

Consultation Paper

**Premium Assessment Approach
and Target Fund Level**

June 2011

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1. Introduction

The Canada Deposit Insurance Corporation (CDIC) was established in 1967 by the *Canada Deposit Insurance Corporation Act* (the *CDIC Act*). The Corporation is an agent of Her Majesty in right of Canada and is a Crown corporation named in Part I of Schedule III to the *Financial Administration Act*. The Corporation reports to Parliament through the Minister of Finance.

CDIC provides insurance against the loss of part or all of deposits, and promotes and otherwise contributes to the stability of the financial system in Canada. This work is pursued for the benefit of persons having deposits with member institutions and in such a manner as will minimize the exposure of the Corporation to loss.

CDIC operates a member-funded deposit insurance scheme for the benefit of depositors and its members. An important implication of this is that insurance losses arising from the failure of a member are ultimately borne by the membership through the assessment and collection of premiums.

The recent financial crisis has put considerable focus on deposit insurers' ability to resolve financial difficulties within their membership and to contribute to financial stability within their respective financial systems. In particular there is significant interest in whether or not deposit insurers have sufficient resources available to them to absorb future insurance losses and whether or not approaches to premium setting and funding are pro-cyclical in the sense that they contribute to financial instability rather than reduce it.

Pro-cyclicality arises if the design of the deposit insurance system requires large premium rate increases following a period of deposit taking institution failures in order to replenish the deposit insurance system's financial reserves. Some concerns have been expressed about deposit insurance premiums that vary significantly over time, particularly if increases are expected to occur following a financial crisis, when members are relatively less able to absorb them.

Pro-cyclicality also exists within CDIC's differential premiums system. Certain measures that are used to classify member institutions into differential premiums categories are driven off of financial results. These measures result in higher classifications (that pay higher premiums) when members report, for example, adverse financial results. The system is designed to operate in this manner as an incentive to reduce risk in the system and the benefits of such risk reduction may outweigh potential pro-cyclical characteristics. The differential premiums system will be the subject of a future consultation and is not addressed in this document.

In the Canadian system, and many others like it around the world, premium rate setting and the determination of a funding approach are closely linked. The manner in which these two matters are addressed has an effect on which members bear insurance losses and the timing of when they bear them. An approach that leads to relatively stable premiums over time has implications for the level of premiums and the size of CDIC's *ex*

ante fund. This paper explains why this is the case and presents alternatives for consideration and discussion. A listing of important concepts used in this document can be found in Appendix 1.

This paper is not intended to be exhaustive nor is it intended to be definitively conclusive. CDIC would welcome additional suggestions that would assist it in identifying other possible approaches to premium setting and funding and will communicate with members the results of this consultation once the information has been compiled.

Please direct your confidential written comments or suggestions by August 31, 2011 to:

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2. Objectives

The purpose of this document is to discuss CDIC's approach to premium rate setting and funding in the context of international developments and in the context of the important role CDIC plays in the Canadian financial system.

This paper presents CDIC's approach regarding:

1. The direction of future decisions regarding premium rates;
2. The appropriate level of *ex ante* funding; and
3. The implications of any changes to CDIC's *ex ante* funding targets.

In order to fulfill its mandate, CDIC must maintain a state of readiness to intervene quickly in the affairs of a troubled member institution of any size or type. The discussion and analysis in this consultation paper are driven by a number of policy objectives that would assist CDIC in achieving its mandate. These include:

- Building a financially strong CDIC that protects depositors and maintains confidence and financial stability;
- Maintaining sufficient financial resources that would allow CDIC to act quickly and effectively to deal with any member financial institution;
- Avoiding periods of deficit so that confidence in CDIC's financial capacity to intervene is maintained at all times;
- Providing sufficient premium revenue to repay any debt within a reasonable period of time;
- Reducing pro-cyclicality in the existing premium assessment process by allowing moderate, steady assessment rates throughout economic and credit cycles; and
- Avoiding excessive, or undue, burden on the membership.

3. Background

Deposits insured by CDIC amount to approximately \$604 billion¹. This represents a significant amount of wealth that has been entrusted by Canadian depositors to CDIC's membership. It also represents a significant source of financing for deposit-taking institutions. The sheer magnitude of these deposits makes the stability of the deposit-taking activity important not only for depositors and member institutions, but for the effective functioning of Canada's economy as well. In this context stability means that depositors are assured of the safety of their insured deposits, and member institutions are assured of a reliable, ongoing source of financing.

A key factor in the stability of this very large deposit-taking activity is the confidence Canadians place in CDIC. A financially strong and capable CDIC that is able to deal with issues within its membership makes financing by way of retail deposits a reliable

¹ Value as at April 30, 2010.

source of member institution funding even during periods of financial turmoil. This is an important contribution that CDIC makes to financial stability in Canada. Therefore, the trust and confidence of Canadians must be considered in CDIC's approach to premium setting and funding.

Between 2007 and 2009, the world's financial system encountered a period of unprecedented instability. While the financial crisis had an effect on CDIC's members, they performed solidly during and after that period. As a result, Canadians enjoyed (and continue to enjoy) a strong and stable financial system.

While Canada has weathered the global financial crisis comparatively well, other nations have faced considerable difficulty. The lessons learned, as documented by the Basel Committee on Banking Supervision (BCBS), revealed the importance of having effective national resolution powers and the importance of effective cross-border crisis management. The BCBS concluded that there was an absence of viable and effective resolution tools that would allow authorities to act quickly to deal with all types of financial institutions, to maintain stability, preserve continuity of systemically important functions and protect depositors.

The following was recommended by the BCBS in its March 2010 *Report and Recommendations of the Cross-Border Bank Resolution Group*:

“National authorities should have appropriate tools to deal with all types of financial institutions in difficulty so that an orderly resolution can be achieved that helps maintain financial stability, minimize systemic risk, protect consumers, limit moral hazard and promote market efficiency. Such frameworks should minimize the impact of a crisis or resolution on the financial system and promote the continuity of systemically important functions.”

This has led to interest around the world in many matters relating to financial system safety nets, important among them being the design and operation of deposit insurance systems. The crisis emphasized the need for deposit insurers to have credible financing to resolve issues quickly and effectively, and the important role the deposit insurer plays in ensuring that resolution costs are borne by the industry and not the taxpayer.

Core Principle 11 in the International Association of Deposit Insurers' (“IADI”) *Core Principles for Effective Deposit Insurance Systems* illustrates this point:

“A deposit insurance system should have available all funding mechanisms necessary to ensure the prompt reimbursement of depositors' claims including a means of obtaining supplementary back-up funding for liquidity purposes when required. Primary responsibility for paying the cost of deposit insurance should be borne by banks since they and their clients directly benefit from having an effective deposit insurance system.”²

² The Basel Committee on Banking Supervision and the International Association of Deposit Insurers' *Core Principles for Effective Deposit Insurance Systems*, Core Principle 11.

In light of the increased international focus on deposit insurance best practices and the emerging sentiment toward harmonizing approaches to deposit insurance evident from the above, it is timely for CDIC to consider its own approach to premium setting and funding to ensure it continues to compare well to international best practices. In addition, the financial crisis has led to the emergence of a discussion of pro-cyclicality in the financial safety net in general, and within deposit insurance systems in particular. Pro-cyclicality is the tendency for elements of the financial system safety net to contribute to financial turmoil rather than reduce it.

In the context of deposit insurance, pro-cyclicality is necessarily tied to deposit insurance premium and funding policies. This is because in many systems around the world, including Canada's, losses incurred due to the failure of one or more insured member are covered by premiums collected from all members³. The timing of the losses and their ultimate coverage by collected premiums is, to some extent, elective – premiums can be collected first to create a fund to cover future losses, called *ex ante* funding, or losses can be incurred first to be covered by premiums collected later, called *ex post* funding, or some combination of both, called hybrid funding.

The fact that there is some flexibility around the timing of collecting premiums gives deposit insurers the ability to select the approach that minimizes pro-cyclicality. This is generally considered to be *ex ante* funding. *Ex ante* funding approaches typically involve premium assessment rates that are sufficient to accumulate a fund during periods of economic stability, before losses occur.

Ex post funding can require increases in deposit insurance premiums to cover losses during or shortly after periods of financial distress. Thus, premium increases tend to occur when they are least welcome: at a time when financial institutions are attempting to recover from the effects of that turmoil. In addition to contributing to pro-cyclicality, *ex post* funding, by its nature, also involves potentially large variations in premium rates through time. This is because relatively low premiums are charged when there are no losses and larger premiums are charged after losses happen to enable deposit insurers to recapitalize themselves (i.e. to recoup losses) over a reasonably short period of time.

Thus, an *ex ante* funding approach can lead to a more stable premium environment for member institutions.

There seems to be an emerging preference for the *ex ante* approach, mostly because of a preference for premium assessment rates that are relatively stable, and therefore not pro-cyclical. This idea is supported by a large majority of EU countries.⁴

³ Note that approaches to premium setting that are front-end loaded (in the sense that relatively larger premiums are assessed before losses are incurred) allocate losses to all members, whereas approaches that are back-end loaded (in the sense that relatively larger premiums are assessed after losses are incurred) allocate losses to surviving members.

⁴ *Draft Proposal for a Directive of the European Parliament and of the Council on Deposit Guarantee Schemes [recast], 2010*. European Commission. Respondents referred to in the quote were mainly banks and their associations, consumers and their associations, Member States and Deposit Guarantee Schemes.

Question 1

Would you agree that the goal of stable premium rates is desirable?

In addition to reducing pro-cyclicality, *ex ante* funding also bolsters the resolution credibility of deposit insurers. An *ex ante* approach enables the public to see the accumulation of appropriate resources standing ready to help the insurer deal with issues as they arise. This is particularly important in jurisdictions such as Canada where there are a few very large members. Noteworthy in this regard is the recent formalization in the *Budget Implementation Act, 2009* (BIA, 2009) of CDIC's ability to establish a bridge institution and, subject to Ministerial approval, to hold shares in its member institutions.

4. Purpose of the Fund

The purpose of CDIC's fund is to absorb losses associated with a resolution. In defining the purpose of the fund, it is important to distinguish between funding of resolution losses and funding for liquidity.

In a failure resolution scenario, CDIC would rapidly take control of the failed member's assets and pay out insured deposits. CDIC does not hold sufficient liquid assets to make a payout in many of the potential resolution scenarios. If necessary, it would top up its resources by borrowing from the Consolidated Revenue Fund or from the market with repayment made from recoveries of assets taken over from the failed member. These borrowings are for liquidity purposes.

The shortfall between cash outlays (e.g. insured deposit payments) and asset recoveries is the loss incurred in the resolution. CDIC would absorb these losses first with the *ex ante* fund, and if required, through additional borrowings. Losses exceeding the *ex ante* fund and CDIC's legislated borrowing limit may be funded through an appropriation act authorized by Parliament. Repayment of borrowings and recapitalization of CDIC's *ex ante* fund would be by way of premiums collected from its members.

CDIC's financial capabilities are not meant, on their own, to be sufficient to address a systemic crisis as that is not the purpose of a deposit insurance system.

5. Current State

In developing its current ex-ante funding policy, CDIC recognized the importance of having appropriate financial resources for the proper functioning of a sound deposit insurance system. Its policy reflects the need for a high degree of confidence that the resources available to CDIC will be sufficient to address the risks to which it is exposed. In fiscal 2004, CDIC’s Board of Directors decided that it would be appropriate to maintain an *ex ante* fund available for possible deposit insurance losses. It was further determined that the *ex ante* fund would be represented by the aggregate of both the retained earnings and the provision for insurance losses as reported in CDIC’s financial statements. The target range for the amount of the *ex ante* fund is currently between 40 and 50 basis points of insured deposits.

Under current forecasts the bottom of the range will be achieved in the Corporation’s 2013/2014 fiscal year. The progression of the *ex ante* fund toward the bottom of the target range is sensitive to the level of insured deposits, premium levels and market interest rates (CDIC’s *ex ante* fund is invested in fixed income securities and therefore is sensitive to movement in interest rates). Changes in one or all of these criteria can materially affect the time it will take the *ex ante* fund to reach 40 basis points of insured deposits.

Premiums are based on the total amount of insured deposits held by members as of April 30th of each year, calculated in accordance with the *CDIC Act* and its *Differential Premiums By-law*, which classifies member institutions into one of four premium categories. Classification is based on a mix of quantitative and qualitative factors. The vast majority of CDIC’s members have fallen into Categories 1 and 2 over the past five years.

In addition to its *ex ante* fund, CDIC’s legislated borrowing limit was increased in fiscal 2010 to \$15 billion (from \$6 billion). This borrowing limit is adjusted annually to reflect the growth of insured deposits, and is available to enable CDIC to absorb losses in excess of its *ex ante* fund and act as a source of liquidity. The borrowing limit was \$17 billion at April 30, 2011. If drawings were to be made under this borrowing limit to cover losses, they would be repaid over

History of Premium Rates <i>(shown as basis points of insured deposits)</i>	
1967	3.3
1986	10.0
1993	12.5
1994	16.7
1999	Differential Premiums System
1999/2000 to 2000/2001	Category 1 — 4.2 Category 2 — 8.3 Category 3 — 16.7 Category 4 — 16.7
2001/2002	Category 1 — 4.2 Category 2 — 8.3 Category 3 — 16.7 Category 4 — 33.3
2002/2003 to 2004/2005	Category 1 — 2.1 Category 2 — 4.2 Category 3 — 8.3 Category 4 — 16.7
2005/2006 to 2008/2009	Category 1 — 1.4 Category 2 — 2.8 Category 3 — 5.6 Category 4 — 11.1
2009/2010	Category 1 — 1.9 Category 2 — 3.7 Category 3 — 7.4 Category 4 — 14.8
2010/2011	Category 1 — 2.3 Category 2 — 4.6 Category 3 — 9.3 Category 4 — 18.5

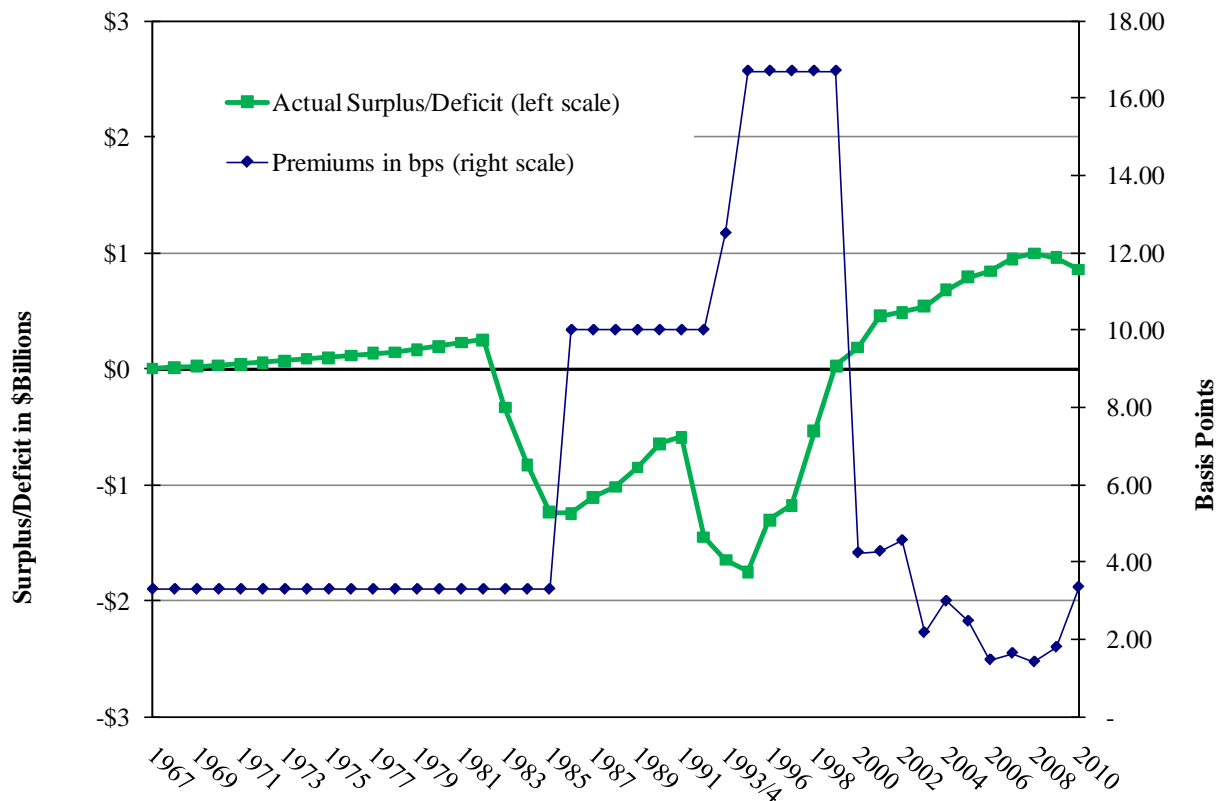
time through premiums collected from member institutions. Thus, CDIC’s funding is a hybrid system, in the sense that it is comprised of both *ex ante* funding and *ex post* funding.

There is no specific requirement for an *ex ante* fund in CDIC’s enabling legislation. Rather, CDIC’s board of directors is empowered to specify funding policies in response to the risks and exposures that CDIC faces. In other words the amount of the funding and its allocation between *ex ante* and *ex post* is determined by prudence rather than by statute.

Throughout CDIC’s history, it has experienced varying levels of retained earnings/deficit, and has charged premiums at various rates as presented in Graph 1. Throughout most of its history, CDIC did not maintain an *ex ante* fund. Its historical experience illustrates how reliance on *ex post* funding leads to premium rates that are substantially pro-cyclical.

Graph 1

CDIC History of Surplus, Deficit and Premium Rates



In 1983, CDIC slipped into a deficit position as a result of member failures and remained there until 1998. During this period, premium rates increased to between 10 and 12 basis points of insured deposits for eight years, and then to over 16 basis points for a further five years. In 1999 the Corporation’s retained earnings returned to positive levels and a

year later premiums normalized, to about 4 basis points. In the years following, CDIC's resources grew and premium levels declined. The challenge that the historical analysis illustrates is that premium levels increased at the same time CDIC's membership was working hard to recover from periods of financial distress: in other words, premium rates operated pro-cyclically. As an example, in 1987, as members were struggling to recover from weak economic conditions, premiums represented approximately 43% of members before tax net income. Additionally, in 1993 as members were dealing with the effects of collapsing real estate prices, premiums represented approximately 13% of members' before tax net income. Premiums remained elevated until 1999 ranging from approximately 9% of members' net income in 1993 to 4% in 1998 as CDIC repaid borrowings.

An important observation from Graph 1 is that the premium assessment rate was extremely volatile over time. This is a direct result of maintaining financial resources that were relatively small, which led to the need to top up financial resources relatively quickly after losses occurred. To avoid this, a deposit insurer can do two things. First, it can hold financial resources that are sufficient to cover losses as they occur, and second, it can assess premiums that are large enough to result in the accumulation of financial resources before loss events. Therefore, an alternate approach to what is depicted in Graph 1 is to set constant or near constant average assessment rates and for CDIC to hold more financial resources. These matters are considered in more detail in the next section.

A second observation that can be made from Graph 1 is that CDIC spent many years in financial deficit. While significant reliance on *ex post* funding led to volatile assessment rates, it also led to volatile financial strength for CDIC. This would appear inconsistent with CDIC's role to promote confidence amongst the depositing public both for the benefit of depositors and for the benefit of its members who rely on deposits as an important source of financing.

A goal of achieving less volatile assessment rates and greater financial strength for CDIC would need to be supported by assessment rates that permit the accumulation of sufficient *ex ante* resources.

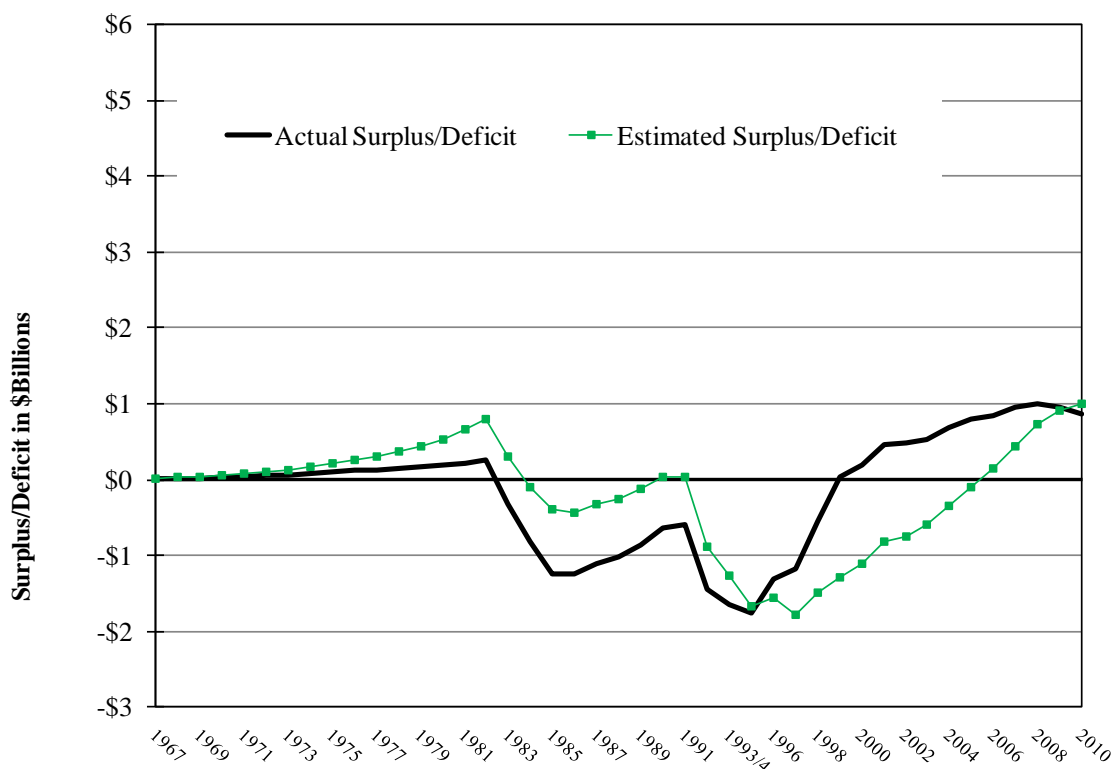
6. Analysis

The pricing, funding and pro-cyclicality of deposit insurance systems are closely linked. This is because relatively low premiums avoid the accumulation of a significant *ex ante* fund, and thus lead to increased premiums after loss events that are borne by the remaining members. Relatively larger premiums lead to the accumulation of an *ex ante* fund, which can be used to cover losses. Premium levels that are large enough to lead to a robust *ex ante* fund – one large enough to cover losses – are sometimes sufficient to rebuild the fund after losses, thus reducing the need for increased premiums after deposit insurance losses. This latter approach is therefore associated with premium arrangements that are relatively more stable than the former approach, and therefore not pro-cyclical.

a) Stable Premium Rates

In the first analysis, CDIC determined a constant premium rate over its history (1967-2010) that would achieve a retained earnings level equivalent to the current level: approximately \$1 billion. This assessment rate is 6.6 basis points of insured deposits. This rate is well below the very high premium rates experienced between 1994 and 1999 of 16.7 basis points.

**Graph 2
Surplus/Deficit Position
Constant Premium Rate of 6.6 Basis Points
1967-2010**

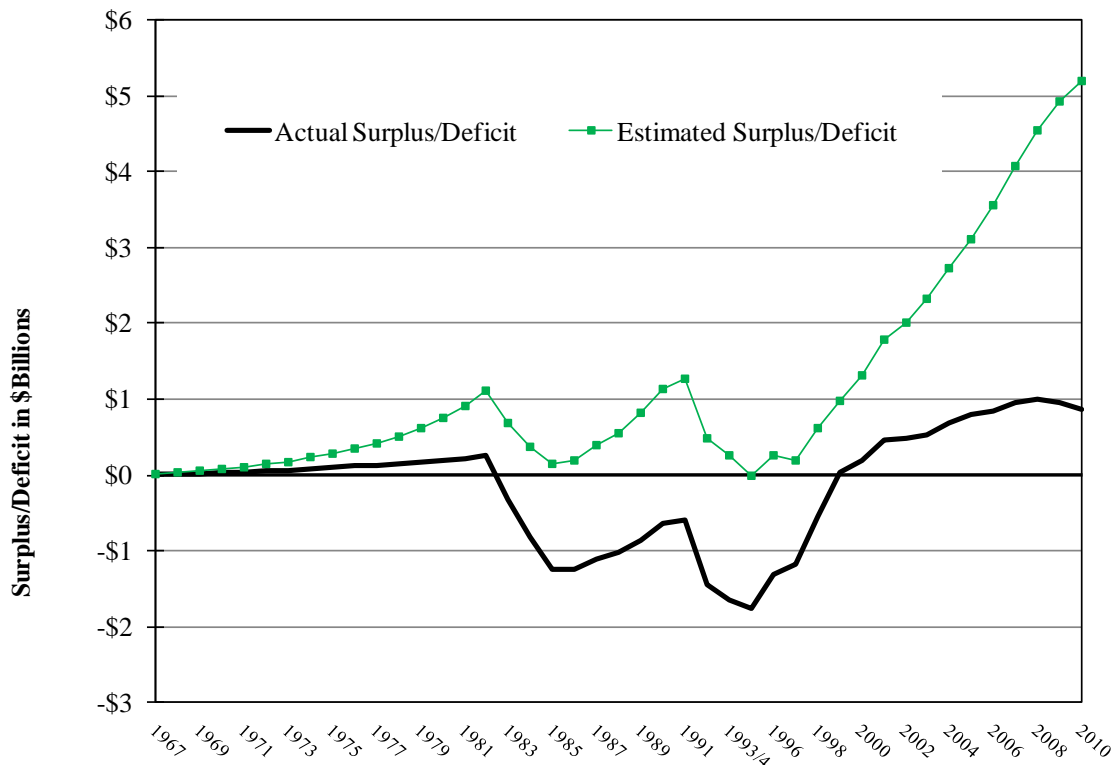


An issue with the application of an assessment rate of 6.6 basis points, evident from Graph 2, is that CDIC would have been in a deficit position (i.e. retained earnings would have been negative) for as many as 13 years. A deficit suggests that CDIC would not have sufficient resources available to deal with the costs of providing deposit insurance thus introducing potential pro-cyclicality.

In a second analysis, CDIC estimated the premium assessment rate that would have kept retained earnings at zero or better. As can be seen from Graph 3, this estimated assessment rate is 8.8 basis points, again significantly below the peak rates charged during the '90s.

In addition to covering losses and keeping retained earnings at zero or better, this constant assessment rate would have led to an *ex ante* fund size of 119 basis points of insured deposits (retained earnings of 97 basis points plus the current provision of 19 basis points), which is larger than both CDIC’s current *ex ante* fund level of 37 basis points and the target range of 40 to 50 basis points.

Graph 3
Surplus/Deficit Position
Constant Rate of 8.8 Basis Points
1967-2010



The analyses depicted in Graphs 2 and 3 show how larger, but constant assessment rates can replace variable assessment rates that are smaller in periods preceding losses and much larger in periods following losses. They also show that assessment rates that are large enough to maintain CDIC in a surplus position also lead to relatively larger *ex ante* fund sizes.

Question 2

In consideration of the above analysis, should the *ex ante* fund and premium rates be calibrated to reduce the likelihood that CDIC will experience a deficit for a prolonged period of time?

b) CDIC's Statistical Fund Model

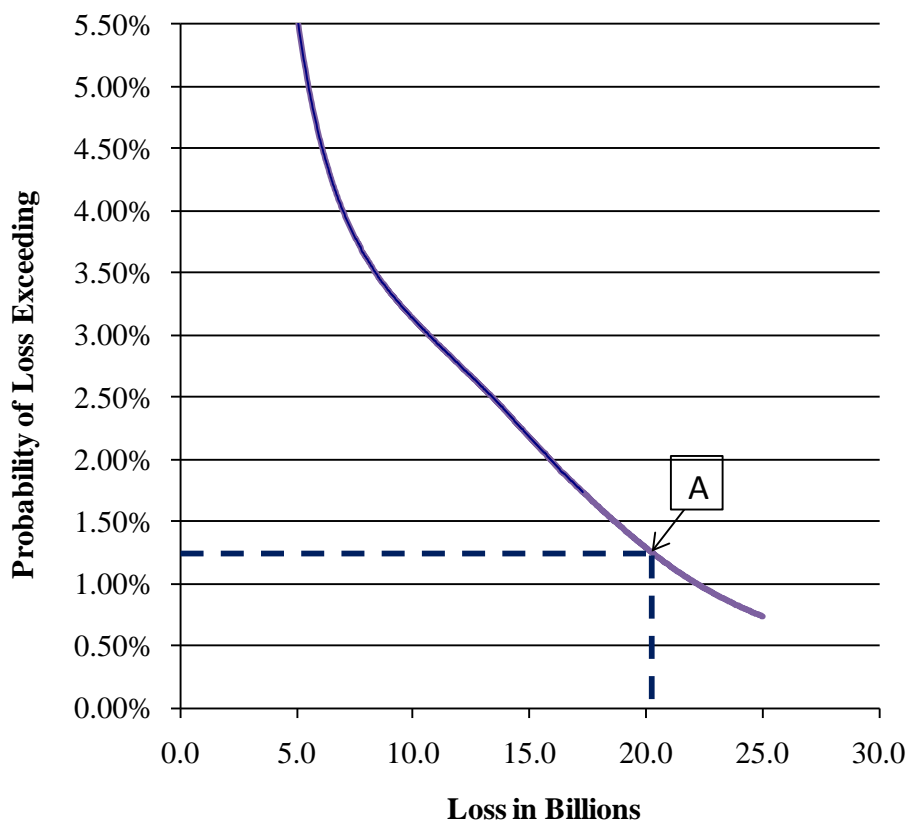
In addition to using historical loss experience as a benchmark for determining funding requirements, CDIC uses currently available information about members to specify a level of funding that is estimated to be sufficient to cover most loss scenarios CDIC might face.

CDIC's statistical model uses actual or estimated information for each CDIC member to create sample resolution scenarios. For each scenario, including failure scenarios, loss estimates are made. The scenarios generated by the model, and the losses associated with each scenario, depend on key assumptions including probability of default, loss given default, and exposure at default.

The statistical model keeps track of the size of losses that occur, and the frequency with which losses of particular sizes occur. Doing this enables CDIC to determine the frequency in the model with which *ex ante* funds of various sizes are exceeded. By setting the *ex ante* fund to a large enough size, CDIC can ensure losses are not expected to exceed it most of the time.

The results of CDIC's statistical model are set out in Graph 4 which depicts how often estimated losses were greater than various dollar values. For example, at point A, the model generated losses greater than \$20 billion 1.25% of the time.

**Graph 4
Statistical Model Results**



Clearly, the larger the fund size the more likely it is to be adequate to cover losses and less likely it is to be exceeded. For the benchmark case – the dotted lines on Graph 4 – a 98.75% confidence level was chosen. That is to say that, based on the model, a fund size based on a 98.75% confidence level would only be exceeded 1.25% of the time. This corresponds to a fund size slightly in excess of \$20 billion. Thus, CDIC's statistical analysis suggests that to achieve a 98.75% confidence interval a total fund size (ex ante and ex post) of approximately 350 basis points of insured deposits would be needed. The lower end of CDIC's current ex ante target, at 40 basis points, is only 11% of this total.

When considering the sufficiency of the *ex ante* fund in the context of CDIC's overall funding sources, it is useful to determine the potential impact of *ex post* borrowings on CDIC's members. As noted above, CDIC's statistical model suggests that approximately \$20 billion of total funding is adequate based on the assumptions used. This is roughly equivalent to CDIC's current level of total funding (\$2 billion *ex ante* and \$17 billion *ex post*). Should an event or series of events occur where the total \$20 billion of funding was required to fund losses, the *ex post* borrowings would be recovered through future premiums assessed against members.

The table below illustrates the implications for CDIC’s membership of CDIC repaying an assumed loss of \$20 billion. The key assumption is that members pay the premiums of 33.3 basis points of insured deposits - the maximum amount of premiums that can be charged under the CDIC Act - or approximately \$2 billion per year at the current level of insured deposits. As context, CDIC’s members paid average premiums in 2010 of 4.2 basis points of insured deposits and the highest rate charged historically was 16.7 basis points.

**Table 1
Repayment Scenarios Under an Assumed Loss of \$20 Billion**

<i>Ex ante</i> fund target (based on \$604 billion of insured deposits)	Assumed loss (\$ millions)	Assumed <i>ex ante</i> fund (\$ millions)	Assumed Borrowing (\$ millions)	Years to Repay borrowings with Premiums at 33.3 bps	Minimum Premium for Interest coverage ¹ (bps)
40 basis points	20,000	2,400	17,600	12	14.6
100 basis points	20,000	6,000	14,000	9	11.6
150 basis points	20,000	9,000	11,000	7	9.1
200 basis points	20,000	12,000	8,000	5	6.6

¹ - based on an assumed interest rate of 5%

The primary implication of this analysis is that, at current levels (4.2 bps or \$253 million of premiums collected), the *ex ante* fund would not be sufficient to service interest costs associated with a loss event of the magnitude outlined in the table. In fact, the current level of premiums would be insufficient to repay any of the principal indebtedness.

CDIC believes, therefore, that it is prudent to permit the *ex ante* fund to grow beyond its current target range of 40 to 50 basis points of insured deposits. This view is supported by the desire to reduce pro-cyclical premium rate increases, mitigate the impact of loss events on members and international movement towards larger *ex ante* funding targets. The loss assumed in the above table can be described as a low probability but high impact event. However, as noted earlier in this document, CDIC has experienced loss events in the past. If CDIC’s premiums had been set at approximately 8.8 basis points of insured deposits, the *ex ante* fund would have grown to approximately 100 basis points today and the Corporation would have stayed out of deficit. Premiums would also not have behaved pro-cyclically as premium rates would have been stable.

Question 3

Would a minimum target for the *ex ante* fund of between 100 to 150 basis points provide acceptable protection to significant *ex post* increases in premium rates?

The determination of an *ex ante* fund for CDIC also requires consideration of a planning horizon over which CDIC would seek to meet the new target. A planning horizon that is too long dilutes the argument that CDIC is prepared to handle member failures, and

therefore undermines depositor confidence in CDIC. On the other hand, a planning horizon that is too short will boost premium assessment levels to the point where they may place an undue burden on CDIC's membership.

The FDIC has given itself until 2020 to meet its initial 135 bps funding target and the EU is contemplating a 10 year period in which to reach fund objectives. The following table estimates the premium rates that would be required for CDIC to reach a fund size of between 100 and 150 basis points under different time horizons:

Table 2
Estimated Premium Rates to Reach Fund Targets

Time horizon	Estimated average premium rates	
	Fund target 100 basis points	Fund target 150 basis points
15 years	5.2	7.2
10 years	7.5	12.0
5 years	12.0	21.0

Question 4

Is ten years an appropriate time frame over which CDIC should reach the minimum target fund?

Specification of a target fund level begs questions about what will happen to premiums and surpluses in the fund once the target fund level has been reached. The FDIC, for example, specifies premium rate reductions at fund levels of 200 and 250 basis points respectively. Its minimum fund level is 135 basis points.

Reaching the minimum target fund will take many years, so it is difficult to specify all the conditions that might prevail at that time. There may be little point in making specific rules about an event that is likely to occur far in the future. Therefore, it is suggested that premium rate reductions and refunds be considered once the target fund is reached, but that it is premature to be specific about how to put them into effect.

CDIC does not expect that an arrangement made at the current time will remain appropriate forever. In light of the desire for stability and recognizing that circumstances change over time CDIC would expect to review its premium assessment approach and target fund level every 5 to 7 years.

Question 5

Is 5 to 7 years an appropriate period of time to review funding strategies? Should it be longer? Or should it be based on progression to the target (e.g. when 50% or 75% of the target is attained)?

c) International Context

In July 2010, the European Commission put a legislative proposal before the European Parliament that would provide a universal target fund ratio for all deposit insurance systems in the European Union (“EU”). EU countries’ deposit insurance systems would have ten years to build an *ex ante* fund of 150 basis points of insured deposits. In the event of a failure and potential fund depletion, an affected deposit insurer would then be able to levy a further 50 basis points in *ex post* premiums from its member banks. If that money were insufficient, the affected insurer could then borrow up to a further 50 basis points of insured deposits from other European deposit insurance systems, to be repayable within five years. The effect of this is that *ex ante* funds would account for 60% of funding (150 of 250 basis points) and *ex post* sources would account for 40% of funding (100 of 250 basis points).⁵

It is not only the EU that is contemplating larger *ex ante* funding levels. The Federal Deposit Insurance Corporation (FDIC) in the United States raised its minimum fund level from 115 basis points to 135 basis points. Subsequent to the approved increase, FDIC proposed a long term plan that would increase the fund level even further by setting a minimum of 200 basis points, while invoking progressively lower premiums when the fund exceeded 200 and 250 basis points.

Data obtained from a 2009 IADI Financial Crisis Survey (“IADI”) reveals that 11 systems funded themselves on an *ex ante* basis; 4 on an *ex post* basis; and many others fund themselves using a hybrid model similar to CDIC’s, incorporating elements of both *ex ante* and *ex post* funding.

Further, the IADI survey shows that there are large disparities in deposit insurer’s back-up borrowing authority and the amount of money they can borrow (in local currency). Many respondents did not state a borrowing limit. Of those that did, the lowest belonged to India (INR 50 million or USD1.045 million). A number of countries – including Spain, Russia, France, Korea, Singapore, Austria, and Sweden, among others – had an unlimited borrowing authority. Others, such as Mexico, Turkey and Argentina could borrow certain percentages of insured liabilities every number of years.

Finally, the level of the fund varied widely, possibly because the survey followed on the heels of a financial crisis that would have depleted many countries’ funds. For the

⁵ See paragraph 7.4, page 7 of the Draft *Proposal for a Directive of the European Parliament and of the Council on Deposit Guarantee Schemes [recast]*, 2010. European Commission.

countries that responded the average fund size was 270 basis points and the median was 129 basis points. The mean was skewed because several countries reported quite large amounts (Tanzania – 9.32%; Nicaragua – 16%; Guernsey – 20%). Deleting these from the list of respondents gives an average of 157 basis points and a median of 111 basis points. Further information regarding international deposit insurers and these surveys can be found in Appendices 2 and 3.

The variation in the fund level and the approach to *ex ante* borrowing arrangements among the respondents suggests that jurisdictions are tailoring their approaches to local circumstances, and that it is difficult to make generalizations about the fund level and the split between its *ex ante* and *ex post* components. What is clear is that an approach that seeks to minimize pro-cyclicality will tend toward an *ex ante* fund and an assessment rate that is large enough to achieve the desired fund size over time.

7. Summary

CDIC is seeking to address a number of questions concerning how it ought to assess premiums and establish an *ex ante* target fund to achieve three goals – the future direction of premium rates; the appropriate levels of *ex ante* funding; and the implications of any changes to CDIC's *ex ante* funding targets.

As indicated at the outset, this paper is not intended to be exhaustive nor is it intended to be definitively conclusive. CDIC would welcome additional suggestions that would assist it in identifying other possible approaches to premium setting and funding and will communicate with members the results of this consultation once the information has been compiled.

Please direct your confidential written comments or suggestions by August 31, 2011 to:

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Appendix 1

Definitions

i. Ex ante funding

This describes the accumulation of a fund by a deposit insurer before loss events occur. It is intended to be a loss absorption mechanism rather than a liquidity source.

ii. Ex post funding

This describes the use of borrowing or other funding mechanisms after loss events occur. These sources can be used to absorb losses or for liquidity purposes.

iii. Hybrid funding

This describes a combination of *ex ante* and *ex post* funding and is the funding mechanism used by CDIC.

iv. Bridge bank

This refers to a resolution tool used by deposit insurers to resolve a trouble financial institution. It involves the incorporation of a new bank by the deposit insurer and the transfer of assets and liabilities from the troubled member.

v. Pro-cyclicality

This refers to the tendency for elements of a financial system safety net to operate to contribute to financial instability rather than reduce it.

vi. Description of *ex ante* fund composition

CDIC's current fund amounts to \$1.96 billion, represented by a \$1.1 billion provision for insurance losses and the balance being retained earnings.

Appendix 2

International Perspective

	Currently Available Fiscal:	Insured Limit	Insured Base	Fund	Target in b.p.	Actual (in b.p.)
Bulgaria	2009	100,000 Euro (BGN196,000)	BGN33.9b	BGN884m	None evident	261
Canada	2010	CAD100k	CAD 590b	CAD 1.96b	40-50	33
Hong Kong	2010	HKD100,000 to increase to HKD 500,000 in 2011	HKD 549b	HKD 1.3b	30 changing to 25 in 2011	24
Indonesia	2009	IDR2b	IDR 1,163t	IDR 17.6	Unk.	151
Jamaica	2009	JMD600k	JMD 196.8b	JMD 5.1b	500	266 ⁶
Korea	2009	KRW50m	KRW 1,020t	KRW 6.1t	There are some, check	60 Check – this is overall whereas they have several funds
Nigeria	2009	NGN200k – universal banks NGN100k – microfinance banks	Universal: NGN1,592b	Universal: NGN224.4b Special Insured Institution fund.: NGN19.2b	None apparent	Universal: 14.1% Special Ins'd Inst.: Not stated

⁶ Although the fund balance, insured deposits balance, and fund ratio are all taken from the annual report, the ratio of the fund to insured deposits does not equal the reported fund ratio.

CDIC Premium Assessment Approach and Target Fund Level Consultation Paper

	Currently Available Fiscal:	Insured Limit	Insured Base	Fund	Target in b.p.	Actual (in b.p.)
Philippines	2008	PHP250k	PHP 964.8b	PHP60.1b	Target of PHP60.38b They refer to a Target Fund in the FS but no specific value found as yet	6/22%
Singapore	2010	SGD20k	n/a	SGD61.2m	30	n/a
Taiwan	2009	TWD1.5m, July 1, 2007 Unlimited to Dec. 31. 2010	n/a	General: TWD0 Agricultural: TWD2.4b	General: 200 Agricultural: 200	Not stated
United States	2009	USD100k	USD 4.8t	USD17.3b	125	36
Malaysia		MYR60k	MYR 337.4b	MYR 369.9m	-	11

Bulgaria	http://www.dif.bg/
Canada	http://www.cdic.ca
Hong Kong	http://www.dps.org.hk/en/home.html
Indonesia	http://www.lps.go.id/
Jamaica	http://www.jdic.org/
Korea	http://www.kdic.or.kr/english/index.jsp
Malaysia	http://www.pidm.gov.my/Home.aspx
Nigeria	http://www.ndic.org.ng/
Philippines	http://www.pdic.gov.ph/
Singapore	https://www.sdic.org.sg/
Taiwan	http://www.cdic.gov.tw/dp.asp?mp=2
United States	http://www.fdic.gov/

Appendix 3

International Trends in Premiums and Funding for Deposit Insurance Systems

Purpose

The purpose of this Appendix is to present international trends in premiums and funding for deposit insurance systems.

This Appendix considers five issues:

- How are deposit insurance systems funded?
- Are premiums assessed against total deposits, insured deposits or something else?
- Are deposit insurance systems funded on an *ex post* or *ex ante* basis?
- What are typical fund balances of deposit insurance systems?
- What are typical borrowing authorities for deposit insurance systems?

The data for these surveys is taken from the 2008 CDIC International Deposit Insurance Survey (“IDIS”) and from the 2009 IADI Financial Crisis Survey.

Findings

How are deposit insurance systems funded?

This question was asked as part of the IDIS. It asked whether deposit insurance systems funded themselves through insurance premiums or tax revenues. Forty-two (42) systems responded to this question. All of them fund themselves through insurance premiums.

Are premiums assessed on total deposits, insured deposits or something else?

This question was asked as part of the IDIS. Of 43 total respondents roughly equal numbers assessed premiums on total deposits (16) and insured deposits (18). Nine (9) systems responded “other”. In supplementary detail, it appears many of systems responding “other” assess their premiums against insurable deposits; that is against the total balance in all deposits that are considered by the system to be insurable.

Are deposit insurance systems funded on an *ex post* or *ex ante* basis?

This question was asked as part of the 2009 IADI Financial Crisis Survey. Of 24 respondents, 11 systems fund themselves on an *ex ante* basis; 4 on an *ex post* basis; and nine responded “other”. Of the systems responding “other”, many of them fund themselves on a hybrid model, incorporating elements of both *ex ante* and *ex post* funding.

What is a typical fund balance of deposit insurance systems?

While there is no data setting funding target ratios for deposit insurance systems, the 2009 Financial Crisis Survey queried the fund balances of deposit insurance systems as at June 30th 2009. This data should be taken with the caveats that it will, of course, have changed since 2009 and that the survey followed on the heels of a financial crisis that would have depleted many countries' funds.

Table A5

Fund Balance Percentages

Country	Fund Balance (% of insured deposits)
Guernsey	20.00
Nicaragua	16.00
Tanzania	9.32
Guatemala	5.40
Kazakhstan	4.70
Turkey	4.41
El Salvador	4.07
Ukraine	4.00
Jamaica	2.75
Bulgaria	2.41
Sweden	2.30
Peru	2.15
Azerbaijan	2.10
Brazil	2.00
Russia	1.90
Greece	1.60
Jordan	1.50
Argentina	1.32
Spain	1.26
Serbia	1.22
Hungary	1.00
Romania	0.97
India	0.85
Uruguay	0.77
Korea	0.58
Canada (AMF)	0.52
Canada (CDIC)	0.33
Mexico	0.31
Belgium	0.31
Colombia	0.30

Country	Fund Balance (% of insured deposits)
US	0.22
Ireland	0.22
Hong Kong	0.14
Malaysia	0.14
France	0.13
Bahamas	0.05

This past July 2010, the European Commission put a legislative proposal before the European Parliament that would provide a universal fund target ratio for all deposit insurance systems in the European Union. EU countries' deposit insurance systems would have ten years to build an *ex ante* fund of 150 basis points. In the event of a failure and potential fund depletion, an affected deposit insurer would then be able to levy a further 50 basis points in *ex post* premiums from its member banks. If that money were insufficient, the affected insurer could then borrow up to a further 50 basis points of insured deposits from other European deposit insurance systems, to be repayable within five years.⁷

What are typical borrowing authorities for deposit insurance systems?

The 2009 IADI Financial Crisis Survey asked respondents whether they have access to back-up borrowing authority and how much money they may borrow (in local currency).

Many respondents did not state a borrowing limit. Of those that did, the lowest belonged to India (INR 50 million or USD1.045 million). A number of countries-- including Spain, Russia, France, Korea, Singapore, Austria, and Sweden, among others—had unlimited borrowing authority. Mexico could borrow up to 6% of insured liabilities every three years. Turkey and Argentina could both levy advance premiums: two year's worth in Turkey's case; and one year's in Argentina's.

⁷ European Commission., *Proposal for a Directive .../.../ EU of the European Parliament and of the Council on Deposit Guarantee Schemes [recast]*, (Brussels: European Commission, 12 July 2010), 7-8.