Agenda

• Overview
• Key Metrics Report & Stress Testing
• Guest speakers:
  – Barry Doan, EVP & CFO, FirstOntario
  – Bill Boni, SVP & CFO, Alterna
• DICO Expectations
• Questions
Overview – ICAAP

• Basel II Accord (June 2004)
• Provincial regulators e.g. FICOM (BC), CUDGC (Sask.)
• Stress Testing (ICAAP) Working Group formed in Fall 2012
  - ICAAP Guidance Note
  - ICAAP Application Guide
  - Stress Testing Guidance Note
Overview – Pillar II Regulatory Principles

1. Process for assessing overall capital adequacy (ICAAP)
2. Supervisor reviews institution’s capital adequacy assessment
3. Expectation to hold capital above minimum regulatory requirements.
4. Supervisor may call for corrective action
Overview – ICAAP Benefits

✓ Capital levels matched to credit union’s risk profile
✓ Provides insight into the setting of risk limits
✓ Provides quantifiable benchmarks to monitor risks.
✓ Ability to adapt more quickly to adverse situations
✓ Supervisors can use as a basis to engage the credit union in dialogue regarding capital requirements
Overview – Application & Requirements

- Class 2 institutions >$1 billion
- Effective January 2014
- First ICAAP submissions due Sep 2014 (270 days after fiscal year-end)
- Based on experience, consider timing of introduction to other large institutions
- Guidance available on DICO website (Sector Release #69)
Key Metrics Report

**Pillar I**
- 8% of risk weighted assets

**Pillar II**
- Legal
- Concentration risk
- Other ERM risks

**Stress Test**
- Additional capital to withstand adverse economic scenario
## Key Metrics Report – Pillar I

<table>
<thead>
<tr>
<th></th>
<th>Total Assets ($000s)</th>
<th>Risk Weight</th>
<th>RWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortgages</td>
<td>2,000,000</td>
<td>35%</td>
<td>700,000</td>
</tr>
<tr>
<td>Commercial</td>
<td>800,000</td>
<td>75%</td>
<td>600,000</td>
</tr>
<tr>
<td>Market</td>
<td>500,000</td>
<td>20%</td>
<td>100,000</td>
</tr>
<tr>
<td>Other</td>
<td>100,000</td>
<td>100%</td>
<td>100,000</td>
</tr>
</tbody>
</table>

\[3,400,000\]

\[1,500,000\]

\[
\text{\$1,500,000 } \times 8\% = \text{\$120,000 (Regulatory minimum)}
\]
## Key Metrics Report – Pillar II

<table>
<thead>
<tr>
<th>Risk Category</th>
<th>Required Capital ($000s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration risk</td>
<td>1,200,000</td>
</tr>
<tr>
<td>Interest rate risk</td>
<td>5,500,000</td>
</tr>
<tr>
<td>Legal</td>
<td>100,000</td>
</tr>
<tr>
<td>Other (e.g. ERM)</td>
<td>200,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>7,000,000</strong></td>
</tr>
</tbody>
</table>
# Key Metrics Report - Recap

<table>
<thead>
<tr>
<th>Capital Required ($000s)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pillar I</td>
<td>120,000</td>
</tr>
<tr>
<td>Pillar II</td>
<td>7,000</td>
</tr>
<tr>
<td>Total capital required</td>
<td>142,000</td>
</tr>
</tbody>
</table>

| Stress Test              | 15,000 |
| Actual capital           | 147,000 |
| Surplus / (Deficit)      | 5,000  |

**Pillar I** - Minimum Regulatory Requirement. Based on risk weighting of assets.

**Pillar II** - e.g. legal, concentration risk, other ERM risks identified.
Stress Testing - Principles and Approaches

- Sufficient capital to withstand a crisis – “highly unlikely but plausible” event.
- Component of Internal Capital Adequacy Assessment Process
- Development of various economic scenarios
- Insight as to what preventive steps could be taken to withstand sudden and prolonged economic adversity
Stress Testing - Principles and Approaches

• Bottom-up approach
  − Individual loan level analysis
  − Large amount of data captured typically
  − More complex, challenging to implement

• Top-down approach
  − Portfolio level loan analysis
  − Fewer details regarding drivers of results
  − Easier to implement

• No single correct approach
  • PD / LGD modelling
  • May be limited by availability of data (hybrid)
  • Assumptions documented and substantiated
### Stress Testing – ICAAP Guide Sample Considerations

<table>
<thead>
<tr>
<th>Material Risk Areas</th>
<th>Considerations</th>
<th>Stress factor</th>
<th>Loss Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equities</td>
<td>30% reduction in security values</td>
<td>1.0</td>
<td>30%</td>
</tr>
<tr>
<td>Residential Mtgs (uninsured)</td>
<td>30% reduction in real estate values Revised Loan to Value ratios Apply losses to amounts &gt;70% LTV</td>
<td>1.0</td>
<td>2% - 5%</td>
</tr>
<tr>
<td>Personal Loans</td>
<td><strong>Minimum 10 years of data</strong></td>
<td>1.0</td>
<td>1 – 3%</td>
</tr>
<tr>
<td>Commercial Real Estate Loans</td>
<td>Worst Year Impairment Worst year Probability of Default (PD) Worst year Loss Given Default (LGD) Worst Year Losses</td>
<td>1.0-2.0</td>
<td>1 – 3%</td>
</tr>
<tr>
<td>Commercial Construction Loans</td>
<td></td>
<td>1.0-2.0</td>
<td>1 – 5%</td>
</tr>
<tr>
<td>Other Commercial</td>
<td><strong>Average Impairment</strong></td>
<td>2.0-4.0</td>
<td>1 – 3%</td>
</tr>
<tr>
<td></td>
<td>Average Probability of Default (PD)</td>
<td>2.0-4.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average Loss Given Default (LGD)</td>
<td>2.0-4.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average Losses</td>
<td>2.0-4.0</td>
<td></td>
</tr>
<tr>
<td>Agricultural</td>
<td>Collective Provision</td>
<td>3.0-5.0</td>
<td>0.5% - 1.5%</td>
</tr>
</tbody>
</table>
Internal Capital Adequacy Assessment Process
Agenda

- Current status
- Initiative structure
- Leveraging prior initiatives/analysis
- Link to Enterprise Risk Management
- Work completed to date
- Next steps for FirstOntario
Current Status at FirstOntario

- FirstOntario’s year end is August 31st

- Initial iCAAP filing to DICO is due May 2015

- Project will be officially kicked off in the fall of 2014 after the year end is complete

- We see this exercise as a further extension of our ERM framework that will have future benefits other than just meeting a regulatory requirement

- We believe there are advantages in completing the annual review of the iCAAP prior to the annual planning process
Structure

- At FirstOntario we see the iCAAP primarily as a capital planning tool to ensure adequate capital is in place to support our strategic plan and enterprise risk appetite.

- Finance is the initiative lead working closely with the Risk Division.

- Other participants/key stakeholders will be:
  - Management
    - Executive and Senior Management Team
    - Credit
  - Board
    - ERM Committee
    - Full Board

- We don’t anticipate requiring outside resources in this initial phase; however, I would anticipate having the iCAAP subject to an outside review at some point in the future.
Leveraging Prior Initiatives/Analysis

- Enterprise Risk Management
- Asset Liability Management – Interest Rate Risk measurement
- Long Term Strategic Forecasting Excel Model
- Credit Portfolio Analysis/Reviews
- IFRS Implementation – Loan Allowance
- Liquidity Risk Framework which includes
  - Liquidity Funding Strategy
  - Contingency Funding Plan
  - Stress Testing Framework
Enterprise Risk Management

- A requirement for an ERM framework has been in place for large CU’s beginning in 2011/2012

- FirstOntario’s ERM Framework has evolved to include:
  - Overall risk appetite
  - Individual risk tolerances for 8 or 9 high level groups of risks
  - Individual assessment of risks that include inherent and residual risk including assessment of likelihood and impact

- At FirstOntario we intend to use our ERM Framework in assessing our Pillar II risks and as an input into our stress testing

- Anticipated Challenge – Developing an appropriate methodology to aggregate the individual risk assessments when determining the level of capital required
Work Completed to Date

- **Statistical Analysis of Loan Losses**
  - Utilized the analysis completed during our transition to IFRS on loan allowances
  - Analyzed our own loan loss statistics in relationship to unemployment rates
    - We were able to increase the statistical significance by looking at time frames greater than a year
  - Analyzed industry statistics for loan categories with low loss experience

- Refined our strategic forecasting model
Next Steps

- Further education of the Executive/Senior Mgt Team
- Finalization of the Pillar II Risk assessments and required supportive capital
  - Expect to have lively debate over our various concentration risks
- Development and modeling of the stress scenarios
- Complete the documentation of our iCAAP including a related Board Policy
  (expansion/amendment of the current Capital Policy)
- Submission and approval of the iCAAP to the Board
- Submission to DICO
Internal Capital Adequacy Assessment Process (ICAAP)
Background and Current Practice

Background

- Alterna adopted the ICAAP in 2009 based on guidance released by OSFI
- ICAAP is core to Alterna’s Capital Management policy, which is reviewed by Management and Board annually

Current Practice

- In its ICAAP, the projected growth of Alterna is considered, as well as the enterprise risks associated with its activities from both Pillar 1 and Pillar 2, and the capital impact from various stress testing scenarios
- The growth assumptions used in projecting capital needs are based on a 3 year horizon i.e. current year budget and followed by 2 year financial outlook
- The assessment of enterprise risks is based on the internal ERM process. This ERM framework includes a corporate risk assessment along with Alterna’s current ALM risk assessments
Stress Testing

Background

• Alterna introduced organization wide stress testing based OSFI E-18 Guidance on stress testing in 2009 and continued to implement it over 2010 and 2011

Purpose

• identify areas requiring additional risk mitigation
• support the capital management process
• supplement other risk management approaches and measures

Current Practice

• Risk owner identify exceptional but plausible event and related assumptions for testing
• Subject matter experts and stakeholders participate in an impact analysis workshop
• Risk are quantified based on statistical reports, ALM model and professional experience.
Stress Testing (cont.)

Current Practice (cont.)

- Time horizon of 3 years is applied to all analysis
- Risk owners validate results and provide mitigation actions as required
- Final results and recommended actions are presented to Executive Leadership team

Key Findings

- No significant gaps observed, however many areas to firm up for added confidence

Behavioural impact

- Risk ownership was adopted at Management level, leading to heightened sense of responsibility and improved responsiveness to changing risk areas, when required, and
- Healthy and thorough discussions at FAC/Board level on enterprise risks
Alterna versus DICO approach

- Table below highlights the significant differences between Alterna’s versus DICO’s ICAAP approach

<table>
<thead>
<tr>
<th>Subject</th>
<th>Alterna</th>
<th>DICO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk Quantification</td>
<td>Risk quantification methodology is based on stress testing using various scenarios with subject matter experts</td>
<td>Risk quantification methodology for certain risk is based on prescribed approach.</td>
</tr>
<tr>
<td>Stress Testing</td>
<td>No additional allocation of capital to cover mandatory stress testing</td>
<td>Additional allocation of capital to cover mandatory stress testing</td>
</tr>
<tr>
<td>Time Horizon</td>
<td>3 years</td>
<td>1 year</td>
</tr>
</tbody>
</table>
DICO Expectations

1. Board and Management Oversight
2. Sound Capital Assessment and Planning
3. Comprehensive Assessment of Risks
4. Stress Testing
5. Monitoring and Reporting
6. Internal Control Review
DICO Expectations

- No single correct approach
- Dependent on size, complexity & risk profile
- Evolve over time as experience gained
- Also influenced by:
  - growth, new products & services
  - economy
  - market conditions

- No approval from DICO
DICO Expectations – ICAAP Submissions

FIRST SUBMISSION:

• Key Metrics Report only (Excel format)
• Mandatory stress test scenarios outlined in the Application Guide (pg. 6)
  ✓ 30% downturn in real estate
  ✓ 200 bps interest rate shock
  ✓ Reverse stress test
• Brief summary of results, basic assumptions, criteria used and supporting rationale
• Results suggest insufficient capital?
  ✓ Action plan to address should be included
DICO Expectations – ICAAP Submissions

SUBSEQUENT SUBMISSIONS:

- Full ICAAP Submission Report (Application Guide)
  1. Executive Summary
  2. Background on ICAAP
  3. Statement of Risk Appetite
  4. Material risks
  5. Capital planning
  6. Stress and Scenario Testing
  7. Conclusions and Next steps
  8. Key Metrics Report
DICO Expectations - Cautions

- Holding more capital is NOT a substitution for:
  - Strong risk management & internal controls
  - Applying internal/regulatory limits
  - Strengthening provisions & reserves
  - Strong Board & management oversight
Questions