

**Report to the Financial Institutions Commission
Credit Union Deposit Insurance Corporation (CUDIC)
Risk-Based Assessment Methodology Working Group
September 12, 2017**

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EXECUTIVE SUMMARY

The Superintendent of Financial Institutions commissioned a Working Group comprised of credit union system representatives to provide input to its proposals to enhance its risk-based deposit insurance premium methodology. The Working Group has completed its review and is pleased to submit a number of recommendations for the Commission's consideration.

RECOMMENDATIONS

ASSESSMENT METHODOLOGY

It is recommended that FICOM consider revising its proposed assessment methodology as outlined in Appendix 2 of this report. The Working Group noted that a number of the measures proposed in its 2016 recommendations were ones that either overlapped with other metrics or were more appropriate as indicators of risk that should be used by prudential regulators rather than deposit insurers. In particular, the following changes are recommended:

- increase the weighting of the capital ratio from 10 per cent to 20 per cent;
- remove the retained earnings to risk weighted assets and risk weighted assets to total assets metric to be replaced by a leverage ratio with a weighting of 10 per cent;
- retain the non-performing loans to total loans metric, but increase its weighting to 10 per cent;
- remove the asset growth and commercial loans and leases to capital metrics;
- retain the operating income (excluding CUDIC assessments) to average assets metric at a 5 per cent weighting;
- remove the net income to average assets metric and replace it with a net operating income volatility over total deposits metric with a 5 per cent weighting;
- retain the encumbered assets to capital metric at a 5 per cent weighting;
- remove the current ratio and agent and wholesale deposits to total deposits metrics to be replaced by a metric measuring agent deposits to total deposits at a 5 per cent weighting; and
- the Liquidity Coverage Ratio (LCR) should be used as the optimal metric for measuring liquidity (as it is in the process of being implemented by FICOM) and that the LCR replace the encumbered assets to capital and the agent deposits to total deposits metrics at a 10 per cent weighting.

It is recommended that the dynamic range concept be retained and modified to ensure that the time period used appropriately reflects changes in market conditions.

It is recommended that the qualitative metrics be based on the lower of the Composite Risk Ratings (CRR) and that the Intervention Stage Rating (ISR) provided by the supervisors at FICOM be retained, but increased from 30 per cent, as proposed by CUDIC, to a weighting of 40 per cent.

PREMIUM STRUCTURE

It is recommended that the number of premium categories remains four.

It is recommended that the premium structure be adjusted to a slightly flatter structure than the 2016 historical premium structure to compensate for the proposed changes to the risk metrics which moves some credit unions to a higher risk category.

SUPERVISORY PROCESSES

It is recommended that FICOM also considers two issues related to its supervisory ratings (CRR and ISR). The first being in regards to the timeliness of rating updates. It is recommended that the supervisory ratings be updated more frequently in general, but at least every 18 months and that it not necessarily be solely dependent on the examination cycle. This is to ensure that credit unions which have taken appropriate corrective action are rewarded through an adjustment to their ratings. The Working Group acknowledged that FICOM had made progress over the past 18 months to increase its resources and to improve the timeliness of rating updates. It is trusted that this progress will continue. The second recommendation is that the supervisory ratings be reviewed to ensure that there are no biases based on the size or complexity of a credit union. Large credit unions are under the impression that FICOM considers them higher risk as a result of their size and complexity and thus will not rate them in a low risk category regardless of the strength of their governance and risk management practices. The Working Group believes that FICOM is sensitive to this issue and the Working Group appreciates that work is being undertaken by FICOM to enhance its risk rating systems and their application. The Working Group recognizes FICOM's commitment to continuous improvement in its supervisory work, efforts to improve communication regarding staging decisions, and FICOM's dedication of resources to staged institutions to support the timely resolution of supervisory issues.

DEPOSIT INSURANCE FUND

While not within the scope of its Terms of Reference the Working Group would like to comment on issues related to the deposit insurance fund. It is recommended that CUDIC considers a number of emerging issues related to the fund when evaluating its plan to build and

maintain the fund. First, it is widely expected that a large credit union will continue as a federal credit union and thus no longer be insured by CUDIC. The implications of this development include a larger fund relative to the deposit base and a potential for lower aggregate premium income to CUDIC. Secondly, the growth in system-wide deposits has meant that the premium rate has been higher than it otherwise would be as the premium revenues need to be sufficient to “catch up” to meet fund targets. Thirdly, in its regular review of the target fund size and pace to achieve the target, CUDIC should keep in mind the impact of overall premium levels on the profitability of credit unions.[The higher the fund target and the annual premium rates, the ability of credit unions to generate retained earnings is reduced].

In discussions with FICOM, it was clear to the Working Group that CUDIC does consider a number of factors related to the size of the fund including the impact of a large credit union leaving the insurance pool, the potential loss of a large credit union partner for smaller credit unions, the investment policy of the fund, the affordability of premiums and the rate of building the fund relative to growth in the system. The Working Group believes that these factors will continue to remain important to consider.

TRANSITION

It is recommended that an appropriate transition plan to the new system be considered to provide credit unions, CUDIC and FICOM with sufficient time to adjust their operations to the revised metrics. Given the recommendations made in this report and based on the availability of the data to support the metrics, it is anticipated that the earliest a transition to a new system would be viable is 2020 based on the available data and information generated in 2019.

Respectively submitted on behalf of the Working Group,

Andy Poprawa, CPA, CA, C. Dir.
Chair, Working Group

BACKGROUND

In January 2016, the Commission directed staff to commence a review of CUDIC's Risk-Based Premium Assessment Methodology to ensure it remains effective and consistent with best practices and under changing conditions.

In March 2016, an initial consultation was undertaken by way of a questionnaire to credit unions. Feedback received from that questionnaire was used to inform changes to the methodology. Staff proposed changes to the methodology to incorporate additional metrics to capture various risks to the CUDIC fund and features that address pro-cyclicality, "cliff" effect and differentiation effectiveness.

A second consultation was undertaken over a period ending on September 15, 2016, asking for feedback from credit unions on the proposed changes. During the consultation, credit unions expressed concerns about the proposed changes. Credit unions asked staff to clarify how the Risk-Based Premium Assessment Methodology contributes to the public policy objectives of protecting depositors and to financial stability.

After reviewing the results of the feedback received, the Superintendent of Financial Institutions determined that a more inclusive process to review the Risk-Based Assessment Methodology would be appropriate. As a result, a Working Group was established including 10 senior level credit union staff, two from each peer group, and two executives from Central 1. In addition, an independent Chair of the Working Group was appointed, as well as, a professional firm to assist in providing independent analytical support testing alternatives against agreed upon criteria and principles.

Appendix 1 provides a list of the individuals serving on the Working Group.

WORKING GROUP OBJECTIVES

In accordance with the approved Terms of Reference the objectives of the working group were to:

- identify and provide supporting analysis for the changes proposed that do not reflect risk to the CUDIC fund;
- propose alternatives for the risk activities/metrics that provide better measures of credit unions' risk to the CUDIC fund;
- test the alternatives for effectiveness; and
- recommend changes to the proposed Methodology.

OBJECTIVES OF THE RISK-BASED PREMIUM ASSESSMENT METHODOLOGY

The *Financial Institutions Act* (FIA) authorizes CUDIC to guarantee the deposits and non-equity shares of credit unions in British Columbia. This guarantee provides confidence for credit union depositors knowing that they are protected by CUDIC in the event of a credit union failure. To fulfill its obligation to depositors, CUDIC maintains an ex-ante deposit insurance fund (fund).

As explained in the International Association of Deposit Insurers' *Enhanced Guidance for Effective Deposit Insurance Systems – Ex Ante Funding June 2015*¹ paper, depositor confidence depends, in part, in knowing that there is adequate funding available for deposit insurance claims. This point was also raised in the *Thematic Review of deposit insurance systems: Peer Review Report* by the Financial Stability Board in February, 2012² post financial crisis. Depositor and potential depositor inquiries to CUDIC often concern the adequacy of the fund. Maintaining a credible fund is a key part of fulfilling CUDIC's mandate.

Credible funding is determined based on the effectiveness of available regulatory and supervisory tools to mitigate losses to the fund from credit union failures. The Risk-Based Premium Assessment Methodology provides financial incentives to credit unions to proactively manage risks that impact the likelihood and magnitude of losses to the fund. It does this by assessing annual premiums relative to the risks posed to the fund.

The Methodology works similarly to a credit default model in that it differentiates credit unions through risk metrics that are linked to the likelihood of loss (probability of default, or PD) and magnitude of loss (loss given default, or LGD) in the event of a credit union failure. By providing

¹ http://www.iadi.org/docs/IADI_Enhanced_Guidance_on_Ex-Ante_Funding_June_2015.pdf

² http://www.fsb.org/wp-content/uploads/r_120208.pdf?page_moved=1

financial incentives to proactively manage risks, the methodology is intended to mitigate risks to the fund and maintain the funding required to cover the loss of a non-viable credit union at a minimum yet credible level.

The Commission is also the supervisory and regulatory authority responsible for ensuring regulatory compliance, monitoring and assessing the ongoing concern of credit unions, and intervening early by taking prompt corrective action in relation to troubled credit unions. Effective supervisory practices serve to mitigate the likelihood and impact of losses to the fund.

REVIEW PROCESS AND SCOPE

The Working Group was established through a cooperative effort working with each peer group in the province to nominate representatives. Credit unions in each peer group had the opportunity to interact with Working Group members in order to provide commentary and feedback on CUDIC's proposals. Seven meetings of the Working Group were held either in person or by conference call in order to minimize the time and expense of travel.

The Working Group is grateful to the FICOM staff for their excellent support and cooperation throughout the review. Staff provided various analyses and other data to permit the Working Group to test various alternatives including a review of the elements in determining the target fund size. Staff at FICOM also provided valuable insights and information on their supervisory approach and issues related to the qualitative assessments used by CUDIC to determine premium levels.

The Working Group also had the benefit of an independent review of the data and analytics by Promontory Group to assist in the development of its recommendations.

WORKING GROUP ASSESSMENT CRITERIA AND IADI PRINCIPLES

The Working Group began its work by discussing and agreeing upon an initial list of criteria which would be used to determine the effectiveness of the proposed assessment methodology. These criteria were independent of international guidance or other influences and were focused on what was important to British Columbian credit unions in the context of a risk based premium regime. As will be noted, some of these criteria are similar to those established by the International Association of Deposit Insurers (IADI).

The Working Group's assessment criteria included the following:

WORKING GROUP'S CRITERIA

Criteria	Detail
Fairness	Credit unions with similar risk profiles should pay similar premiums per dollar of deposit.
Affordability	No credit union should pay a premium that is significantly higher than the average credit union, except if that credit union has an excessive risk score.
Competitiveness	Small changes in risk scores should not produce big changes in premiums per dollar of deposit.
Incentives	Premiums per dollar of deposit should rise significantly when a credit union's risk score moves into the excessive-risk range.
Predictability	Changes in premiums for next year should depend only on indicators that are under the control of the credit union in the current year.
Simplicity	The methodology should be easy to understand and apply.

In its guidance³ dealing with risk-based or differential deposit insurance premium systems, IADI provides the following objectives for such a regime:

“The primary objectives of differential premium systems should be to provide incentives for banks [or credit unions] to avoid excessive risk taking and introduce more fairness into the premium assessment process.

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

IADI also provides guidance regarding an evaluation of the state of the sector before establishing or modifying a differential premium system. IADI notes that it is important to undertake a situational analysis to assess the state of the economy, current monetary and fiscal policies, the state and structure of the system, the strength of prudential regulation and

³

http://www.iadi.org/en/assets/File/Papers/Approved%20Guidance%20Papers/IADI_Diff_prem_paper_FINAL_updated_Oct_31_2011_clean_version.pdf

supervision, the legal framework, and the soundness of accounting and disclosure regimes. In the context of

British Columbia, the Working Group noted that at this time, the state of the economy and system, as well as, the soundness of the accounting and disclosure regimes were reasonably strong. It was also recognized that there had not been a credit union failure in the province for over 30 years. With respect to the strength of the prudential regulatory and supervisory regime, it was noted that while improvements have been made in recent months, further work was needed to bring the oversight of credit unions to desired levels.

The Working Group noted that CUDIC’s 2016 proposals had followed the guidance provided by IADI in many respects. However, in a number of areas there was a divergent view as to the fairness of some of the metrics proposed and the way in which those metrics were constructed.

Once a working model had been developed, the Working Group considered the application of the criteria established by IADI, including:

IADI CRITERIA

Criteria	Detail
Incentives to avoid excessive risk taking	Premiums per dollar of deposit should rise significantly when a credit union’s risk score moves into the excessive-risk range.
A fair premium assessment process	Credit unions with similar risk profiles should pay similar premiums per dollar of deposit and small changes in risk scores should not produce big changes in premiums per dollar of deposit.
Evaluate available options	Supporting analysis should evaluate multiple risk-metric structures and premium structures.
Differentiate banks by risk category	The methodology should use multiple risk indicators from different risk categories.
Use a variety of information	The methodology should use quantitative and qualitative risk metrics.
Be forward looking	The methodology should use metrics that signal the probability of failure as well as the expected loss upon failure.

Criteria	Detail
Accepted by industry and supervisors	Implementation should be preceded by a robust process of industry consultation that includes the participation of supervisory staff.
Necessary authority, available resources, quality information	The deposit insurer should have the necessary authority, available resources, and quality of information to implement the methodology.

WORKING GROUP ASSESSMENT OF PROPOSED CHANGES

The first objective under the Terms of Reference was to identify and provide supporting analysis for the changes proposed that do not reflect risk to the CUDIC fund.

The Working Group reviewed in detail with the assistance of CUDIC staff, the specific proposed metrics with the view to better understanding how these measures impacted risk to the fund. In order to better understand how risk impacts the fund, the Working Group was briefed on how the deposit insurance fund target was developed using an actuarial model developed by an actuarial consulting firm, the limitations of the model and the approach to establishing a range for the fund. This background information also helped inform the industry representatives on how deposit insurance systems work and the various elements of a risk-based assessment process.

PROPOSED CAPITAL METRICS

CUDIC proposed three metrics to be used to measure capital:

- capital adequacy ratio (CAR);
- retained earnings to risk weighted assets; and
- risk weighted assets to total assets.

Capital Adequacy Ratio

CUDIC proposed the use of the current capital adequacy ratio as the primary measure of capital. As the most common measurement of capital used by credit unions, regulatory bodies and deposit insurers both in Canada and internationally, the Working Group felt that the CAR was an appropriate measure of risk to the fund. It was quite evident that a lower overall CAR would pose an increased risk to the fund.

As a result, the Working Group decided that this measure was an appropriate metric for this purpose.

One note of caution that the Working Group would like to raise is the implications of the introduction of *IRFS 9 – Financial Instruments* and its potential impact on the measurement of capital. It is recommended that, should the introduction of IFRS 9 have a significant impact on system capital, CUDIC adjust the ranges for measuring capital in this metric.

Retained Earnings to Risk Weighted Assets

This metric measures the quality of capital as retained earnings and contributed capital are ostensibly the highest quality of capital. The Working Group discussed the question of whether quality of capital has a bearing on risk to the fund. If one accepts the argument that higher quality capital, whatever its composition, is an important element of lowering risk to the fund, then the focus of the debate shifts to whether higher quality capital has any impact on a potential loss to the fund in the event of a failure. In the end, the Working Group accepted the argument that capital is capital no matter what its composition might be and that the quantum is the more important element. It is true that supervisory authorities may prefer higher quality capital, but for the purpose of deposit insurance, there is no difference.

As a result, the Working Group decided that this measure was not an appropriate metric for this purpose.

Risk Weighted Assets to Total Assets

The Working Group also considered and discussed in detail this proposed metric. The risk weighted assets to total assets measure was determined not to be a measure of capital, but rather a measure of the risk tolerance of a credit union. The higher the risk weighted assets, the more likely the credit union had decided to take on more risk as defined by the risk weightings assigned by the supervisory authority. Further, the Working Group noted that this measure was already included in the CAR. Again, it was felt that while the supervisory authority might be a proponent of this metric, for supervisory purposes, it was not necessarily a good indicator of risk to the fund.

As a result, the Working Group decided that this measure was not an appropriate metric for this purpose.

Leverage Ratio (Recommended)

The Working Group discussed other possible metrics that might complement the CAR and provide a useful indication of potential risk to the fund. A review of other measures used by deposit insurers in Canada and internationally indicated that a strong candidate for inclusion was the leverage ratio. The leverage ratio (defined as total assets plus risk-weighted off-balance sheet exposures as a percentage of total capital less deductions to capital) is a metric proposed by the Basel Committee on Banking Supervision as a key measure of risk.

In its guidance the Committee notes:

“The Basel III leverage ratio is intended to:

- restrict the build-up of leverage in the banking sector to avoid destabilizing deleveraging processes that can damage the broader financial system and the economy; and*
- reinforce the risk-based requirements with a simple, non-risk-based “backstop” measure.*

The Basel Committee is of the view that:

- a simple leverage ratio framework is critical and complementary to the risk-based capital framework; and*
- a credible leverage ratio is one that ensures broad and adequate capture of both the on- and off-balance sheet sources of banks’ leverage”.*

The Working Group noted that a poor leverage ratio would in fact create a higher level of risk to the fund. As a result, the Working Group decided that this measure was an appropriate metric for this purpose. It is noted that the proposed metric would not necessarily be compliant with the standards proposed under the Basel III framework.

PROPOSED ASSET QUALITY METRICS

CUDIC proposed four metrics to be used to measure asset quality:

- Non-performing Loans to Total Loans;
- Asset Growth;
- Commercial Loans and Leases to Capital; and
- Encumbered Assets to Capital.

Non-Performing Loans to Total Loans

The International Monetary Fund (IMF) cites non-performing loans as a percentage of total loans as one of its key financial soundness indicators. In addition, failures which caused losses to deposit insurance funds in many jurisdictions were caused by poor credit and investment practices.

The Working Group concurred with CUDIC's proposal to include this metric in the assessment methodology.

Asset Growth

The Working Group considered and discussed in detail this proposed metric. The asset growth metric (defined as the difference in assets year over year as divided by the prior year's assets) was determined not to be necessarily a measure of asset quality, but rather a measure of the risk tolerance of a credit union. The higher the asset growth, the more likely the credit union had decided to make a strategic decision to grow its business. CUDIC pointed out in its proposed methodology that jurisdictions with institutions that experienced higher rates of failure noted that high asset growth was a factor.

The Working Group also noted that high growth could also be a function of geographic location within the province as urban areas may be experiencing higher growth in population and economic activity than other regions. It was noted and agreed that the supervisory authority would indeed be very interested in this measure as a potential indicator of increased risk, however in and of itself, the Working Group felt there was no indication that higher growth had a direct correlation to increased risk to the fund. Further, the Working Group also noted that as part of the supervisory framework used by FICOM, supervisors undertake to understand the business model employed by a credit union and factor this into the supervisory rating assigned to the credit union.

As a result, the Working Group decided that this measure was not an appropriate metric for this purpose.

Commercial Loans and Leases to Capital

CUDIC's proposal to include a measure of commercial loans and leases as a percentage of capital in the methodology was based on its view that these asset classes are inherently higher risk and provided a good differentiation between credit unions within the system. This view is

supported by the IMF and certainly the supervisory authority would assess this element as part of its supervisory rating.

The Working Group noted that for purposes of the determining risk to the fund, that the risk weighted capital adequacy ratio already included a capital allocation for these higher risk asset classes. Thus the Working Group felt that in effect the methodology would double count the impact of higher components of commercial activities.

As a result, the Working Group decided that this measure was not an appropriate metric for this purpose.

Encumbered Assets to Capital

Encumbered assets reduce the pool of assets available to CUDIC to recover potential losses to the fund in the event of a failure. Credit unions in the province encumber their assets in a number of ways including their arrangements with Central 1. While the Working Group felt that this metric was useful as a measure of potential liquidity problems, it was not evident how it was a good indicator of asset quality.

As a result, the Working Group decided that this measure was not an appropriate metric for this purpose, but proposed that it be considered in the discussion of liquidity (see discussion on liquidity).

PROPOSED EARNINGS METRICS

CUDIC proposed two metrics to be used to measure earnings:

- Operating Income (Net of CUDIC Assessments) to Average Assets; and
- Net Income to Average Assets.

Net Operating Income (Net of CUDIC Assessments) to Average Assets

CUDIC proposes to use net operating income (net of CUDIC assessments so as not to penalize credit unions with low scores) as a percentage of average assets to measure one element of earnings. It is recognized that a credit union's ability to produce earnings from operations is a significant factor in determining the probability of failure and loss given default. After thorough discussion and debate, the Working Group concurs with this recommendation subject to the resolution of a volatility metric and the dynamic range solution.

The Working Group concurred with CUDIC's proposal to include this metric in the assessment methodology.

Net Income to Average Assets

CUDIC also proposed to employ net income to average assets as the other metric to measure earnings. The Working Group felt that this metric did not provide a useful measure to determine the level of a credit union's risk of loss to the fund as other significant factors contribute to the determination of net income including items such as the credit union's business model, economic factors, non-recurring expenses and extraordinary events. The Working Group determined that a measure of volatility would be a better indicator of risk to the fund (see below).

As a result, the Working Group decided that this measure was not an appropriate metric for this purpose.

Net Operating Income Volatility to Total Deposits (Recommended)

Based on its discussion of operating income as an appropriate measure of earnings, the Working Group felt that a metric quantifying sustainability of income based on some measure of volatility would enhance the methodology by measuring the stability of earnings over a period of time. After considerable discussion and with the assistance of CUDIC staff, the Working Group agreed that measuring the volatility of net operating income as a percentage of total deposits would be an appropriate metric as a high level of volatility would be a good indicator of increased risk to the fund.

The proposed metric would be defined as the standard deviation of net operating income as a percentage of average total deposits over a 10-year period.

PROPOSED LIQUIDITY METRICS

CUDIC proposed two metrics to be used to measure liquidity:

- Current Ratio; and
- Agent and Wholesale Deposits to Total Deposits.

The Working Group had a considerable amount of discussion regarding the metrics for liquidity. In particular, it was recognized that while the level of liquidity may have a significant impact on the likelihood of institutional failure, it may not explicitly have a direct correlation on risk to the fund. This conclusion is based on the premise that losses incurred by the fund would be caused by a decrease in the value of assets or an increase in the value of liabilities that deplete the

capital available to sustain a shock rather than the quantum of liquidity available to meet depositor's demands.

Nevertheless, the Working Group supports the inclusion of metrics to measure liquidity in the methodology. It is recognized that the Commission is currently implementing the Basel Committee's recommended LCR as the primary supervisory tool to measure liquidity. The Working Group recommends that CUDIC consider using the LCR as the measure for liquidity in the methodology given that its implementation will be completed before the new premium system is ready to be introduced.

Current Ratio

CUDIC proposed to use the current ratio defined as short term assets (cash and liquid assets less assets not originated by the credit union) as a percentage of short term deposits (fixed rate liabilities up to 12 months) in the methodology. While the Working Group felt that the current ratio is a useful accounting concept, as noted above, there did not appear to be a reasonable linkage between the ratio and the risk to the fund.

As a result, the Working Group decided that this measure was not an appropriate metric for this purpose.

Encumbered Assets to Capital

As discussed earlier, it was noted that encumbered assets reduce the pool of assets available to CUDIC to recover potential losses to the fund in the event of a failure. While it may not be a useful metric to measure asset quality, this ratio does provide a better gauge of risk to the fund than the current ratio or other similar measures in the event of a credit union failure.

Encumbered assets would not be available to CUDIC until the obligations associated with them are extinguished. Thus a high level of encumbered assets may cause the deposit insurance additional costs during the resolution process since it would need to use the fund's liquidity or capacity to borrow to compensate depositors while waiting for the encumbered assets to be realized.

While the Working Group originally concurred with CUDIC's proposal to include this metric in the assessment methodology with the introduction of the LCR metric, this ratio is no longer supported as a preferred option.

Agent and Wholesale Deposits to Total Deposits

CUDIC proposed to use agent deposits and wholesale deposits as a percentage of total deposits as a metric for the methodology. This was based on the premise that a high level of price sensitive “hot money” as represented by deposit agents and brokers as well as wholesale funds was not a stable funding source. The Working Group expressed the view that wholesale deposits as represented by various sectors including municipalities, universities, schools and hospitals (the “MUSH” sectors) has been and continues to be a stable sources of funding. It was acknowledged, however, that funds raised by deposit agents and brokers were typically less stable and represented a funding risk to credit unions.

Based on these arguments, while the Working Group originally concurred with CUDIC’s proposal to include agent deposits (but not wholesale deposits) in the assessment methodology with the introduction of the LCR metric, this ratio is no longer supported as a preferred option.

PROPOSED DYNAMIC RANGE APPROACH

During the 2016 consultation process CUDIC responded to credit unions’ view that the current approach to set scoring ranges for quantitative metrics using a 10-year average should be changed to one that reflects current economic conditions and business cycles. In response, CUDIC proposed the use of a “dynamic range” approach.

Under the dynamic range approach the scoring range for each risk metric (except the capital and now liquidity (LCR) metrics) was proposed to be determined annually based on the credit union system’s performance. The dynamic range approach would then automatically adjust the risk metric range depending on where the credit union system is in a business cycle (i.e. the range would more closely reflect the present operating environment).

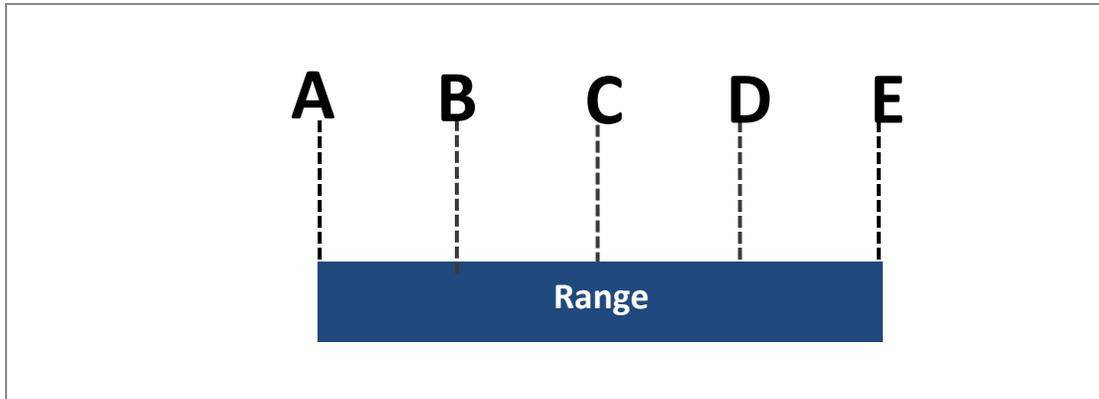
The effective range is based on the credit union system’s prior fiscal year financial performance and condition. It would be communicated to credit unions following submission of their annual filings to FICOM. It was proposed that the dynamic range ceiling and floor would be set at one standard deviation from the system average. The following figure provides an example of how a dynamic range would be set for a given risk metric, where:

A & E = one standard deviation from the system average;

C = system average;

B = mid-point between A and C; and

D = mid-point between C and E.



The Working Group supports the concept of a dynamic range as a method to reflect current economic and market conditions on the basis that it minimizes biases towards credit unions of different sizes.

It was also proposed, and the Working Group supports, the application of the dynamic range to all quantitative metrics except for the capital and liquidity (LCR) measures.

The Working Group also discussed the appropriate effective scoring range. A number of options were considered by CUDIC and concluded that a one year lag, a three year average and a five year average was appropriate depending on which metric was chosen.

PROPOSED QUALITATIVE METRICS

Composite Risk Rating (CRR)

The Working Group was briefed on the supervisory approach used by FICOM to assess risk levels at each credit union. FICOM staff will assign a composite risk rating (CRR) to each credit union based on its risk profile using the Supervisory Framework as a guide. Essentially FICOM reviews each credit union's significant activities, assesses the level of risk management to mitigate inherent risks and considers the level of earnings, capital and liquidity to determine the CRR. The CRR is FICOM's assessment of the safety and soundness of the credit union with respect to its depositors. There are four levels of CRR – Low, Moderate, Above Average and High.

Intervention Stage Rating (ISR)

The impact of a high or above average CRR may result in FICOM "staging" a credit union to ensure that appropriate corrective action is taken to reduce the probability of failure. The

level and intensity of supervisory actions taken by FICOM is based on a credit union's risk assessment and the supervisor's view of the probability of failure and potential loss to the fund. The five stages of ISR include:

- 0 – Normal;
- 1 – Early Warning;
- 2 – Risk to financial viability or solvency;
- 3 – Future financial viability in serious doubt; and
- 4 – Non-viability/insolvency imminent.

In its proposed methodology CUDIC suggested that the lower rating of either CRR and ISR be used as a qualitative measure for the supervisory rating. The Working Group supports this proposal. CUDIC also proposed to have a weighting of 30 per cent of the total scoring system for the qualitative metric. The rationale for the lower weighting (reduced from 50 per cent under the current model) was that the supervisory system was not in a position to provide timely assessments of credit unions. Thus using a higher weighting of quantitative metrics would compensate for the potential lag time in updating supervisory ratings.

The Working Group felt that the decrease in weighting from 50 per cent to 30 per cent was a dramatic change and thus recommend that the weighting be reduced to 40 per cent.

There were two other matters raised by the Working Group in relation to the current supervisory program used by FICOM which are impacting the premium system. The first was the timeliness of examinations and the subsequent updating of a credit union's CRR. In some cases, credit unions commented that a CRR might not be updated for several years, thus putting some credit unions at a disadvantage when their risk profiles may have improved.

The Working Group acknowledged that FICOM had made progress over the past 18 months to increase its resources and to improve the timeliness of rating updates. It is trusted that this progress will continue.

Secondly, some larger credit unions commented that FICOM had made a decision that because of their size and complexity, their composite risk rating could never be rated low. They noted that such a bias against larger, more complex credit unions put them in a higher premium category from which they could not escape.

The Working Group believes that FICOM is sensitive to these issues and appreciates that work is being undertaken by FICOM to enhance its risk rating systems and their application. The Working Group recognizes FICOM's commitment to continuous improvement in its supervisory

work, efforts to improve communication regarding staging decisions, and FICOM's dedication of resources to staged institutions to support the timely resolution of supervisory issues.

PREMIUM STRUCTURE

In addition to reviewing the risk metric structure of the deposit insurance assessment system, the Working Group, with the assistance of the Promontory Group (Promontory), also reviewed the premium structure.

This review was based on the premise that any changes to the premium structure along with the risk metrics would be revenue neutral to the fund. As a result, the Working Group asked Promontory to construct several premium models and make recommendations with respect to the premium categories, premium structures and risk metrics. In addition, the Working Group was provided with an independent assessment of its proposals against the evaluation criteria selected at the beginning of the project.

Promontory made the following recommendations:

Area	Recommendation
Premium Categories	Keep the number of premium categories at four
Premium Structure	Use a “hockey stick” premium structure that is slightly flatter than the 2016 historical premium structure to compensate for changes to the risk metric structure that moves credit unions to higher risk categories
Risk Indicators	Use at least eight risk indicators
Risk Categories	Use categories instead of a line when distinguishing credit unions by risk

EVALUATION AGAINST WORKING GROUP AND IADI CRITERIA

Promontory also provided the Working Group with the following comments with respect to the evaluation of the proposed approach against the criteria established:

Working Group Criteria	Evaluation	
Fairness	Using a small number of premium categories means that credit unions with similar risk profiles will pay the same premium per dollar of deposit.	✓
Affordability	Using a “hockey stick” premium structure means that no credit union will pay a premium that is significantly higher than the average credit union, except if that credit union has a high risk	✓

Working Group Criteria	Evaluation	
	score.	
Competitiveness	Using at least eight metrics means that small changes in the risk score for a single metric will not produce a big change in premiums per dollar of deposit.	✓
Incentives	Using a “hockey stick” premium structure means that premiums per dollar of deposit will rise significantly when a credit union’s risk score moves into the high risk range.	✓
Predictability	The methodology allows that changes in premiums for next year can depend only on indicators that are under the control of the credit union in the current year.	✓
Simplicity	The methodology has two basic components and therefore will be easy to understand and apply.	✓

IADI Criteria	Evaluation	
Incentives to avoid excessive risk taking	A strong incentive to avoid excessive risk because substantial premium differentiation occurs when moving to the highest risk category.	✓
A fair premium assessment process	Strong fairness because premium differentiation is moderate for all risk categories except where risk taking is high.	✓
Evaluate available options	A broad range of options were evaluated using a model-based approach.	✓
Differentiate banks by risk category	Strong differentiation of risk categories with multiple risk metrics from each category.	✓
Use a variety of information	A wide variety of information based on quantitative and qualitative metrics.	✓
Be forward looking	Multiple forward looking metrics that signal the probability of failure as well as expected loss upon failure.	✓

IADI Criteria	Evaluation	
Accepted by industry and supervisors	A robust process of industry consultation that includes the participation of supervisory staff.	✓
Necessary authority, available resources, quality information	The deposit insurer should have the necessary authority, available resources, and quality of information to implement the methodology.	✓

Working Group

Organization	Name
North Peace Savings	Don McMillian
First Credit Union	Alan Fougere
Coast Capital Savings	David Gaskin
East Kootenay CU	Alan Fillis
Kootenay Savings CU	Ron Johnston
Gulf and Fraser CU	Ron Lee
Central 1	David Finnie
Central 1	Emily McCance
Integrus CU	Lorne Calder
Interior Savings	Trevor Tremblay
Coastal Community Credit Union	Barbara Coe
Westminster Savings Credit Union	Mary Falconer
Salmon Arm Savings CU	Jennifer Black
Sunshine Coast CU	Dawn Bezaire
FICOM	Stanley Chang
FICOM	Sharon Fernando
FICOM	Caitlyn Sue
FICOM	Sarah Curtis
Working Group Chair/Contractor	Andy Poprawa
Promontory PLC/Technical Support	Jack Selody

CUDIC Assessment Working Group Proposed Methodology

Calculation Manual

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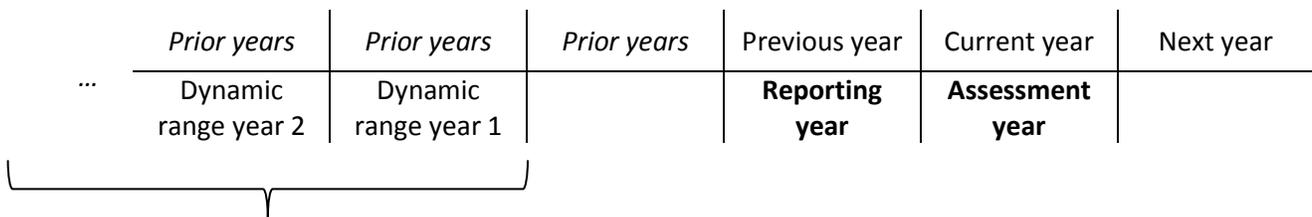
COMPARISON OF ASSESSMENT METHODOLOGIES

	Current		Proposed		Working Group	
Quantitative Risk Metrics						
Capital	Capital Adequacy Ratio	10	Capital Adequacy Ratio	10	Capital Adequacy Ratio	20
	Retained Earnings to Risk Weighted Assets	10	Retained Earnings to Risk Weighted Assets	10	Leverage Ratio	10
			Risk Weighted Assets to Total Assets	10		
	Total Capital Score	20	Total Capital Score	30	Total Capital Score	30
Assets/ Asset Quality	Non-performing Loans to Total Loans	7.5	Non-performing Loans to Total Loans	5	Non-performing Loans to Total Loans	10
			Asset Growth	5		
			Commercial Loans and Leases to Capital	5		
			Encumbered Assets to Capital	5		
	Total Assets Score	7.5	Total Assets Score	20	Total Assets Score	10
Earnings	Net Operating Income to Average Assets	5	Operating Income (excl. Assessments) to Average Assets	5	Net Operating Income (excl. Assessments) to Average Assets	5
	Operating Income excluding Subsidiary Income to Average Assets	5	Net Income to Average Assets	5	Net Operating Income Volatility to Average Total Deposits	5
	Net Income to Average Assets	5				
	Total Earnings Score	15	Total Earnings Score	10	Total Earnings Score	10
Liquidity & Funding	Borrowings to Capital	7.5	Current Ratio	5	Liquidity Coverage Ratio	10
			Agent and Wholesale Deposits to Total Deposits	5		
	Total Liquidity Score	7.5	Total Liquidity Score	10	Total Liquidity Score	10
	Total Quantitative Score	50	Total Quantitative Score	70	Total Quantitative Score	60
Qualitative Risk Metrics						
Qualitative Metric(s)	Composite Risk Rating (CRR) and Intervention Stage (IS)	50	Lower of CRR and IS	30	Lower of CRR and IS	40
	Total Qualitative Score	50	Total Qualitative Score	30	Total Qualitative Score	40
			Gross Score	100		
			Adjustment	+3		
	Total Score	100	Total Score	100	Total Score	100

SCORING TIMELINE

For a given **assessment year**, a credit union will be assessed based on data from their Financial and Statistical Returns of the prior fiscal year, or their **reporting year**. Dynamic ranges will be constructed based on a consecutive five-year period. In order to provide predictability of ranges, a two-year lag from the reporting year will be applied to the dynamic range (three-year lag from the assessment year). In other words, the dynamic range will begin two years prior to the reporting year, and consist of five consecutive years of data.

Example: Given an assessment year of 2018, the reporting year will be 2017 and the dynamic range will begin in 2015 to 2011 (five consecutive years).



five year dynamic range, beginning two years prior to the *reporting year* (or three years before the *assessment year*)

RISK METRICS

Quantitative Risk Metrics

Capital	1. Capital Adequacy Ratio	C1
	2. Leverage Ratio	C2
Assets	1. Non-performing Loans to Total Loans	A1
Earnings	1. Net Operating Income (excluding CUDIC Assessments) to Average Assets	E1
	2. Net Operating Income Volatility to Average Total Deposits	E2
Liquidity & Funding	1. Liquidity Coverage Ratio (LCR)	L1

Qualitative Risk Metric

Qualitative risk metrics are based on the Composite Risk Rating and Intervention Stage Ratings:

Composite Risk Rating
Low
Moderate
Above Average
High

Intervention Stage Rating
0 – Normal
1 – Early Warning
2 – Risk to financial viability or solvency
3 – Future financial viability in serious doubt
4 – Non-viability/insolvency imminent

RISK METRICS SCORING

Scoring Range

The scoring range for the risk metrics (except capital adequacy which applies a fixed range) is determined based on the credit union system’s overall performance.

The range ceiling and floor is set at one standard deviation from the system simple average¹.

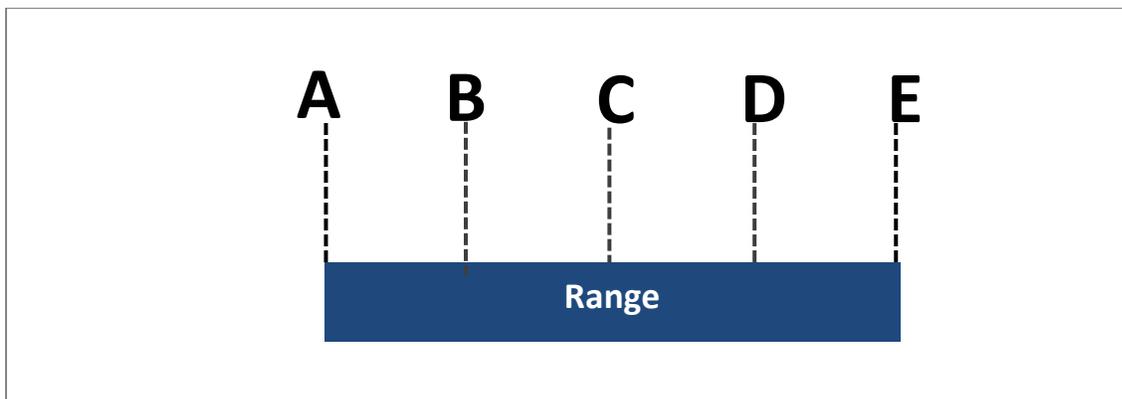
The dynamic range for a risk metric is set as shown in Figure 1 where:

A & E = One Standard deviation from the System Simple Average;

C = System Simple Average;

B = Mid-point between A and C;

D = Mid-point between C and E



The effective scoring range will be based on a five year simple average - ranges will be reviewed and adjusted in accordance with policy (to be developed at a later time).

¹ If the floor is negative, it is set at zero.

Each metric is based on a score of 5 points or a multiple of 5 points. In general credit unions are assigned one of six possible scores based on its own result (times the multiple if needed)²:
 Points are assigned to each risk metric as follows:

Points	(C1), (E1)	(C2), (A1), (E2), (L1), (L2)
0	< A	> E
1	≥ A	≤ E
2	≥ B	≤ D
3	≥ C	≤ C
4	≥ D	≤ B
5	≥ E	≤ A

² For C1 the points multiple is 4; C2 and A1 the points multiple is two; for all other metrics, the points multiple is one.

CAPITAL

Capital Adequacy Ratio

$\text{Capital Adequacy Ratio} = \frac{\text{Credit union capital base}}{\text{Risk Weighted Assets}}$																						
Credit union capital base	The aggregate amount of capital items as specified by the Capital Requirements Regulation and calculated in the Capital Adequacy Return Line 132*																					
Risk Weighted Assets	The aggregate amount of on-balance and off-balance sheet risk-weighted assets calculated as sum of Lines 246*, 310* and 315*																					
<p>Formula (per Capital Adequacy Return)</p> $\frac{\text{Line 900}^*}{\text{Line 901}^*}$																						
<p>The Capital Adequacy Ratio is the capital position confirmed in FICOM’s Annual Filing Requirements confirmation letter to credit unions.</p>																						
<p>Score</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th style="text-align: center;">Range³</th> <th style="text-align: center;">Points</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">≥ E</td> <td style="text-align: center;">≥ 13.0000</td> <td style="text-align: center;">20</td> </tr> <tr> <td style="text-align: center;">≥ D</td> <td style="text-align: center;">< 13.0000 and ≥ 11.7500</td> <td style="text-align: center;">16</td> </tr> <tr> <td style="text-align: center;">≥ C</td> <td style="text-align: center;">< 11.7500 and ≥ 10.5000</td> <td style="text-align: center;">12</td> </tr> <tr> <td style="text-align: center;">≥ B</td> <td style="text-align: center;">< 10.5000 and ≥ 9.2500</td> <td style="text-align: center;">8</td> </tr> <tr> <td style="text-align: center;">≥ A</td> <td style="text-align: center;">< 9.2500 and ≥ 8.0000</td> <td style="text-align: center;">4</td> </tr> <tr> <td style="text-align: center;">< A</td> <td style="text-align: center;">< 8.0000</td> <td style="text-align: center;">0</td> </tr> </tbody> </table>			Range ³	Points	≥ E	≥ 13.0000	20	≥ D	< 13.0000 and ≥ 11.7500	16	≥ C	< 11.7500 and ≥ 10.5000	12	≥ B	< 10.5000 and ≥ 9.2500	8	≥ A	< 9.2500 and ≥ 8.0000	4	< A	< 8.0000	0
	Range ³	Points																				
≥ E	≥ 13.0000	20																				
≥ D	< 13.0000 and ≥ 11.7500	16																				
≥ C	< 11.7500 and ≥ 10.5000	12																				
≥ B	< 10.5000 and ≥ 9.2500	8																				
≥ A	< 9.2500 and ≥ 8.0000	4																				
< A	< 8.0000	0																				

³ An absolute range based on the regulatory capital minimums are used in place of the dynamic range for this ratio

Leverage Ratio

Leverage Ratio	=	$\frac{\text{Total Assets} + \text{Risk-weighted Off-Balance Sheet Exposures}}{\text{Total Capital} - \text{Deductions to Capital}}$
Total Assets		Total of cash, investments, loans and leases and other assets at fiscal year-end
Risk-weighted Off-Balance Sheet Exposures		Off Balance Sheet Exposures refer to business not reported on the balance sheet of the credit union and includes items such as credit commitments, transaction-related contingencies and interest rate hedges.
Total Capital		Total primary and secondary capital
Deductions to Capital		Deductions from capital, as set out by the Capital Requirements Regulation, include Goodwill and Other Intangible Asset, Subsidiary and Other Equity Investments, Excess Investments in Prescribed Businesses, and Other.
Formula		
$\frac{\text{Line 1430} + \text{Line 4510}}{\text{Line 2310} - \text{Line 6340}}$		
Score		
	Range	Points
≤ A	≤ 12.3868	10
≤ B	> 12.3868 and ≤14.4705	8
≤ C	> 14.4705 and ≤16.5542	6
≤ D	> 16.5542 and ≤18.6378	4
≤ E	> 18.6378 and ≤20.7215	2
> E	> 20.7215	0

ASSET QUALITY

Non-performing loans to total loans

Non-Performing Loans to Total Loans	=	$\frac{\text{Delinquent loans 90 days or more - Total allowance} + \text{Property acquired in settlement of loans}}{\text{Total Loans}}$																					
Delinquent loans 90 days or more		The aggregate amount of personal and commercial loans and leases (including securitizations and lines of credit outstanding balances within authorized limits) in arrears 90 days or more – both principal and accrued interest.																					
Total allowance		General and specific allowances for impairment on personal and commercial loans, leases and securitizations.																					
Property acquired in settlement of loans		Property acquired in settlement of loans and leases and held for less than seven years, net of any allowance for property losses and accumulated depreciation/amortization.																					
Total loans		Gross commercial and personal loans, leases and securitizations.																					
Formula $\frac{(4120+4130+4140+4160+4170+4180+4200+4210+4220) + (4240+4250+4260+4280+4290+4300+4320+4330+4340) + (1300 + 1310 + 1350)}{(1150+1160+1170) + (1180+1187+1190) + 1200 + (1210+1220+1230+1240)+ (1250+1257+1260) + (1270+1280) + (1287+1288+1289)}$																							
Score <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th style="text-align: center;">Range</th> <th style="text-align: center;">Points</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">≤ A</td> <td style="text-align: center;">≤ 0.0000</td> <td style="text-align: center;">10</td> </tr> <tr> <td style="text-align: center;">≤ B</td> <td style="text-align: center;">> 0.0000 and ≤ 0.0020</td> <td style="text-align: center;">8</td> </tr> <tr> <td style="text-align: center;">≤ C</td> <td style="text-align: center;">> 0.0020 and ≤ 0.0040</td> <td style="text-align: center;">6</td> </tr> <tr> <td style="text-align: center;">≤ D</td> <td style="text-align: center;">> 0.0040 and ≤ 0.0080</td> <td style="text-align: center;">4</td> </tr> <tr> <td style="text-align: center;">≤ E</td> <td style="text-align: center;">> 0.0080 and ≤ 0.0120</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="text-align: center;">> E</td> <td style="text-align: center;">> 0.0120</td> <td style="text-align: center;">0</td> </tr> </tbody> </table>				Range	Points	≤ A	≤ 0.0000	10	≤ B	> 0.0000 and ≤ 0.0020	8	≤ C	> 0.0020 and ≤ 0.0040	6	≤ D	> 0.0040 and ≤ 0.0080	4	≤ E	> 0.0080 and ≤ 0.0120	2	> E	> 0.0120	0
	Range	Points																					
≤ A	≤ 0.0000	10																					
≤ B	> 0.0000 and ≤ 0.0020	8																					
≤ C	> 0.0020 and ≤ 0.0040	6																					
≤ D	> 0.0040 and ≤ 0.0080	4																					
≤ E	> 0.0080 and ≤ 0.0120	2																					
> E	> 0.0120	0																					

EARNINGS

Net Operating Income (excluding CUDIC Expense) to Average Assets

<p>Net Operating Income (excl. CUDIC Assessments) to Average Assets</p>	<p>=</p>	$\frac{\text{Net Operating Income (Loss) + CUDIC Assessment}}{\text{Average Assets}}$																					
Net Operating Income (Loss)		Income including income from subsidiary and other equity investment earnings.																					
CUDIC Assessment		CUDIC Premium Assessment paid in the reporting year is added back to Net Operating Income.																					
Average Assets		Thirteen-month average of Total Assets, beginning with total assets value as of prior fiscal year-end to current fiscal year.																					
<p>Formula</p> $\frac{\text{Line 3440 + CUDIC Assessment}}{(\text{Line 1430}_{\text{Month1}} + \text{Line 1430}_{\text{Month2}} \dots + \text{Line 1430}_{\text{Month13}}) / 13}$																							
<p>Score</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th style="text-align: center;">Range</th> <th style="text-align: center;">Points</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">≥ E</td> <td style="text-align: center;">≥ 0.0076</td> <td style="text-align: center;">5</td> </tr> <tr> <td style="text-align: center;">≥ D</td> <td style="text-align: center;">< 0.0076 and ≥ 0.0060</td> <td style="text-align: center;">4</td> </tr> <tr> <td style="text-align: center;">≥ C</td> <td style="text-align: center;">< 0.0060 and ≥ 0.0044</td> <td style="text-align: center;">3</td> </tr> <tr> <td style="text-align: center;">≥ B</td> <td style="text-align: center;">< 0.0044 and ≥ 0.0027</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="text-align: center;">≥ A</td> <td style="text-align: center;">< 0.0027 and ≥ 0.0011</td> <td style="text-align: center;">1</td> </tr> <tr> <td style="text-align: center;">< A</td> <td style="text-align: center;">< 0.0011</td> <td style="text-align: center;">0</td> </tr> </tbody> </table>				Range	Points	≥ E	≥ 0.0076	5	≥ D	< 0.0076 and ≥ 0.0060	4	≥ C	< 0.0060 and ≥ 0.0044	3	≥ B	< 0.0044 and ≥ 0.0027	2	≥ A	< 0.0027 and ≥ 0.0011	1	< A	< 0.0011	0
	Range	Points																					
≥ E	≥ 0.0076	5																					
≥ D	< 0.0076 and ≥ 0.0060	4																					
≥ C	< 0.0060 and ≥ 0.0044	3																					
≥ B	< 0.0044 and ≥ 0.0027	2																					
≥ A	< 0.0027 and ≥ 0.0011	1																					
< A	< 0.0011	0																					

Net Operating Income Volatility to Total Deposits

$\text{Net Operating Income Volatility to Deposits} = \frac{\text{Standard deviation of net operating income (loss)}}{\text{Average Total Deposits}}$	
Net Operating Income	Income including income from subsidiary and other equity investment earnings.
Average Net Operating Income	The average of net operating income over the last 10 fiscal years
Standard Deviation of Net Operating Income	Variation of each year's net operating income relative to the 10 year average
Average Total Deposits	The average of total deposits over the last 10 fiscal years
<p>Formula</p> $\frac{1. \quad \text{Standard deviation of net operating income (loss)}}{2. \quad \text{Average Total Deposits}}$	
<p>1. Standard deviation of net operating income (loss)</p> <p>Determine the standard deviation of net operating income (loss) using the following formula:</p> $\frac{\sqrt{((N1 - \bar{N})^2 + (N2 - \bar{N})^2 + (N3 - \bar{N})^2 + (N4 - \bar{N})^2 + (N5 - \bar{N})^2 + (N6 - \bar{N})^2 + (N7 - \bar{N})^2 + (N8 - \bar{N})^2 + (N9 - \bar{N})^2 + (N10 - \bar{N})^2)}}{n - 1}$	
<p>Where</p> <p>N1 to N10 denotes the net operating income (loss) for each of the last 10 fiscal years (Line 3440)</p> <p>\bar{N} denotes the average net operating income (loss) of each of the last 10 fiscal years (see 1.1 Average net operating income)</p> <p>n is equal to 10</p>	
<p>1.1. Average net operating income (\bar{N})</p> <p>Determine the average net operating income (loss) using the formula:</p> $\bar{N} = \frac{N1 + N2 + N3 + N4 + N5 + N6 + N7 + N8 + N9 + N10}{n}$	

N1	Net Operating Income or Loss from audited financial statements for the reporting fiscal year
N2	Net Operating Income or Loss from audited financial statements for the fiscal year preceding the fiscal year referred to in N1
N3	Net Operating Income or Loss from audited financial statements for the fiscal year preceding the fiscal year referred to in N2
N4	Net Operating Income or Loss from audited financial statements for the fiscal year preceding the fiscal year referred to in N3
N5	Net Operating Income or Loss from audited financial statements for the fiscal year preceding the fiscal year referred to in N4
N6	Net Operating Income or Loss from audited financial statements for the fiscal year preceding the fiscal year referred to in N5
N7	Net Operating Income or Loss from audited financial statements for the fiscal year preceding the fiscal year referred to in N6
N8	Net Operating Income or Loss from audited financial statements for the fiscal year preceding the fiscal year referred to in N7
N9	Net Operating Income or Loss from audited financial statements for the fiscal year preceding the fiscal year referred to in N8
N10	Net Operating Income or Loss from audited financial statements for the fiscal year preceding the fiscal year referred to in N9
<i>n</i>	is equal to 10

2. Average total deposits (\bar{D})

$$\bar{D} = \frac{D1 + D2 + D3 + D4 + D5 + D6 + D7 + D8 + D9 + D10}{n}$$

D1 to D10 denotes the total deposits for each of the last 10 fiscal years (Line 2180), where:

D1	Total Deposits from audited financial statements for reporting fiscal year
D2	Total Deposits from audited financial statements for the fiscal year preceding the fiscal year referred to in D1
D3	Total Deposits from audited financial statements for the fiscal year preceding the fiscal year referred to in D2
D4	Total Deposits from audited financial statements for the fiscal year preceding the fiscal year referred to in D3

D5	Total Deposits from audited financial statements for the fiscal year preceding the fiscal year referred to in D4
D6	Total Deposits from audited financial statements for the fiscal year preceding the fiscal year referred to in D5
D7	Total Deposits from audited financial statements for the fiscal year preceding the fiscal year referred to in D6
D8	Total Deposits from audited financial statements for the fiscal year preceding the fiscal year referred to in D7
D9	Total Deposits from audited financial statements for the fiscal year preceding the fiscal year referred to in D8
D10	Total Deposits from audited financial statements for the fiscal year preceding the fiscal year referred to in D9
<i>n</i>	is equal to 10

Score

	Range	Points
≤ A	≤ 0.0007	5
≤ B	> 0.0007 and ≤ 0.0013	4
≤ C	> 0.0013 and ≤ 0.0020	3
≤ D	> 0.0020 and ≤ 0.0027	2
≤ E	> 0.0027 and ≤ 0.0033	1
> E	> 0.0033	0

LIQUIDITY

Liquidity Coverage Ratio (LCR)

<p>Liquidity Coverage Ratio =</p> $\frac{\text{Stock of Unencumbered Quality Liquid Assets}}{\text{Total Net Cash Outflows Over the Next 30 Calendar Days}}$																	
<p>Stock of Unencumbered Quality Liquid Assets</p>	<p>Level 1 + Level 2A + Level 2B – Adjustment for 40% Cap – Adjustment for 15% Cap (Refer to B.C. Liquidity Coverage Ratio Reporting Guide)</p>																
<p>Total Net Cash Outflows Over the Next 30 Calendar Days</p>	<p>Total expected cash outflows – Min(total expected cash inflow, 75% of total expected cash outflows) (Refer to B.C. Liquidity Coverage Ratio Reporting Guide)</p>																
<p>Formula</p> <p style="text-align: center;">To be determined when LCR is implemented and LCR data points are incorporated into the Financial and Statistical Reporting</p>																	
<p>Score</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th style="text-align: center;">Range</th> <th style="text-align: center;">Points</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">≥ E</td> <td rowspan="7" style="text-align: center;">To be established when LCR is implemented</td> <td style="text-align: center;">10</td> </tr> <tr> <td style="text-align: center;">≥ D</td> <td style="text-align: center;">8</td> </tr> <tr> <td style="text-align: center;">≥ C</td> <td style="text-align: center;">6</td> </tr> <tr> <td style="text-align: center;">≥ B</td> <td style="text-align: center;">4</td> </tr> <tr> <td style="text-align: center;">≥ A</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="text-align: center;">< A</td> <td style="text-align: center;">0</td> </tr> </tbody> </table>			Range	Points	≥ E	To be established when LCR is implemented	10	≥ D	8	≥ C	6	≥ B	4	≥ A	2	< A	0
	Range	Points															
≥ E	To be established when LCR is implemented	10															
≥ D		8															
≥ C		6															
≥ B		4															
≥ A		2															
< A		0															

QUALITATIVE RISK METRICS

FICOM Supervisory Risk Assessment

Supervisory Risk Assessment = Lower of the Composite Risk Rating and Intervention Stage Rating Score																							
Composite Risk Rating (CRR)	<p>Assessment rating under FICOM’s Supervisory Framework, of a credit union’s risk profile, after considering the assessments of its earnings and capital in relation to the overall net risk from its significant activities, and the assessment of its liquidity. The CRR is FICOM’s assessment of the safety and soundness of the credit union with respect to its depositors.</p> <p>CRR are:</p> <ul style="list-style-type: none"> • Low • Moderate • Above Average • High 																						
Intervention Stage Rating (ISR)	<p>Rating of the level and intensity of supervisory actions taken by FICOM based on a credit union’s risk assessment determined by the CRR</p> <p>ISR are:</p> <ul style="list-style-type: none"> • 0 – Normal • 1 – Early Warning • 2 – Risk to financial viability or solvency • 3 – Future financial viability in serious doubt • 4 – Non-viability/insolvency imminent 																						
<p>Score</p> <p><u>Lower of the CRR and IS Score:</u></p> <p>Composite Risk Rating:</p> <table border="1"> <thead> <tr> <th>CRR</th> <th>Points</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>40</td> </tr> <tr> <td>Moderate</td> <td>35</td> </tr> <tr> <td>Above Average</td> <td>20</td> </tr> <tr> <td>High</td> <td>0</td> </tr> </tbody> </table> <p>Intervention Stage Rating:</p> <table border="1"> <thead> <tr> <th>ISR</th> <th>Points</th> </tr> </thead> <tbody> <tr> <td>0 – Normal</td> <td>40</td> </tr> <tr> <td>1 – Early Warning</td> <td>35</td> </tr> <tr> <td>2 – Risk to financial viability or solvency</td> <td>15</td> </tr> <tr> <td>3 – Future financial viability in serious doubt</td> <td>0</td> </tr> <tr> <td>4 – Non-viability/insolvency imminent</td> <td>0</td> </tr> </tbody> </table>		CRR	Points	Low	40	Moderate	35	Above Average	20	High	0	ISR	Points	0 – Normal	40	1 – Early Warning	35	2 – Risk to financial viability or solvency	15	3 – Future financial viability in serious doubt	0	4 – Non-viability/insolvency imminent	0
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Appendix 1: Scoring Ranges

The following risk scoring ranges have been calculated for the 2018 Assessment Year (using 2017 Reporting Year financial results):

Quantitative Risk Metrics		Scoring Ranges	Points	
Capital				
C1: Capital Adequacy Ratio	A	< 8.0000	0	
	B	≥ 8.0000 and < 9.2500	4	
	C	≥ 9.2500 and < 10.5000	8	
	D	≥ 10.5000 and < 11.7500	12	
	E	≥ 11.7500 and < 13.0000	16	
C2: Leverage Ratio	A	≥ 13.0000	20	
	B	≤ 12.3868	10	
	C	> 12.3868 and ≤ 14.4705	8	
	D	> 14.4705 and ≤ 16.5542	6	
	E	> 16.5542 and ≤ 18.6378	4	
Assets	A	> 18.6378 and ≤ 20.7215	2	
	B	> 20.7215	0	
	A	≤ 0.0000	10	
	B	> 0.0000 and ≤ 0.0020	8	
	C	> 0.0020 and ≤ 0.0040	6	
A1: Non-performing Loans to Total Loans	D	> 0.0040 and ≤ 0.0080	4	
	E	> 0.0080 and ≤ 0.0120	2	
	A	> 0.0120	0	
	Earnings			
	E1: Net Operating Income (excl. Assessments) to Average Assets	A	< 0.0011	0
B		≥ 0.0011 and < 0.0027	1	
C		≥ 0.0027 and < 0.0044	2	
D		≥ 0.0044 and < 0.0060	3	
E		≥ 0.0060 and < 0.0076	4	
E2: Net Operating Income Volatility over Total Deposits	A	≥ 0.0076	5	
	B	≤ 0.0007	5	
	C	> 0.0007 and ≤ 0.0013	4	
	D	> 0.0013 and ≤ 0.0020	3	
	E	> 0.0020 and ≤ 0.0027	2	
		> 0.0027 and ≤ 0.0033	1	
		> 0.0033	0	

Quantitative Risk Metrics		Scoring Ranges	Points
Liquidity			
L1: Liquidity Coverage Ratio	A	To be established when LCR is implemented	0
	B		2
	C		4
	D		6
	E		8
			10
Qualitative Risk Metric			
Supervisory Risk Assessment			
Lower of Composite Risk Rating (CRR) and Intervention Stage Rating (ISR)	CRR	Low Moderate Above Average High	40 35 20 0
	ISR	0-Normal 1-Early Warning 2- Risk to financial viability or solvency 3 – Future financial viability in serious doubt 4 – Non-viability/insolvency imminent	40 35 15 0 0

Proposed Premium Methodology: Summary of Comments of Second Consultation

TOPIC	CREDIT UNION COMMENTS	WORKING GROUP RESPONSE
Dynamic Range	Use of a simple average and standard deviation do not adequately set range boundaries and BC credit unions do not form a normal distribution.	Considered but not recommended. The research conducted indicates that the dynamic range concept provides a reasonable relative measure and is superior to an average 10 year range currently used.
	The dynamic range disproportionately favours behaviours and business outcomes of smaller-sized credit unions, has the long term impact of reverting everyone to the mean. It should be limited to only the earnings metric and include a weighted average.	Considered but not recommended. The dynamic range does not necessarily favour any particular size of credit union. With the proposed methodology the bias against size of credit union is diminished.
	The dynamic range penalizes credit unions that happen to be “worst of a good lot”.	The dynamic range provides an incentive to lower premiums to those with better performance metrics.
	Replace the dynamic range in favour of absolute ranges formed by a working group of CUDIC and system experts.	Considered but not recommended. This suggestion would require annual rebalancing and is not efficient.
	Averaging out system performance and measuring a credit union’s performance against the mean performance will not effectively accomplish primary objectives of a differential premium system, which is	The proposed premium rate structure will assist in providing incentives to all credit unions to move away from excessive risk taking and will lead to a fairer

TOPIC	CREDIT UNION COMMENTS	WORKING GROUP RESPONSE
	to provide incentives to avoid excessive risk taking and introduce fairness into the premiums assessment process.	assessment system.
	Very technical and extremely difficult to calculate.	CUDIC undertakes to provide all the necessary analysis to reduce the burden on credit unions.
Holistic Adjustment	Agrees with intention of helping smaller- sized CU's by giving greater credence to excess capital – recommend that FICOM provide even greater flexibility and provide more credit to CU's with sufficient capital.	Considered but not recommended. It is recommended that the adjustment for excess capital is to be eliminated as a new range for capital is established to provide more differentiation.
Capital	Remove the risk weighted assets to total assets metric and increase the scoring on the capital adequacy ratio and retained earnings to risk weighted assets to 15 points each.	Risk weighted assets to total assets metric removed and replaced by the leverage ratio.
	Not in favour of the introduction of the risk weighted assets to total assets metric, as it would overly-penalize credit union business lending, which are already considered in the assets category.	As above.
	Credit unions scoring below the norm should be given an opportunity to gain bonus points for having comprehensive capital, a capital contingency plan, and an appropriate ICAAP document.	Considered but not recommended. The proposed system provides an incentive to improve performance and condition metrics.
Liquidity	Replace Current Ratio and Agent- and- Wholesale deposits ratios with <u>FIA regulatory liquidity ratios with</u>	Agreed and so recommended.

TOPIC	CREDIT UNION COMMENTS	WORKING GROUP RESPONSE
	<p><u>absolute thresholds</u> until the Basel III liquidity metrics are introduced by FICOM.</p>	
	<p>Agent and Wholesale deposits metric discourages diversification, incenting credit unions to rely on alternative sources of funding which may result in more risk-taking. MUSH accounts are very predictable sources of funding and pose less risk relative to other types of deposits.</p>	<p>Agreed – wholesale deposits metric removed however agent deposits retained as it is recognized that these may be less stable sources of funding.</p>
	<p>Deposits originating from wholesalers vs. agents should not be combined.</p>	<p>Agreed.</p>
	<p>Exclude term deposit relationships greater than one year from the Wholesale and Agent deposit ratios as these funds are considered more stable than the short-term wholesale deposit market</p>	<p>Considered but not recommended. Interesting concept however data collection and validation could be a challenge.</p>
	<p>Recommend future implementation of Basel III liquidity metrics (LCR, NCCF, and NSFR)</p>	<p>Agreed and so recommended.</p>
<p>Assets</p>	<p>Non-performing loans to total loans metric should be retained</p>	<p>Agreed and so recommended.</p>
	<p>The asset growth ratio penalizes larger credit unions operating in larger active growth markets, relative to smaller credit unions. Using a simple average lowers mean of growth, penalizing credit unions with higher growth with no clear link to risk.</p>	<p>Agreed and so recommended.</p>
	<p>Fails to incent prudent behaviour that supports a sustainable economy and reduce risk – unintended consequence is restricting growth to the benefit of banks, or forcing growth in a region</p>	<p>Agreed and so recommended.</p>

TOPIC	CREDIT UNION COMMENTS	WORKING GROUP RESPONSE
	that does not warrant it.	
	Should high vs low growth be considered equal in magnitude and therefore create a symmetrical range?	Agreed and so recommended.
	Commercial lending activity should not be considered as excessive risk taking and should not be discouraged by the methodology. The methodology would also limit lending to SME's, going against provincial public policy. Example: Credit union average commercial loan growth is on par with average deposit growth at 0.63% which indicates stability, and 90-day delinquency was on average 0.60% from June 2015 to July 2016, which is extremely low.	Agreed and so recommended.
	Eliminate the commercial loans metric and consider using percentage limits on loan portfolios and measuring diversification measures. There is no evidence participation in this profitable market (commercial loans) represents risk to the deposit insurance fund.	Agreed and so recommended.
	Eliminate the commercial loans and leases to capital metric in favour of a <u>commercial loan concentration</u> metric or one that is more specific and reflects true risk to credit union's portfolio	Agreed and so recommended.
	Consider the <u>real estate asset concentration ratio</u> to emphasize appropriate risk diversification	Considered but not recommended.

TOPIC	CREDIT UNION COMMENTS	WORKING GROUP RESPONSE
	Consider the three- year moving average asset growth using 15% to 40% thresholds	Considered but not recommended.
	Eliminate the encumbered assets to capital metric as it penalizes credit unions for diversifying funding sources; this is contradictory to liquidity practices by FICOM which encourage holding multiple funding sources. Securitization also supports competition in the mortgage market by providing funding to small lenders, which have fewer alternative funding sources.	Considered but not recommended. Recommendation to replace this metric with LCR once implemented by FICOM.
Earnings	Inclusion of subsidiary income and excluding assessments from earnings	Considered but not recommended. The earnings metric redefined.
	Consider the <u>mean adjusted net income volatility ratio</u> given differences between CU's income streams, cost structures, and economies of scales compared to a federal bank. Low earnings or high earnings are not in and of themselves risky; rather opinions of rating agencies suggest it is erratic earnings that could be reflective of higher risks. Credit unions recommend a working group be established to set an appropriate absolute range for these two metrics	Considered but not recommended.
Qualitative	Removal of business model bias – the approach disadvantages large-sized credit unions without regard to risk management practices or behaviours	Agreed and so recommended.
	Due to lack of transparency of qualitative ratings, a 3-point buffer	Considered but not recommended.

TOPIC	CREDIT UNION COMMENTS	WORKING GROUP RESPONSE
	should be implemented to the qualitative portion of the methodology	
Qualitative vs. Quantitative Weighting	Adopt a qualitative-quantitative weighting of 40-60, similar to CDIC	Agreed and so recommended.
	A credit union experiencing difficulties is often charged higher assessments, adding additional burden. If a credit union remains under a specific target score for a prolonged period of time, increased monitoring and supervision is more suitable than a higher assessment.	Agreed and so recommended.
Other	There are too many new metrics adding unnecessary complexity to the process. The new methodology limits business strategies and contributes to significant expenses in order to manage scores.	Agreed and so recommended. The number of metrics reduced to 8.
	Complete the methodology by the end of the calendar year, and allow for later implementation (2018) of proposed methodology for CU's to appropriately develop and integrate new risk measures into financial planning and business processes	Agreed and so recommended.
	Methodology should be more aligned with international best practices, with specific attention to CDIC's quantitative metrics	Agreed and so recommended.
	Address the diversity of BC credit unions with respect to business complexity, risk management practices, size, and geographic differences	Agreed and so recommended.
	Form a diverse working group that would work collaboratively to develop	Agreed. Working Group formed and

TOPIC	CREDIT UNION COMMENTS	WORKING GROUP RESPONSE
	appropriate absolute ranges for metrics	provided recommendations.
	Each credit union should be charged the same base rate as is consistent with cooperative systems in Alberta and Saskatchewan. The proposed metrics does not differentiate or relate to risk compared to older metrics and feel a yearly snap shot can be misleading.	Considered but not recommended. The recommended metrics provide a sound basis for differentiating risk.