the rating of its soundness. Beginning in January 2010, 80% will apply for A++ classified banks, the minimum contribution lowers to 0.4 basis points and the contribution base was expanded to address risks in bonds and other capital market assets held by the banks. Since then, the new contribution base is the risk weighted assets as it is more risk oriented, treats banks more fairly, and there is no additional cost to calculate as the supervisory authorities require this data by law. The BVR has chosen to use assets (notwithstanding a general move toward using covered deposits as a contribution base) as the contribution base because they are the source of difficulties which may lead to a situation where a member bank may need the support of the Protection Scheme.

In addition to the Guarantee Fund, the BVR Protection Scheme has a Guarantee Network , composed of "declarations of guarantees" of each member bank. The scope of liability of each is limited to a maximum of 5.0 basis points of the assessment base for the Guarantee Fund. Drawing on the Guarantee Network for restructuring measures is only possible if it can be repaid within five years. The Guarantee Network is used only as an ultimate solution – a kind of internal lender of last resort.

The ex ante funding, and contribution levels, are calculated and fixed yearly based on expected risks of the following year.

Banks are evaluated according to their assets, liabilities, income and risk situation. They are classified into one of nine rating grades (from A++ to D), and the rating grade translates into a contribution factor from 80% to 140%.

A++	A+, A	A-, B+, B	B-	C	D
80%	90%	100%	110%	120%	140%

Classification model

	Factor	Definition	Weight
Capital structure	Capital	Retained capital Total assets	20%
	Tier 1 – capital	Tier 1 – capital Risk weighted assets	15%
Income structure	Operating income	Operating income – unrealised tracking losses Average business volume	15%
	Cost – income	Personnel and admin expenses Gross profits	10%
	Risk revenue/expense	Net risk result of credit business Gross profits	20%
Risk structure	Blank credit I	Unsecured portions of not prime loans Retained capital	7.5%
	Blank credit II	Unsecured portions of not prime loans Earnings before risk adjustments	7.5%
	Segment concentration	Largest credit volume to a business sector Client credit volume	5%

The individual bank contribution would be determined by taking its reference base (factor of balance sheet loans and advances to non-bank customers and those backed by special mortgages, risk-weighted assets as specified in § 4 of the BVR-protection scheme by-law), identifying the basic levy rate for that year set by the administrative board of the BVR and then applying the specific bank's rating grade and applicable rate.

The BVR Institutional Protection Scheme knowingly ceased using qualitative elements in the classification system and therefore also in the determination of the contributions. It defines "qualitative elements" as management skills, internal organization and processes of the banks, steering systems, etc. which elements are not unique and equally measurable for every member bank. Therefore, BVR uses a classification grade, especially a score B/B-/C/D, as a first indication to look more closely at the member bank in the context of its Prevention Management and early intervention system. And in this phase qualitative elements play an important role in evaluating the (risk)

situation of a member bank. This procedure is widely accepted by the member institutions and is in line with the character and role of the Institutional Protection Scheme in the cooperative financial services network of Germany.

6. Kazakhstan

Background

The Kazakhstan Deposit Insurance Fund (KDIF) was founded as a non-profit organization in 1999. The highest governing body of the Fund is its sole shareholder, the National Bank of the Republic of Kazakhstan.

From the KDIF's foundation until the adoption of the Differential Premium System (DPS) member-banks paid premiums to KDIF based on a flat-rate system. According to this system banks with membership of less than 2 years paid 0.25% of their total retail deposit base as quarterly premiums and others – 0.16%.

In 2004 KDIF had begun developing the DPS methodology. This process included development of numerous indicators, data gathering and statistical tests which lasted 3 years from 2004 to 2006. Finally, KDIF developed and further implemented the differential premium system 'BATA'. The main purpose of the DPS 'BATA' in Kazakhstan is the implementation of the fair premium payment system depending on member-banks' financial soundness and their risk profiles. KDIF put forward this methodology for the member-banks' consideration. Their valuable comments were taken into account in the development of the DPS methodology. Since 2007 member-banks in Kazakhstan pay their quarterly premiums based on the DPS.

The transition period, when banks received information concerning their classification groups according to the DPS methodology but paid their quarterly premiums according to the flat rate system, lasted almost one year. Thus, member-banks knew what amount of premiums would be paid to the KDIF when the DPS was implemented.

KDIF also conducted a number of seminars for the member-banks' top and middle management, as well as for the member-banks' staff engaged in calculations of the banks' differential premiums, concerning the general description of the DPS, and the specific procedures for the calculation and

monitoring of bank specific financial indicators, their final aggregate score and other relevant issues.

Under the "Law on the Mandatory Insurance of Deposits" the value of the mandatory quarterly premium of a member-bank shall not exceed 0.5% of the member-bank's insured deposits. This limitation of the mandatory regular premium by law was taken into account when a number of classification groups and their corresponding premium rates were determined.

General description of the differential premium system

Since the bank's risk profile is affected by a number of factors the broad risk categories which generally make up a bank's risk profile are reflected in the CAMEL system, which is focused on the following areas:
- Capital and capital adequacy
- Asset quality
- Management quality
- Earnings power/Profitability
- Liquidity.

To categorize the banks into different groups according to their risk profile KDIF adopted a combined (hybrid) approach using both Quantitative and Qualitative indicators.. However, as the supervisory system in Kazakhstan is not mature and the regulatory framework is still under development, it was recognized that in the beginning FSA's ratings could be supported by independent third party assessments (external ratings). Therefore, the quantitative factors dominate in determining the final aggregate score and constitute 70% of it, while qualitative factors make up the remaining 30%.

The Fund's differential premium system "BATA" allows the assessment of the financial condition and level of associated risk of the member-banks on the basis of quantitative (capital adequacy, asset quality, asset concentration, earnings, liquidity) and qualitative (infringement of prudential norms set by the regulatory body and the National Bank, excess of deposit interest rates recommended by the Fund, management quality, etc.) indicators.

In order to eliminate the banks' additional reporting burden, the vast amount of data currently reported to the FSA and Central Bank as financial and regulatory reports is used in the calculation of the member-banks' quantitative indicators. In addition, a few reports from banks and readily available data from public sources of regulators are considered for the qualitative indicators' assessment.

Methodology used for the selection of quantitative indicators

The process of quantitative indicator selection needed to reflect not only the standard rules of risk analysis, but also specifics of the Kazakhstani economic environment and its current stage of maturity. In order to choose the most valuable financial ratios from a broad range of indicators, statistical methods such as correlation, t-test, and factor analysis were used.

An expert judgement was applied to divide banks into normal and problem banks due to the lack of reliable and comparable statistics concerning results of normal and liquidated bank activities. The main reason for that is that Kazakhstan is an emerging market. Statistical methods were then applied to select the most valuable indicators in order to include them in the testing process.

For each of the quantitative indicators, an algorithm was developed to justify the transformation of the actual values of the indicators into the resulting "score" as a final output of the model. Use of the indicators' numerical values and their weights based on the factor loadings of each indicator is done through the Factor Analysis. Other methods are based on defining intervals of actual indicator values that can be achieved.

Quantitative Indicators

The Kazakhstani DPS 'BATA' utilizes 14 quantitative indicators with the maximum total score of 115 points. The table below presents a summary of the quantitative ratios and preliminary weights of indicators that are used in the methodology. The ratios have been classified into 5 categories as follows:

Code	Category	Ratio Name	Max. Weight
C	**Capital Adequacy**	Coefficient k1-1 of Prudential norms	30
		Coefficient k2 of Prudential norms	
		Coefficient k1-2 of Prudential norms	
A	**Assets**	Classified assets / Assets	5

		((Provisions + Debts written-off loss) / (Assets + Debts written-off loss)) x 100%	10
		((Doubtful assets of 4th category + Doubtful assets of 5th category + Bad assets) / (Assets before provisions + Contingent liabilities)) x 100%	10
A1	**Assets concentration**	(Concentrated loans (more than 20% of own capital classified by types of economic activity) / Total standard and classified loans) x 100%	15
		(Mortgage loans / (Total loans + Securities + Investments in capital)) x 100%	
E	**Earnings**	(Net income before provisions (over the last 4 quarters) / Average risk-weighted value of assets (over the last 4 quarters)) x 100%	5
		Average value of retained net income (over the last 5 quarters) – One standard deviation	5
		Interest spread	9
		Net interest margin	10
L	**Liquidity**	(Liquid assets / Total assets) x 100%	9
		Gap analysis of differences between assets and liabilities of the same maturity period	7
Total			115

Qualitative Indicators

DPS 'BATA' adopted 5 qualitative indicators one of which consists of 3 indicators being indicated as one ratio. The maximum total score for qualitative indicators is 50 points.

Initially, a number of potential qualitative indicators were considered by the KDIF. After analysis of their applicability, availability of information, and possibility of measuring them, the following indicators were finally selected:

Ratio	Ratio Name	Max.

		Weight
Q1	Violations of prudential and other regulatory norms and requirements	14
Q2	Fines and sanctions applied by financial regulators to member-banks	14
Q3	Long-term credit ratings in foreign currency provided by the international rating agencies (S&P, Fitch and Moody's)	11
Q4	Excessive interest rates on individuals' deposits	-15
Q5	Improvement of bank's total quantitative score over the reporting quarter	5
	Changes in the bank's Board of Directors and Governing board during the reporting quarter	3
	Availability of long-term credit ratings from at least two international rating agencies	3
Total		50

Thus, KDIF's Differential Premium System includes 14 quantitative and 5 qualitative indicators.

Threshold Values

Based on the threshold analysis banks receive a certain number of points for each indicator. KDIF determined the optimal number of thresholds for each ratio having considered prudential standards, graphic analysis, and distribution analysis. For some quantitative indicators (capital adequacy and asset concentration) additional complex internal grading is performed.

Premium Categories

The score is calculated for each member-bank on a quarterly basis. The integrated rating (which is the accumulated score) of member-banks is calculated by using the regress geometric progression from the most recent period to 6 next periods with diminishing assigned weights. A sum of all the accumulated points received by the banks in the last 7 quarters splits the banks into different classification groups.

In March 2008 the Fund decided to reduce all the rates for the quarterly premiums by 25% with respect to each classification group in order to reduce

the financial burden on banks and support the liquidity of the banking system during the period of financial crisis.

The DPS system consists of five classification groups: group A is the best one while group E is the worst. Each classification group is charged at the following rates for quarterly premiums until, and after, March 2008.

Final Aggregate Score	Classification group	Rates for quarterly premiums (valid from the introduction of DPS to March 2008)	Current rates for quarterly premiums (since March 2008)
<140 but>=165	A	0.05%	0.04%
<120 but>=140	B	0.10%	0.08%
<100 but>=120	C	0.15%	0.11%
<80 but>=100	D	0.25%	0.19%
<0 but>=80	E	0.50%	0.38%

The total individuals deposit base for the corresponding member-bank is then multiplied by its assigned rate for quarterly premiums, which determines the amount of quarterly premiums that must be paid to the Fund.

Transparency, disclosure and confidentiality

In order to build and maintain trust in the deposit insurance system the KDIF's differential premium methodology is fully disclosed to the market participants, i.e. commercial banks, regulators, etc. Each bank, knowing the methodology, is able to perform all calculations itself and to understand what the drivers for the scores are. KDIF ensures that the member bank's aggregate scores and premium rates are calculated according to the defined schedules and that they are fully disclosed to the respective member banks. The calculated aggregate scores, assigned premium rates and premium amounts are treated as confidential information.

Maintenance Process

According to the KDIF's by-laws, information about the classification group for a member-bank is confidential. New member-banks stay in the

classification group 'D' for 2 years. Afterwards, the DPS is applied to these member-banks.

Settlement of disagreements with banks regarding their classification group is determined in accordance with the KDIF's by-laws. A bank should send a letter of objection with reasons.. In the case of KDIF agreeing with the bank, KDIF must make appropriate corrections and, if needed, repay overpayments or take them into account for the next premium payment. Otherwise, KDIF must justify by providing the reasons for refusing to accept the member-bank's objections.

Updating of DPS in Kazakhstan

The KDIF's DPS methodology is periodically reviewed in order to accommodate the changing risk profile of the member banks and the whole banking system. Since the beginning of 2007 when the DPS was introduced some changes have been applied to its qualitative indicators. KDIF has also twice reviewed quantitative indicators in 2010 and the beginning of 2011. The weights and threshold values of indicators were also reviewed by the KDIF. The last review was approved by the Fund's Board of Directors in May, 2011. The Fund's software "BATA" designed to automatically calculate the differential premium rates is also updated in accordance with the changes to the indicators' calculation methodology.

Lowering statistical importance of a number of quantitative indicators and their decreasing dispersion to 69% were revealed through analysis of the existing quantitative indicator system in 2010. Then its review allowed increasing dispersion to 75 %. As a result of recent updating of the DPS (in May, 2011) the dispersion of quantitative indicators has increased to about 80% and statistical meanings of all indicators became significant. Thus, the normal distribution of banks into classification groups is ensured.

7. MALAYSIA

Background

Since the introduction of the deposit insurance system in September 2005, Malaysia has adopted an *ex ante* funding approach where the premiums charged to the member institutions have been based on a flat-rate premium system. Under this system, the annual premium rate of 0.06% applied to all members. The MDIC Act provides for the establishment of Differential

Premium Systems ("DPS"). The objective of introducing the DPS is to provide incentives for member institutions to avoid excessive risk taking and to introduce more fairness into the premium assessment process. Therefore, the flat-rate system was replaced in 2008 by the DPS, for both conventional and Islamic deposits, in line with the Corporation's mandate of promoting sound risk management and contributing to the stability of the financial system in Malaysia. After 3 years of implementation, MDIC has completed a review and the revised DPS system was implemented in assessment year 2011.

Objectives

The objectives of our DPS are based on the International Association of Deposit Insurers ("IADI") Guidance as follows:

- **To provide incentives for member institutions to adopt sound risk management practices**. The DPS should provide incentives for member institutions to better manage their risk profiles and to address the factors that would lead to a lower rating, hence, a lower premium;

- **To differentiate member institutions according to their risk profiles**. The DPS should appropriately differentiate member institutions according to their risk profiles. Appropriate criteria and factors need to be identified such that the system is able to clearly differentiate the risk profiles of member institutions;

- **To introduce more fairness into the premium assessment process**. The DPS should result in member institutions with a higher risk profile paying higher premiums than member institutions with a lower risk profile; and

- **To promote stability of the financial system**. The DPS should enhance sound risk management practices in member institutions, thereby promoting the stability of the financial system.

MDIC's DPS Framework

Part of the objects in our mandate is to promote sound risk management practices among member institutions, and the MDIC Act provides the necessary powers to achieve this object. Therefore the MDIC Act empowers the Corporation to make regulations for a system that would differentiate member institutions into different categories, and contemplates, for

transparency, that the regulations would deal with the criteria and procedures for classifying member institutions.

Following extensive research, public consultation and intense analysis, our Board approved the DPS framework and related draft regulations in September 2007. And the DPS was implemented in 2008. The DPS system was reviewed and revised for implementation in assessment year 2011.

Guiding principles

In developing our DPS, we were guided by eight principles as described below. These principles were intended to ensure the development of a DPS that would adequately and fairly capture the risk profiles of member institutions, and which can be effectively implemented.

The DPS should:

- Remain equitable for all member institutions irrespective of size or complexity;
- Provide incentives for member institutions to move towards the best classification (lowest premium) by improving their risk profile;
- Take into consideration both quantitative and qualitative factors and contain forward looking elements;
- Remain objective and transparent such that member institutions can understand the system and are able to manage their profiles;
- Ensure that information provided is accurate, reliable and timely;
- Use data based on the approved accounting standards set by the Malaysian Accounting Standards Board;
- Classify member institutions based on their risk profiles that are consistent with the Corporation's and the supervisor's overall assessment; and
- Segregate between conventional and Islamic banking businesses.

Scope

As required by law, we manage two separate and distinct DPS – for both conventional and Islamic deposit-taking activities.

Quantitative and qualitative criteria

Measures to assess risks may be qualitative or quantitative. In line with most countries, Malaysia has adopted the "combined" approach, whereby both

quantitative and qualitative measures are used to categorize member institutions into their applicable DPS categories.

The DPS scores member institutions according to a variety of quantitative and qualitative criteria. The quantitative factors which account for a score of 60 out of 100 include capital adequacy, profitability, asset quality, asset concentration and asset growth criteria as shown in Table 1 below. The remaining score of 40 accounts for the qualitative criteria which include supervisory rating and other information. The scores will then be added up to derive a total score for the member institutions that would determine which premium category it would fall within.

Table 1: Summary of criteria and scores

Criteria	Maximum Score
Quantitative Criteria	**60**
Capital Adequacy	**20**
Risk-weighted Capital Ratio	10
Core Capital Ratio	10
Profitability	**15**
Return on Risk-weighted Assets Ratio	8
Mean Adjusted Return Volatility	7
Asset Quality	**15**
Net Impaired Loans to Capital Base Ratio	8
Total Impaired Loans Ratio	7
Asset Concentration	**5**
Aggregate Sector Asset Concentration Ratio; and Residential Property Asset Concentration Ratio	
Asset Growth	**5**
Risk-weighted Assets to Total Assets Ratio; and Total Asset Growth Ratio	
Qualitative Criteria	**40**
Supervisory Rating	35
Other Information	5
Total	**100**

Premium categories

Member institutions will be classified into one of four premium categories based on their DPS scores, 1 representing the best, and 4 the lowest. The table below sets out the scores and premium categories:

Table 2: Scores and Premium Categories

Score	Premium Category
≥ 85	1
≥ 65 but < 85	2
≥ 50 but < 65	3
< 50	4

An annual premium rate is prescribed in relation to each premium category and the applicable premium rate for each member institution is based on the premium category in which a member institution is scored. Member institutions that achieve a score of less than 50 out of 100 will be placed in the highest premium rate category (4) and those with a score of 85 or better will be classified into the lowest premium rate category (1). The Corporation has established a structured approach to determine the annual premium for each member institution. The annual premium is calculated by multiplying the total insured deposits with the applicable premium rates as determined by the DPS.

For the first year of implementation, applicable to the premium assessment year of 2008, the system provided a transitional period such that rates for premium category 4 were accorded the same as category 3. Furthermore, member institutions' quantitative scores were adjusted upwards by 20% subject to a ceiling score of 60 during the one-year transitional period.

Premiums are payable by 31 May of an assessment year based on member institutions' DPS scores, premium category and the amount of insured deposits they hold at 31 December of each year. For any new institution that becomes a member institution of MDIC during the year, the member institution is automatically categorized in the lowest premium category for the first two years. This is on the basis that the member institution has just started operations, and hence its risk profile may not be significant.

Impact on member institutions

The timing of the introduction of the DPS has been strategically determined. Given the relative stability of our financial system, the impact of the DPS, as well as the transitional adjustments provided to member institutions, were minimal. The one-year transitional period allowed member institutions in the lowest category time to improve their risk management resulting in a less drastic change in the applicable premium rates.

The DPS in fulfilling our mandate

Our DPS is a culmination of extensive research, discussions and feedback from our stakeholders. Our DPS helps MDIC to advance one of our key objects, i.e., to promote sound risk management in the financial system. As a consequence, greater levels of risk management provide more stability within the financial system.

Submission by member institutions

The computation of the DPS score for premium assessment involves the submission of member institutions' quantitative information in a pre-formatted template or forms by 30 April of each assessment year. The Corporation will aggregate the quantitative and qualitative scores and notify member institutions of the total score, premium category and applicable premium rates such that the respective premiums will be payable to the Corporation by the end May of each assessment year. In order to ensure the accuracy of the submissions, the quantitative information submitted shall be validated by an external auditor. In addition, each member institution's chief executive officer and chief financial officer shall certify that the submission is accurate and reflective of its financial condition for the assessment period.

Appeal Process

An appeal process is put in place to provide an avenue for any member institution to request a review of its final scores in certain specified circumstances.

DPS Score Card

MDIC has put in place a process of communicating member institution's DPS results in a form of score card. The annual score card tells the member

institutions of their performance as compared to the industry as well as highlight the areas that need to be improved in the future years.

Conclusion

MDIC has reviewed and implemented its revised DPS framework, effective assessment year 2011, to ensure its continued effectiveness amidst a changing economic environment and developments in regulatory requirements. MDIC envisages the revised DPS framework to continue to provide further incentives for members to enhance their risk management practices and to ensure greater fairness and equality in premium assessments process.

8. NIGERIA

With the emergence of bigger banks in the 2006 sequel to the bank consolidation policy of the Federal Government, sound risk management became a critical factor in ensuring the safety and soundness of the banking system. In addition, in view of the initiative to adopt risk-based supervision and the emphasis placed on risk management by the Basle II Capital Accord, the Nigeria Deposit Insurance Corporation decided to transit from the flat rate premium assessment system to a differential premium assessment system (DPAS). The DPAS was introduced in consideration of many factors. First, it was introduced to promote sound risk management in insured institutions. Second, it was aimed at ensuring fairness in deposit insurance pricing. Finally, the framework was adopted to reduce the overall premium burden on banks. The design and implementation was made possible with the enactment of the NDIC Act No. 16 of 2006 which legally empowered the Corporation to vary the premium rate and base as well as the method of premium assessment as and when necessary.

The methodology for developing the applicable DPAS in Nigeria entailed the following two primary stages:

i. The determination of a base premium Rate Ro to which some add-ons based on the risk profile of individual banks shall be included to determine the applicable premium rate;
ii. The determination of add-ons based on individual bank's risk profile using both quantitative and qualitative factors.

With respect to Ro, several scenarios were generated to determine the sustainability of the scheme at various levels of feasible minimum Ro. Based on several assumptions and projections, 50 basis points emerged as the rate that would ensure the sustainability of the scheme. As regards the second aspect, the add-ons were calculated based on individual bank's risk profile. The different add-ons are shown in Appendix I.

As shown in the appendix, the maximum add-on is 30 basis points. That is the additional rate the most risky bank will attract from the deposit insurer. An addition of the base rate and the add-ons show that there is a clear reduction in premium burden on insured banks. For instance, under the DPAS, the riskiest bank in the system will pay 80 basis points (50 basic + 30 add-ons) whereas under the old system, all banks paid a flat-rate of 94 basis points.

Following the development and approval of differential premium assessment system (DPAS) in 2007, 2008 marked the first year when the new system was implemented and all 24 universal banks were assessed based on the DPAS. Accordingly, in 2008, the maximum rate paid by an insured bank was 74 basis points. That was significantly lower than the 94 basis points payable under the flat rate system and also less than the 80 basis points, representing the maximum rate payable under the DPAS. The minimum paid by the least risky bank in the system was 54.50 basis points whilst the mean rate for all the banks in 2008 was about 62 basis points.

In 2009, the maximum rate paid by an insured bank was 73 basis points, a basis point lower than the maximum rate paid in 2008. The maximum rate of 73 basis points paid in 2009 was significantly lower than the 94 basis points paid under the flat rate system and also less than the 80 basis points, being the maximum rate payable under the DPAS. The minimum paid by the least risky bank in the system was 55 basis points as against the minimum 54.50 basis points paid in the previous year. The mean rate for all the insured universal banks was about 61.19 basis points in 2009 as against 62 basis points recorded in 2008.

In 2010, the base rate was reduced to 40 basis points and would take effect from 2011. A basic challenge in the implementation of the new method was the need for banks to render timely, complete, reliable and consistent information and data that would enable NDIC to adequately measure the risk posed to the system. Meanwhile, NDIC had commenced the review of the DPAS model in order to make it an effective tool for promoting sound risk management in insured banks.

Appendix I

Differential Premium Assessment System [DPAS] Rate Determination Matrix

S/N			
Basic Premium Rate [Ṛ] %			
	Parameters	Criteria	Add-Ons [Ṛ]%
	Quantitative Factors		
1.	**Capital Adequacy:**		
	[a] Capital to Risk Weighted Assets	X <5	0.05
		5≤X<8	0.04
		8≤X <10	0.03
	[b] Adjusted Capital to Net Credit Ratio	X>1:10	0.01
2.	**Asset Quality:**		
	[a] Non performing Credits to Total Credits Ratio	X≥10	0.04
		7.5 ≤ X <10	0.03
		5≤ X <7.5	0.02
	[b] Violation of Aggregate insider Lending: [all insider credits & related party interest]	X > 10% of [paid up capital +share premium]	0.02
	[c] Non Performing Insider Credits	X > 0	0.02
	[d] Violation of single obligor limit	Credits > 20% of Shareholders' funds	0.02
3.	**Liquidity:**		
	Liquidity Ratio	X < 15	0.04

| | | 15 ≤X <20 | 0.03 |
| | | 20 ≤X <25 | 0.02 |

Qualitative Factors [Mgt]

4.	Poor Internal Control	0.02
5.	Late Rendition of Returns	0.01
6.	Financial Misreporting	0.03
7.	Poor Risk Management System	0.02
8.	Non implementation of examiners recommendations	0.02

Maximum Additional Premium Basis Points — **0.30**

MAXIMUM PREMIUM RATE

R_o +

0.30

9. TAIWAN

I. Background

The deposit insurance system (DIS) of Taiwan was established in 1985. Membership to the system was not compulsory. The establishment and scope of operations of banks were subject to numerous restrictions, thus risk differentiation among financial institutions was small. Therefore, the DIS adopted a flat premium rate. Since then, Taiwan's financial sector has further liberalized and financial regulatory controls have been loosened. Meanwhile, the operations of financial institutions have become more diversified and internationalized, widening the differences among such institutions in terms of their levels of risk. These trends sparked debate over the fairness of the flat rate system, and the tendency of the system to lead to moral hazard as well as encourage financial institutions to assume high levels of risk. In order to apply premium rates according to the different levels of risk assumed by individual institutions, Central Deposit Insurance Corporation (CDIC) drafted the "Proposal for a Deposit Insurance Risk-based Premium System." This system was formulated on the basis of a broad consensus among banking industries, the government and academia as well as in line with the implementation of the mandatory membership of deposit insurance system. The proposal was also drafted in accordance with the *Deposit Insurance Act*

and was submitted to the Ministry of Finance, which ratified and officially enacted the "Implementation Scheme for the Deposit Insurance Risk-based Premium System" on July 1, 1999. At that time, Taiwan became the first Asian country to implement such a system.

II. Development

Taiwan introduced a Deposit Insurance Risk-based Premium System on July 1, 1999. In the beginning, premium rates were initially based on three levels of risk to reduce industry resistance to the new system and minimize the burden it posed on insured institutions. The premium rates for the three risk levels were 0.015%, 0.0175% and 0.02% of covered deposits [23] , representing a difference of 0.0025% between successive rate categories. In order to accelerate accumulation of the deposit insurance fund, while remaining true to the user-pay principle, the premium rates were raised to 0.05%, 0.055% and 0.06%, representing a difference of 0.005% between successive rate categories, effective from January 1, 2000.

In line with the amendments to the *Deposit Insurance Act* in January 2007, the deposit insurance assessment base was enlarged from covered deposits to total insured deposits. To avoid increasing the burden of the deposit insurance premium placed on insured institutions, from July 1, 2007 onwards, risk-based premium rates continued to be adopted for the covered deposits, yet for those insured deposits in excess of the coverage limit, a relatively low flat premium rate was used to calculate the premium. In addition, to more effectively guide insured institutions in lowering their operating risk, the former three levels of premium rates was increased to five levels and the difference between successive rate categories was expanded from 0.005% to 0.01%. The approved premium rates were as follows:

(1) For domestic banks, local branches of foreign banks and credit cooperatives the five risk premium levels were 0.03%, 0.04%, 0.05%, 0.06%, and 0.07% of covered deposits; the flat rate of insured deposits in excess of the coverage limit was 0.0025%. From January 1, 2010, the flat rate was changed to 0.005%.
(2) For credit departments of farmers' and fishermen's associations the five risk premium levels were 0.02%, 0.03%, 0.04%, 0.05%, and 0.06%. The flat rate was 0.0025%.

To provide better incentive for financial institutions to enhance their operations, and speed up the process of making up for the shortfall in the

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[23] Covered deposits referred to insured deposits under the coverage limit.

deposit insurance fund and achieving the 2% target ratio according to the Act, beginning January 1, 2011 CDIC raised the premium rates and expanded the spread among each of the five levels for banks and credit cooperatives. The approved premium rates are as follows:

(1) For domestic banks and foreign bank branches in Taiwan, the five risk premium levels for covered deposits are 0.05%, 0.06%, 0.08%, 0.11%, and 0.15%, and the flat premium rate for insured deposits in excess of the coverage limit is 0.005%.

(2) For credit cooperatives, the five risk premium levels for covered deposits are 0.04%, 0.05%, 0.07%, 0.10%, and 0.14%, and the flat premium rate for insured deposits in excess of the coverage limit is 0.005%.

(3) For credit departments of farmers' and fishermen's associations, the five premium levels for insured deposits under the coverage limit are 0.02%, 0.03%, 0.04%, 0.05%, and 0.06%, and the flat premium rate for insured deposits in excess of the coverage limit is 0.0025%.

Date	Membership	Rate System	Premium Rate
09/1985	Voluntary	Flat Rate	0.05% of covered deposits
07/1987	Voluntary	Flat Rate	0.04% of covered deposits
01/1988	Voluntary	Flat Rate	0.015% of covered deposits
07/1999	Mandatory*	Risk-based (9 grades/3 levels)	0.015%, 0.0175%, and 0.02% of covered deposits
01/2000	Mandatory	Risk-based (9 grades/3 levels)	0.05%, 0.055%, and 0.06% of covered deposits

Date	Membership	Rate System	Premium Rate
07/2007	Mandatory Application **	Risk-based rate of covered deposits (9 risk grades with 5 premium levels) Flat rate of insured deposits in excess of coverage limit	1. For domestic banks, local branches of foreign banks and credit cooperatives the five risk premium levels were 0.03%, 0.04%, 0.05%, 0.06%, and 0.07% of covered deposits, and the flat rate of insured deposits in excess of the coverage limit was 0.0025%. From Jan. 1, 2010, the flat rate was changed to 0.005%. 2. For credit departments of farmers' and fishermen's associations the five risk premium levels were 0.02%, 0.03%, 0.04%, 0.05%, and 0.06% of covered deposits. The flat rate of insured deposit in excess of coverage limit was 0.0025%.

Date	Membership	Rate System	Premium Rate
01/2011	Mandatory Application	Risk-based rate of covered deposits (9 risk grades with 5 premium levels) Flat rate of insured deposits in excess of coverage limit	1. For domestic banks and foreign bank branches in Taiwan, the five premium levels for covered deposits are 0.05%, 0.06%, 0.08%, 0.11%, and 0.15%, and the flat premium rate for insured deposits in excess of coverage limit is 0.005%. 2. For credit cooperatives, the five risk premium levels for covered deposits are 0.04%, 0.05%, 0.07%, 0.10%, and 0.14%, and the flat premium rate for insured deposits in excess of coverage limit is 0.005%. 3. For credit departments of farmers' and fishermen's associations, the five risk premium levels for insured deposits under coverage limit are 0.02%, 0.03%, 0.04%, 0.05%, and 0.06% of covered deposits, and the flat premium rate for insured deposits in excess of coverage limit is 0.0025%.

Note: * The voluntary system was replaced by a mandatory one on February 1, 1999.

** Mandatory application system was adopted on January 20, 2007. Since then, all depository institutions must apply for deposit insurance by submitting application form to CDIC, but CDIC has the right of determination to approve the membership.

III. Key Features of the "Revised Implementation Scheme for the Deposit Insurance Risk-based Premium System"

(1) Premiums

The deposit insurance premium of insured institutions is assessed at a differential rate for covered deposits based on the institution's calculated risk indicators. A flat rate is applied to deposits in excess of the coverage limit.

(2) Risk Indicators

The two risk indicators are the capital adequacy ratio (CAR) of insured institutions and the Composite Score of the Examination Data Rating System (CSEDRS) under the Financial Early-Warning System (FEWS).[24]

- Determination of CAR:

   The CAR of banks, local branches of foreign banks and credit cooperatives refers to the ratio of equity capital to risk assets. For local branches of foreign banks the ratio for the head office is used. The standard for credit departments of farmers' and fishermen's associations is the ratio of net worth to risk assets.

(3) Risk Grading

i. The CAR is divided into three risk grades:
- Domestic banks, foreign bank branches in Taiwan, and credit cooperatives with a CAR of 12% and over; and credit departments of farmers' and fishermen's associations with a CAR of 10% and over;
- Domestic banks, foreign bank branches in Taiwan and credit cooperatives with a CAR of 8% to 12%; and credit departments of farmers' and fishermen's associations with a CAR of 8% to 10%; and
- Insured institutions with a CAR of less than 8%

For insured institutions required by the competent authority to meet the minimum CAR, the risk grades are divided into three levels: over 1.5 times of the lowest CAR stipulated by the competent authority; less than 1.5 times of the lowest CAR stipulated by the competent authority; and less than the lowest CAR.

ii. The CSEDRS is divided into three levels:
- Composite scores of 65 and over;
- Composite scores of 50 to under 65; and
- Composite scores of less than 50.

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[24] CDIC's National Financial Early-Warning System (FEWS) is a CAMEL-based statistical model that regularly assesses the operational condition of all depository financial institutions. The system was built up by CDIC and its outcome is shared among all financial safety net participants in Taiwan. The FEWS includes both Examination Data Rating System and Call Report Percentile Ranking System. The former system is based mainly on examination reports consists of quantitative (e.g. capital adequacy ratios, NPL ratios, etc.) and qualitative data (e.g. management). A Composite Score of the Examination Data Rating System (CSEDRS) will be generated for each depository institution after a general on-site financial examination is conducted and the report is sent to the CDIC

(4) Risk Groups

Nine risk groups are distinguished according to a three-by-three matrix, in which the Y-axis represents the CAR and the X-axis represents the CSEDRS.

(5) Deposit insurance premium rates

i. For covered deposits, the applicable premium rates are categorized into five grades as A, B, C, D, and E:
  - For domestic banks and foreign bank branches in Taiwan, the premium rates of Grade A, B, C, D, E are 0.05%, 0.06%, 0.08%, 0.11% and 0.15%.
  - For credit cooperatives, the premium rates of Grade A, B, C, D, E are 0.04%, 0.05%, 0.07%, 0.10% and 0.14%.
  - For credit departments of farmers' and fishermen's associations, the premium rates of Grade A, B, C, D, E are 0.02%,0.03%,0.04%,0.05% and 0.06%.

ii. The flat premium rate of 0.005% is applied to domestic banks, foreign bank branches in Taiwan and credit cooperative whose insured deposits exceed the coverage limit. The flat premium rate of 0.0025% is applied to credit departments of farmers' and fishermen's associations whose insured deposits exceed the coverage limit.

iii. Premium rates for each type of financial institution are detailed in the following charts.

(6) Standard Dates for Calculation of Risk Indicators

i. The standard dates for calculating CAR are March 31 and September 30, which are determined as one quarter before the standard dates for calculating deposit insurance premiums (June 30 and December 31), based on the most recent report submitted by the insured institution to the competent authority. For foreign bank branches in Taiwan, data reported to the competent authority in their home countries shall serve as the basis.

ii. The standard dates used by the CSEDRS are May 31 and November 30, respectively, which are determined as the end of the month before the standard dates for calculating deposit insurance premiums (June 30 and December 31). Under this system, the most recent financial examination report of the insured institutions on such standard dates shall be used to calculate CSEDRS ratings.

(7) Exceptions:

i. Calculation of the differential premiums for insured institutions in the process of a merger/consolidation:
  - For the payment period at the time of merger/consolidation: The calculation of premium rates will be based on the risk indicators of each institution before a merger/consolidation.
  - For the payment period after a merger/consolidation:

(a) If there is no new examination data, the premium rate is based on the CSEDRS of the existing institution. The premium rate of the newly-established institution is based on the highest CSEDRS of the original institutions before a merger/consolidation.

(b) If there is no CAR data, the premium rate is based on the CAR of the existing institution. The premium rate of the newly-established institution is based on the CAR of the institution whose CSEDRS are the highest among the original institutions before consolidation.

ii. The differential premium rates for insured institutions that do not have examination data or CAR data available due to reorganization will be based on the latest CSEDRS before the reorganization.

iii. Insured institutions that are newly established and do not yet have examination data shall pay the Grade C differential premium rate. However, the Grade D differential premium rate must be applied to credit departments of farmers' and fishermen's associations established under special permission by the central competent authority for agricultural finance in accordance with the proviso of subparagraph 2 of the "Auditing Standards for Applications to Reestablish Credit Departments by Farmers' and Fishermen's Associations whose Credit Departments are Assumed by a Bank."

iv. The premium rate for government-owned insured institutions, excluding those institutions subject to the lowest differential rate, should be calculated as one rate level lower than the rate for their risk group.

v. The premium rate for insured institutions that accept deposits but do not make loans other than time deposit pledge, and the rate for deposits required by law to be deposited in certain financial institutions, will be determined by the competent authority.

vi. Insured institutions shall pay the highest premium rate if they are under guidance, superintendence or conservatorship by officers dispatched by the competent authority or the central competent authority of the agricultural finance in accordance with the law.

vii. Bridge banks that are set up in accordance with the *Deposit Insurance Act* do not need to pay the insurance premium.

viii. If an insured institution receives a warning notice of termination of the deposit insurance agreement by CDIC in accordance with the Article 25 of the *Deposit Insurance Act*, CDIC can legally raise the premium rate of the institution by 0.01% to 0.05%.

(8) Regulations on Appealing a Premium Rate
i. The insured institutions that object to their differential premium rates are still required to pay the insurance premiums on time. A written request for review of the premium rates should be submitted to CDIC

between the date of receiving notification of premium payment and the due date of the premium payment (January 31 or July 31, based on the postmark date). Only one such request is allowable.

ii. The insured institutions that obtain their latest financial examination reports before the due date of the premium payment which financial status has been improved and can apply to lower rates, can also file a written request for a review of their premium rate. Only one such request is allowable per insurance period.

(9) Punitive Regulations

i. CDIC sends a separate written notification of the applicable premium rate to each insured institution. Insured institutions cannot publicly announce their CSEDRS. CDIC may increase the differential premium rate of violators of this regulation by 0.01 %.

ii. If an insured institution does not pay its premium on time as stipulated under the CDIC regulations, CDIC may increase the differential premium rate of the violator by 0.01 %.

Charts: Differential Premium Grading for Insured Institutions (Five Premium Levels)

● **Premium Rates for Domestic Banks and Local Branches of Foreign Banks**

CSEDRS / CAR	65 and Over	50 to Under 65	Less than 50
12% and over 1.5 times of the lowest CAR stipulated by the competent authority	Grade A 0.05%	Grade B 0.06%	Grade C 0.08%
8% to less than 12% or the lowest CAR to less than the 1.5 times of CAR	Grade B 0.06%	Grade C 0.08%	Grade D 0.11%
Less than 8% or the lowest CAR	Grade C 0.08%	Grade D 0.11%	Grade E 0.15%

● **Premium Rates for Credit Cooperatives**

CSEDRS CAR	65 and Over	50 to Under 65	Less than 50
12% and over	Grade A 0.04%	Grade B 0.05%	Grade C 0.07%
8% to less than 12%	Grade B 0.05%	Grade C 0.07%	Grade D 0.10%
Less than 8%	Grade C 0.07%	Grade D 0.10%	Grade E 0.14%

● **Premium Rates for Credit Departments of Farmers' and Fishermen's Associations**

CSEDRS CAR	65 and Over	50 to Under 65	Less than 50
10.0% and over	Grade A 0.02%	Grade B 0.03%	Grade C 0.04%
8% to less than 10%	Grade B 0.03%	Grade C 0.04%	Grade D 0.05%
Less than 8%	Grade C 0.04%	Grade D 0.05%	Grade E 0.06%

Note:
1. CSEDRS refers to the Composite Score of the Examination Data Rating System under the Financial Early-Warning System.
2. For domestic banks and credit cooperatives, CAR (capital adequacy ratio) equals the ratio of equity capitals to risk assets; for local branches of foreign banks, CAR equals the ratio of equity capital to risk assets of the foreign banks; for the credit departments of farmers' and fishermen's associations, CAR equals the ratio of net worth to risk asset

10. Turkey

Saving Deposit Insurance Fund (SDIF) is the unique deposit insurer of Turkey. It is as well an autonomous legal entity. Membership in the Deposit Insurance Scheme is compulsory for all foreign and domestic deposit- and participation fund-taking institutions.

On the basis of a protocol signed between BRSA (Banking Regulation and Supervision Agency) and SDIF, SDIF uses the database of BRSA for the determination of differential premiums where the database essentially contains financial statements of the banks including the outstanding saving deposit and participation fund balances, and information such as ratios used in the differential premium system.

In Turkey deposit insurance premium rates of the banks are not publicly available. However financial statements of the banks are disclosed quarterly to the public including some essential banking ratios.

SDIF started to use a differential premium system first in 2005 and revised the system and introduced the current differential premium system in 2009. SDIF uses for all its member institutions (deposit and participation banks) the same ratios while calculating the scores and the premium rates of the banks. The differential/ risk adjusted premium system evaluates banks according to their risk profile and takes higher premiums from high-risk banks and lower premiums from low risk-banks.

The differential premium system categorizes member institutions into four premium categories depending on the total score between the lowest "0" and the highest "100". Each category corresponds to a premium ratio (11, 13, 15 or 19 basis points) determined by SDIF. Deposit insurance premiums are the major revenue source of SDIF.

The 14 evaluation factors of the differential premium system include both qualitative and quantitative factors. While adopting the premium system SDIF took into account comments from BRSA, the Central Bank and the Treasury Under secretariat and utilized experiences of countries like Canada and the USA.

The premium system is effective in distributing banks into appropriate risk categories and encourages banks to have a strong risk management[25].

The differential premium factors are based on the following five areas:
- Capital adequacy
- Asset quality
- Profitability
- Liquidity
- Other factors

Risk Factors and Scoring Scale

	Risk Factors	Maximum Score
1.	**Capital Adequacy**	**25**
1.1.	Capital Adequacy Ratios	20
1.1.1.	Capital Adequacy Standard Ratio (CAR Solo)	
1.1.2.	Consolidated Capital Adequacy Standard Ratio (CAR	
1.1.3.	consolidated)	
	Initial Capital Adequacy Ratio (Initial CAR Solo)	
1.2.		5
	Asset Capital Multiplier	
2.	**Asset Quality**	**20**
2.1.	Group Loans Ratio	5
2.2.	Cash Loans Concentration Ratio	5
2.3.	Non-Performing Loans Ratio	5
2.4.	Average Growth Rate	5
3.	**Profitability**	**10**
3.1.	Profitability Ratio	5
3.2.	Efficiency Ratio	5
4.	**Liquidity**	**10**
4.1.	Average Maturity (Days) of Deposits/Participation Funds	5
4.2.	Insured Deposit/Participation Fund Ratio	5
5.	**Other Risk Factors**	**35**

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[25] SDIF revised the Differential Premium System as of September 2011, and replaced the Free Capital Ratio with Average Maturity of Deposits/Participation Funds, and Ratio of Free Float with Other Information based on the validation process.

	Risk Factors	Maximum Score
5.1.	Banking Regulation and Supervision Agency's Rating	30
5.2.	Other Information	5
	Total	**100**

Premium Categories

Premium Categories and Percentages Table		
Total Score	**Premium Category**	**Premium Ratio (basis points)**
≥ 80	A	11
≥ 65 and < 80	B	13
≥ 50 and < 65	C	15
< 50	D	19

Depending on the calculated total scores, regarding the table presented above, credit institutions   on the insured amount of total deposits.

1. in category A shall pay a premium of 11 basis points
2. in category B shall pay a premium of 13 basis points
3. in category C shall pay a premium of 15 basis points
4. in category D shall pay a premium of 19 basis points

Apart from the premium ratios, large credit institutions are subject to 1 or 2 basis points additional rates based on their asset size. Asset size represents the sum of total assets and off balance sheet liabilities of the credit institution. Banks with an asset size of TRL 120 billion (USD 65 billion) or more pay an additional 2 basis points surcharge; and banks with an asset size less than TRL 120 billion (USD 65 billion), and more than and equal to TRL 50 billion (USD 27 billion) pay an additional 1 basis points surcharge.

11. United States

During the first 60 years of its history, the **Federal Deposit Insurance Corporation** (FDIC) charged flat-rate deposit insurance premiums that were identical for all insured banks. The premium rate was set by statute and could be changed only by action of the U.S. Congress. The premium rate was expressed as a percent of assessable deposits.

Adoption of Risk-Based Premiums

In response to the surge in bank failures in the 1980s and early 1990s, legislation was enacted that required the FDIC to establish a system of risk-based premiums. In devising the initial risk-based rate schedule the FDIC combined objective and subjective criteria: (1) capital ratios[26] based on financial reports that insured institutions are required to file quarterly with the regulatory agencies; and (2) CAMELS ratings[27] derived from on-site examinations.

The first risk-based premium rate schedule was designed to achieve the following objectives:

• Be fair, easily understood, and not unduly burdensome for weak banks;
• Produce sufficient revenue within 15 years to recapitalize deposit insurance funds that had been depleted by the large failure costs of the 1980s;
• Increase incentives for insured institutions to operate safely; and
• Provide a transition from flat-rate premiums to a "permanent" risk-based system.

Effective January 1, 1993, the FDIC began computing risk-based premiums according to a nine-cell matrix using capital ratios and supervisory ratings. The matrix determined an institution's premium rate, which was then multiplied by its assessment base (based upon and nearly equivalent to its domestic deposits) to produce the institution's deposit insurance premium. Premiums were determined quarterly.

Schedule effective Jan.1, 1993, in basis points (cents per $100 of assessable deposits, expressed as an annual rate).

	Supervisory rating

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[26] The specific capital ratios used in the calculation of risk-based premiums are essentially the same as the ratios used in the implementation of Prompt Corrective Action, which requires that progressively more severe restrictions be placed on troubled banks as their capital ratios decline. The use of capital as a primary risk differentiation measure was intended to provide greater protection for the deposit insurance fund by increasing an institution's cushion against loss and increasing the owner's stake in sound operations. Moreover, the use of capital ratios for the purpose of assessing premiums would provide a potentially prompt financial reward (in the form of reduced premiums) to institutions that improve their condition in an objective and defined manner.

[27] U.S. banking supervisors rate insured institutions on six factors: Capital, Asset quality, Management, Earnings, Liquidity, and Sensitivity to market risk (CAMELS). Institutions receive an overall rating ranging from 1 to 5, with 1 being the best rating.

Capital category	A	B	C
1. Well capitalized	23	26	29
2. Adequately capitalized	26	29	30
3. Undercapitalized	29	30	31

Institutions in column A have the highest supervisory ratings, while those in column C have the lowest, with supervisory ratings based essentially on CAMELS ratings assigned by the primary regulator. Institutions were assigned to capital categories on the basis of a battery of capital ratios. The minimum premium rate of 23 basis points was mandated by law and corresponded to the rate paid by all institutions prior to the adoption of the risk-related premium system.

When a deposit insurance fund fell below the target ratio of 1.25 percent of insured deposits, the FDIC was required to charge premium rates that would restore the fund to the target ratio within one year, or charge an average premium of at least 23 basis points. Beginning in 1996, the FDIC was prohibited by law from charging well-managed and well-capitalized institutions (those in the 1A cell in the table above) for deposit insurance when the fund's reserve ratio was expected to remain at or above 1.25 percent.

Following the banking crisis, the condition of the economy and the banking industry rapidly improved. The two deposit insurance funds steadily increased and reached the target ratio of 1.25 percent of insured deposits in 1995 and 1996, respectively. In 1996, a new assessment schedule was adopted with rates ranging from 0 to 27 basis points. This schedule remained in place until 2006. In the period between 1996 and 2006, the great majority of institutions fell into the least risky (1A) category and thus were charged nothing for deposit insurance.

Reform of the FDIC Risk-Related Premium System

The risk-related premium system implemented in 1993 was an improvement over the flat rate system it replaced. However, some provisions of the system and the governing statutes had unforeseen consequences that required corrective action.

The establishment of a "hard target" for the ratio of 1.25 percent of insured deposits was intended to ensure that the cost of deposit insurance would be borne by the industry and not by taxpayers. However, because the FDIC

was required to restore the fund within one year or charge an average premium of 23 basis points if the fund fell below the target, a sharp rise in premiums could occur in a weak economy when the industry could least afford it.

On the other hand, when the actual fund ratio equaled or exceeded the target ratio, the FDIC could not by law charge the least-risky (1A) institutions any premiums even though they posed some risk. As a result, premium levels were potentially subject to wide swings. Moreover, hundreds of recently chartered (licensed) institutions and rapidly growing institutions paid no premiums even though they increased the FDIC's exposure to loss.

The system also failed to differentiate adequately for risk. Insured institutions were concentrated in the 1A group, and subject to the same premium rate, despite significant differences in risk profile.

Beginning in 2002, the FDIC worked for enactment of legislation to reform deposit insurance.
The Federal Deposit Insurance Reform Act of 2005, signed into law on February 5, 2006, merged the deposit insurance funds, established a range within which the Board could set a target reserve ratio (and thus the size of the fund), and provided substantial flexibility for the Board to manage the size of the fund. It also provided a means to adjust the level of deposit insurance coverage over time based on inflation. The Act also gave the FDIC discretion to price deposit insurance according to risk for all insured institutions regardless of the level of the reserve ratio (thus eliminating the prohibition on charging premiums to banks in the lowest risk category). It allowed the FDIC to design and implement a system that better aligned insurance premiums with the risk posed by each institution and more fairly distribute the burden of assessments.

Significant refinements to the risk-related premium system were implemented pursuant to financial reform legislation enacted in 2010. Modifications included redefining the assessment base as average consolidated total assets minus average tangible equity (rather than total domestic deposits, the assessment base that had been in place since 1935), revising the system for small bank pricing, and substantially redesigning the pricing framework for large institutions. The current system for risk differentiation is described below.

Risk differentiation for small institutions

In developing the new pricing framework for small institutions—generally those with fewer than $10 billion in assets—the FDIC decided to continue to rely on supervisory evaluations and capital levels as a basis for risk differentiation. The FDIC considered whether to maintain the nine risk categories or to create a framework comprising fewer categories. Since the original risk-based assessment system was implemented, the number of institutions in several of the risk categories had remained consistently low. Moreover, the FDIC found that historical five-year failure rates for some of the nine risk categories were similar. Based on these findings, the FDIC consolidated the nine existing categories into four, based on historical failure rates. The four new risk categories are referred to as risk categories I, II, III, and IV. The least risky, Category I, was composed of well-capitalized banks with supervisory ratings of 1 or 2, which was identical to the former 1A cell.

Risk

Capital Group	Supervisory Group		
	A	B	C
Well	I	II	III
Adequate	II	II	III
Under	III	III	IV

Category I contained the vast majority of institutions when the Reform Act was enacted. For small institutions the FDIC decided to concentrate its efforts on risk differentiation within that category, with institutions in the other risk categories paying a uniform assessment rate, primarily because institutions in these risk categories are generally subject to much greater supervisory attention than those in Rick Category I.

Risk differentiation for Category I banks is based on a combination of financial ratios and supervisory ratings. In this "financial ratios method" certain financial ratios and a weighted average of supervisory component ratings are multiplied by a corresponding pricing multiplier. The sum of these products is added to a uniform amount. The resulting sum equals an institution's initial base assessment rate.

The FDIC used statistical analysis to choose the most useful financial measures and apply weights to them. The model's dependent variable—the event to be explained—was the incidence of downgrade for Risk Category I institutions from a composite rating of 1 or 2 to a rating of 3 or worse during an on-site examination between 3 and 12 months later. Based on model results, six measures were chosen for the pricing calculation. These were:

Tier 1 leverage ratio, loans past due 30 to 89 days to gross assets, nonperforming assets to gross assets, net loan charge-offs to gross assets, net income before taxes to risk-weighted assets, and an adjusted brokered deposit ratio.[28]

The weights applied to CAMELS components are as follows: 25 percent for Capital and Management; 20 percent for Asset quality; and 10 percent each for Earnings, Liquidity, and Sensitivity to market risk. The CAMELS component weights and pricing multipliers are the same for all institutions subject to the financial ratios method.

Risk differentiation for large institutions

From 2007 through 2011, the FDIC used a combination of CAMELS ratings, long-term debt issuer ratings and the financial ratios method to differentiate Risk Category I large banks according to risk. Based upon its experience during the most recent banking crisis (which started in 2008), in 2011 the FDIC adopted a risk-differentiation scheme for all large institutions that eliminates risk categories and attempts to predict risk much farther in the future using measures that were associated with risk during the crisis.

For large institutions, two scorecards are used: one for most large institutions, and a second for very large institutions that are structurally and operationally complex or that pose unique challenges and risks in case of failure ("highly complex institutions").[29] Both scorecards combine CAMELS ratings and forward-looking financial measures to assess the risk a large institution poses to the DIF. Each assesses certain risk measures to produce a performance score and a loss severity measure that are combined and converted into an initial assessment rate.

Large bank scorecard for other than highly complex institutions

In the scorecard for large institutions other than highly complex institutions, the performance score measures a large institution's financial performance

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[28] This ratio, which measures the extent to which brokered deposits are funding rapid asset growth, affects institutions whose brokered deposits are more than 10 percent of domestic deposits and whose total assets are more than 40 percent greater than they were four years previously. Generally speaking, above these thresholds, the greater an institution's asset growth and the greater its percentage of brokered deposits, the greater will be the increase in its initial base assessment rate.

[29] In general, a highly complex institution is an institution (other than a credit card bank) with more than $50 billion in total assets that is controlled by a parent or intermediate parent company with more than $500 billion in total assets or a processing bank or trust company with at least $10 billion in total assets.

and its ability to withstand stress. The performance score is calculated by combining a weighted average of CAMELS component ratings and certain financial measures into a single performance score between 0 and 100.

The loss severity factor measures the relative magnitude of potential losses to the FDIC in the event of a large institution's failure. It ranges between 0.8 and 1.2.

The performance score and the loss severity factor are multiplied to produce a total score, which the FDIC has authority to adjust to a limited extent. The total score is converted to an initial base assessment rate.

The table below shows scorecard measures and components, and their relative contribution to the performance score or loss severity score (which is converted from a scale of 0 to 100 into the loss severity factor scale of 0.8 to 1.2). Scorecard measures (other than the weighted average CAMELS rating) are converted to scores between 0 and 100 based on minimum and maximum cutoff values for each measure. [30] A score of 100 reflects the highest risk and a score of 0 reflects the lowest risk. A value reflecting lower risk than the cutoff value receives a score of 0. A value reflecting higher risk than the cutoff value receives a score of 100. A risk measure value between the minimum and maximum cutoff values converts linearly to a score between 0 and 100. The weighted average CAMELS rating is converted to a score between 25 and 100 where 100 reflects the highest risk and 25 reflects the lowest risk.

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[30] Most of the minimum and maximum cutoff values are equal to the 10th and 90th percentile values for each measure, which are derived using data on large institutions over a ten-year period beginning with the first quarter of 2000 through the fourth quarter of 2009—a period that includes both good and bad economic times.

Large Institution Scorecard (for other than highly complex institutions)

	Scorecard Measures and Components	Measure Weights	Component Weights
P	Performance Score		
P.1	*Weighted Average CAMELS Rating*	100%	*30%*
P.2	*Ability to Withstand Asset-Related Stress:*		*50%*
	Tier 1 Leverage Ratio	10%	
	Concentration Measure*	35%	
	Core Earnings/Average Quarter-End Total Assets	20%	
	Credit Quality Measure**	35%	
P.3	*Ability to Withstand Funding-Related Stress:*		*20%*
	Core Deposits/Total Liabilities	60%	
	Balance Sheet Liquidity Ratio	40%	
L	Loss Severity Score		
L.1	*Loss Severity Measure****		*100%*

*Takes into account higher-risk assets relative to Tier 1 capital and growth-adjusted portfolio concentrations.

**Reflects the level of underperforming assets relative to Tier 1 capital.

***Applies a standardized set of assumptions based on recent failures regarding liability runoffs and the recovery value of assets to calculate possible losses to the FDIC.

Scorecard for highly complex institutions

Those institutions that are structurally and operationally complex or that pose unique challenges and risks in case of failure have a different scorecard with measures tailored to the risks these institutions pose. This scorecard is otherwise similar to the scorecard for other large institutions.

The table below shows the measures and components and their relative contribution to a highly complex institution's performance score and loss severity score.

Highly Complex Institution Scorecard

	Measures and Components	Measure Weights	Component Weights
P	Performance Score		
P.1	*Weighted Average CAMELS Rating*	100%	*30%*
P.2	*Ability to Withstand Asset-Related Stress:*		*50%*
	Tier 1 Leverage Ratio	10%	
	Concentration Measure*	35%	
	Core Earnings/Average Quarter-End Total Assets	20%	
	Credit Quality Measure and Market Risk Measure**	35%	
P.3	*Ability to Withstand Funding-Related Stress:*		*20%*
	Core Deposits/Total Liabilities	50%	
	Balance Sheet Liquidity Ratio	30%	
	Average Short-Term Funding/Average Total Assets	20%	
L	Loss Severity Score		
L.1	Loss Severity Measure		*100%*

*As in the scorecard for large institutions, this measure takes into account higher-risk assets relative to Tier 1 capital. However, the concentration measure for highly complex institutions considers the top 20 counterparty exposures to Tier 1 capital and reserves ratio and the largest counterparty exposure to Tier 1 capital and reserves ratio instead of the growth-adjusted portfolio concentrations measure.

**In addition to a credit quality component, the highly complex institution scorecard includes a market risk measure that considers trading revenue volatility, market risk capital, and level 3 trading assets.

Discretion to adjust assessment rates for large and complex institutions

The FDIC can make limited adjustments to the scores of large and complex institutions based on quantitative or qualitative measures not adequately captured in the scorecards. In determining whether to make an adjustment, the FDIC consults with an institution's primary federal regulator and, for state chartered institutions, state banking supervisor.

Assessment rate adjustments

In addition, up to three possible adjustments can be applied to any sized institution's initial base assessment rate: (1) a decrease in rates for long-term unsecured debt, (2) an increase for institutions than hold long-term unsecured debt issued by another insured institution, and (3) an increase not to exceed 10 basis points for brokered deposits in excess of 10 percent of domestic deposits for non-Risk Category I institutions (and for large and complex institutions with CAMELS and capital ratings similar to institutions in the II, III, and IV risk categories).

The table below shows initial base assessment rates, adjustments, and total base assessment rates, expressed as annual rates.

Initial and Total Base Assessment Rates*

	Risk Category I	Risk Category II	Risk Category III	Risk Category IV	Large and Highly Complex Institutions
Initial base assessment rate	5–9	14	23	35	5–35
Unsecured debt adjustment**	(4.5)–0	(5)–0	(5)–0	(5)–0	(5)–0
Brokered deposit adjustment	……	0–10	0–10	0–10	0–10
TOTAL BASE ASSESSMENT RATE	2.5–9	9-24	18-33	30-45	2.5–45

* Total base assessment rates do not include the depository institution debt adjustment.
**The unsecured debt adjustment cannot exceed the lesser of 5 basis points or 50 percent of an insured depository institution's initial base assessment rate.

Treatment of new institutions

New small institutions (defined as banks and thrifts federally insured for less than five years) in Risk Category I are assessed at the maximum initial base assessment rate applicable to Risk Category I institutions. Other new small institutions are assessed at the initial base assessment rate for their risk category. No new small institution in any risk category is subject to the unsecured debt adjustment. All new small institutions are subject to the depository institution debt adjustment. All new small institutions in Risk Categories II, III, and IV are subject to the brokered deposit adjustment.

The initial base assessment rate for large or highly complex institutions is calculated using the appropriate scorecard, regardless of new or established status. However, no new large or highly complex institution is subject to the unsecured debt adjustment. All new large or highly complex institutions are subject to the depository debt adjustment. All new large or highly complex institutions, except those which are well capitalized and have a CAMELS composite rating of 1 or 2, are subject to the brokered deposits adjustment.

Background Notes: Criteria Used to Assign Institutions to Cells in Risk-Based Premium Matrix

Supervisory ratings categories are:

Category A: Consists of financially sound institutions with only a few minor weaknesses. Generally corresponds to CAMEL(S) ratings of 1 and 2.

Category B: Consists of institutions that demonstrate weaknesses that, if not corrected, could result in significant deterioration of the institution and increased risk of loss to the FDIC. Generally corresponds to CAMEL(S) rating of 3.

Category C: Consists of institutions that pose a substantial probability of loss to the FDIC unless effective corrective action is taken. Generally corresponds to CAMEL(S) ratings of 4 and 5.

Capital categories are:

Well capitalized banks

• Total risk-based capital ratio at least 10 percent (total capital as percent of risk-weighted assets) and
• Tier 1 risk-based capital ratio at least 6 percent (Ratio refers to percent of risk-weighted assets.) and
• Tier 1 leverage ratio at least 5 percent (Tier 1 capital as percent of total tangible assets)

Adequately capitalized banks

- Total risk-based capital ratio at least 8 percent, <u>and</u>
- Tier 1 risk-based capital ratio at least 4 percent, <u>and</u>
- Tier 1 leverage ratio at least 4 percent.

<u>Undercapitalized banks</u>

- All other banks

<u>Note</u>: Risk-weighted assets refer to amounts of both on-balance sheet and off-balance sheet assets multiplied by their respective risk weights (from 0 percent to 100 percent). Tier 1 capital equals common equity, plus non-cumulative perpetual preferred stock, plus minority interest in consolidated subsidiaries, minus goodwill and other ineligible intangible assets.

12. **Uruguay**

General system description

The Uruguayan Deposit Insurance Scheme (DIS) was created in September 2005 under an *ex ante* funding methodology and a flat-rate premium system. Later, in December 2006, a risk-adjusted differential premium system was designed. Before its implementation, banking industry and financial safety-net participants were invited to comment and make suggestions on it.

The complete framework of this system has been disclosed to the public; however, the actual risk-adjusted premium categories are only disclosed to the board of directors of member institutions. The following summarizes the main components of the Uruguayan risk-adjusted differential premium system. Including only the core ideas, some details were omitted to simplify the description.

Member institutions contributing to the Deposit Insurance Fund (hereafter the "Fund") are banks as well as credit unions regulated as banks. Membership is compulsory for all foreign and domestic deposit taking institutions. For descriptive purposes, they are referred to as member institutions, financial institutions (FIs) or banks.

Today, the Fund is managed by an autonomous entity: COPAB – Corporación de Protección del Ahorro Bancario (Uruguayan Bank Savings Protection Corporation).

Methodology for developing Risk-Adjusted Differential Premium System

COPAB's risk-adjusted differential premium system categorizes member institutions into one of five categories (I - V). These categories are based on FIs performances according to both quantitative and qualitative factors or objective and subjective criteria. Category I represents the lowest risk and category V the highest risk. These categories are under constant scrutiny and adjusted twice a year (December and June) reflecting bank performance.

Risk categories result from the consideration of four basic variables:

- FI's weaknesses.

- FI's capital adequacy.

- Shareholder's economic and financial strength.

- Shareholder's commitment.

These basic variables interact through two sub-matrixes: *Institution's Financial Soundness Sub-Matrix* and *Shareholder's Strength and Commitment Sub-Matrix.*

Institution's Financial Soundness Sub-Matrix combines both the weaknesses and capital adequacy variables of each contributing financial institution. Thus, *Financial Soundness* indicators are obtained from intersecting rows and columns.

Shareholder's Strength and Commitment Sub-Matrix considers simultaneously the shareholder's economic and financial strength as well as evidence of commitment on the part of the shareholder with consideration to the specific FI. *Shareholder's Strength and Commitment* indicators are obtained from intersecting rows and columns.

Financial Soundness indicators and Shareholder's Strength and Commitment indicators are used to populate the COPAB'S RISK MATRIX.

The following Figure 1 shows the process resulting in the COPAB's risk categories.

Figure 1 – COPAB's Risk Categories process
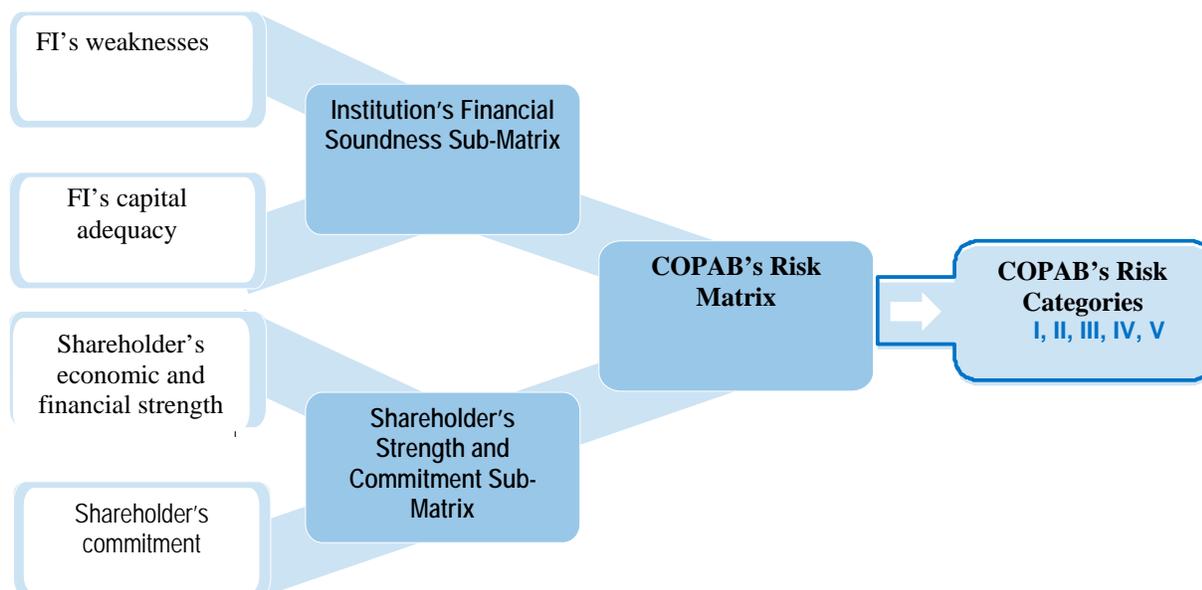
FI's weaknesses

This first variable is based on the host-country Supervisor's opinion of member institutions. These judgments (qualitative and subjective criteria) are quantified through ratings assigned to each component of an overall assessment method known as CERT. Roughly speaking, the CERT method considers and assesses four components in banks performances, namely: Corporate Governance (C), Economic-Financial performance (E), Risks (R) and Information Technology (T). Each CERT component is discretely rated from 1 to 5, with 1 being the best rating. Financial institutions starting up activities will be scored with 1 during the first year of contributions to the Fund.

Categories of FI's weaknesses

Based on the host-country Supervisor's rating, COPAB calculates a compound score (CS) based on a weighted average of the four component ratings.

Weights were assigned on a subjective basis but following international best practices:

- Corporate Governance (C)   40%

- Economic-Financial Assessment (E)   20%

- Risk Assessment (R)   30%

- Information Technology (T)   10%

Thus, member institutions will be categorized under low (B), moderate (M) and high (A) weakness according to the following subjective tiers:

- Low weakness (B):   CS < 2.5

- Moderate weakness (M):   2.5<= CS < 3.5

- High Level (A):   CS>= 3.5

FI's capital adequacy

The second basic variable takes into consideration the ratio of capital to risk-based capital (C/RBC). In order to find a capital adequacy indicator, the following ratios has been considered: (a) an excess over 100% (C/RBC is greater than 2), (b) an excess ranging from 0% to 100% (C/RBC lies between 1 and 2) and, (c) non-compliance with regulatory standard position (C/RBC lower than 1).

Financial Soundness Indicators: As said, FI's weaknesses and capital adequacy determines its financial soundness indicator. This indicator can have values of 1, 2, 3 and 4. Rate 1 is applied to the strongest financial institutions and rate 4 to the weakest ones.

Figure 2 below shows the determination of the *financial soundness indicator.*

Figure 2 - COPAB's RISK MATRIX

Shareholder's Strength and Commitment Sub-Matrix

Institution's Financial Soundness Sub-Matrix

FI's weaknesses

Shareholder's economic and financial strength

		AAA a BBB-	BB+ or lower
Share-holder's commitment	Yes	A	B
	No	B	C

		Low	Moderate	High
FI's capital adequacy	> 100%	1	1	2
	0% – 100 %	1	2	3
	< 0 %	2	3	4

Shareholder's Strength and Commitment Indicators

A	B	C

Financial Soundess Indicators

1	2	3	4
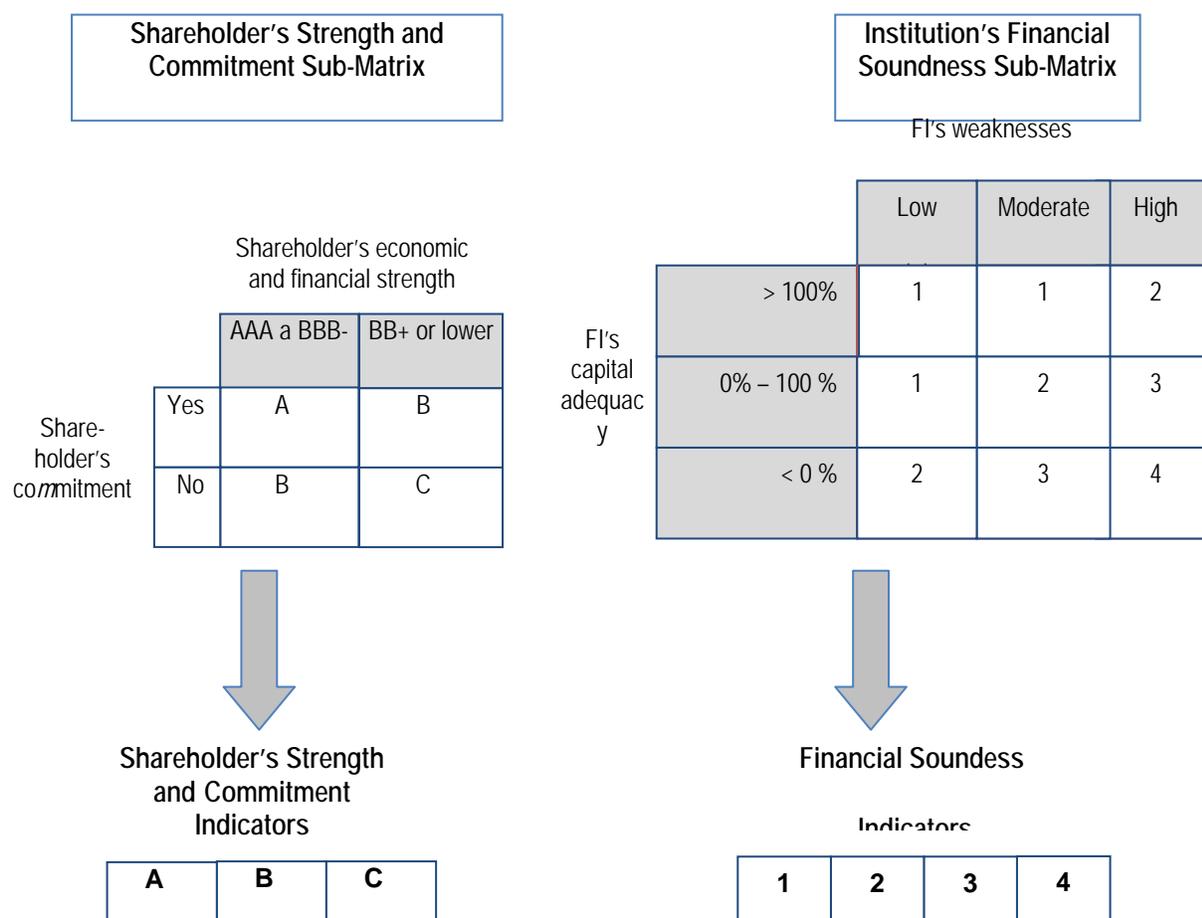
Shareholder's economic and financial strength

The third basic variable takes into account the risk ratings granted to head offices, shareholders and other kind of owners, by international credit rating agencies registered with the Central Bank. In all cases, long-term ratings in foreign currency granted by the aforementioned rating agencies are considered. In connection with this, shareholders, head offices and other kind of owners will be categorized as having investment grade (ratings between AAA and BBB- or equivalents) or speculative grade (BB+ rating or equivalent, or a lower rating).

To be categorized as having an investment grade, at least 75% of the bank's capital stock must be categorized as investment grade whenever the FI has several shareholders. If different ratings are provided by different rating agencies, the most adverse one will be considered. Likewise, speculative risk will be granted by COPAB whenever head offices, shareholders or any other kind of owners do not have a market–based risk rating.

In the event that a FI is a state-owned bank and it has no risk grade, the bank's home country sovereign grade will be considered by COPAB in order to assess shareholder's strength.

Shareholder's commitment

The fourth basic variable is a proxy to reflect the willingness of the shareholder to provide economic support to the FI facing troubles which might affect either its solvency or liquidity.
Commitment characteristics

Shareholder's commitment might be implicit or explicit. In order to assess shareholders' commitment, COPAB takes into consideration the evidence of an explicit commitment. The explicit commitment of the shareholder is usually revealed by signing a contract reflecting willingness to give economic support to the FI at stake.

These contracts have distinctive features depending on the type of shareholder (head office, single shareholder, etc.). In all cases, contracts are enforceable at either Uruguayan Courts or the shareholders' country courts. Appealing jurisdiction will depend on the banking regulation authorities.

Shareholder's Strength and Commitment Indicators: The shareholder's strength and commitment indicator might be A, B or C. Category A refers to high financial strength and high commitment, category B refers to high strength and poor commitment or vice-versa, and category C refers to low financial strength and poor commitment.

Figure 2 above shows the determination of this indicator.

COPAB's Risk Categories

COPAB's risk matrix arises from the combination of the outcomes obtained from the FI's strength indicator and the shareholder's strength and commitment indicator.   It has twelve risk positions that derive in five COPAB's risk categories, giving rise to potential compensations between low

financial soundness and higher shareholders' strength and commitment or vice-versa.

The COPAB's risk categories will be I, II, III, IV and V, being I the lowest risk category and V the highest one.   Figure 3 shows the process resulting in the COPAB's risk categories.

<u>Figure 3 – Risk Matrix</u>

FI's Soundness

		1	2	3	4
Share-holder's Strength and Commit-ment	A	I	II	III	IV
	B	II	III	IV	V
	C	III	IV	V	V

COPAB's Risk Categories

I	II	III	IV	V
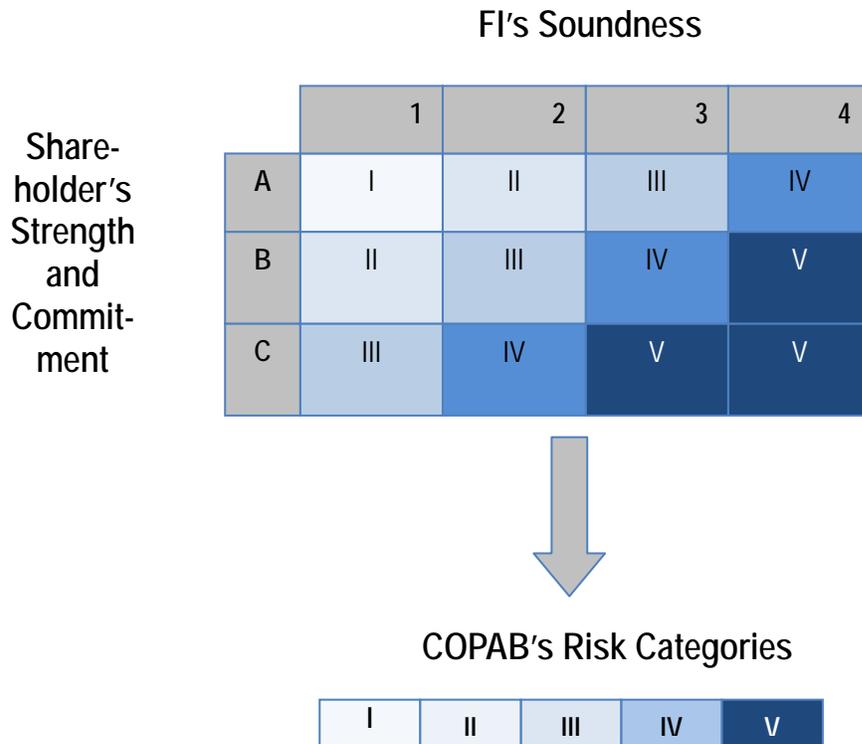
ANNEX II

Deposit insurance systems utilizing differential premium systems

Based on the results of the CDIC International Deposit Insurance Surveys (2003 and 2008), Garcia (1999), and the surveys conducted during the updating of the Guidance, the following countries currently have in place differential premium systems.

Argentina	Nicaragua
Canada[30]	Nigeria
Colombia	Peru
Finland	Poland
France	Portugal
Germany[31]	Romania
Italy	Singapore
Kazakhstan	Sweden
Malaysia	Taiwan
Marshal Islands	Turkey
Micronesia	United States
Netherlands	Uruguay

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[31] Not all of the deposit insurers operating in Canada and Germany have differential premiums