PRUDENTIAL STANDARDS

Internal Capital Adequacy Assessment Process (ICAAP)

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INTRODUCTION

Pursuant to Part XIII of *The Credit Union Central of Saskatchewan Act, 2016* (the Act), Credit Union Deposit Guarantee Corporation (the Corporation) may make Prudential Standards that apply to SaskCentral. The Prudential Standard (Standard) contained herein must be adhered to by SaskCentral.

This Standard outlines the Corporation's expectations with respect to SaskCentral's internal capital adequacy assessment process (ICAAP) as described in Part 3 of the Basel II Framework.[1]

The Corporation's Capital Adequacy Requirements Standard establishes minimum standards for regulatory capital based on the borrowing multiple.

The Corporation's supervisory review process evaluates the inherent risk within each significant activity undertaken by SaskCentral and then evaluates the quality of the risk management applied to mitigate these risks. The Corporation's assessment of SaskCentral's ICAAP supplements its independent assessment of inherent risk and risk management, and can result in fine-tuning of these assessments.

STATEMENT OF REGULATORY PRINCIPLES

As minimum regulatory capital requirements contain restrictive or simplifying assumptions, SaskCentral should not rely only on compliance with regulatory minimums when conducting its own assessment of the adequacy of its capital.

A thorough and comprehensive ICAAP is a vital component of a strong risk management program. The ICAAP should produce a level of capital adequate to support the nature and level of SaskCentral's risk. SaskCentral is responsible for developing and implementing its own ICAAP for the purpose of setting internal capital targets and developing strategies for achieving those internal targets that are consistent with its business plans, risk profile and operating environment.

From the Corporation's perspective, ICAAPs provide additional information that can aid in assessing inherent risks, risk management techniques, and may point to the need for additional supervisory activities as part of the normal course Supervisory Review Process. While the Corporation makes use of information gleaned from SaskCentral's ICAAP to assess the quality of risk management and the adequacy of capital levels, the Corporation does not approve SaskCentral's ICAAP.

SCOPE OF THE ICAAP

The Corporation expects SaskCentral to put into place an ICAAP that covers the consolidated operations of SaskCentral, including all members of the SaskCentral group.[2] The consolidated approach means that a formal ICAAP is not required at every legal entity below SaskCentral.

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[1] International Convergence of Capital Measurement and Capital Standards: a Revised Framework, issued by the Basel Committee on Banking Supervision, June 2006

[2] The "SaskCentral group" is defined as SaskCentral and its subsidiaries.

EXPECTATIONS FOR SASKCENTRAL'S ICAAP

A rigorous ICAAP has six main components:

I. Board and senior management oversight
II. Sound capital assessment and planning
III. Comprehensive assessment of risks
IV. Stress testing
V. Monitoring and reporting
VI. Internal control review

While these fundamental features of ICAAP are broadly prescribed, there is no single 'correct' approach, and one approach does not fit all institutions. SaskCentral's ICAAP should be as simple or complex as needed, and should reflect how it is managed and organized in practice. It should not be established solely to fulfill a regulatory requirement.

The extent of formalization and sophistication of SaskCentral's ICAAP will depend on its complexity, range of business activities, risk profile, and operating environment.

I. BOARD AND SENIOR MANAGEMENT OVERSIGHT

The board of directors is responsible for overseeing, and senior management is responsible for designing and implementing SaskCentral's ICAAP. In order to perform an effective assessment of its capital adequacy, SaskCentral should have in place a sound risk management process. Management should understand the nature and level of risk taken by SaskCentral and how this risk relates to adequate levels of capital. Management should also ensure that the formality and sophistication of the risk management processes are appropriate for the risk profile and business plan of SaskCentral.

As part of the strategic planning process, SaskCentral should perform an analysis of its current and future capital requirements in relation to its strategic objectives. The strategic plan should clearly describe SaskCentral's capital needs in relation to, among other things, anticipated balance sheet growth and acquisitions, board approved risk tolerance and access to capital. Senior management and the board should view capital planning as a crucial element in SaskCentral's ability to achieve its desired strategic objectives.

SaskCentral's board of directors has responsibility for setting the institution's tolerance for risk. It should ensure that management:

i. establishes detailed policies that set institution-wide controls on SaskCentral's activities that are consistent with its risk-taking capacity and appetite
ii. effectively communicates these policies throughout SaskCentral
iii. establishes a framework for assessing the various risks
iv. develops a system to relate risk to SaskCentral's capital level as part of its internal assessment of capital adequacy
v. establishes strong internal controls and a method for monitoring compliance with internal policies

II. SOUND CAPITAL ASSESSMENT AND PLANNING

A sound capital assessment process should include the following elements:

i. A clear and documented process for evaluating risks and determining whether or not a risk should result in an explicit amount of capital being held[3]
ii. Policies and procedures designed to ensure that SaskCentral identifies, measures and reports all material risks requiring capital
iii. A process that relates capital to current and anticipated future levels of risk in accordance with board approved risk tolerance
iv. A process that states capital adequacy goals with respect to risk, taking account of SaskCentral's strategic focus and business plan
v. A process of internal controls, reviews and audits to ensure the integrity of the overall risk management process

SaskCentral should consider several factors in relating capital to the level of risk, for example:

i. A comparison of its own capital levels with regulatory standards and with those of industry peers
ii. Its current and desired credit agency ratings
iii. Potential severe adverse events, based on historical experiences, either of SaskCentral itself or the markets in which SaskCentral conducts business, as well as non-historical scenarios
iv. Planned changes in SaskCentral's business or strategic plans, identified changes in its operating environment, and consequential changes in its risk profile

SaskCentral may also use risk modeling techniques and integrated scenario analyses to estimate the risks that it may incorporate into the overall assessment of capital adequacy. Quantifiable estimates of risk used in this assessment should also have a business use (i.e., should not be made solely for use in ICAAP) and should be subject to validation. As economic capital (EC) models were designed as a relative measure of risk to be used for performance measurement and pricing, the assumptions underlying these models typically hold under normal conditions and not under the stressed conditions considered in ICAAP. Although EC models provide useful inputs to ICAAP, EC is not a substitute for ICAAP.

In evaluating the adequacy of capital relative to risk and in making decisions on the appropriate level and structure of capital, SaskCentral may rely on well documented, qualitative considerations. Qualitative considerations may include implicit or explicit regulatory expectations, peer analysis, and the results of forward-looking stress tests and sensitivity analyses of the components of risks that should be covered by capital. For risks that cannot be directly quantified (e.g., reputational risk), SaskCentral may use well documented, qualitative considerations.

An effective capital planning process requires SaskCentral to assess both the risks to which it is exposed and the risk management processes in place to manage and mitigate those risks; evaluate its capital adequacy relative to its risks; and consider the potential impact on earnings and capital from potential economic downturns. SaskCentral should identify the time horizon over which it is assessing capital adequacy. It should evaluate whether long-run capital targets are consistent with short-run goals, based on current and planned

[3] Not all risks can be directly quantified and capitalized. Material risks, including those that are difficult to quantify in an ICAAP framework, should be mitigated by internal controls and contingency plans.

changes in risk profile and the recognition that accommodating additional capital needs can require significant lead time. Capital planning should factor in the potential difficulties of increasing capital during downturns or other times of stress.

III. COMPREHENSIVE ASSESSMENT OF RISKS

The ICAAP should address all material risks faced by SaskCentral as they relate to the adequacy of capital. The techniques used in assessing material risks should be commensurate with the scope and complexity of SaskCentral's risk taking activities.

Credit Risk

SaskCentral should have methodologies that enable it to assess the credit risk involved in individual exposures and at the portfolio level. The credit review assessment of capital adequacy should cover the following as appropriate:

i. Risk rating systems
ii. Portfolio analysis/aggregation
iii. Large exposures and risk concentrations
iv. Complex structured instruments (where relevant)

The credit risk review assessment of capital adequacy should cover the following areas as appropriate:

- historical loss experience
- forecast and past economic conditions
- attributes specific to borrowers of SaskCentral
- other characteristics directly affecting the collectability of loans

Risk Concentrations

The impact of risk concentrations should be reflected in SaskCentral's ICAAP. Typical situations in which risk concentrations can arise include exposures to:

- a single counterparty, borrower or group of connected counterparties or borrowers
- industry or economic sectors, including exposures to both regulated and nonregulated financial institutions such as hedge funds and private equity firms
- geographical regions
- similar collateral types or to a single or closely related credit protection provider, and other exposures arising from credit risk mitigation techniques
- trading exposures/market risk

Risk concentrations can also arise through a combination of exposures across these broad categories. SaskCentral should have an understanding of its firm-wide credit risk concentrations resulting from similar exposures across its different business lines.

SaskCentral may also incur a concentration to a particular asset type indirectly through investments backed by such assets (e.g., collateralized debt obligations – CDOs), as well as through collateral or guarantees used to mitigate credit risk. Institutions that place more reliance on collateral values than on an evaluation of a borrower's or counterparty's capacity to perform may see themselves exposed to unexpected market risk in addition to wrong way risk[4], particularly where the value of the collateral declines.

SaskCentral should have in place adequate, systematic procedures for identifying high correlation between the creditworthiness of a protection provider or collateral and the obligors of the underlying exposures due to its performance being dependent on common factors beyond systemic risk (i.e. “wrong way risk”).

Risk Diversification

SaskCentral should exercise caution when including risk diversification benefits in ICAAP. Assumptions on diversification are often based on expert judgement and are difficult to validate. SaskCentral should be conservative in its assessment of diversification benefits, in particular between different classes of risk, and should consider whether such benefits exist under stressed conditions.

Operational Risk

Similar rigour should be applied to the management of operational risk as is done for the management of other significant risks. The failure to properly manage operational risk can result in a misstatement of SaskCentral’s risk/return profile and expose it to significant losses.

SaskCentral should refer to the Corporation’s Operational Risk Management Standard which describes a set of principles for managing operational risk.

Market Risk

SaskCentral should have methodologies that enable it to assess and actively manage all material market risks, wherever they arise (i.e., position, trading desk, business line or firm-level).

The assessment of internal capital adequacy for market risk may be based on both value-at-risk (VaR) or similar modelling and stress testing, including an assessment of concentration risk and the assessment of illiquidity under stressful market scenarios.

Interest Rate Risk in the Banking Book

The ICAAP should include all material interest rate risk positions of SaskCentral and consider all relevant repricing and maturity data. The system should have well-documented assumptions and techniques. SaskCentral should be able to support its assumptions about the behavioural characteristics of non-maturity deposits and other assets and liabilities, especially those exposures characterized by embedded optionality. Given uncertainty in such assumptions, stress testing and scenario analysis should be used in the analysis of interest rate risks.

In general, an increase in uncertainty related to modeling and business complexity should result in more capital being held.

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[4] **General Wrong-Way Risk** arises when the probability of default of counterparties is positively correlated with general market risk factors.

Specific Wrong-Way Risk arises when the exposure to a particular counterparty is positively correlated with the probability of default of the counterparty due to the nature of the transactions with the counterparty.

SaskCentral should refer to the supporting Basel Committee document Principles for the Management and Supervision of Interest Rate Risk for further considerations relevant to the measurement of interest rate risk.

Liquidity Risk

Liquidity is vital to the ongoing viability of SaskCentral. SaskCentral's capital position can have an effect on its ability to obtain liquidity, especially in a crisis. Whereas, SaskCentral is not expected to separately capitalize its liquidity risk, the stress scenarios for target capital planning and liquidity risk management should be complementary. SaskCentral should refer to the Corporation's Liquidity Principles Standard, and the supporting Basel Committee document Principles for Sound Liquidity Risk Management and Supervision.[5]

Other Risks

Although risks such as strategic and reputation risk are not easily measurable, SaskCentral is expected to develop techniques for managing all aspects of these risks. Reputation risk is a key issue for an industry that relies on the confidence of consumers, creditors and the general marketplace. For example, when SaskCentral acts as an advisor, arranges or actively participates in financial transactions, it may assume market, credit, and operational risks. Reputation risk often arises because of inadequate management of these other risks, whether they are associated with direct or indirect involvement in the sale or origination of complex financial transactions or relatively routine operational activities.

Reputational risk can lead to the provision of implicit support, which may give rise to credit, liquidity, market and legal risk – all of which can have a negative impact on SaskCentral's earnings, liquidity and capital position. SaskCentral should identify potential sources of reputational risk to which it is exposed. This includes SaskCentral's business lines, liabilities, affiliated operations, off-balance sheet vehicles and markets in which it operates. The risks that arise should be incorporated into SaskCentral's risk management process and appropriately addressed in its ICAAP and liquidity contingency plans.

SaskCentral should refer to the industry notice OSFI's Review of Reputation Risk Practices: Principles, Observations and Next Steps for a further discussion of reputation risk.

IV. STRESS TESTING

Stress testing is a risk management technique used to evaluate the potential effects on an institution's financial condition, of a set of specified changes in risk factors, corresponding to exceptional but plausible events[6]. SaskCentral's capital planning process should incorporate rigorous, forward-looking stress testing that identifies possible events or changes in market conditions that could adversely impact it. In its ICAAP, SaskCentral should examine future capital resources and capital requirements under adverse scenarios. The results of forward-looking stress testing should be considered when evaluating the adequacy of SaskCentral's capital.

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[5] See also the Basel Committee's January 2010 paper, International framework for liquidity risk measurement, standards and monitoring. This document provides additional liquidity guidance which should also be considered.

[6] Stress Testing at major financial institutions: survey results and practice, Committee on the Global Financial System, January 2005.

For further guidance on stress testing expectations, SaskCentral should refer to the Corporation's Stress Testing Standard.

V. MONITORING AND REPORTING

SaskCentral should establish an adequate system for monitoring and reporting risk exposures and assessing how changes to its risk profile affects the need for capital. SaskCentral's senior management and board of directors should receive regular reports on SaskCentral's risk profile and capital needs. These reports should allow senior management to:

- evaluate the level and trend of material risks and their effect on capital levels
- evaluate the sensitivity and reasonableness of assumptions used in the capital assessment measurement system
- determine that SaskCentral holds sufficient capital against the various risks and is in compliance with established capital adequacy goals
- assess the future capital requirements based on SaskCentral's reported risk profile and make necessary adjustments to its strategic plan accordingly

VI. INTERNAL CONTROL REVIEW

SaskCentral's internal control structure is essential to the capital assessment process. Effective control of the capital assessment process includes an independent review and, where appropriate, the involvement of internal and external audits. SaskCentral's board of directors has a responsibility to ensure that management establishes a system for assessing the various risks, develops a system to relate risk to SaskCentral's capital level, and establishes a method for monitoring compliance with internal policies. The board should regularly verify whether its system of internal controls is adequate to ensure the well-ordered and prudent conduct of business.

SaskCentral should conduct periodic reviews of its risk management process to ensure its integrity, accuracy, and reasonableness. Areas that should be reviewed include:

- appropriateness of SaskCentral's capital assessment process, given the nature, scope and complexity of its activities
- identification of large exposures and risk concentrations
- accuracy and completeness of data inputs into SaskCentral's assessment process
- reasonableness and validity of scenarios used in the assessment process
- stress testing and analysis of assumptions and inputs

INTERACTION OF ICAAP WITH SUPERVISORY REVIEW

The Corporation assesses capital adequacy at two levels. SaskCentral must have sufficient capital to meet its target regulatory requirements (regulatory capital), as well as sufficient capital to support its risk profile, (i.e., its Inherent Risks and Overall Net Risk (ONR)) as determined through the Corporation's Supervisory Framework.

The Corporation's risk assessment process begins with an evaluation of the inherent risk within each significant activity of SaskCentral. The Corporation then examines the quality of risk management applied to mitigate these risks. Considering this information, the Corporation arrives at an assessment of both the level of net risk of the significant activity and the direction of the net risk, i.e., whether it is decreasing, stable or increasing. Then, taking into account the materiality of each of the significant activities, the Corporation arrives at an overall net risk rating and its direction.

The Corporation then develops a composite risk rating (and direction) for SaskCentral, taking into account both our assessment of the overall net risk (which includes an assessment of the adequacy of risk management processes) and our assessment of financial factors, such as capital, liquidity and earnings. Capital can be assessed as “strong”, “acceptable”, “needs improvement” or “weak”.

The depth and frequency of supervisory review of SaskCentral’s ICAAP will be proportional to the nature, scale and complexity of its activities, and the risks posed to the Corporation’s supervisory objectives with respect to the safety and soundness of SaskCentral.

The dialogue between, on the one hand, the Corporation’s assessment of inherent risk and ONR, and SaskCentral’s ICAAP on the other, will embrace the following three elements:

- Element 1: The level of conservatism in internal estimates of the risks
- Element 2: The extent that material risks are fully captured by SaskCentral (e.g. have credit risks been fully captured, has SaskCentral fully considered all aspects of reputation risk, or underestimated strategic risks)
- Element 3: External factors, where not already considered in the previous points, including stress testing, impact of economic cycles and other external risks and factors

The Corporation expects that capital assessment will not become a formula-driven process of add-ons. Expert judgement will continue to be necessary to operationalize the assessment and quantification of risk and integrate those results into the overall assessment of capital. Initially, this assessment will likely include measures of outliers for risk concentrations and outliers for interest rate risk in the book of business.

Once capital rating criteria are more fully developed and experience is gained from a reasonable period of implementation, the supervisory assessment of the internal target capital could indicate that SaskCentral’s target is too conservative or not conservative enough. This would lead to discussions with SaskCentral about a more appropriate level of capital within the target capital framework.