National Credit Union Administration

Range of Practice – Capital Planning and Analysis in Response to the COVID-19 Pandemic

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Executive Summary

In 2014, the NCUA Board approved Part 702, Subpart E – Capital Planning and Stress Testing (the rule), for credit unions with total assets of $10 billion or more. After each annual capital planning and stress testing cycle, the Office of National Examinations and Supervision (ONES) publishes a range of practice (ROP) paper identifying leading and lagging practices observed through its review of capital plans. The ROP document enhances transparency and supports iterative improvement of credit union capital planning.

Prior year NCUA ROP documents chronicled the observed range of capital planning practices and opined on the relative strength of these practices. The unprecedented economic stress and uncertainty arising out of the COVID-19 pandemic, provided credit unions and the NCUA a unique opportunity to invoke, and evaluate, the strength and usefulness of covered credit union capital planning and assessment practices. Particularly, as those practices were applied to sudden and uncertain non-hypothetical disruptions to economic stability and business activities. Accordingly, this year's ROP document focuses on the use of capital planning and capital assessment tools in response to the pandemic and related disruptions.

In keeping with past NCUA guidance and white papers related to capital planning, we arranged observations in this paper in alignment with the NCUA's core principles of capital planning:

- sound risk management fundamentals,
- effective capital policy and governance, and
- comprehensive capital planning and analysis.

Sound Risk Management Fundamentals

As detailed in prior years' ROP analyses, the existence of a foundational risk management framework and practices are fundamental to support sound capital planning and analysis. Specifically, the external economic and operational stresses associated with the pandemic elevated the importance of model risk management and timely risk identification as key risk management fundamentals supporting and informing capital analysis during 2020.

Model Risk Management

The existence and use of a sound model risk management (MRM) framework supporting capital analysis is the stand-out risk oversight activity of the 2020 capital planning cycle. The uncertainty and severity of pandemic circumstances created unique challenges for financial models and capital analysis techniques, which deserved the attention of both front-line model developers/owners as well as independent second line model reviewers. Areas of MRM oversight that required additional attention related to pandemic related stress and responses included:

- Re-evaluation of Model Conceptual Design and Development Data
- Review and Critical Challenge of Model Approaches and Performance

Economic conditions at the outset of the pandemic produced employment related economic variables outside the span of historical data used to develop credit loss and capital adequacy models. Active and involved MRM functions assessed model suitability given current variable inputs and projected variable values used in forward looking risk assessment. These functions were more transparent in their assessments and communications regarding model suitability under the circumstances, and effectively identified or approved approaches to mitigate heightened model risk in capital analysis.

In response to the unique economic and public policy responses arising out of the pandemic, all credit unions in the analyses applied some form of management overlays to model output used for capital assessment. Leading MRM functions assessed the suitability and application of management overlays, and provided unfettered critical challenge to the approaches, which served to mitigate pandemic related model risk. Leading functions also conducted enhanced sensitivity analysis to understand where model outcomes may have demonstrated significant volatility and sensitivity to historically unprecedented economic conditions and governmental and institutional responses initiated during the pandemic. Sound MRM functions continuously assessed, challenged and opined on the sensitivity analysis in order to mitigate model risk and enhance transparency to stakeholders of the capital planning and analysis.

Lagging MRM functions provided less oversight, independent critical challenge and guidance to pandemic related model use and capital assessment. In some cases, MRM did not opine on model suitability or heightened model risk due to data outside the bounds of developmental data sets. These observations of lagging practice demonstrate less suitable model risk identification and support to produce sound and conservative capital assessment and planning.

Risk Identification and Assessment

Active enterprise risk identification and assessment is another enterprise function that supported sound pandemic capital assessment. Leading risk identification functions maintained current quantitative or qualitative risk assessments in the rapidly changing pandemic environment. Sound capital planning frameworks used these updated risk assessments to identify needs for contemporaneous capital management and/or to trigger frequency of refreshed capital assessments. Another strong practice is the use of non-traditional indicators of risk. This included looking for previously unseen correlations between environmental factors and member behaviors, which further informed growth, origination and loss forecasts used in the capital assessment.

Most credit union enterprise risk identification and assessment functions reassessed risk at least once during the period covered in the 2020 capital planning cycle at the onset of the pandemic. As the severity with which the pandemic progressed ebbed and flowed throughout the year, leading credit unions continually re-assessed both financial and operational risk indicators and updated risk assessments as well as strategic and capital plans. This more frequent and proactive approach to re-assessment aligns with the requirement of §702.503(b)(8) of the rule, which requires credit unions to update capital plans to ensure they remain current with changes in market conditions, credit union products and strategies, credit union risk exposures and activities, the credit union's established risk appetite, and industry practices.

Effective Capital Policies and Governance

Credit unions with well-established governance structures and risk cultures responded with more immediacy and effectiveness to the pandemic related uncertainties. Cultures stressing the importance of critical challenge and transparency demonstrated sound approaches to capital reassessment, which affected timely re-evaluation of strategic plans and capital contingency actions.

Leading credit unions had established capital policies with forward looking and actionable triggers enabling rapid response to pandemic conditions. For example, leading credit union policies required the board and management to invoke contingency actions given certain environmental changes or forward-looking capital analysis results produced by management. This proactive approach limited capital sensitivity to risk and, in some cases, established additional capital buffers to account for the ongoing uncertainty caused by the pandemic and associated public policy response.

Conversely, credit union policies relying on balance sheet positions to trigger capital actions required by policy reacted more slowly to pandemic conditions. This reactive policy approach left these credit unions more vulnerable at the onset of the pandemic. Going forward, reactive approaches will diminish the value of forward-looking assessments of potential capital needs as uncertainties related to the economy continue to evolve.

As noted above, critical review and challenge of policies, models, techniques and results are essential elements of sound governance and risk management fundamentals supporting the capital assessment and planning process. A governance culture, which fosters independent critical challenge:

- improves the reliability of analysis results,
- aids in an understanding of analytical limitations,
- identifies areas for improvement in the capital analysis framework, and
- ensures the use of capital analysis results are consistent with the framework's objectives.

Such reviews should provide coverage of all aspects of the capital analysis framework periodically and ensure regular maintenance and updates of the structure.

The pandemic provided a unique opportunity to observe the strength, consistency and efficiency of critical challenge of capital and strategic forecasts. The pandemic presented real time economic and organizational stresses requiring re-assessment and revision to capital assessment techniques, estimates and contingency actions. The ability of a credit union's governance framework to efficiently oversee and foster credible challenge of these revisions serves to strengthen the conservatism and transparency of the capital assessment process.

As noted in previous ONES' range of practice whitepapers, credit unions have used various approaches in establishing governing frameworks over capital planning to support critical challenges of approaches and estimates. Some institutions have developed independent risk management departments overseeing development and use of the capital analysis, while other accomplish this oversight through a committee-based approach. Our review of pandemic related capital assessments and actions found that culture open to effective challenge and transparency was critical regardless of the way the various challenge functions are geographically placed in the organizational chart. Credit unions which previously showed more evolved cultural acceptance of effective challenge or risk perspectives by and between lines of defense, demonstrated more consistent, transparent, and useful critical challenge. Observations of leading practice identified in this paper were often accompanied by strong independent critical challenge, which was effectively applied in all phases of oversight, support, production and use of the capital analysis.

Comprehensive Capital Analysis

Sound capital analysis is a crucial component of the capital planning process and is a critical element of risk management for credit unions. Capital analysis informs the board and senior management of the credit union's viability through uncertain times, helps establish enterprise risk appetites and associated risk limits, and provides an opportunity to assess strategic and business decisions on a forward-looking basis.

The fundamentals of capital analysis below are not new for credit unions. However, in this paper we are detailing the specific application of certain principles of sound capital analysis in terms of strength of practice observed when applied against the backdrop of adverse operating conditions, and uncertainty arising out of the pandemic. We acknowledge credit unions may approach and apply the principles in different ways, depending on the unique circumstances of each credit union as they responded to the immediate and sustained stress induced by the pandemic.

Specific fundamentals of sound capital analysis, and the strength with which they were deployed by credit unions in the face of the pandemic related stress are as follows:

- Scenario Design and Variable Selection
- Conservatism and Transparency of Approaches, Assumptions and Estimates
- Model Performance and Sensitivity Testing
- Integration and Use of the Analysis in Ongoing Risk and Strategic Planning

Scenario Design and Variable Selection

The COVID-19 pandemic emerged as a nationwide threat that elicited varying degrees of governmental response and personal behaviors. There is a large degree of uncertainty as to how the pandemic response and corresponding economic fallout will unfold. Credit unions will need to be responsive as national policy and economic responses to the pandemic continue to unfold; while at the same time, the regional and local impact affecting credit unions may be more or less pronounced. All credit unions generally relied upon pandemic related scenarios developed by outside parties. Many credit unions used these scenarios to augment previously produced capital analysis and compare the output to limits. Credit unions with strong capital analysis practices also incorporated regional or local adjustments to the pandemic scenarios, relevant to their own unique circumstance, to gain more insight into potential outcomes. Another strong approach observed was the use of enhanced sensitivity analysis to broaden strategic foresight due to unprecedented actions and uncertainties embedded within the scenarios.

Conservatism and Transparency of Approaches, Assumptions and Estimates

Due to elevated levels of uncertainty regarding the severity and duration of pandemic conditions, conservatism of approaches used in producing capital analysis during the pandemic was, and remains, essential to understand a broad array of potential outcomes. Applying conservatism within the capital analysis conducted does not mean the credit union must take a "the sky is falling" approach. Effective application of conservatism requires thorough and transparent vetting of data biases, analytical limitations, current and future polices pertaining to reporting and consumer compliance, and the potential impact, availability and unintended consequences of proposed mitigating actions.

Examples of frequently observed modeling and forecasting approaches lacking conservatism included:

- Loss forecasts not bifurcating the risk mitigating impact of management and/or government intervention embedded within developmental data foundational to various credit loss model designs, and
- Credit unions estimating the loss mitigating impact of management and/or government intervention through the use of a model overlay without adequate explanation, transparency and/or support.

The abundance of presumed risk mitigation actions embedded within the model development data, or the forecasting approaches themselves, led to residual risk perspectives for credit losses applied as opposed to an inherent risk perspective. In the cases observed, credit loss estimates were counterintuitive when compared to the severity of the economic stress applied. This was particularly evident when compared to prior year stress test and independent challenge model results. We also noted breakdowns in critical challenge with counterintuitive results as these results were not sufficiently vetted and questioned by internal reviewers of the model or by the reviews of the results of the capital analysis.

Conversely, leading approaches applied management intervention assumptions to capital analysis sparingly to ensure conservatism in the face of mounting uncertainty. Where adjustments and overlays were applied, leading credit unions' practices only applied these overlays in cases where high correlation between various loan types, borrower credit quality and the severity of the various econometric stress applied were identified and could be adequately supported and documented. Further, leading approaches evaluated, and presented, the impact of the forecast results on loss provisioning and capital adequacy independent of the impact of any proposed intervention strategies. The risk mitigating effect of governmental and/or management intervention strategies to assist members affected by the pandemic were then independently applied as adjustments or overlays to the model results. This approach provides users of the capital plan and assessment with both an inherent and residual risk perspective of capital adequacy as well as additional transparency on how estimates are derived. This approach also enhances the value and usefulness of the capital analysis as an ongoing risk management and strategic planning tool. Presenting the inherent and residual risk perspectives in a bifurcated manner provides the board and other decision makers with additional transparency into the loss forecasts utilized in the capital analysis. The bifurcated approach provides valuable information regarding the sensitivity of various loan types and characteristics to various stressors applied as well as separately identifying the estimated loss mitigating impact of intervention and contingency available for consideration.

Model Performance and Sensitivity Testing

Most all of the credit unions analyzed conduct model performance testing as part of initial model development prior to use for capital planning and analysis. Leading credit union MRM policies require periodic model performance testing annually or at any time model variables and coefficients are changed or underlying developmental data sets are refreshed or expanded.

It is important to test the performance of models used for capital analysis given the unprecedented impact of and response to the pandemic. Leading credit unions utilized performance testing to identify anomalies in model outcomes due to actual variable values outside of data sets used for model development. Leading credit unions reviewed model output for unintuitive results and used existing governance frameworks to vet adjustments and overlays. Lagging credit unions merely used pandemic scenarios, without sufficient performance and/or back testing to understand the reasonableness of results.

Governance frameworks at leading credit unions produced transparent, and well challenged and supported analytics to capital planning decision makers. Lagging approaches conducted the model performance testing within the front-line unit responsible for model oversight and use and documented the results in model documents that were not passed forward. This approach impaired transparency and reasonable critical challenge of the results brought to independent reviewers and/or higher-level board committees using the information for decision-making purposes.

While all credit unions conduct and present some form of sensitivity analysis as part of their annual capital assessment and plan, again, the range of practices observed varied widely. In selecting what type and degree of sensitivity analysis to conduct, MRM and capital planning committees in leading credit unions performed additional financial and model risk assessment to identify key model variables, coefficients and economic variables to test. This practice assisted in isolating models and modeling variables and assumptions having the most impact on forecast estimates affecting capital assessments.

Lagging credit unions merely applied sensitivity testing as additional stress tests by varying certain stress variables, such as interest rate shocks or changes in unemployment rates applied in the model. Other lagging approaches merely applied multipliers to loss forecasts without understanding the relative sensitivity of the forecasts in relation to the loss drivers themselves. These approaches disregard aspects of model conceptual design, inputs and assumptions and/or computational soundness that could breakdown when using the model for specific purposes.

Leading credit unions were also much more proactive in reviewing, interpreting, and using results of sensitivity analysis to inform strategic financial forecasts and capital assessments. ONES observed lagging approaches where meaningful sensitivity analysis was conducted and results of the analysis indicated significant limitations in the use of the model in the pandemic scenarios, but the results were not effectively vetted and communicated to users of the forecasts. This resulted in significant model limitations not being adequately communicated, vetted, or addressed, severely limiting the usefulness of the capital assessment completed. Conversely, leading credit unions utilized sensitivity analysis to better understand model risks and alternative outcomes in a very uncertain environment. Leading credit unions communicated a broad array of potential outcomes to decision makers along with recommendations for creation of various earnings and capital action triggers that could be used to invoke contingency responses to preserve capital if conditions worsened.

Integration and Use of the Analysis in Ongoing Risk Management and Strategic Planning

The pandemic provided NCUA unique insight into the state of maturity of credit unions' use of capital planning and analysis as a tool to inform ongoing strategic and risk management decisions.

A commonly observed lagging approach to capital assessment was to use scenario analysis, its deterministic path, and the resulting forecast as a prediction of future capital. If a limit is breached, management reacts by documenting potential mitigating actions. Pandemic related capital analysis incorporated into some 2020 capital plan submissions continued to demonstrate this reactive approach. This approach implies capital actions are merely stop-loss measures, which do not align with forward-looking strategic planning and risk management. This reduces the effective use of the capital analysis as a risk management tool.

Conversely, leading approaches to capital planning provide strategic foresight. Scenario analysis and other techniques enable the consideration of adverse events and help dimension a range of potential outcomes. This provides forward-looking insight to support planning and decision-making during times of uncertainty. This proactive approach to scenario analysis helps identify inflection points before losses may occur, and the development of new triggers for action in response to degradation in both actual performance and scenario-based forecasts. The proactive approach aligns well with the primary goal of capital planning and analysis being a forward-looking input to covered credit union strategic planning and risk management programs.

Conclusions

As the pandemic and associated governmental and institutional responses continue to play out, NCUA expects covered credit unions to continue to utilize and adapt their capital analysis and assessment practices. Credit unions should leverage core enterprise functions and oversight to ensure useful, conservative and transparent capital stress testing and financial forecasting that assists in informing ongoing strategic and risk management action plans. The principles and practices detailed in this whitepaper, as presented in relation to their use in response to pandemic related challenges, will assist covered credit unions in deploying progressively more useful capital assessment and planning activities moving forward.