

**CDICSADC**

**DIFFERENTIAL PREMIUMS BY-LAW**

**2004 COMPREHENSIVE REVIEW**

**CONSULTATION**

**June 2004**



Canada Deposit  
Insurance Corporation

Société d'assurance-dépôts  
du Canada

Canada

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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.<sup>1</sup>

CDIC undertakes comprehensive reviews of its by-laws from time to time. While annual reviews of the By-law have resulted in a number of amendments, the comprehensive review is intended to ensure that, in its entirety, the By-law remains up-to-date and relevant and supports the achievement of the goals initially set. The review noted in the March 2004 Federal Budget may result in further amendments to the By-law.

Premiums have been calculated for member institutions using the differential premiums system for six years providing sufficient data to conduct such a review. This document outlines the results of our review and describes the elements that we intend to change.

Comments are requested from member institutions, their associations, regulators and other interested parties not only with respect to the intended changes but also on any other aspect of the differential premiums system.

Please direct your written comments prior to September 15, 2004 to: Ms. Sandra Chisholm, Director, Standards & Insurance, Canada Deposit Insurance Corporation, 50 O'Connor Street, 17th Floor, P.O. Box 2340, Station D, Ottawa, Ontario K1P 5W5, Tel: (613) 943-1976, Fax: (613) 996-6095, Email: schisholm@cdic.ca

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<sup>1</sup> 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.*

**HIGHLIGHTS**

	<b>Summary of changes</b>	<b>Page</b>
<b>ENVIRONMENTAL</b>		<b>5</b>
➤ <b>Basel II</b>	Premature to introduce changes in anticipation of impact Basel II and recent accounting standards changes on financial results	
➤ <b>Accounting Standards</b>		
<b>QUANTITATIVE CRITERIA</b>		<b>9</b>
➤ <b>Criterion #1 Capital Adequacy</b>	Relax authorized Assets to Capital Multiple test	<b>9</b>
➤ <b>Criterion #2 Return on Risk-Weighted Assets</b>	No change	<b>11</b>
➤ <b>Criteria 3 and 4 Mean Adjusted Net Income Volatility and Volatility Adjusted Net Income</b>	No change Suggestions requested	<b>11</b>
➤ <b>Criterion #5 Efficiency Ratio</b>	Adjust thresholds	<b>12</b>
➤ <b>Criterion #6 Net Impaired Assets to Total Capital</b>	No change	<b>14</b>
➤ <b>Criterion #7 Aggregate Counterparty Asset Concentration Ratio</b>	Eliminate	<b>15</b>
➤ <b>Asset Growth</b>	Introduce an asset growth ratio	<b>15</b>
➤ <b>Criterion #8 Real Estate Asset Concentration Ratio</b>	Rely on data provided through regulatory reporting	<b>17</b>
➤ <b>Criterion #9 Aggregate Industry Sector Asset Concentration Ratio</b>	Rely on data provided through regulatory reporting	<b>17</b>
<b>QUALITATIVE CRITERIA</b>		<b>18</b>
➤ <b>Standards of Sound Business and Financial Practices</b>	Extend period to correct deficiencies in following Standards before score reduced	<b>18</b>
➤ <b>Examiner Rating</b>	No change	<b>19</b>
➤ <b>Other Information</b>	No change	<b>20</b>

**BACKGROUND**

Commencing with the 1999 premium year, each member institution has paid annual premiums at a rate dependent upon its classification under the By-law. The following table sets out the rates applicable to the four classifications since 1999:

**Premium Rates**

Premium Year	Maximum	As a percentage of 1% of insured deposits			
		Category 1	Category 2	Category 3	Category 4
<b>1999</b>	1/3 of 1%	1/24	1/12	1/6	1/6
<b>2000</b>	1/3 of 1%	1/24	1/12	1/6	1/6
<b>2001</b>	1/3 of 1%	1/24	1/12	1/6	1/3
<b>2002</b>	1/3 of 1%	1/48	1/24	1/12	1/6
<b>2003</b>	1/3 of 1%	1/48	1/24	1/12	1/6

The distribution of CDIC membership across the four categories has been as follows:

**Percentage of Members Per Category**

	Category 1	Category 2	Category 3	Category 4
<b>1999</b>	69%	22%	7%	2%
<b>2000</b>	74%	20%	5%	1%
<b>2001</b>	67%	23%	9%	1%
<b>2002</b>	78%	14%	7%	1%
<b>2003</b>	63%	33%	3%	1%

CDIC uses four premium categories for a number of reasons. More categories would result in less significant premium rate distinctions between categories, and also would reduce the significance of, and incentive for, moving from one category to another. With fewer categories and greater premium differentials, member institutions have more incentive to obtain higher scores. At the same time, members falling just short of achieving the score necessary to move into a better premium category have tended to question individual criteria scores.

It seems reasonable that an institution scoring less than 50 (out of 100) should be in the worst premium category and those with a score of 80 or better should be in the best category. The remaining two categories are proportional between the best and worst. CDIC established the ranges such that at least 80% of members would be in the best two categories. As the above table indicates, more than 90% of members have been in the two best categories since the system was introduced.

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In developing the differential premiums system, CDIC identified a number of principles, which we believe should continue to underpin it:

- provide incentive to members to achieve the best classification and to address the factors that led to a lower rating;
- take into consideration both quantitative and qualitative factors;
- ensure that, to the extent possible, there is no discretion on the part of CDIC;
- rely as much as possible on audited financial statements or information available through regulatory reporting;
- provide for minimal, if any, deviations from GAAP;
- without understating the importance of capital adequacy, ensure that appropriate weight is assigned to other quantitative criteria that measure the extent to which institutions can earn and retain their capital; and
- assign regulatory ratings the dominant relative weight among qualitative criteria or factors.

**OVERVIEW OF THE SYSTEM**

CDIC has concluded that the principles underlying the system remain relevant. In addition, we are committed to the tenet that the system must remain equitable for member institutions irrespective of size or complexity.

The following table summarizes the differential premiums system:

<b>CDIC Differential Premiums System Summary</b>	
<b>Criteria or Factors</b> - Measures	<b>Maximum Score</b>
<b>Capital Quantitative:</b>	
<ul style="list-style-type: none"> <li>• Capital Adequacy                             <ul style="list-style-type: none"> <li>- Assets to Capital Multiple</li> <li>- Tier 1 Risk-Based Capital Ratio</li> <li>- Total Risk-Based Capital Ratio</li> </ul> </li> </ul>	20
<b>Other Quantitative:</b>	
<ul style="list-style-type: none"> <li>• Profitability                             <ul style="list-style-type: none"> <li>- Return on Risk-Weighted Assets</li> <li>- Mean Adjusted Net Income Volatility</li> <li>- Volatility Adjusted Net Income</li> </ul> </li> </ul>	5 5 5
<ul style="list-style-type: none"> <li>• Efficiency                             <ul style="list-style-type: none"> <li>- Efficiency Ratio</li> </ul> </li> </ul>	5
<ul style="list-style-type: none"> <li>• Asset Quality                             <ul style="list-style-type: none"> <li>- Net Impaired Assets (Including Net Unrealized Losses on Securities) To Total Capital Ratio</li> </ul> </li> </ul>	5
<ul style="list-style-type: none"> <li>• Asset Concentration                             <ul style="list-style-type: none"> <li>- Aggregate Counterparty Asset Concentration Ratio</li> <li>- Real Estate Asset Concentration</li> <li>- Aggregate Industry Sector Asset Concentration Ratio</li> </ul> </li> </ul>	5 5 5
<b>Sub-total: Quantitative Score</b>	<b>60</b>
<b>Qualitative:</b>	
<ul style="list-style-type: none"> <li>• Examiner's Rating</li> </ul>	25
<ul style="list-style-type: none"> <li>• Extent of Adherence to CDIC Standards of Sound Business and Financial Practices</li> </ul>	10
<ul style="list-style-type: none"> <li>• Other Information</li> </ul>	5
<b>Sub-total: Qualitative Score</b>	<b>40</b>
<b>Total Score</b>	<b>100</b>

Quantitative indicators are based on measurable characteristics of the member or derived from financial statements. Their advantage is that the information / data is relatively easy to collect and usually is available from public sources or supervisors. The main

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drawback has been that quantitative indicators tend to measure past performance rather than likely future behaviour and are not reflective of the quality of governance, risk management and controls.

Qualitative assessments are based on knowledge gained by CDIC and regulators in the course of their dealings with the member institution. These can include more current and forward-looking factors, such as the quality of governance, risk management and control programs. The basic rationale for evaluating risk management is that, while institutions make money by taking risk, they lose money by not managing it. Capital helps somewhat to cushion the impact of exposure to risk, but it is not a substitute for sound risk management. When an institution has effective risk management, it may be possible to take steps to get ahead of exposures.

CDIC has also reviewed the work currently under way in the United States. The Deposit Insurance Options Paper (August 2000) was part of a comprehensive review by the Federal Deposit Insurance Corporation (FDIC). FDIC compared the CDIC differential premiums system to the current FDIC system that combines supervisory ratings with capitalization. As indicated in the Options Paper: “The current [FDIC] premium matrix does not recognize institutions that, by objective measures and historical experience, have a higher risk profile, unless the institution fails to maintain the minimum level of capitalization to be considered ‘well-capitalized’ as defined for prompt corrective action purposes or is subject to heightened supervision.” The Options Paper goes on to say:

“The advantage of this [CDIC] approach potentially would be in using more detailed risk-related information without imposing a regime where supervisors are asked to make subjective distinctions among healthy banks. Moreover, it could avoid the resource and timeliness issues (...) that could arise if supervisors were asked to monitor inter-examination changes in risk profiles for over 9,000 banks along a more finely graduated scale than is now required. Such an approach could raise concerns about the burdens of creating another layer of bank reporting. Those concerns might be allayed if the risk scorecard were either simple, or built on information that is readily available to a well-managed bank.”



## **ENVIRONMENTAL**

Before addressing the individual quantitative or qualitative criteria two subjects must be referred to that will, in both the near and longer term, have an impact on financial statements. The first is the New Basel Capital Accord (Basel II) and the second are recent accounting standards changes.

### **Basel II**

Basel II is the result of work by the Bank for International Settlements (BIS) in conjunction with regulators and banks from major economies to improve the capital adequacy framework along two dimensions: by developing capital regulation that encompasses not only minimum capital requirements but also supervisory review and market discipline; and by increasing substantially the risk sensitivity of the minimum capital requirements. This framework is intended to foster a strong emphasis on risk management and to encourage ongoing improvements in banks' risk assessment capabilities.

It is unlikely that implementation of Basel II will affect the results under the differential premiums system before the 2008 premium year at the earliest. However, CDIC will closely follow changes made to regulatory capital requirements and will address any disparity within the differential premiums system that may arise as a result. CDIC will look carefully at situations where banks taking advantage of potential capital relief resulting from Basel II might be penalized by existing formulae (e.g., capital adequacy criteria).

Basel II is divided into three Pillars, the first of which is the most relevant for purposes of the differential premiums system. Pillar I sets the criteria for the determination of minimum capital requirements and establishes minimum standards for the management of capital on a risk-sensitive basis. It covers credit risk, operational risk, credit risk mitigation and securitization. Various options for the determination of regulatory capital requirements are provided. Institutions will be required to adopt an approach for each of the major types of risk. Therefore, given the various combinations available, direct comparison between member institutions on the basis of capital levels may become more difficult. The current expectation is that the level of capital will vary depending on the type of approach adopted and may be lower for the more advanced approaches, such as the Advanced Measurement Approach (AMA) for operational risk and the Advanced Internal Ratings Based (IRB) approach for credit risk. Some member institutions likely will meet the qualifying criteria to adopt the advanced approaches while others may adopt the simpler approaches.

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CDIC has identified two key impacts that Basel II could have on the differential premiums system:

- Anticipated reduction in regulatory capital (consequently book capital) for members adopting advanced approaches under Basel II, which may impact most ratios using capital;<sup>2</sup> and
- Increased regulatory reporting and greater transparency. As a result of improved risk measurement practices, there may be enhanced regulatory reporting on risk and capital. Once designed and implemented, these disclosures may help in establishing new and improved forward-looking differential premiums criteria.

If the Assets to Capital Multiple (ACM) requirements for institutions adopting the Basel II approach are changed, CDIC will review whether its ACM test in the Capital Adequacy Criterion should be changed or eliminated to accommodate the various approaches under Basel II.

In light of the implementation phases of Basel II, it is unlikely that there will be an impact on book capital until the 2008 or 2009 filing years. Changes to the differential premiums system, if any, resulting from the impact of Basel II should therefore be ready for implementation by the 2009 filing year (which will rely on 2008 audited statements). Further, CDIC will endeavour to accommodate as concurrently as possible changes to the calculation of regulatory capital for members imposed by their regulators, and in particular the Office of the Superintendent of Financial Institutions (OSFI).

In the circumstances, changes to the differential premiums system in response to Basel II would be premature at this time.

### **Accounting Standards**

The differential premiums system is based on Canadian GAAP, with reliance on audited financial statements to ensure consistency.

CDIC monitors changes to GAAP and the impact that changes may have on the differential premiums system. Currently the changes that may have the greatest impact are: Accounting Guideline 15 (AcG-15) Consolidation of Variable Interest Entities;<sup>3</sup> changes to Section 3860 - Financial Instruments: Disclosure and Presentation;<sup>4</sup> AcG-13:

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<sup>2</sup> Assets to Capital Multiple (ACM), Tier I Risk-Based Capital Ratio, Total Risk-Based Capital and Net Impaired Assets.

<sup>3</sup> Requires the consolidation of entities that were not previously consolidated, as well as the deconsolidation of certain entities.

<sup>4</sup> Requires certain preferred shares, such as those convertible into a variable number of common shares at the holders' option, to be classified as liabilities rather than as equity. In addition, the classification of dividends paid on those shares will change from shareholders' equity to interest expense.

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Hedging Relationships; and the proposed new accounting standards in respect of Financial Instruments.<sup>5</sup>

Changes to Canadian GAAP are occurring more frequently than in the past and are of greater complexity. They are being made to address:

- Convergence toward a single set of global accounting standards;
- Harmonization with U.S. accounting standards;
- The continuing increase in complexity of business transactions and in new and innovative financial instruments; and
- Financial reporting issues such as those involving several well-publicized business failures during the last few years that have been related to the integrity of financial reporting.

Standard-setters increasingly are emphasizing the need for any reported asset or liability to meet the definitional requirements of their conceptual frameworks and moving away from industry practice as a basis for reporting.<sup>6</sup> This change in emphasis will result in changes to the timing of recognizing assets and/or liabilities in the balance sheet and to the timing of recognizing the related revenue and/or expense in the income statement.

We have explored the more significant of these changes with a view to understanding their potential impact on the differential premiums system.

The differential premiums system criteria that may reflect the greatest fluctuations as a result of the above accounting changes are the volatility criteria (Mean Adjusted Net Income Volatility and Volatility Adjusted Net Income) since they are calculated using amounts from prior years' financial statements. Due to changes in accounting during the calculation period, it is likely that some of the computed volatility would be "artificial". In some cases, accounting changes are on a prospective basis only and prior years' financial statements are not adjusted. Alternately, accounting changes may require retroactive implementation, either with restatement of the prior year comparatives or as an adjustment to opening retained earnings. In some situations the standard provides the option of retroactive or prospective adoption, which may result in inconsistent application between member institutions (e.g., AcG-15). Direct comparison could be misleading.

The extent of such artificial volatility to date likely has been relatively minor. However, the transition to fair value accounting potentially could result in such an increase in volatility of income that it would be more difficult to conclude that the volatility does not

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<sup>5</sup> Requires certain securities to be carried at fair value instead of amortized cost. The change in fair value of these securities will be temporarily recorded in a new account within shareholders' equity entitled Other Comprehensive Income until the security is sold, matures or becomes impaired, at which time the amounts would be recorded through income. Requires all derivatives to be recorded on the balance sheet at fair value. As derivative values can vary significantly from period to period with changes in market rates, the Other Comprehensive Income balances could swing from a debit to a credit or vice versa, creating significant volatility in the shareholders' equity balance.

<sup>6</sup> CICA Handbook S. 1100

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arise primarily from the accounting change. Some may argue that the volatility was always present and the accounting change has merely revealed it.

Increasingly, accounting standard-setters are requiring the use of fair value as the measurement basis for a multitude of financial instruments. Fair values are more volatile than the historical cost basis of measurement and require more effort to compute. For example, if no active market exists for an instrument, the computation of fair value may require the use of mathematical models and draw on various assumptions – which can in turn raise issues about the representational faithfulness and integrity of the computed amounts.

A financial institution with the same assets, liabilities and off-balance sheet items may appear more volatile both in its balance sheet and in its income statement than it did in the past, particularly after the adoption of fair value accounting standards.

The impact of the foregoing changes will not be known until after implementation. For this reason it would be premature to make changes to the By-law at this time.

## **QUANTITATIVE CRITERIA**

### **Criterion #1 - Capital Adequacy**

In designing the Capital Adequacy Criteria, CDIC used three tests (assets to capital multiple (ACM); tier 1 risk-based capital ratio; and, total risk-based capital ratio) and decided that meeting regulatory requirements with respect to each would not result in the highest points. An institution exceeding regulatory requirements with respect to each of the three tests scores 20 points, an institution meeting regulatory requirements scores 13 points (more than half of the available points, acknowledging that it meets minimum regulatory requirements and would be considered adequately capitalized) and an institution falling outside of regulatory requirements with respect to any of the three tests receives no points.

The ACM test has come under the most scrutiny primarily due to the fact that in order to score the maximum points, a member must have an ACM that is less than or equal to 20 times *and* is less than or equal to 85% of the multiple authorized by its regulator.

Meeting a tier 1 risk-based capital ratio of at least 7% and a total risk-based capital ratio of at least 10% have not been questioned, notwithstanding that the original Capital Accord (Basel I) recommends minimums of 4% and 8% for tier 1 and total risk-based capital, respectively. OSFI advised all federally regulated deposit-taking institutions they should maintain ratios of 7% and 10% respectively for these two measures.

Under the differential premiums system, an institution can satisfy the regulatory risk-based capital requirements, and be operating within its authorized ACM, yet fail to score maximum points for capital adequacy if either of the two components of the ACM test is not met. For example, a member institution with an authorized ACM of 23 times that meets the 7% and 10% requirements fails to score 20 points if its ACM is above 19.5 (i.e. 85% of 23 times). The 85% threshold was chosen since at the time it was the acknowledged industry threshold for a well-capitalized institution.

In the course of the consultation process leading up to the introduction of the differential premiums system, some member institutions commented that the ACM should not be used, on the grounds that it was “too blunt” an instrument in view of the growing sophistication of risk management techniques and of the use of risk-based ratios. Other members commented that CDIC’s requirements were excessive relative to regulatory capital requirements (i.e., operating at no more than 85% of ACM to be considered well-capitalized). These institutions believe that they should be considered well capitalized as long as they operate within their authorized ACM, even if it is higher than 20 times.

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In the five years since the introduction of the system, members have continued to recommend that the ACM test be modified, arguing that a cap of 20 times and/or the 85% ceiling on the ACM as a condition for scoring maximum points restrains an institution's ability to maximize return on capital. In addition, members argue that the implementation of more precise market risk rules by OSFI has lessened the need for the ACM, which was designed originally to limit the growth of credit activities. Further, the OSFI examination criteria published in August 2002 recognize an institution as having strong capital if it meets the risk-based capital ratios of 7% and 10% and is operating within its authorized ACM.

More recently, the ACM test has come under scrutiny as a result of Basel II. It has been argued that the ACM militates against the Basel II goal of improved risk management. Since it is not a risk-based measure, members may be unable to benefit from the reductions in regulatory capital that could result from adopting the more advanced risk management techniques available in Basel II.

OSFI has advised that at this time it intends to continue to use an authorized capital multiple.

### **Quantitative Analysis**

An institution that is not well capitalized should not generally be able to achieve the best category. The weight attributed to the capital adequacy criteria (20 out of 100) is an incentive for members to be well capitalized. Over the last five years a large majority of members (90%) have scored full points for capital adequacy. CDIC's analysis shows that other criteria, particularly the profitability factors, are much more effective in segmenting the membership .

Furthermore, our analysis shows that, if the additional restriction of 85% of the authorized ACM had not been in place, only six institutions would have changed (improved) their premium category over the five-year period. A modification of the criterion to remove the restriction does not therefore appear to result in any significant change in the distribution of the membership among the four categories.

### **Proposed Amendment**

We propose to maintain the Capital Adequacy criteria with three sub-tests but without the restriction to 20 times or 85% of the authorized ACM. To obtain full points, an institution would be operating within its authorized ACM and would meet the requirements of the tier 1 and total risk-based capital measures of 7% and 10% respectively. To obtain 13 points, an institution would also be operating within its authorized ACM, but its tier 1 risk-based capital ratio would be between 4% and 7%, and/or its total risk-based capital ratio would be between 8% and 10%. If an institution is not operating within its authorized ACM, or does not meet either of the minimum risk-based capital measures of 4% and 8% respectively, it would score zero.

**Criterion # 2 - Return on Risk-Weighted Assets**

CDIC's analysis shows that this is one of the most effective ratios in differentiating among members, both on a purely statistical basis and on the basis of risk.

One member institution, however, has expressed the view that the upper threshold of this criterion is stringent and difficult for many institutions to meet. Currently, the thresholds for the Return on Risk-Weighted Assets Ratio are set at 1.15% or greater to obtain the maximum points, between 0.75% and 1.15% to obtain three points, and less than 0.75% or negative values result in zero points.

CDIC's quantitative analysis suggests that adjustments, if any, would be more appropriate to the mid rather than the upper threshold. Between 1999 and 2003, almost two times more member institutions scored zero than three points. By contrast, almost half (43%) of member institutions scored the maximum points.

CDIC is not proposing any changes to this ratio.

**Criteria #3 and #4 - Mean Adjusted Net Income Volatility and Volatility Adjusted Net Income**

Currently, the differential premiums system contains two measures of volatility. Mean Adjusted Net Income Volatility is calculated by dividing the volatility (defined as the standard deviation) of an institution's net income over a five-year period by its mean net income over the same period. The higher the volatility, the lower the score. Dividing the standard deviation by the mean "standardizes" the ratio, i.e., recognizes the fact that institutions will have different mean incomes over time. The other volatility measure, Volatility Adjusted Net Income, is calculated by subtracting one and two standard deviations of the institution's income from net income in the current year. An institution will score higher the greater its current year's income relative to volatility.

Over the last few years, some members suggested that including two such measures could place too much emphasis on volatility in the system and penalize institutions experiencing sustained rapid growth. Suggestions for change have included using ten years of data to calculate Volatility Adjusted Net Income instead of five; dropping one of the standard deviation calculations in Volatility Adjusted Net Income; or dropping one of the measures altogether (with differing opinions as to which of the two measures to drop) and including only negative volatility (drop in net income compared to mean).

Quantitative Analysis

CDIC's analysis indicates that the two volatility criteria together with the Return on Risk Weighted Assets criterion (together referred to as the profitability criteria) are the most effective criteria for differentiating member institutions.

CDIC's analysis (employing year-end 2003 data) indicates that using ten years of data in the calculation of Volatility Adjusted Net Income would not automatically yield favourable results. This is contrary to the assumption that ten years rather than five more accurately reflects a business cycle and volatility would therefore be moderated. In fact, our analysis showed that more institutions would lose points. While the analysis covered only the most recent ten-year period, it seems logical to assume that the results would be repeated for other periods. Further, although ten years may be more representative of a business cycle, an increase to ten years would only be of benefit to those institutions with constant or fluctuating growth. Institutions experiencing rapid growth over the entire period would be penalized, owing to the upward pressure that growth would have on the standard deviation of net income.

If the Volatility Adjusted Net Income criterion were changed to include only one or two standard deviations, it would eliminate the middle portion of the threshold. The threshold of zero, around which the middle portion is currently structured, essentially measures whether or not net income is equal to or greater than the standard deviation, and is easily understood.

Although the system includes two measures of volatility, each has a different focus. The stability of earnings is important to CDIC. Mean Adjusted Net Income Volatility is concerned with the volatility of an institution's earnings, on the ground that 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. Volatility Adjusted Net Income in effect stress tests an institution's earnings, by comparing current year income to the volatility of the institution's income. Our analysis indicated a very low correlation between the two criteria suggesting that they measure different things.

As suggested by some members, CDIC is looking into the possibility of using a statistical measure of volatility that would capture only the volatility associated with drops in net income rather than all variations, positive and negative, compared to the mean. Further analysis is being conducted to assess the effectiveness of possible measures as a differentiator between member institutions.

### Conclusion

At this time, CDIC is requesting suggestions as to how it might measure "negative variance".

### **Criterion #5 - Efficiency Ratio**

The Efficiency Ratio is defined as an institution's non-interest expenses expressed as a percentage of gross revenue (net interest income plus non-interest income). An efficiency



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ratio of no more than 60% is required to score maximum points, while a ratio above 60% and no more than 80% would result in a score of three, and a ratio above 80% scores zero.

Member feedback on this ratio has focused on two areas: first, the items included in the calculation of non-interest expenses, and second, the thresholds.

### *Calculation of Non-Interest Expenses:*

The differential premiums system is based on GAAP, with reliance on audited financial statements to ensure consistency. To maintain the integrity of the application of the By-law, discretion and interpretation are removed from the scoring process as much as possible, since it would be problematic to continually assess all adjustment items. Furthermore, all allowed exceptions or adjustments to GAAP net income would have to be listed or described in the By-law. That would be impractical and onerous.

A number of member institutions have requested the exclusion of specific items from the calculation of non-interest expenses, which would be a deviation from GAAP. For example, some have requested the deduction of certain extraordinary items as well as goodwill.

The Efficiency Ratio shows the cost to produce a certain level of gross revenue. Apart from alignment with GAAP, CDIC has taken the position that expenses are costs of doing business that over time indirectly contribute to producing additional revenue.

In 2002, however, an amendment was made to the calculation of non-interest expenses to accommodate a change in the accounting treatment of intangible items that would otherwise have been included in goodwill. Amortization expense for goodwill and any goodwill or intangible impairment expenses are excluded from non-interest expenses for the purposes of this ratio. However, amortization expenses for intangibles are not excluded.<sup>7</sup> Some members argue that the amortization of intangible assets should be excluded from the calculation of non-interest expenses for purposes of the efficiency ratio, on the basis that the amortization of identified intangible assets is similar to goodwill (non-cash and non-operating expense). Others suggest, however, that no deductions relating to goodwill or intangibles should be made, since goodwill and intangibles often represent the expense of efficiencies of scale and are therefore relevant to the calculation of the Efficiency Ratio.

CDIC's view is that unless the treatment is supported by GAAP, no such amendments should be entertained particularly in light of the current trend in the industry to reinforce GAAP reporting. Furthermore, CDIC will not entertain one-off requests from individual institutions under the principle that all members should be assessed in an equitable manner.

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<sup>7</sup> Based on amendment to CICA Handbook Section 3062 – element of permanence.

### Thresholds:

Some institutions have expressed the view that the thresholds for the Efficiency Ratio are too stringent and should be relaxed. First, they suggest that spreads are narrower in Canada than in the U.S. and other countries where the current thresholds could be better justified. Second, they argue that the 60% threshold for the maximum score does not take into account the growing reliance on fee-based income and the inherently higher efficiency ratio for affected institutions, in comparison with members that are focused more on traditional lending. It was also argued that fee-generation businesses can be low risk and highly profitable, despite the higher efficiency ratios, while a low ratio could be the result of reliance on the riskier end of the lending spectrum.

### Quantitative Analysis

The percentage of institutions obtaining maximum points for the Efficiency Ratio has been consistently low. In 2002 and 2003, only about one-third scored the maximum points, which is the lowest percentage of all the quantitative criteria in both years. In addition, from 1999 to 2003 institutions were fairly evenly distributed across the three possible scores. This could lead to the conclusion that the ratio is overly stringent. The results under the differential premiums system as a whole, by contrast, have most institutions clustered in the better categories (i.e., 1 and 2). It can be argued that the distribution of a particular criterion should mirror the overall distribution of members in the system. This could be achieved by adjusting the thresholds of the Efficiency Ratio.

Over the five-year period, an adjustment in the thresholds to 65% and 85% would have affected the score of roughly fifteen per cent of the membership, all positively. At the same time, this adjustment would not cause any significant change in the overall distribution of differential premiums categorizations.

### Proposed Amendment

The thresholds of the efficiency ratio will be adjusted. An institution scoring 65% or less (rather than 60%) will be eligible for the maximum of five points, while an institution scoring over 85% (rather than 80%) will score zero. Values between 65% and 85% would score three points.

### **Criterion #6 - Net Impaired Assets to Total Capital**

A majority of institutions have scored the maximum points on this measure in the last five years, reflecting overall favourable economic conditions. Performance under this measure could differ noticeably if there is a downturn in the business cycle. The ratio therefore is working effectively and no change is proposed.

**Criterion #7 - Aggregate Counterparty Asset Concentration Ratio**

The Aggregate Counterparty Asset Concentration (Counterparty Concentration) Ratio is one of three concentration ratios included in the differential premiums system. The other two (Real Estate Asset Concentration and Aggregate Industry Sector Asset Concentration) are referred to later in this paper. The three ratios were included to address the diversification of a member's asset portfolio, as a key determinant of safety and soundness. Excessive concentration renders an institution vulnerable to adverse changes. Asset diversification reduces the potential negative impact of loss on an institution's earnings and capital.

Two issues have been noted with respect to the Counterparty Concentration Ratio: the data used to compute the ratio, and the performance of the ratio. First, in order to complete the differential premiums reporting form, a member institution is not able to rely on information otherwise filed (i.e., Financial Information Committee (FIC) data) or on data reported in audited financial statements. Rather, it must organize data specifically for purposes of completing the reporting form.<sup>8</sup> Data on counterparty concentration is not filed in FIC, nor is it otherwise reported. Secondly, our quantitative analysis points to questionable usefulness of the criterion in conjunction with the other concentration ratios.

Quantitative Analysis

The results produced by the Counterparty Concentration Ratio show that it is highly correlated to the results produced by the Industry Sector Asset Concentration Ratio. This implies that the two ratios are essentially the same. Further, our analysis disclosed that the Counterparty Concentration Ratio is not a very effective differentiator.

Proposed Amendment

CDIC intends to eliminate the Aggregate Counterparty Asset Concentration Ratio as a result of its high correlation with the Aggregate Industry Sector Asset Concentration Ratio as well as the constraints regarding availability of data.

The Aggregate Counterparty Asset Concentration Ratio will be replaced with an asset growth ratio (as described below).

**Asset Growth Criterion**

One of the most common characteristics of member institutions that have failed or otherwise run into difficulty has been an unusually high rate of asset growth. The FDIC Options Paper mentions that rapid loan growth was significantly associated with higher probabilities of failure. While it is true that businesses expect to grow over time and

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<sup>8</sup> This issue is also raised in connection with the Industry Sector Asset Concentration Ratio.

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should not be penalized for growing, unusually high or rapid asset growth carries the potential for increased exposure to credit and operational risk. The evolution of a member's governance, risk and control infrastructure may not keep pace.

The introduction of an asset growth criterion is particularly important given the proposal to relax the ACM test under the Capital Adequacy Criterion. Apart from acting as a measure of capital adequacy, the ACM also sought to capture capacity issues to some degree. An asset growth criterion seeks to capture, albeit implicitly, some of this operational risk.

CDIC therefore intends to introduce an asset growth criterion into the differential premiums system.

The analysis used to determine the proposed criterion is contained in the Appendix. First, CDIC looked at the class of assets to be measured, keeping in mind that the data had to be readily available through audited financial statements or regulatory reporting. The second step was to analyse many of the more common methods of measuring asset growth. Lastly, historic data was used to back test its performance under each of the possibilities considered.

### **Proposed Amendment**

CDIC intends to introduce a three-year moving average asset growth ratio, calculated as the arithmetic average of assets (years 2 to 4) divided by the arithmetic average of assets (years 1 to 3). The range of results would produce the scores set out in the following table:

<b>Three-year Moving Average Growth</b>	
<b>Range of Results</b>	<b>Score</b>
Three-year Moving Average Growth $\leq$ 15% (including negative results)	<b>5</b>
Three-year Moving Average Growth $>$ 15% but $\leq$ 40%	<b>3</b>
Three-year Moving Average Growth $>$ 40%	<b>0</b>

CDIC recognizes that, in certain circumstances, special rules will need to be developed. For example, for institutions with less than four years of data it would be unlikely that any score would be assigned and the scores for the remaining quantitative criteria would be adjusted proportionately to determine the member's total quantitative score (in a manner similar to the method used for the volatility measures).

New member institutions could be severely penalized if the first two years of data were used. Rules will be developed to ensure that the first few years of rapid asset growth expected of a new member institution do not operate to penalize the member under this criterion.

Another issue is mergers or acquisitions. CDIC must consider whether growth as a result of acquisitions or mergers should be treated differently than organic growth. As credit

and operational risk can potentially increase no matter the source of growth, it is likely that they would be treated on an equal footing.

### **Criterion #8 - Real Estate Asset Concentration Ratio**

At this time no changes are envisioned for this criterion. At a later date, consideration may be given to expanding the interim construction lending sub-criteria to both residential and non-residential and possibly reduce the number of sub-measures. However, quantitative analysis indicates that this criterion is differentiating members appropriately.

CDIC will align the reporting form to FIC data, particularly in regard to out-of-Canada loan information.

### **Criterion #9 - Aggregate Industry Sector Asset Concentration Ratio**

The Aggregate Industry Sector Asset Concentration (Industry Concentration) Ratio does not now rely on FIC data. It requires member institutions to report data based on the Canadian Standard Industrial Classification (SIC) system and as defined by CDIC. For some members, that already classify their assets according to SIC coding, providing the concentration information to CDIC requires them to aggregate the appropriate SIC codes according to CDIC's definitions and apply the appropriate risk-weighting. Others are required to develop systems solely for the purpose of completing this report.

In developing a ratio that relies on FIC data, certain matters must be taken into consideration. First, FIC data filed on industry concentration is not risk-weighted, nor does it include most securities. Rather, it is primarily limited to loan concentrations. The current ratio includes securities and risk weighted assets. CDIC must also take into account that the Financial Information Committee has undertaken a general review of all FIC data. There is also a gradual move by member institutions to the North American Industry Classification System (NAICS) to replace SIC, which could also have implications.

#### Proposed Change

A ratio will be developed over the summer of 2004, during which time back-testing will take place to ensure that a ratio relying on FIC data produces appropriate results for the differential premiums system as a whole and is not inconsistent with results produced by the existing Industry Concentration Ratio.

## **QUALITATIVE CRITERIA**

### **Standards of Sound Business and Financial Practices (Standards)**

The differential premiums system assigns ten points to an institution's adherence with CDIC's Standards. The score classifies members according to their ability to identify and promptly correct deficiencies.

Member institutions have identified two issues. The first is a request that CDIC clarify that the information from members on which it bases its determination be received by CDIC in writing prior to April 29<sup>th</sup>. There has been some confusion respecting deficiencies carried uncorrected year-over-year. The second revolves around the timing of identification of deficiencies.

The differential premiums system requires a cut-off date in order to calculate an institution's score for premium purposes. However, this date may potentially work at odds with the intended incentive to promote self-identification of deficiencies.

Further, member institutions that receive the report of their examiner during the period from February to April of any given year have expressed concern that they may be penalized based on the timing of the examinations. For example, if the examiner identifies a deficiency in February, it would be unlikely that the member would have sufficient time before April 29<sup>th</sup> to undertake appropriate corrective action. This will result in a loss of four points. On the other hand, if the deficiency were identified in May, the member would be afforded eleven months to correct the deficiency before points would be deducted.

The counter position is that an institution is likely well aware, or should be well aware, of significant weaknesses or breakdowns long before the issuance of an examiner's report and should have identified the deficiency to CDIC in the normal course.

Some member institutions have requested at least one year to correct deficiencies, from the time they are identified to or by CDIC, before the deduction of any points under the system. This proposal could create a disincentive to correct deficiencies in a timely fashion.

On the other hand, an additional timeframe within which to correct deficiencies in following Standards before points are deducted may lessen any tendency to overstate adherence. When the system was first designed there was a concern that the differential premiums system of scoring Standards adherence would have a negative impact on the Standards self-assessment process then in place. Any self-assessment process has an inherent bias to be positive rather than negative.

### Proposed Amendment

Member institutions will have at least one year to correct deficiencies in following Standards before any points would be deducted under the differential premium system.

### **Examiner Rating**

Examiner Rating means the rating on a scale of one to four that is assigned to an institution by the examiner in the course of carrying out the examiner's duties. The examiner provides its rating to CDIC and the rating is then translated into a score of 25, 18, 11 or 0.

Numerous issues have been raised in connection with the examiner-rating component of the qualitative score over the years. For example:

- CDIC should define in the By-law the criteria upon which each of the ratings would be assigned;
- If twenty-five points are available, a member should be able to score anywhere on a scale of one to twenty-five;
- A larger proportion of the total score should be assigned to the examiner ratings, or to the qualitative components generally.

The Examiner Rating is the rating assigned by the examiner. It is not CDIC's rating and it would be inappropriate for CDIC to define the components of the rating. CDIC will not make any changes in this regard.

Making available to the examiner the full range of 25 points to rate member institutions raises difficulties for the examiner in defining criteria for each rating as well as a more general issue. Having a system with a category and premium level for each point scored could reduce the likelihood of complaints by institutions missing a category by only a few points. It could also provide some incentive for members to marginally improve if there is a financial benefit. However, one of the objectives of the system is to send a message to the management and board of member institutions. The system was not therefore concerned with capturing subtle differences but rather with providing an incentive to low-scoring members to make improvements where necessary.

As to the balance between qualitative and quantitative factors, CDIC has received suggestions both that the qualitative component be increased and decreased. CDIC's analysis indicates that the impact of increasing the value of the qualitative factors at this time would result in a shift of many institutions to worse categories. The current mix of 60% quantitative / 40% qualitative produces an appropriate distribution of members across each of the four categories.

**Other Information**

CDIC does not propose any changes to this criterion. There have been no comments received in connection with it and it appears to be working as anticipated.

**OTHER MATTERS**

**Premium Levels for Category 4**

Many member institutions pay the minimum level of premiums irrespective of their classification under the differential premiums system because they do not have significant insured deposits. (The minimum payment is \$5,000.) However, there is no incentive for these member institutions to achieve a better category. In the circumstances, member institutions in Category 4 should pay no less than double the minimum payment.

**Restated Financial Statements**

In some circumstances, institutions are required to restate prior year's financial statements. The differential premiums system is unclear as to whether restated financial statements should be used in completing the reporting form. Instructions about the use of restated financial statements will be clarified so that, if they are available, restated financial statements are used in completing the differential premiums reporting form.

**CONCLUSION**

In conclusion, our review has shown that the enhancements proposed will make the differential premiums system even more effective and at the same time will reduce the burden that member institutions experience when completing the reporting form.

We look forward to your comments on the intended changes and on any other aspects of the differential premiums system.



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**APPENDIX**

**ASSET GROWTH CRITERION**

*Asset Classes*

The data to be used to calculate this measure is readily available either through audited financial statements or as part of the member institution's regulatory reporting.

Asset growth can be measured in many ways. The first step is to determine what class of assets is to be measured. This in turn will depend on the particular risks that the measure seeks to address. One option would be to measure the total of on-balance sheet assets and exclude off-balance sheet assets. However, to ignore off-balance sheet activity would paint an incomplete picture of some institutions' asset growth, particularly in light of the objective to capture operational risk issues.

CDIC therefore will use all on- and off-balance sheet assets encompassing commitments, repurchase agreements, trade-related contingencies, guarantees and derivative contracts, and including "own securitized" assets. The inclusion of own securitized assets aims to capture the operational risks that apply to asset origination, regardless of whether the assets are recorded on- or off-balance sheet. In order to focus attention on the resource constraint issues that are of interest, third party securitizations will be excluded.

*Measuring Growth*

A number of options for measuring growth were considered by CDIC. One is simply to measure the change in assets at two points in time, either over consecutive years or over a longer time frame (such as five years). Although such calculations have the advantage of simplicity, growth rates would be subject to considerable fluctuation.

Another option is to measure the standard deviation of the assets over a given period, standardized by dividing by the mean of the assets over that period. However, this ratio is primarily a measure of volatility as opposed to growth. With two volatility measures already included in the differential premiums system, the addition of a third could skew the system too heavily towards volatility indicators.

In addition, we looked at the option of a moving average growth rate which divides the average of assets over a number of years (e.g. years 2 to 4) over the assets in the years immediately prior to that period (in this example, years 1 to 3). This ratio smoothes out yearly fluctuations and provides a means of comparison that is centred on the institution's own historical performance. It is also more directly focused on asset growth, as opposed to the volatility of that growth.

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For these reasons, and following extensive testing of all the above scenarios, a moving average growth rate was chosen. In scenario testing, three years appeared to be a reasonable time frame in which to observe a trend of sustained rapid growth.

*Quantitative Analysis*

Extensive back testing of this ratio across CDIC’s membership (those institutions for which four years of data were available) supports thresholds of 15% and 40% for scores of 5 and 3 respectively. In other words, institutions growing at 15% or less (as measured by the current period’s moving average assets compared to the previous period’s three-year moving average asset levels) would score the maximum 5 points; members growing at above 15% but no more than 40% would score 3; and institutions with growth rates above 40% would score 0. At these thresholds, the distribution of the membership across the points is consistent with the distribution of the membership in the differential premiums system as a whole.

Furthermore, these thresholds also seem reasonable in light of CDIC’s experience with institutions that have encountered growth-related problems in the past.

*Formula*

The three-year moving average asset growth ratio will be calculated as the arithmetic average of assets (years 2 to 4) divided by the arithmetic average of assets (years 1 to 3). The formula would appear as:

$\frac{(A_{yr2} + A_{yr3} + A_{yr4})}{3}$	$- 1$	$\times 100$
<hr style="width: 100%;"/> $\frac{(A_{yr1} + A_{yr2} + A_{yr3})}{3}$		

where A = on- and off-balance sheet and own securitized assets