

**CANADA DEPOSIT INSURANCE
CORPORATION**

DIFFERENTIAL PREMIUMS BY-LAW

CONSULTATION PAPER

OCTOBER 18, 2013

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FOREWORD

The Canada Deposit Insurance Corporation (CDIC) *Differential Premiums By-law* (By-law) establishes a system for classifying member institutions into different categories for annual premium rate purposes. The authority for the By-law is in Section 21(2) of the CDIC Act.¹

In addition to annual reviews², CDIC undertakes comprehensive reviews of its by-laws from time to time. These are intended to ensure that the by-laws remain up-to-date and relevant and support the achievement of CDIC's objects. The prior comprehensive review of this By-law was concluded in 2004.

Premiums paid by member institutions have been calculated using a differential premiums system since 1999 thus providing up to fifteen years of data for analysis. This document outlines the results of our review and describes the elements that we are considering for change.

Comments are requested from member institutions, their associations, regulators and other interested parties on the proposals set out in this paper.

Please direct your written comments by January 31, 2014 to:

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¹ 21. (2) *The Board may make by-laws respecting the determination of annual premiums for member institutions and, without restricting the generality of the foregoing, may make by-laws*

- (a) *for the establishment of a system of classifying member institutions into different categories;*
- (b) *respecting the criteria or factors to be taken into account or procedures to be followed by the Corporation in determining the category in which a member institution is classified; and*
- (c) *fixing the amount of, or providing for the manner of determining the amount of, the annual premium applicable to each category.*

² The annual reviews of the By-law have resulted in a number of technical amendments such as the introduction of premium incentives and penalties associated with the implementation of the *Data and System Requirements By-law*.

BACKGROUND

Commencing with the 1999 premium year, each member institution has paid annual premiums at a rate dependent upon its classification into one of four premium categories under the By-law. The historic premium rates charged by category since 1999 and the distribution of CDIC membership across the four categories are available in Appendix I.

The differential premiums classification system (DPS) is one part of the overall premium assessment process for CDIC. Under the CDIC Act³, CDIC shall maintain a deposit insurance fund to which annual premiums assessed and collected from each member institution are credited. The maximum annual premium chargeable to any institution is fixed by the Governor in Council each year at a percentage of insured deposits not to exceed 1/3 of 1% (33 basis points). The classification into a category under the DPS determines what percentage of the maximum an institution will pay in any given year.⁴ The DPS is set out in a regulation and, subject to approval by the Minister of Finance, can be amended by resolution of the CDIC Board of Directors.

A number of principles or goals underpin the DPS. The system should:

- define categories that reflect the risk posed to CDIC by a member institution;
- provide incentive for members to achieve the best classification;
- consider both quantitative and qualitative factors;
- eliminate to the extent possible discretion on the part of CDIC; and
- rely on readily available data as much as possible (i.e. available through audited financial statements or regulatory reporting).

Further, the system should provide for minimal, if any, deviations from generally accepted accounting / reporting standards and be transparent while maintaining confidentiality of member classification.

It is our view that each of the principles or goals for the DPS are relevant and appropriate and are aligned with the Core Principles for Effective Deposit Insurance Systems⁵ (Core Principles) introduced in June of 2009 by the International Association of Deposit Insurers (IADI) and the Basel Committee on Banking Supervision (BCBS). Furthermore, they are consistent with the updated IADI General Guidance for Developing Differential Premium Systems⁶.

³ Sections 20 to 23

⁴ Category 1 pays 12.5% of the maximum amount fixed for that year; Category 2 pays 25%; Category 3 pays 50%; and Category 4 pays 100% of the maximum.

⁵ Core Principle 11 states, *inter alia*: 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.

⁶ Both the Core Principles as well as the IADI General Guidance for Developing Differential Premium Systems are available on the IADI website at the following link: <http://www.iadi.org/Research.aspx?id=55>



ENVIRONMENTAL CONSIDERATIONS

CDIC considered a number of subjects that in the near and longer term may have an impact on financial statements such as Basel II and III, the transition to International Financial Reporting Standards (IFRS), and the designation of certain member institutions as domestic systemically important banks (DSIB). We also looked back on the outcomes from the recent international financial crisis, considered whether all institutions, irrespective of size or complexity, should be assessed against the same measures and whether possible amendments mitigate or increase pro-cyclical impacts in the system. Furthermore, key elements of the DPS may be impacted by changes in the regulatory environment such as those recently announced in the federal government's Economic Action Plan 2013, i.e. the introduction of a comprehensive risk management framework for Canada's DSIBs including a bail-in regime. Future changes to the DPS will be considered as the regulatory environment evolves.

Basel II and III

The Basel capital adequacy framework is intended to foster a strong emphasis on risk management and to encourage ongoing improvements in banks' risk assessment capabilities. Basel III is part of the continuous effort to enhance the banking regulatory framework building on the International Convergence of Capital Measurement and Capital Standards document (Basel II). The main thrust of Basel III is to redefine components of capital, address risk coverage, capital conservation and counter-cyclical buffers, and introduce a leverage ratio.

Some elements of Basel III continue to evolve, such as the regulatory framework for the Basel III Liquidity Coverage Ratio (LCR) and other aspects of the liquidity framework. In December of 2010, the BCBS released *Basel III: International framework for liquidity risk measurement, standards and monitoring* which outlined two minimum standards – the LCR and the NSFR. The LCR was revised in January of 2013⁷ and is to be introduced in January 1, 2015.

The DPS must also take into account that under Basel II regulatory capital requirements can be determined using various approaches (e.g. standardized vs IRB⁸ vs a partially implemented IRB). Further, the requirements may be different if the institution has been designated a DSIB. Developing measures that take into account the differences must therefore be considered.

Accounting Reporting Standards

The DPS was developed when accounting standards in Canada were Canadian GAAP (Generally Accepted Accounting Principles). IFRS were introduced to federally regulated financial institutions for fiscal years commencing in 2011, and the DPS has

⁷ *Basel III: the Liquidity Coverage Ratio and liquidity risk monitoring tools* available at <http://www.bis.org/publ/bcbs238.pdf>

⁸ Internal ratings-based (IRB) methodology to establish minimum regulatory capital.



been modified and continues to be modified to reflect the new accounting standards for measures calculated using data reported pre- and post-IFRS implementation.⁹ Once this review is concluded, institutions will have completed in excess of four years of reporting under IFRS. This fact eliminates most, if not all, bridging rules within the current DPS system.¹⁰

Different Criteria For Larger Institutions

CDIC has considered whether a different set of indicators should be used to classify larger members and in particular DSIBs. Indicators of risk are not necessarily the same for smaller or less complex institutions than for large complex institutions. The FDIC, for example, uses specific indicators for its larger or more complex institutions. Of the over 7,000 institutions insured by the FDIC, more than 150 meet its definition of large or complex institutions¹¹.

CDIC is differentiating among a total of 55 institution groups, very few of which would meet the FDIC definition. We do not support introducing a completely different set of indicators for the larger members, but propose to reflect that in some instances an indicator should be applied differently to ensure it is working appropriately irrespective of the size or complexity of institutions, or a different indicator of risk should be applied to DSIBs.

CDIC has sought to ensure that an appropriate balance of criteria is built into the system such that, overall, the system is fair to all members irrespective of size or complexity.

Pro-cyclicality of DPS

Following the financial crisis, in their Action Plan of October 2008, the G7 Finance Ministers and Central Bank Governors recommended that statutory and regulatory requirements be reviewed with a view to identifying those that may be contributing to pro-cyclical adverse effects and explore mitigation. For a deposit insurer, the prime mechanism it can use to avoid pro-cyclical impacts is to establish an ex-ante fund as opposed to relying on ex-post levies which are typically collected following failures and during times of increased stress. In 2004, CDIC adopted an ex-ante fund approach and is working toward achieving its minimum target fund.

⁹ An example of the accounting challenges is evident in measuring income volatility. The transition to IFRS changed the timing of recognizing assets and/or liabilities in the balance sheet and the timing of recognizing the related revenue and/or expense in the income statement. While the resulting impact on volatility has been relatively minor for most institutions, some institutions were negatively affected. Therefore, for purposes of calculating an institution's Assets to Capital Multiple, certain grandfathering provisions were put in place by the regulator to smooth the transitional impact and these were incorporated into the DPS.

¹⁰ E.g. Grandfathered assets for ACM purposes included for purposes of Asset Growth ratio.

¹¹ FDIC definition includes institutions with more than \$50 billion of assets or that are within a group of companies with consolidated assets of over \$500 billion, or is a processing or trust company with over \$10 billion in assets.

Since the DPS is part of the overall premium assessment framework, a review was completed to determine whether it contributes to pro-cyclicality and if so whether the benefits of mitigating pro-cyclicality would outweigh any drawbacks. It was determined that although the DPS introduces a degree of pro-cyclicality into the framework, it is relatively small. Attempts to mitigate it would diminish the ability of the DPS to differentiate on the basis of risk and therefore would be generally counterproductive.

OVERVIEW OF THE SYSTEM – Current and Proposed

Tables 1 and 2 summarize the DPS¹² in effect at the writing of this paper. Table 3 summarizes the proposed DPS – as applied to DSIBs and non-DSIBs.

Table 1: CDIC Differential Premiums System Summary Scorecard	
Criteria or Factors	Maximum Score
Quantitative:	
<ul style="list-style-type: none"> • Capital Adequacy <ul style="list-style-type: none"> - Assets to Capital Multiple - Tier 1 Risk-Based Capital Ratio - Total Risk-Based Capital Ratio 	20
<ul style="list-style-type: none"> • Profitability <ul style="list-style-type: none"> - Return on Risk-Weighted Assets - Mean Adjusted Net Income Volatility - Stress Tested Net Income 	5 5 5
<ul style="list-style-type: none"> • Efficiency <ul style="list-style-type: none"> - Efficiency Ratio 	5
<ul style="list-style-type: none"> • Asset Quality / Concentration <ul style="list-style-type: none"> - Net Impaired Assets To Total Capital Ratio - Three-Year Moving Average Asset Growth Ratio - Real Estate Asset Concentration - Aggregate Commercial Loan Concentration Ratio 	5 5 5 5
Sub-total: Quantitative Score	60
Qualitative:	
<ul style="list-style-type: none"> • Examiner's Rating • Other Information 	35 5
Sub-total: Qualitative Score	40
Total Score	100

Table 2: Premium Categories	
Score	Premium Category
≥ 80	1
≥ 65 but < 80	2
≥ 50 but < 65	3
< 50	4

¹² Detailed description of the system is available on the CDIC website in the Differential Premiums Manual available at: <http://www.cdic.ca/e/formemberinstitutions/differentialpremiums.html>



Table 3: Proposed Differential Premiums System Scorecard – for non-DSIBs and for DSIBs

Proposed criteria for non-DSIBs	Maximum Score	Proposed criteria for DSIBs	Maximum Score
Quantitative:			
Capital Adequacy Measure		Capital Adequacy Measure	
<ul style="list-style-type: none"> • Tier 1 Capital Ratio will be formula driven based on member specific requirements 	10	<ul style="list-style-type: none"> • Tier 1 Capital Ratio will be formula driven based on member specific requirements 	10
<ul style="list-style-type: none"> • Leverage Ratio: Based on ACM and will be formula driven based on member specific requirements. 	10	<ul style="list-style-type: none"> • Leverage Ratio: Based on ACM and will be formula driven based on member specific requirements. 	10
Profitability		Profitability	
<ul style="list-style-type: none"> • Return on Risk-Weighted Assets 	5	<ul style="list-style-type: none"> • Return on Risk-Weighted Assets 	5
<ul style="list-style-type: none"> • Mean Adjusted Net Income Volatility 	5	<ul style="list-style-type: none"> • Mean Adjusted Net Income Volatility 	5
<ul style="list-style-type: none"> • Stressed Tested Net Income 	5	<ul style="list-style-type: none"> • Stressed Tested Net Income 	5
Efficiency*	5	Efficiency*	5
Asset Quality / Concentration		Asset Quality / Concentration	
<ul style="list-style-type: none"> • Net Impaired Assets to Total Capital Ratio 	5	<ul style="list-style-type: none"> • Net Impaired Assets to Total Capital Ratio 	5
<ul style="list-style-type: none"> • Three-Year Moving Average Asset Growth Ratio 	5	<ul style="list-style-type: none"> • Three-Year Moving Average Asset Growth Ratio 	5
<ul style="list-style-type: none"> • Real Estate Asset Concentration Ratio 	5	<ul style="list-style-type: none"> • Asset Encumbrance (pledging) 	5
<ul style="list-style-type: none"> • Aggregate Commercial Loan Concentration Ratio 	5	<ul style="list-style-type: none"> • Aggregate Commercial Loan Concentration Ratio 	5
Sub-total: Quantitative Score	60	Sub-total: Quantitative Score	60
Qualitative:		Qualitative:	
<ul style="list-style-type: none"> • Examiner's Rating 	35	<ul style="list-style-type: none"> • Examiner's Rating 	35
<ul style="list-style-type: none"> • Other Information 	5	<ul style="list-style-type: none"> • Other Information 	5
Sub-total: Qualitative Score	40	Sub-total: Qualitative Score	40
Total Score	100	Total Score	100

* consideration will be given to replacing this measure in future years with one that considers the liquidity risk posed by an institution

Categories

The DPS classifies members into one of four categories. Using four categories is a balanced approach to a number of issues such as:

- more categories would dilute the impact of changing categories;
- use of an even number of categories ensures that no institution falls into an “average” category; and
- International best practice is to have from 3 to 5 categories.

As indicated in Table 2, an institution scoring less than 50 (out of 100) is rated in the worst premium category and one with a score of 80 or better is rated in the best category. The remaining two categories are proportional between the best and worst. Given that financial institutions are in the business of assuming risk, it is unrealistic to expect any member institution to achieve the maximum score. However, CDIC does expect that institutions manage their risk appropriately. Therefore, institutions that score 80 or better are rated in the best category. At the other end of the scale, however, CDIC is of the view that an institution that cannot achieve a score of better than 50 is exhibiting significant risk of failure and should be paying the highest premium rate. CDIC initially established the ranges such that at least 80% of members would score in the best two categories during economically stable periods. This goal has been met and surpassed by CDIC membership – with more than 90% of members achieving the best two categories in all but two years since the 1999 introduction of the DPS - largely a function of the positive economic cycle during that timeframe.

CDIC performed various analyses using different thresholds and has concluded the current thresholds should be maintained. Altering the thresholds by up to 10 marks did not significantly alter the categorization or incentive structure.

Quantitative / Qualitative Indicators:

CDIC’s system uses both quantitative (financial ratios) and qualitative (examiner rating and other information) factors weighted 60/40 in the total score.

Quantitative indicators are based on measurable characteristics of the member or derived from financial statements. Their advantage is that they reflect the financial condition of an institution and the information / data is available from public sources or supervisors. They tend, however, to measure past performance rather than likely future results and are not necessarily reflective of the quality of governance, risk management and controls.

Qualitative criteria, on the other hand, are based primarily on knowledge gained by regulators and can include more current and forward-looking factors such as the quality of governance, risk management and control programs. Qualitative criteria, however, are more subjective and may be more open to challenge. It may also be argued that subjective criteria could detract from the transparency of scoring within the system.



Of the 24 deposit insurers¹³ that report using a differential premium system, 16 use only quantitative criteria (since such systems are more easily administered, rely on information readily available to the deposit insurer, and are less open to challenge) while the others use a combination of qualitative and quantitative elements with supervisory or regulatory rating as the foundation for the qualitative component. In the case of CDIC, the examiner rating is readily available and can easily be incorporated into the system. While the examiner rating may already reflect the financial results, the quantitative criteria can emphasize those financial results that are of most importance to CDIC as deposit insurer. Moreover, the review of back testing indicated that dropping quantitative or qualitative elements from the overall classification tends to weaken the system by reducing the differentiation.

The current balance between the quantitative and qualitative components (60/40) aligns with international best practice which ranges from 30 to 50 percent assigned to qualitative components. CDIC proposes to maintain the current balance of qualitative and quantitative indicators.

¹³ IADI Updated General Guidance for Developing Differential Premiums Systems



QUANTITATIVE CRITERIA

In analyzing each of the quantitative criteria, CDIC reviewed the history of the criterion, what it was intended to measure, its performance as a differentiator on the basis of risk, and whether it should be applied equally to all members. CDIC also reviewed whether the scoring thresholds are set appropriately. A detailed explanation of the current formulae for each of the quantitative measures and its threshold scoring grid is set out in the Differential Premiums Manual available on the CDIC website¹⁴.

#1 - CAPITAL ADEQUACY

Recommendation:

CDIC is proposing to continue to use a combination of a leverage ratio with a capital ratio. The three tests currently used would be reduced to two: Leverage Ratio (percentage of authorized assets to capital multiple) and a Tier 1 Capital Ratio (including capital conservation buffer). Each ratio would be independently scored out of 10 marks. Institutions will score full marks if they exceed regulatory targets.

The current Capital Adequacy Criterion consists of a combination of three tests (assets to capital multiple (ACM); tier 1 risk-based capital ratio; and, total risk-based capital ratio). From 1999 to 2004, institutions exceeding regulatory requirements with respect to each of the three tests would score full marks (20 points). An institution meeting regulatory requirements would score 13 marks – more than half of the available marks thereby acknowledging the institution met minimum regulatory requirements and would be considered adequately capitalized by the supervisor. An institution falling outside of regulatory requirements with respect to any of the three tests would receive no marks.

In 2005 the ACM sub-test was amended. Since then, provided an institution is operating within its authorized ACM and meets the required Tier 1 and Total risk-based capital ratios, it obtains full marks. If an institution meets the minimum requirements (and not the recommended levels) for Tier 1 and Total risk-based capital ratios, it will score 13 out of 20 (assuming it operates within its authorized ACM). Not operating within its authorized ACM or not meeting minimum capital requirements results in no marks.

Quantitative Analysis

This criterion does little to differentiate among CDIC members. From 1999 to 2004, 90% of CDIC members scored full marks for Capital Adequacy. From 2005 onwards, no institution has scored less than full marks which is understandable since the criterion benefits any institution that meets recommended regulatory minimums.

The financial crisis of 2008/2009 clearly showed the importance of sound capital adequacy as well as liquidity. Many international banks with low capital levels and weak

¹⁴ www.cdic.ca



funding models failed. Banks with sound capital levels were more readily able to withstand the adverse shocks in the system and “ride the storm”. It is recognized that while no CDIC member institution failed during this period, the anticipated increased safety as a result of the adoption of Basel II did not materialize. However, the adoption of Basel III should improve the quantity and quality of capital in the system.

Beginning in January 2013 regulatory capital rules in Canada were changed to include specific requirements for Common Equity Tier 1 (CET1) capital as well as requirements to hold capital conservation buffers. Further, in March of 2013, the six largest Canadian banks were designated DSIBs which designation carries, among other things, a requirement to hold an additional 1% above the minimum CET1 capital. As a result, there is no longer a ‘one size fits all’ approach to required or target regulatory capital ratios.

Proposed Amendment

Institutions currently have no incentive to exceed targeted regulatory minimum capital levels. As a result, any change to this criterion should encourage members to hold additional and better quality capital. We assessed a number of options and that proposed assigns part of the score to a Leverage Ratio which reflects how the member manages its leverage through the ACM and the balance of the score is assigned to a Tier 1 Capital Ratio (inclusive of required capital conservation buffer) which emphasizes better quality capital.

A) ACM (Leverage) component:

Imposing an authorized ACM assists regulators in restricting excessive leverage and associated growth. Canadian federally regulated financial institutions have been required to operate under an authorized ACM (leverage ratio) for many years, well before the introduction of the DPS in 1999. After the introduction of Basel II, Canadian supervisors did not relieve institutions from this requirement. Under Basel III financial institutions worldwide will be required to abide by a leverage ratio. The timing and application of the Basel III leverage ratio in Canada continues to evolve. However, its future introduction supports the continued use of a leverage ratio within the DPS.

In CDIC’s view an institution that manages its leverage prudently should be recognized and rewarded with a better score than an institution that utilizes fully its authorized ACM. The larger the capital cushion in relation to an institution’s assets the better protected CDIC will be in the event that an institution runs into difficulty. CDIC proposes nonetheless to recognize with a better than average score institutions that operate within their authorized ACM.

B) Tier 1 Capital Ratio:

The primary limitation of using only the leverage ratio as a determinant of a capital adequacy score is that it does not recognize better quality capital and lower risk assets.



CDIC’s proposed option includes a Tier 1 capital ratio (which includes the capital conservation buffer). The selection of Tier 1 capital rather than total capital acknowledges the global movement toward the recognition of better quality capital and its ability to enhance the institution’s ability to absorb loss. Further, the characteristics of Tier 1 capital are more equally applicable to institutions irrespective of the calculation approach used by the institution (standardized vs IRB vs a partially implemented IRB).

Proposed Criterion:

Table 4 describes the proposed criterion and the thresholds for each ratio together with the proposed mark allocation. There is a discrete score out of ten for each component of the proposed capital adequacy criterion.

For a member institution to score full marks it would need a leverage ratio equal to or less than 90% of its authorized ACM and its Tier 1 Capital ratio would need to exceed regulatory targets¹⁵ imposed on the member institution.

Table 4: Scoring Grid: Proposed Capital Adequacy Criterion			
Leverage Ratio	Score	Tier 1 Capital Ratio	Score
Assets to capital multiple is ≤ 23 and $\leq 90\%$ of multiple authorized by the regulator	10	Tier 1 capital ratio is $>$ target Tier 1 capital ratio set by the regulator for the member institution	10
Assets to capital multiple is ≤ 23 and $\leq 100\%$ of multiple authorized by the regulator	7	Tier 1 capital ratio is \leq target Tier 1 capital ratio set by the regulator for the member institution but $>$ Tier 1 capital ratio required by regulator	6
Assets to capital multiple is > 23 or $> 100\%$ of the multiple authorized by the regulator	0	Tier 1 capital ratio is $<$ Tier 1 capital ratio set by regulator	0
Leverage Ratio Score plus Tier 1 Capital Ratio Score =			

Through the Tier 1 capital component thresholds, CDIC recognizes that differing requirements and/or targets apply to individual member institutions. We reference in particular the additional CET1 capital requirement being imposed on DSIBs as well as, in relation to capital conservation buffers, the possibility that differing requirements vs target may be set, for example, if the institution is implementing a capital conservation buffer restoration plan. The formulaic approach taken also recognizes that certain requirements are being phased in over time. It ensures alignment with regulatory recommendations yet emphasizes the importance to CDIC that a member not be overly leveraged and maintains high quality capital.

¹⁵ The Tier 1 Capital Ratio (which includes Common Equity Tier 1 and the capital conservation buffer) component references both the required Tier 1 capital ratio as well as a target Tier 1 capital ratio. According to the OSFI Capital Adequacy Requirements (CAR) Guideline that came into effect on January 1, 2013, an institution is subject to specified Tier 1 (including Common Equity Tier 1-CET1) capital requirements and stipulates targets for institutions to achieve – in many cases by specified dates. Under the current Guideline, by 2019 required Tier 1 capital may be equal to target Tier 1 capital. Should this occur, this measure would be adjusted.



The proposed amendment will re-introduce an element of differentiation among members for this measure.

An alternative criterion considered by CDIC recognized (with bonus marks) those institutions that significantly exceeded regulatory Tier 1 capital target levels as such institutions would have greater capacity to absorb losses that would otherwise fall to CDIC in a failure. However, this approach is not being proposed at this time as member institutions are currently working toward meeting the new regulatory targets.

Score:

The weight attributed to the Capital Adequacy criterion (20 marks out of 100) is a measure of the importance that CDIC attaches to the level of capital any institution maintains and should act as an incentive for members to be well capitalized. An institution that is not well capitalized should not generally be able to achieve the best category. CDIC proposes to continue to assign 20 marks to this criterion.

Currently only three discrete marks are available (20, 13 or 0) which arguably enhances the incentive to reach a higher score. However, CDIC is including in this proposed criterion numerous score possibilities. This approach moderates somewhat the implications for those institutions that only meet regulatory minimums. However, it rewards institutions that exceed regulatory targets. For example, an institution that only meets regulatory minimums for both ratios cannot score more than a total of 13 marks (7 plus 6) which is nonetheless above 50% of the available marks.

Back-Testing:

Based on the data available for the first quarter of 2013, no member institution would score less than 16 marks with the vast majority of members scoring full marks. The reason for loss of marks was equally distributed between the two ratios.

2 - RETURN ON RISK-WEIGHTED ASSETS

Recommendation:

CDIC is not proposing any changes to this criterion.

CDIC is concerned with measuring the adequacy of earnings relative to the risk of a member. The criterion is calculated by dividing the current year's net income by the average of the last two years' adjusted risk-weighted assets expressed as a percentage. The criterion provides an indication of the relative returns among member institutions adjusted for their risk profiles. CDIC's analysis shows that this is one of the most effective ratios in differentiating among members on a purely statistical basis and also on the basis of risk.



Currently, an institution scores the maximum marks (5) if its ratio is $\geq 1.15\%$ and no marks if it is $< 0.75\%$ with 3 marks assigned to ratios from 0.75% to 1.15%.

Quantitative Analysis:

With one exception (2000), in each of the 15 years this measure has been used, more than 50% of members scored full marks with the balance of members fairly equally distributed between three marks and zero marks.

It is noteworthy that notwithstanding changes to the weighting of certain asset classes under Basel II reporting (beginning in 2008), the distribution of marks under this criterion across the membership did not change. During the period of the downturn (2008-2010) the ratio results shifted downward which reflected the reduction in earnings by CDIC members during this period. While the earnings reduction had no a significant impact on the overall criterion results, the institutions that did lose marks were those whose earnings were stressed during this period. We are of the view that the measure is working appropriately to differentiate on the basis risk.

#3 - MEAN ADJUSTED NET INCOME VOLATILITY

Recommendation:

CDIC proposes to amend the Mean Adjusted Net Income Volatility criterion by calculating the volatility over a ten year period (with new members beginning calculation after five years of available data) and use standard deviation rather than semi-deviation in the calculation. Thresholds for mark allocation would change to accommodate standard deviation.

The Mean Adjusted Net Income Volatility ratio (Volatility criterion) compares the relative volatility of earnings of each institution. It is currently calculated as the semi-deviation of an institution's net income divided by its mean net income over a five-year period.

Volatility causes some concern as institutions with more volatile earnings pose a relatively higher risk that their earnings will not be sufficient to cover losses that may occur. Assuming that net income reflects the earnings contribution from all areas of a member's business, the volatility of that income captures all sources of risk to which the institution is exposed. Higher volatility correlates to a lower score. Dividing by the mean "standardizes" the ratio, i.e. recognizes the fact that institutions will have different mean incomes over time.



Quantitative Analysis

CDIC's analysis indicates that the Volatility criterion is one of the most effective for differentiating member institutions. However, from a statistical perspective, our analysis has indicated that certain technical changes should be proposed: (i) use ten years of data, rather than the current five; and (ii) move to standard deviation from semi-deviation on the basis that risk management implications are associated with any volatility, positive or negative.

(i) **Ten years of data** had not been previously available for purposes of calculating this measure. While using ten years of data in the calculation would not necessarily yield different results, it would more accurately reflect a business cycle¹⁶ and volatility should therefore be moderated. Those institutions with constant or fluctuating growth should benefit as there would be less dramatic deviations from the mean over the longer period. While the analysis covered only the four most recent ten-year periods (within the last 14 years), it seems logical to assume that the results would be repeated for other periods. Ten years of data should provide adequate statistical significance. Institutions experiencing rapid growth or contraction over the entire period would be penalized, owing to the upward pressure that change would have on the standard deviation of net income. For newer members, once a member institution has at least five years of data, it will calculate this measure.

(ii) **Standard Deviation versus Semi-Deviation:** CDIC is proposing to use standard deviation rather than semi-deviation in the calculation as was the case from 1999 to 2004. Statistically, the use of standard deviation is the more commonly accepted method of volatility measurement. CDIC recognizes the argument that it should be less concerned from a risk perspective with volatility caused by increases in earnings (eliminated by using semi-deviation). However, elimination of the impact of positive growth has a smoothing effect that may not permit a true picture of volatility to emerge as there are risk management implications of both positive and negative growth. The smoothing effect introduced with semi-deviation would be replaced for those members with constant or fluctuating growth when the proposed use of 10 years of data in the calculation is introduced. In 2004, when CDIC conducted its back testing of the measures using semi-deviation rather than standard deviation, and using revised scoring thresholds, the number of institutions changing scores as a result of the change was minimal with little disruption to the distribution of differential premiums scores for the membership as a whole. These were the anticipated results post introduction of the change. Since introduction of semi-deviation the intended results did not materialize.

Validation and Back-testing:

The results using a recommended ten-year calculation period for the last four reporting years as well as standard deviation, rather than semi-deviation, produced results reflecting

¹⁶ Defining a business cycle may be problematic as it can be defined by many measures. For purposes of our cyclical determination, for example, performance of four different measures was used to define business cycle: overnight target rate; unemployment; economic growth; and, output gap.



lower scores for those institutions known to CDIC as having more volatility in their risk profiles. Further, the results produced a more even distribution across each of the scoring ranges – more in line with expectations when the 2004 changes were introduced.

4 – STRESS TESTED NET INCOME

Recommendation:

CDIC is proposing that the Stress Tested Net Income criterion remain unchanged except insofar as the proposed changes to the Mean Adjusted Net Income Volatility criterion may impact this measure. New member institutions will begin calculating the measure when they have five years of data.

The Stress Tested Net Income criterion stress tests an institution's earnings by comparing the current year's income to the mean adjusted net income volatility of that institution. An institution will score higher the greater its current year's income relative to volatility.

Both this criterion and the Mean Adjusted Net Income Volatility look at the volatility of an institution's net income. However, each has a different focus. The correlation between the two criteria is negative suggesting that they measure different things.

Quantitative Analysis:

Our analysis has shown that the measure, as a differentiator, is working well. While the period of the downturn did not have much impact on the institutions achieving full marks for the Stress Test measure, there was downward movement by institutions that had previously scored less than full marks, i.e. those already exhibiting earnings stress. Back-testing results incorporating proposed changes to the Volatility measure indicate no significant difference from the current distribution for this criterion.

#5 - EFFICIENCY RATIO

Recommendation:

CDIC is proposing that the Efficiency Ratio be retained at this time. Going forward, it may be replaced with another measure as CDIC looks to consider liquidity within the system.

CDIC has considered the elimination of the Efficiency Ratio (non-interest expenses expressed as a percentage of gross revenue) which ratio is intended to show the cost to produce a certain level of gross revenue. Most, if not all, expenditures that CDIC considers through the Efficiency Ratio are factored into net income measures currently employed elsewhere in the quantitative measures. Further, there is some concern that the ratio may be providing a false positive insofar as risk is concerned. Member institutions



might be motivated to not expend funds on important operational functions in order to benefit from a better Efficiency Ratio and higher profitability.

Quantitative Analysis

Nonetheless, the measure is an industry accepted standard, is calculated using readily available data, and appropriately differentiates among member institutions including appropriate differentiation among DSIBs. However, the regression analysis conducted of the efficiency ratio against the total quantitative score concluded that this criterion could be discarded with little or no degradation of the DPS thus its consideration for elimination at some future date.

#6 - NET IMPAIRED ASSETS TO TOTAL CAPITAL

Recommendation:

CDIC is proposing that this criterion continue to be included but net unrealized losses on securities be eliminated from the calculation of total net impaired assets within the formula.

This criterion is calculated by adding net impaired on-balance sheet assets, net impaired off-balance sheet assets and net unrealized losses on securities and comparing the result to total capital. It has proven, based on historical data, to be very effective at differentiating the risk profile of member institutions. It performs appropriately during both periods of favourable and unfavourable economic conditions. Strong performance over the past 14 years reflects overall favourable economic conditions. Performance under this measure did decline during the downturn, but not noticeably due to the strength of the capital position of our member institutions.

CDIC considered moving to a coverage ratio but determined that, since the current measure is working effectively, the change would not improve the DPS.

With respect to the inclusion of net unrealized losses on securities as a component of impaired assets, CDIC's analysis has disclosed:

- The vast majority of institutions have never reported net unrealized losses on securities as, in the usual course, once recognized, the losses are provided for and are reflected not as impaired assets but rather as provisions for loss.
- Including net unrealized losses on securities without considering the credit quality of the issuer may be flawed. For example, shifts in market value of government securities relate to fluctuations in interest rates and/or the shape of the yield curve and in no way are indicative of impairment. But to correct this flaw (by risk-weighting the securities) would require specific data to be produced for CDIC to compute the



measure which would be contrary to CDIC's commitment to use readily available data either from audited financial statements or regulatory filings.

Back-testing shows that, over the last 14 years, elimination of net unrealized losses on securities would have resulted in a member institution's criterion results changing on only one occasion. Further, our testing indicates that there is no need to modify the thresholds within this measure due to the elimination of net unrealized losses on securities.

#7 – THREE YEAR MOVING AVERAGE ASSET GROWTH RATIO

Recommendation:

CDIC is proposing two changes to this criterion: (i) alter its upper scoring threshold (from $\leq 20\%$ to $\leq 15\%$); and (ii) alter the threshold for relief from the impact of large asset acquisitions.

Institutions experiencing unusually high rates of asset growth pose greater risk to CDIC and therefore asset growth should continue to be one of the differentiating factors included in the DPS. The criterion uses a three-year moving average asset growth ratio which has the effect of smoothing out yearly fluctuations and provides a means of comparison that is centered on the institution's own historical performance.

CDIC includes both net on- and off-balance sheet assets plus own securitized assets that are not already included in balance sheet assets. To ignore off-balance sheet activity would paint an incomplete picture of some institutions' asset growth and may overlook operational risk associated with these assets.

An institution scores full marks if its ratio is less than or equal to 20% and no marks if it is greater than 40%.

Quantitative Analysis:

CDIC's analysis disclosed that some institutions known to CDIC as exhibiting risk due to fast growth are not being appropriately scored. A large majority of institutions (78%) have on average scored the maximum marks with only 6% scoring no marks.

Back-testing has confirmed that if the upper scoring threshold for scoring full marks is reduced from 20% to 15%, the institutions with growth rates of concern to CDIC would be appropriately scored. Further, the scoring distribution would have been more in line with other criteria. The change would not impact financial institutions in times of downturn since asset growth slows under difficult economic conditions.



With respect to the threshold to smooth out the effect of asset growth due to merger or acquisition, it is proposed that it be increased to 15% from 10% of consolidated assets. Currently, if the value of the acquired assets is more than 10% of the consolidated assets, the acquired assets are artificially included in all years used in the calculation. The primary reason for permitting this adjustment is to focus the criterion on organic growth and not penalize institutions for one-time large acquisitions. When competition for retail deposits is stressed, growth opportunities for institutions may more readily present themselves through mergers and acquisitions. And for some institutions this may be the norm rather than the ‘one-off’ which the adjustment in the criterion is intended to address. As a result, by increasing the threshold to 15%, the acquisitions or mergers in the normal course will be appropriately captured and reflected in growth.

#8 - REAL ESTATE ASSET CONCENTRATION RATIO

Recommendation:

CDIC is recommending that this criterion not be applied to DSIBs. For non-DSIBs, the measure would continue to apply with a slight change to the sub-criteria used in relation to land development lending as well as the inclusion of Home Equity Lines of Credit (HELOCs) in Total Mortgage Loans.

DSIB application

CDIC is considering applying an alternative criterion to DSIBs. Due to their size, complexity and diversity of business lines, on only 3 occasions since 1999 has a DSIB not scored full marks for this criterion and on those 3 occasions the institution scored 3 marks. Real Estate Asset Concentration is not a useful indicator of risk for these institutions and an alternative criterion is being considered which is discussed later in this paper.

Background

Notwithstanding the issue related to DSIBs, CDIC places significant importance on the impact of real estate asset concentration on the risk profile of some of its member institutions. This criterion exerts an element of discipline on members and will continue to be included in the DPS.

The scoring under this criterion is a two-step process. First, if an institution holds less than 10% of its loan portfolio in mortgage loans, it is assigned full marks as it is not concentrated in real estate. If the threshold test is not passed, the institution must then report its concentration levels in eight sub-criteria. The institution is assigned its lowest score for any of the sub-criteria.



Quantitative Analysis:

CDIC's analysis has determined that the measure is appropriately differentiating, and given its structure, it is understandable that a greater proportion of institutions score no marks given the impact of high concentration in any of the eight sub-criteria. CDIC does not propose to alter this impact as any high concentration denotes significant risk.

CDIC has considered what is included in each of the concentration sub-criteria and has confirmed that concentration in that type of mortgage lending poses heightened risk to CDIC. It has also reviewed whether other types of mortgage lending should be included as additional sub-criteria and whether any of the sub-criteria should be combined due to strong correlation. The conclusion reached is that the measure is working appropriately and, with the exception of including HELOCs in total mortgage loans and combining two strongly correlated sub-criteria, no other changes are being considered to this measure.

It is proposed that the Land Banking and Development Mortgage Loans sub-criterion be combined with the Residential Interim Construction Mortgage Loans sub-criterion to better reflect concentration in land development. Back-testing using a number of different concentration thresholds has indicated that there would have been virtually no change in overall results using this revised sub-criterion. The thresholds for the proposed sub-criterion would be: concentration levels of $\leq 5\%$ scores five marks whereas concentration levels of $\geq 10\%$ scores no marks.

The ratio has always specifically excluded collateral loans secured by residential mortgages. However, HELOCs do constitute a real estate exposure given that the line of credit is secured by residential real estate notwithstanding that they present a different type of real estate risk to that posed by a conventional mortgage. In the circumstances, it is proposed to include HELOCs in the calculation of Total Mortgage Loans and within the sub-criteria titled Residential Properties Mortgage Loans. The data surrounding HELOCs has only been reported in the last few years and for this reason CDIC had not taken this approach in the past.

We also considered converting the entire measure to a ratio based on equity. However, while risk thresholds for certain sub-criteria are generally accepted, for most of the sub-criteria they have yet to become generally accepted. Further, member institutions are familiar with the current methodology and such a change would not enhance the differentiation capacity of this measure.

#9 - AGGREGATE COMMERCIAL LOAN CONCENTRATION RATIO

Recommendation:

CDIC is considering altering the scoring thresholds to improve the contribution to differentiation of this criterion.



The Aggregate Commercial Loan Concentration Ratio measures a member institution's non-mortgage loan concentration across 12 industry categories as a percentage of total capital. As with the previous criterion, there is a threshold formula. If an institution's ratio of total mortgage loans to total loans is greater than 90%, it scores full marks as it is concentrated in mortgage loans. If this is not the case, it must determine its concentration in each of the 12 identified industry sectors. Aggregate Commercial Loan Concentration is calculated by summing loans per sector (less allowance for impairment) that exceed 10% of Total Capital and expressing this as a percentage of Total Capital. If the institution's ratio is less than 150%, it scores full marks whereas if the ratio is 350% or greater, it scores no marks.

CDIC reviewed the industry sectors and has concluded that it need not make any adjustment to the sectors included. However, if additional sectors of concentration are included in regulatory filings for 'loans to individuals and others for business purposes' CDIC will modify the sectors to reflect regulatory filings.

Quantitative Analysis:

Our analysis has disclosed that the contribution to differentiation of this measure is limited as well over 80%¹⁷ of members have on average scored full marks with very few scoring no marks. When the measure was changed in 2005 to make use of readily available data, CDIC had set the thresholds with a view to maintaining a similar score distribution. This did not occur. Further, our analysis has shown that this measure is now a questionable contributor to the overall differential premiums score. Given the importance that CDIC places on commercial loan concentration to the risk profile of an institution, CDIC considers it important to continue to include this criterion and therefore needs to improve its differentiation capacity.

Assuming that the threshold formula remains unchanged, CDIC has back tested the results if the scoring grid is altered. With scoring thresholds altered to 100% / 300%, the measure better captures those institutions known to CDIC as exhibiting higher concentration risk. Notwithstanding that very few institutions would score no marks, there would be a somewhat better distribution overall.

DSIBs and this criterion:

Consideration was given to altering or eliminating the application of this measure to DSIBs. However, none of the DSIBs obtain full marks by passing the initial threshold formula. Further, none of the DSIBs has always scored full marks under this measure. Every one of the DSIBs has from time to time exhibited excess concentration in one or more industry sectors and in some cases over numerous years. As a result, CDIC intends to maintain this criterion's application to DSIBs.

¹⁷ Of this 80%, 14% did so by passing the threshold formula.

POTENTIAL ASSET ENCUMBRANCE MEASURE FOR APPLICATION TO DSIBs

CDIC is considering a number of measures for potential inclusion that would apply only to DSIBs. This is in keeping with suggestions by the Basel Committee on Banking Supervision and the Financial Stability Board. They could be used on a stand-alone basis or in combination.

Two of the measures being considered for inclusion are a domestic unencumbered asset concentration measure and a pledged asset measure. Used in combination, the measure would replace the Real Estate Asset Concentration Measure for DSIBs.

Domestic Unencumbered Asset Concentration Measure: This criterion would measure Total liabilities (ranking total deposits *pari passu* with other liabilities) as a percentage of total domestic assets less pledged and impaired assets. If this ratio is above 1, the bank does not have sufficient realizable assets to prevent CDIC from taking a loss in the event of the bank's failure. This measure encourages banks to grow non-pledged assets to match unsecured liabilities.

Pledged Assets Measure: Pledged assets increase an institution's liquidity risk. As an institution pledges more assets to creditors, it has less flexibility to deal with a liquidity shock. Further, this also reduces available assets to unsecured creditors (including CDIC) in a failure. In the circumstances, given the additional risk posed to CDIC by pledging, it is proposed to measure Total domestic pledged assets to Total domestic assets. An institution that has pledged more than 25% of its domestic assets would score no marks and an institution pledging less than 15% would score full marks. Data on total domestic pledged assets is currently unavailable in regulatory filings or in audited financial statements. Institutions would be required to report this information directly to CDIC until this information is made readily available.

CDIC Proposal:

CDIC is proposing a criterion that would combine both the Domestic Unencumbered Asset Concentration Measure with the Pledged Asset Measure.

Step 1: calculate the Domestic Unencumbered Asset Concentration Measure. If the institution's ratio is less than 1, the member would score full marks. If the ratio is equal to or greater than 1, the institution would go to the next step.

$\frac{\text{Total liabilities (ranking total deposits } \textit{pari passu} \textit{ with other liabilities)}}{\text{Total domestic assets less pledged and impaired assets}} \times 100$
--

Step 2: calculate the Pledged Asset Ratio. If the institution's ratio is less than 25%, it would score 3 marks and if it is equal to or more than 25%, it would score no marks.



$$\frac{\text{Total Domestic Pledged Assets}}{\text{Total Domestic Assets}} \times 100$$

Additional detail about this proposed criterion is set out in Appendix 2.

Other measures considered:

Resolvability Measure: Consideration was given to introducing a resolution complexity criterion. Its purpose would be to encourage institutions to be less complex to resolve. While it may be premature to consider such a measure for inclusion at this time, once a resolvability scale is defined, and descriptions of what a better-ranked institution would look like from a resolvability perspective, CDIC may revisit including this measure.

Core Deposits Measure: This measure would assess the level of deposits that are considered core and likely to be more stable than wholesale deposits and less likely to run in times of stress. This is used by the FDIC.

Franchise Value or Market Power: We considered a measure that would assess and compare the relative values (book vs market) of an institution. This could emphasize the importance of strong franchise value in reducing CDIC's exposure to loss. However, availability of data poses significant issues for including this measure.

LIQUIDITY RISK MEASURE UNDER CONSIDERATION

Recommendation:

CDIC is not proposing a liquidity measure at this time. Rather, as the regulatory framework for the Basel III Liquidity Coverage Ratio (LCR) is adopted and other aspects of the regulatory liquidity framework evolve (such as the Net Stable Funding Ratio (NSFR) and other liquidity risk monitoring tools), CDIC will be considering a measure for inclusion in the DPS that considers the liquidity risk of a member institution.

Liquidity is a key factor influencing the risk exposure of member institutions as sound liquidity mitigates the impact of an unexpected reduction in deposits. Currently, the DPS does not take into consideration members' liquidity profiles. As was experienced during the recent financial crisis, some foreign institutions failed despite having sufficient capital because of weak liquidity and consequent inability to mitigate the impact of deposit runs.

For CDIC, the two dimensions to consider in any discussion of bank liquidity risk are its liquidity profile and its funding profile. Measures that address the liquidity profile, such as the LCR, gauge the amount of contingent liquidity an institution can use to generate cash to meet obligations (particularly during stress). Meanwhile, measures that address the funding profile consider the structure of the liability mix, including sources,



counterparties and tenors. Such measure could include, for instance, the NSFR, a retail funding ratio, a long-term funding ratio or a core funding ratio. Relevant metrics could also capture a less stable funding profile through the level of reliance on brokered deposits given the lack of depositor loyalty or stickiness¹⁸ to the institution associated with brokered deposits. Metrics could also measure the availability of liquidity through the level of pledged assets since an increase in pledging to creditors means less flexibility to deal with a liquidity shock and less assets available to unsecured creditors such as CDIC in the event of a bank failure.

The evolving regulatory framework must also be considered. As mentioned earlier in this paper, in December of 2010 the BCBS released *Basel III: International framework for liquidity risk measurement, standards and monitoring* which outlined two minimum standards – the LCR and the NSFR. The LCR rules were subsequently revised in the January 2013 BCBS document titled *Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools*. On introduction in January 1, 2015, the LCR minimum requirement will be 60% and it will rise in equal annual steps to reach 100% by January 1, 2019. The LCR aims to ensure that a bank maintains an adequate level of unencumbered high quality assets that can be converted into cash to meet its liquidity needs for a 30-day time horizon under an acute liquidity stress scenario specified by supervisors.

The NSFR addresses longer term structural liquidity mismatches by measuring the amount of longer-term stable sources of funding used relative to the liquidity profiles of the assets funded, and the potential for contingent calls on funding liquidity arising from off-balance sheet commitments and obligations. The NSFR requires a minimum amount of funding that is expected to be stable over a one year time horizon based on factors assigned to assets and off-balance sheet liquidity exposures. The introduction of the NSFR is still under review by both global standard-setters and domestic authorities, but it is anticipated that it will become a minimum standard in Canada by January 2018.

CDIC has considered relying on the LCR or the NSFR. The LCR has its challenges as a criterion in the DPS as it is calibrated to a bank's ability to survive a specified stress scenario over a short time horizon and, thus, only measures the risk of a bank's liquidity profile. While using the LCR as a liquidity measure ensures consistency between regulatory requirements and the DPS, little differentiation among institutions will result as institutions will likely meet regulatory requirements at all times. However, when other elements, such as the level of brokered deposits and/or the level of pledged assets are introduced, differentiation does occur. Furthermore, CDIC must take into account that data availability for the LCR and NSFR is currently very limited given that the Canadian regulatory guidance and requirements are not yet in effect and necessary data is yet to be reported by the majority of member institutions.

¹⁸ The FDIC has taken a similar view of the low "stickiness" of brokered deposits and has incorporated it into their premium assessment model using a premium rate increase to penalize institutions with high levels of brokered deposits. This is in addition to the historic regulatory restriction on the percentage of deposits that can be sourced through brokers.



CDIC is also considering other options to highlight the stability of funding profiles for institutions. Alternative metrics such as a Core Funding Ratio or in combination, a Retail Funding Ratio and a Long-Term Funding Ratio are being considered.

The *Core Funding Ratio* would require institutions to maintain a minimum amount of core funding in the form of retail deposits and wholesale funding of a specified minimum maturity as a percentage of total funding and potential commitment calls. The proposed standard aims to ensure that a fixed percentage of the total funding of an institution is comprised of stable funding sources in the form of retail deposits and wholesale funding of a specified minimum maturity. Minimum fixed percentages of such funding compositions are specified for incremental time horizons to support longer-term funding. Compliance with this metric would ensure that banks fund a high proportion of their activities from more stable, long-term sources.

The proposed combination of a *Retail Funding Ratio* and a *Long-term Funding Ratio* would capture a bank's funding profile focusing on stable funding that captures the stability of funding counterparties and the funding tenor. The Retail Funding Ratio is defined as retail, small business and other stable deposits as a percentage of total assets. The Long-term Funding Ratio is defined as total long-term funding obligations as a percentage of total funding obligations.

Going Forward:

CDIC is requesting comments and suggestions from industry with respect to the development of a liquidity measure. CDIC will issue a further paper that sets out the conclusions in respect of the liquidity risk measure (or a combination of complementary measures).



QUALITATIVE CRITERIA

In addition to the 60 marks assigned to the quantitative measures, 40 marks are assigned to qualitative factors (35 marks to the examiner rating and 5 marks to Other Information).

Recommendation:

CDIC is proposing no change to the examiner rating criterion or the Other Information criterion.

Examiner Rating

Examiner Rating refers to a rating on a scale of one to five that is assigned to an institution by its examiner in the course of carrying out the examiner's duties. It accounts for 35 marks within the DPS and each of the five ratings is currently assigned the following marks: 1 – 35 marks; 2 – 31 marks; 3 – 21 marks; 4 – 11 marks; and 5 – zero marks. CDIC is not proposing any changes to the number of examiner ratings available nor to the marking scheme for this criterion.

Numerous issues have been raised in connection with the examiner-rating component over the years. For example, it has been suggested that CDIC should define in the By-law the criteria upon which each of the ratings would be assigned. In response, CDIC would point out that the Examiner Rating is the rating assigned by the examiner and it would be inappropriate for CDIC to define the components of the rating.

Another suggestion was that a member should be able to score anywhere on the scale of one to thirty-five. In response, CDIC would point out that the differential premiums system is not concerned with capturing subtle differences but rather with providing an incentive to low-scoring members to make improvements where necessary and having larger incremental changes in score achieves this goal. Nonetheless, CDIC has recognized that very few institutions would pose little or no risk and obtain an examiner rating of 1 since the business of a financial institution is founded on the assumption of risk. Thus, the scoring gap from an examiner rating of 1 to an examiner rating of 2 is only 4 marks. Whereas the scoring gaps for the other ratings are in ten-mark increments.

As discussed earlier in this paper, the balance between the score assigned to the quantitative vs qualitative elements in the DPS is being maintained. In line with that discussion, and with international best practice, the Examiner Rating should account for most of the qualitative marks and between 1/3 and 1/2 of the total score in the DPS. As a result, CDIC is not proposing any change to the score assignment.

Other Information

The Other Information criterion, which accounts for 5 marks, permits CDIC to factor into an institution's total score information or data that comes to its attention and in its view

may have an impact on the risk posed by the institution. For example, if CDIC's internal risk assessment methodology has identified an institution as high risk to CDIC, it may be penalized. Or if an institution's foreign parent is significantly downgraded by rating agencies such that it causes a threat to the viability of the member institution, under this criterion the member may lose marks.

This criterion provides CDIC with the means to incorporate environmental or other important information that otherwise would not be included in the DPS.

In considering whether this criterion is properly weighted within the qualitative criteria, CDIC is of the view that any increase to the marks allotted would introduce added discretion in the overall score which CDIC has sought to minimize.

CONCLUSION

In conclusion, our review has shown that the enhancements proposed will make the DPS even more effective and at the same time will not impose additional burden for member institutions. Further, the review has identified that regulatory regimes no longer treat all institutions in the same way and this should be taken into account in classifying members for premium assessment purposes.

We look forward to your comments on the proposals outlined in this paper and in particular to any suggestions for alternative criteria that could be included. We also welcome comments on any other aspect of the DPS.



Appendix 1

History of Premium Rates

Premium Rates prior to introduction of Differential Premiums System								
Premium Year	% of insured deposits				Basis Points % of insured deposits			
1967 to 1985	1/30th of 1%				3.33			
1986 to 1992	1/10th of 1%				10.00			
1993	1/8th of 1%				12.50			
1994 to 1998	1/6th of 1%				16.67			
Premium Rates per category after introduction of Differential Premiums System								
Premium Year	Category 1		Category 2		Category 3		Category 4	
	As a percent of 1% of insured deposits	Basis Points % of insured deposits	As a percent of 1% of insured deposits	Basis Points % of insured deposits	As a percent of 1% of insured deposits	Basis Points % of insured deposits	As a percent of 1% of insured deposits	Basis Points % of insured deposits
1999 to 2000	1/24	4.17	1/12	8.33	1/6	16.67	1/6	16.67
2001	1/24	4.17	1/12	8.33	1/6	16.67	1/3	33.33
2002 to 2004	1/48	2.08	1/24	4.17	1/12	8.33	1/6	16.67
2005 to 2008	1/72	1.389	1/36	2.778	1/18	5.556	1/9	11.111
2009	1/54	1.852	1/27	3.704	2/27	7.408	4/27	14.815
2010	5/216	2.315	5/108	4.630	5/54	9.259	5/27	18.519
2011 to 2013	1/36	2.778	1/18	5.556	1/9	11.111	2/9	22.222

Distribution of Members by Category

	Category 1	Category 2	Category 3	Category 4
1999	69%	22%	7%	2%
2000	74%	20%	5%	1%
2001	67%	23%	9%	1%
2002	78%	14%	7%	1%
2003	63%	33%	3%	1%
2004	77%	18%	4%	1%
2005	81%	18%	0%	1%
2006	84%	13%	3%	0%
2007	93%	6%	1%	0%
2008	75%	20%	5%	0%
2009	68%	21%	10%	1%
2010	62%	26%	10%	2%
2011	72%	20%	6%	2%
2012	76%	17%	5%	2%

Appendix 2

ASSET ENCUMBRANCE MEASURE

Criterion combining

Domestic Unencumbered Asset Concentration Measure with Pledged Assets Measure

The use of collateral in financial transactions has risen in many jurisdictions following the financial crisis, and is likely to continue increasing. This is driven by both market forces and regulatory changes, and raises concerns about excessive asset encumbrance. Demand for high-quality assets that can be used as collateral will increase due to a number of key regulatory reforms such as the introduction of the liquidity coverage ratio under Basel III and revising the Counterparty Credit Risk (CCP) framework.

Increased encumbrance of bank balance sheets can negatively affect the residual claims of unsecured creditors (including CDIC) in a bank resolution and increase risks to deposit insurers. Greater transparency about the extent to which bank assets are pledged or available for pledging will allow unsecured creditors to better assess the risks. Therefore, an argument can be made to include asset encumbrance in the pricing of deposit guarantee schemes.

To assess whether asset encumbrance levels have the potential to affect CDIC's recovery, an appropriate measure of asset encumbrance must be chosen. One possible measure is the ratio of unsecured liabilities to unencumbered assets. This measure provides an indication of the amount of domestic assets on a bank's balance sheet that would be available to cover unsecured creditors' claims in the event of default. However, limited regulatory data exists. For example, the current regulatory data does not include pledged assets on a domestic level. Furthermore, liabilities are not available on a domestic or non-domestic basis. In the circumstances, we will be supporting the reporting of these data points in future regulatory filings.

Notwithstanding the data limitations, CDIC is confident that the measure currently contemplated as set out below achieves an appropriate asset encumbrance measure:

Step 1: calculate the Domestic Unencumbered Asset Concentration Measure. If the institution's ratio is less than 1, the member would score full marks. If the ratio is equal to or greater than 1, the institution would go to the next step.

$\frac{\text{Total liabilities (ranking total deposits } \textit{pari passu} \textit{ with other liabilities)}}{\text{Total domestic assets less pledged and impaired assets}} \times 100$
--

If this ratio is above 1, the bank does not have sufficient realizable assets to prevent CDIC from taking a loss on failure. CDIC has also considered calculating the ratio



based on Total Assets rather than Total Domestic Assets. As one would expect, since the denominator is larger, the results are more favorable using total assets.

Step 2: calculate the Pledged Asset Ratio. If the institution's ratio is less than 25%, it would score 3 marks and if it is equal to or more than 25%, it would score no marks.

$$\frac{\text{Total Domestic Pledged Assets}}{\text{Total Domestic Assets}} \times 100$$

The level of an institution's pledged assets increases its liquidity risk. As an institution pledges more assets to creditors, it has less flexibility to deal with a liquidity shock. Further, this also reduces available assets to unsecured creditors in a failure. In the circumstances, given the additional risk posed to CDIC by pledging, it is proposed to measure Total domestic pledged assets to Total domestic assets. Ideally, this measure would compare data that is readily available in either regulatory reports or in audited financial statements. Notwithstanding, we are of the view that the information is of sufficient importance that it should be reported. We will be working toward including this data in regulatory filings.

CDIC recognizes that the use of these measures for all DSIBs does not consider individual institution risk. However, DSIBs have alternatives to pledging of assets in order to raise funds (e.g. securitization vehicles). Limiting pledging to conservative levels can significantly reduce losses for unsecured creditors including CDIC in the event of a failure.