

NCUA

CAPITAL PLANNING & STRESS TESTING

Final Rule Guidance

National Credit Union Administration
Office of National Examinations and Supervision



Table of Contents

- OVERVIEW..... 2
 - Introduction 2
 - Principles of Capital Policy and Capital Planning 2
 - Principle 1: Sound Risk Management Fundamentals..... 2
 - Principle 2: Effective Capital Policy and Governance..... 2
 - Principle 3: Comprehensive Capital Planning and Analysis 2
 - Sound Risk Management Fundamentals 3
- CAPITAL POLICY AND GOVERNANCE 4
 - Effective Capital Policy and Governance 4
 - Capital Policy 4
 - Board of Directors..... 4
 - Senior Management 5
 - Minimum Capital Levels..... 6
 - Capital Contingency Plans..... 6
- CAPITAL PLANNING AND ANALYSIS 7
 - Comprehensive Capital Planning and Analysis 7
 - Quarterly Assessment of Capital Levels..... 7
 - Expected and Unfavorable Scenarios 8
 - Capital Adequacy Assessment Process 9
 - Mandatory Elements of Capital Analysis 9
 - Sensitivity Testing 9
 - Reverse Stress Testing 10
 - Interconnected Risk – Credit and Interest Rate Risk 10
- ANNUAL SUPERVISORY STRESS TESTING 12
 - Introduction 12
 - Data Expectations 12
 - Data Sources 12
 - Historical Data..... 12
 - Data Segmentation 12
 - Balance Sheet Information 13
 - Data Templates 13

OVERVIEW

This document provides guidance to assist the application and implementation of NCUA final rule Part 702 Capital Planning and Stress Testing. The document addresses the following subjects:

1. Capital Policy and Governance;
2. Capital Planning and Analysis; and
3. Annual Supervisory Stress Testing.

Introduction

Capital is central to a credit union's ability to absorb unexpected losses and to continue to lend to creditworthy consumers. Capital serves as the first line of defense against losses, protecting the National Credit Union Share Insurance Fund (NCUSIF). As such, the processes of a covered credit union for managing and allocating its capital resources are critical not only to its individual health and performance, but also to the stability and effective management of the NCUSIF.¹ NCUA's Capital Planning and Stress Testing Rule emphasizes the importance that the NCUA Board places on a credit union's capital policy and governance, internal capital planning processes, and on the supervisory assessment of all aspects of these processes. The rule is a key element of NCUA's supervisory program to promote safety and soundness at the largest credit unions.

Principles of Capital Policy and Capital Planning

NCUA applies three principles to capital policy and capital planning.

Principle 1: Sound Risk Management Fundamentals

A covered credit union should have safe and sound risk-management policies and processes that support the identification, measurement, assessment, and control of all material risks to a credit union's capital arising from its risk exposures and business activities.

Principle 2: Effective Capital Policy and Governance

A covered credit union should have effective board and senior management oversight of the capital planning process governed by a capital policy approved by the credit union's board of directors. The capital policy should state the credit union's capital goals and limits and specify essential standards and actions to ensure the capital adequacy of the credit union.

Principle 3: Comprehensive Capital Planning and Analysis

A covered credit union should have strong capital planning processes and practices for establishing capital goals, determining appropriate capital levels, making decisions about capital actions, and maintaining capital contingency plans in accordance with policy.

¹ *Covered credit union* means a federally insured credit union whose assets were \$10 billion or more on March 31 of the current calendar year.

Sound Risk Management Fundamentals

A covered credit union is expected to have effective processes to manage risks to its capital and to protect capital at all times including when conditions are unfavorable. Weaknesses in this area may contribute to a negative supervisory assessment of a credit union capital planning process, which may lead NCUA to object to and/or to reject a credit union's capital plan.

A covered credit union should comprehensively identify business activities and associated risk exposures across the organization, and combine this with effective techniques for assessing how these may impact capital, including under stressful economic and market conditions. A safe and sound capital adequacy process relies on the underlying strength of each of these elements.

Covered credit unions should have risk identification processes that ensure that all risks are appropriately taken into account when assessing capital needs. These processes should evaluate the full set of potential exposures stemming from a credit union's lines of business and activities, including those that are conditional on changing economic and financial market conditions during periods of stress. A credit union should have a systematic and repeatable process to identify all risks and consider the potential impact to capital from these risks. A credit union should monitor trends over time and be able to assess these, and apply them in a forward-looking assessment of capital needs.

Strong risk identification practices require processes through which senior management regularly updates risk assessments, reviews risk exposures and considers how these exposures might evolve in the course of business, as well as under stressful situations. Consideration of the risks inherent in new products and activities should be a key part of risk-identification and risk-assessment programs.

A covered credit union should consider risks associated with any change in the credit union's strategic direction, and risk measures should be able to capture changes in a credit union's risk profile. These risk measures should support the credit union's assessments of capital adequacy and capital contingency plans.

CAPITAL POLICY AND GOVERNANCE

Effective Capital Policy and Governance

Covered credit unions should have strong board and senior management oversight of capital planning processes as articulated in a capital policy that is approved annually by the credit union board. This includes ensuring that there is comprehensive review of all credit union processes supporting internal capital planning. Together, a credit union's board and senior management should establish a comprehensive capital planning process that supports the credit union's risk management processes, business model, and strategic direction.

Capital Policy

A capital policy states the principles and guidelines used by a credit union for capital planning. A capital policy should include internal capital goals, strategies for addressing potential capital shortfalls, and internal governance procedures around capital policy principles and guidelines. The capital policy must be approved by the credit union's board of directors or a designated committee of the board. It should be a distinct, comprehensive written document that addresses the major components of the credit union's capital planning processes and links to and is supported by other policies (e.g. asset liability management, credit risk management policies, concentration risk, and audit policies).

A capital policy should provide details on how a credit union manages, monitors, and makes decisions regarding all aspects of capital planning. The policy should also address roles and responsibilities of decision-makers, process and data controls, and validation standards. The capital policy should explicitly lay out how any capital analysis results that are prepared for the board and senior management will be used.

The capital policy must be reevaluated and revised no less than annually to address changes to organizational structure, governance structure, business strategy, capital goals, regulatory environment, risk appetite, and other factors potentially affecting a credit union's capital adequacy.

Board of Directors

A covered credit union's board of directors has ultimate oversight responsibility and accountability for capital planning and should be in a position to make informed decisions on capital adequacy and capital actions. The board of directors should receive sufficient information to understand the credit union's material risks and exposures and to inform and support its decisions on capital adequacy and planning.

The information provided to the board should include sufficient details on capital analysis used for the credit union's capital planning so that the board can evaluate the appropriateness of the analysis, given the current economic outlook and the credit union's current risk profile, business activities, and strategic direction. The information should include a discussion of key limitations, and uncertainties within the capital planning process, so the board is fully informed of any limitations in the process and can effectively challenge reported results before making capital decisions. The board should be advised of any actions planned to remedy processes that

are in need of enhancement. The board should be fully informed of any material assumptions and key drivers of risk used in capital planning analysis, as well as the effect of these assumptions and drivers on any analytical results.

The board of directors, or designated committee of the board, is required to approve a covered credit union's capital plan. In order for a board to carry out this requirement, management should provide adequate reporting on key areas of the analysis supporting capital plans. Reports should be prepared for the board at least quarterly and more frequently when conditions merit. Credit unions should include information on the impact of key assumptions to the sensitivity of capital.

Senior Management

Senior management is responsible for ensuring that capital planning activities authorized by the board are implemented in a satisfactory manner, and is accountable to the board for the effectiveness of those activities. Senior management should ensure that capital planning analysis is sufficiently robust and fully demonstrates the impact of unfavorable circumstances which may confront the credit union. Senior management should also ensure effective controls are in place to maintain the integrity of the capital planning process.

Senior management should be fully informed of the credit union's capital planning process. Senior management also should ensure that this process has sufficient analytical support. Senior management should identify weaknesses and potential limitations in the capital planning process and develop remediation plans for any weaknesses that may affect the reliability of internal capital planning results. Specific identified limitations and remediation plans to correct any deficiencies should be reported to the board.

A covered credit union's internal control framework should address its entire capital planning process, including the risk measurement and management systems used to produce reports to management and the board. The control framework also should help assure that all aspects of the process function as intended in support of robust assessments of capital needs.

Internal audit should play a key role in evaluating internal capital planning and its various components. Internal audit should perform a review of the full process, and not just of the individual components. Periodic internal audit review should ensure that the entire end-to-end process is functioning in accordance with supervisory expectations and with the credit union's board of directors' expectations. Internal audit should review the manner in which deficiencies are identified, tracked, and remediated. Internal audit staff should have the appropriate competence and influence to identify and escalate key issues, and should report regularly on the status of all aspects of the capital planning process—including any identified deficiencies related to the credit union's capital plan—to senior management and the board of directors.

Covered credit unions should document decisions about capital adequacy, and capital actions taken by the board of directors and senior management, and describe the information used to reach those decisions. Final decisions regarding capital planning of the board or its designated committee should be recorded and retained in accordance with the credit union's policies and procedures.

Minimum Capital Levels

A covered credit union's capital policy must include goals and limits for the level of capital and provide clarity about the credit union's objectives in managing its capital position. The policy should explain how the credit union's capital planning practices align with the objective of maintaining a strong capital position and continuing to operate through periods of severe stress.

Covered credit unions should establish capital goals aligned with their risk appetites and risk profiles, under both current and unfavorable conditions. Internal capital goals should be sufficient to allow a credit union to continue its operations during and after the impact of stressful conditions. As such, capital goals should be mindful of current regulatory capital requirements even under unfavorable conditions. Required capital targets should take into consideration forward-looking elements related to the economic outlook, the credit union's financial condition, the potential impact of stress events, and the uncertainty inherent in the capital planning process. Minimum capital requirements should be specified in the capital policy and reviewed and approved by the board.

Capital Contingency Plans

Covered credit unions should ensure that capital contingency plans are elevated for approval by the board of directors. The credit union board should recognize the key role of contingency plans to protect credit union capital against insolvency. The board should outline in the capital policy specific capital contingency actions it would consider to remedy any current or prospective deficiencies in their capital position. In particular, a credit union's policy should consider the circumstances in which the credit union will take actions to reduce risk or to raise capital. The capital contingency plan should be reviewed and updated as conditions warrant such as where there are material changes to the credit union's financial condition.

Contingency plans should identify events and circumstances that present a need for corrective actions by the credit union to protect capital against insolvency. For example, to decrease risk exposure under an unfavorable scenario, a contingency plan may enumerate strategies such as to modify asset growth, or identify assets that may be liquidated. To raise capital, a credit union may increase its earnings retention rate, for example by adjusting dividends paid to members.

Contingency actions should be flexible enough to work in a variety of situations and be realistic for what is achievable during periods of stress. The capital plan should be prepared recognizing that certain risk reduction or capital-raising activities may not be feasible or effective during periods of stress. Contingency actions should be ranked according to ease of execution.

CAPITAL PLANNING AND ANALYSIS

Comprehensive Capital Planning and Analysis

A covered credit union should have strong capital planning processes and practices for establishing capital goals, determining appropriate capital levels, making decisions about capital actions, and maintaining capital contingency plans in accordance with policy.

NCUA's final rule states as follows:

702.504 Capital planning. (a) Annual capital planning. (1) A covered credit union must develop and maintain a capital plan and submit this plan to NCUA each year by February 28, or such later date as directed by NCUA. The plan must be based on the credit union's financial data as of September 30 of the previous calendar year. NCUA will assess whether the capital planning and analysis process is sufficiently robust in determining whether to accept a credit union's capital plan.

Quarterly Assessment of Capital Levels

A covered credit union's capital plan must include estimates of projected revenues, expenses, losses, reserves, and pro forma capital levels, over the planning horizon.

Projections of cash flows under various scenarios provide the building blocks of the pro forma financial analysis supporting the credit union's capital analysis. Credit unions should ensure that estimates of pro forma capital are reasonable based on the expected and unfavorable conditions analyzed by the credit union. Credit unions should understand any uncertainties around their estimates, including the sensitivity of capital to changes in inputs and key assumptions. Estimates of pro forma capital should be supported by empirical evidence wherever possible, and the entire estimation process should be transparent and repeatable. Changes in cash flows from credit losses, or changes in interest income and expense, should rely on quantitative methods as the basis for their estimates wherever possible.

Covered credit unions should carefully evaluate quantitative approaches, the granularity and length of available time series of data, and the materiality of a given portfolio or activity. Analysis should be performed at a sufficiently granular level to capture observed variations in risk characteristics and performance across the portfolio segments and across time, and account for changing exposure or portfolio characteristics over the planning horizon.

Credit unions should segment instruments based on common credit risk or interest rate risk characteristics that exhibit meaningful differences in historical performance. The granularity of analysis typically depends on the type, size, and composition of the credit union's portfolio. Credit unions should separately estimate changes in cash flows for portfolios or business lines that are sensitive to different risk drivers. These differences, leading either to credit losses or to changes in net interest income, can become more pronounced under unfavorable conditions, and this should be reflected in the analysis. Credit unions should incorporate their business plan into their assessment of capital levels in a manner that reasonably reflects the strategic objectives of the credit union.

Any qualitative approaches should be clearly documented so that an external reviewer can follow the logic and evaluate the reasonableness of the outcomes. Use of management judgment to adjust modeled estimates should trigger review and discussion as to the need for improvement in the form of quantitative alternatives.

Expected and Unfavorable Scenarios

A covered credit union's scenario design process should involve developing scenarios that affect the credit union as a whole, stemming from macroeconomic and financial market conditions, and should include potential credit union specific events. Assumptions of risk drivers should remain constant across the credit union and risk areas for the chosen scenario, since the objective is to see how the credit union as a whole will be affected by a common and internally consistent scenario. A credit union should consider the best manner in which to capture combinations of unfavorable events and circumstances, including effects that may result from the specific economic and financial environment or any potential credit union specific events.

The credit union's expected scenario should reflect its view of the expected path of the economy over the planning horizon. A credit union may use the NCUA baseline, adverse, and severely adverse scenarios if the board and senior management believe these appropriately represent the credit union's outlook. However, any analysis by the credit union should be based on a coherent, logical narrative of economic and financial market conditions and credit union specific events. These narratives should detail key events and circumstances that occur in the scenario. Analysis should consider why certain events and circumstances may occur and in which combination and order. Examples of events and circumstances include but are not limited to: a severe recession, a sudden change in interest rates brought on by inflation, loss of a significant portion of the field of membership, localized economic downturn, or the effects of stagnation on member activity. Along with the narrative, the credit union must provide quarterly trajectories of key macroeconomic, financial, and credit union specific variables for its expected and unfavorable scenarios.

Given the uncertainty inherent in a forward-looking capital planning exercise, credit unions should apply generally conservative assumptions throughout the capital planning process to ensure appropriate tests of the credit union's resilience to unfavorable conditions. Care should be taken not to make assumptions that relationships during benign environments will hold during unfavorable times, or that estimating such relationships is relatively straight forward. For example, linear relationships between risk drivers and losses, or balances and interest rate behavior may become nonlinear under unfavorable conditions.

A credit union's stress scenarios should describe an unfavorable combination of circumstances designed with the credit union's particular vulnerabilities in mind. The stress scenarios should be designed to stress factors that affect all of the credit union's material exposures and activities. For example, if a credit union is concentrated in residential mortgage lending, it is appropriate to explore the impact of a downturn in this market segment with geographic concentrations. In addition to considering vulnerabilities, the forward-looking analysis should be relevant to the direction and strategy set by the credit union's board of directors.

Analysis conducted by the credit union should consider contingent events that may run counter to strategic initiatives, and anticipate the impact of these on the strategic, business and capital plans of the credit union. Other relevant factors to consider also include reputational, legal and compliance risks to the credit union.

Capital Adequacy Assessment Process

The quarterly assessment of capital levels and the evaluation of expected and unfavorable scenarios are key components of a credit union's capital adequacy assessment process. In addition, the credit union should have a robust and well-defined procedure for identifying risks to the credit union's capital plan, for stating and describing ranges of outcomes, for setting triggers for actions with escalations as appropriate and for initiating any contingency plans to address unfavorable outcomes. It is the responsibility of senior management to ensure that the standards and expectations articulated in the guidance are applied and enforced.

Covered credit unions should clearly state the responsibility and accountability of each function in the overall capital adequacy assessment process. The role played by each function should be delineated to avoid overlap or lack of clarity in the assessment process. It should be clear both when each capital assessment function has performed its task, and when it has failed to do so.

Mandatory Elements of Capital Analysis

A covered credit union must discuss and support the following aspects of the credit union's capital adequacy:

- The credit union's ability to maintain capital commensurate with all of its risks under unfavorable conditions;
- How the credit union will maintain access to funding even under unfavorable conditions; and
- The impact of changes in the credit union's business plan on its capital adequacy and liquidity.

The credit union should discuss and document its viability to operate safely and independently during times of stress. At these times the preservation of capital and access to funds are critical challenges that the credit union may face. The board of directors and senior management should be able to determine and assert the safety and soundness of the credit union under these circumstances. If needed, the board and management must be able to make fundamental decisions to protect the viability of the credit union. These decisions should be informed by a full understanding of the factors involved, and supported by the conclusions of the capital analysis performed by the credit union.

Sensitivity Testing

A covered credit union must conduct sensitivity analysis of the impact on the credit union's capital of any variables, parameters and inputs used by the credit union in its capital planning. The credit union should apply this analysis using ranges of inputs to estimate the impact of key changes on capital. The credit union should also consider the mutual dependence of variables it uses to analyze capital and take second-order sensitivities into account.

For example, a credit union may consider both an increase in credit default rates, and a decrease in collateral values on credit losses in unfavorable scenarios, and establish the impact through sensitivity analysis of each of these elements acting at first individually and then in combination. The same process may be applied to interest rate variables. For example, changes in the level and slope of the yield curve can be considered separately and in conjunction, as can the propensity of credit union savings account holders to move into term share accounts as the level and slope of the yield curve changes.

Sensitivity analysis as specified by the rule focuses on the strength of a variable and its impact on capital. Therefore the credit union should apply sensitivity results to make clear the variables with the strongest impact on the credit union's capital. The credit union should understand any changes in these impacts over time, as the credit union makes any changes in its business model, in order to better inform its strategic objectives.

Reverse Stress Testing

Reverse stress testing is an important exercise that allows a credit union to assume a known adverse outcome, such as suffering a credit loss that breaches regulatory capital ratios or suffering severe liquidity constraints that render it unable to meet its obligations, and then to infer the types of events that could lead to such an outcome. Reverse stress testing requires a credit union to consider scenarios beyond its normal business expectations and anticipate the impact of unexpected events on the credit union. It also allows the credit union to challenge assumptions about its performance and any mitigation strategies it may ordinarily expect to employ.

Reverse stress testing enables a credit union to better focus on the possible events that could threaten its viability. Given the numerous potential threats, the credit union should focus first on those scenarios that have the largest impact, such as insolvency or illiquidity, and that seem most imminent given the current environment. The credit union should focus on the most prominent vulnerabilities to prioritize its choice of scenarios for reverse stress testing as well as exploring potential blind spots. The credit union should make a concerted effort as part of its capital analysis to highlight previously unacknowledged sources of risk that could be mitigated through enhanced risk management.

Interconnected Risk – Credit and Interest Rate Risk

As part of its capital analysis, a covered credit union is required to evaluate the combined effect of credit and interest rate risk. Taken together, these risks may threaten the credit union, even if in isolation each of the effects might be manageable. For instance, the impact of interest rate risk may be most pronounced at a time when interest rates are rising, and the value of fixed-rate instruments are impacted negatively. If this is followed by a downturn in which margins are squeezed by a flattening or inverted yield curve, and a rising level of unemployment creates a severe impact on credit losses, then the impact of these events occurring sequentially or simultaneously may be more severe for the credit union than each event taken independently.

It is important for the credit union to take the dynamic effects of compound events into account in evaluating its pro forma capital adequacy. This evaluation can start from a relative sensitivity analysis that is then enhanced by correlation or regression analysis. Regardless of the method, the purpose of the analysis is to inform credit union management of co-dependent relationships

between risk factors, which management should then use to refine and enhance the capital and strategic planning process.

DRAFT

ANNUAL SUPERVISORY STRESS TESTING

Introduction

NCUA supervisory stress testing will be conducted independently for the first three years they are run at a covered credit union. NCUA's independent test will measure the **capital adequacy** of covered credit unions in order to protect the NCUSIF. These stress tests are not for the purpose of evaluating credit union **capital planning processes**. After three years a covered credit union may request approval from NCUA to run its own stress tests. NCUA will issue additional guidance at a later date for credit union-run stress testing. The following guidance applies to independent stress testing run by NCUA.

Data Expectations

The covered credit union will conform to reasonable data collection standards in order to provide NCUA with all relevant qualitative and quantitative information to estimate losses, pre-provision net revenues, loan and lease loss provisions, and net income. NCUA has elected to use the services of an independent provider to perform stress tests and the NCUA Board has approved the procurement of these services.

NCUA has the following expectations for covered credit unions to provide information to its selected independent provider.

Data Sources

Covered credit unions are expected to have appropriate management information systems and data processes that enable them to collect, sort, aggregate, and update data and other information efficiently and reliably within business lines and across the credit union for use in stress tests. The data should be consistent across time. The covered credit union must store all data used for stress testing and maintain the data using adequate controls to ensure data integrity. Credit unions with limited internal data should develop specific strategies to improve the completeness of their data sources over time, and be able to state specific completion dates.

Historical Data

Covered credit unions must maintain historical data on all items material to NCUA stress tests. The data must include but may not be limited to credit union balances and funding, credit losses, interest rate risk management reports, non-interest income and expense, and profits and losses from credit union operations. NCUA may use this data to inform its stress tests. Each credit union must submit its historical data to NCUA in the first year it is subject to stress testing and as requested thereafter. In the absence of acceptable data from credit unions, NCUA may use proxy data or benchmark data at its discretion to augment missing information.

Data Segmentation

To account for differences in risk profiles across exposures and activities, covered credit unions must maintain data on their assets and liabilities based on their risk characteristics. Credit unions should maintain this data to allow NCUA to segment assets and liabilities as it needs to perform stress tests, based on the size and materiality. For example, NCUA may segment loan data by product, industry, loan size, credit quality, collateral type, vintage, maturity, debt service

coverage, or loan-to-value (LTV) ratios. NCUA may segment credit union data as necessary in its supervisory tests to capture material risks addressed in the stress testing.

Balance Sheet Information

A covered credit union will provide data for assets and liabilities for the “as of” date of the stress test. At its discretion NCUA may use static balance sheet assumptions for purposes of projections. Credit unions should maintain data for projected assets and liabilities based on the historical relationship between those balances and macro-economic variables. This stress data should be reasonable and should not materially differ from the credit union’s core business strategy and past experience. For example, a credit union may provide data to project certain components of the balance sheet based on originations, pay-downs, losses and prepayment behavior that reflects the relevant scenario and the maturity profile of the balance sheet instrument.

Data Templates

The covered credit union will submit data for stress testing in templates specified by NCUA’s independent provider.

DRAFT