CRE FINANCE COUNCIL

ANNUAL CONFERENCE

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J W MARRIOTT HOTEL
WASHINGTON DC

CRE Finance Council
The Voice of Commercial Real Estate Finance
Risk-Based Capital

Agenda

• Insurance Company Regulation
• RBC Background
• MEAF
• RBC Proposal
Risk-Based Capital
Insurance Company Regulation

• The U.S. Insurance industry is regulated by the states.
• The state Insurance Commissioners have established the National Association of Insurance Commissioners (NAIC), which:
  • Is governed by the chief insurance regulators from the 50 states, D.C., and five U.S. territories,
  • Provides support to the state regulators to help make regulation more efficient, and
  • Helps coordinate regulatory efforts to enhance uniformity of regulation.
• State regulators focus on the legal entity level.
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RBC Background

RBC framework was created by NAIC and became effective in 1992
- Responds to insurance company failures in the 1980’s caused largely by real estate and “junk bond” concentrations
- Intended to serve as an “early warning tool” to identify undercapitalized companies
- Set a minimum threshold for regulatory action
- Regulates adequate insurance company solvency

The NAIC model law, and each state’s law, look to the NAIC formula to compute RBC.
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RBC Background

- RBC is used to set capital requirements considering the size and degree of risk taken by the insurer
- RBC is a rough measure of risk
  - Each element of risk is assigned a "risk factor"
  - Each risk factor is multiplied by some measure of volume for each risk class which are then added together resulting in a total "risk requirement"
- The major categories of risk include:
  - Asset risk, insurance risk, interest rate risk, and business risk
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RBC Ratio

The RBC Ratio is the main test used to determine whether a company's capital level is adequate given the size and degree of risk that firm has taken.

Total Risk-Based Capital

- Total RBC is calculated by multiplying the risk factors by some measure of volume for each risk class and adding together the resulting "risk requirements."

Total Adjusted Capital

- Total Adjusted Capital (TAC) is made up primarily of capital and surplus, and the asset valuation reserve (AVR).
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The RBC Formula

• Determines the minimum amount of capital an insurer needs given its risks
  - For example, at a 300% RBC level, a company holds $3 of capital for every $1 of “risk” assumed

• RBC was designed to differentiate adequate capital from inadequate capital, but not to distinguish “good” from “better”

• The ratio can be raised by either increasing total adjusted capital or by lowering risk based capital requirements

\[
RBC\ Ratio = \frac{"Equity"}{"Risk\ Charges"} = \frac{Total\ Adjusted\ Capital\ (TAC)}{Risk\ Based\ Capital\ (RBC)}
\]
## Risk-Based Capital
### Regulatory Action Levels

<table>
<thead>
<tr>
<th>RBC Level</th>
<th>Required Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above 200%</td>
<td>No negative trend, No action</td>
</tr>
<tr>
<td>150% to 200%</td>
<td>Company submits a plan to improve capital</td>
</tr>
<tr>
<td>100% to 150%</td>
<td>State regulator specifies corrective actions</td>
</tr>
<tr>
<td>70% to 100%</td>
<td>State regulator may take control of company</td>
</tr>
<tr>
<td>Below 70%</td>
<td>State regulator takes control of company</td>
</tr>
</tbody>
</table>
### Risk-Based Capital

**The RBC Formula – “Asset Risk Requirements”**

<table>
<thead>
<tr>
<th>Risk Category</th>
<th>Pre-Tax RBC Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Treasuries</td>
<td>0.0%</td>
</tr>
<tr>
<td>NAIC 1 (Aaa-A)</td>
<td>0.4%</td>
</tr>
<tr>
<td>NAIC 2 (Baa)</td>
<td>1.3%</td>
</tr>
<tr>
<td>NAIC 3 (Ba)</td>
<td>4.6%</td>
</tr>
<tr>
<td>NAIC 4 (B)</td>
<td>10.0%</td>
</tr>
<tr>
<td>NAIC 5</td>
<td>23.0%</td>
</tr>
<tr>
<td>NAIC 6</td>
<td>30.0%</td>
</tr>
<tr>
<td>Mortgages in Good Standing</td>
<td>2.6%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>15.0%</td>
</tr>
<tr>
<td>Real Estate JV</td>
<td>23.0%</td>
</tr>
<tr>
<td>Common Stock</td>
<td>30.0%</td>
</tr>
</tbody>
</table>
## Risk-Based Capital
**Mortgage RBC Factors**

<table>
<thead>
<tr>
<th>Mortgage Status</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortgages in Good Standing</td>
<td>2.6%</td>
</tr>
<tr>
<td>Restructured Mortgages</td>
<td>9.0%</td>
</tr>
<tr>
<td>Mortgages 90 Days Overdue</td>
<td>18.0%</td>
</tr>
<tr>
<td>Mortgages in Foreclosure</td>
<td>23.0%</td>
</tr>
</tbody>
</table>

1 Before Mortgage Experience Adjustment Factor (MEAF)
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Why MEAF?

• Mortgages are an un-rated asset class
• Regulators needed to distinguish risk
• There was minimal amount of loss experience data
• There was a presumption that the quality of a company’s underwriting would emerge over time in measurable loss experience
• Therefore, MEAF was developed
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MEAF Defined

- Mortgage Experience Adjustment Factor (MEAF)
  - Mortgages only asset class whose RBC factor can vary by relative experience
  - MEAF - Ratio of company problem loans to industry problem loans.
  - Through 2008, MEAF has a minimum and maximum of 50% to 350%.
  - Mortgage RBC factor is:
    - Standard RBC factor $\times$ MEAF
    - Then applied to entire mortgage portfolio
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MEAF Issues

- Given historic low delinquency rates MEAF can be volatile
- Negative RBC impact even if problem loans decline
- Negative RBC impact even when life company achieves optimal economic outcome in resolving problem loans
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MEAF Example

- Life company foreclosed on a $140 million loan
- MEAF increased from 85% to 160%
- Foreclosure negatively impacted RBC by approximately 20 points
- Life company sold property after foreclosure for $142 million resulting in a gain
- Life company could have taken a $10 million loss and sold the loan for $130 million prior to foreclosure
  - RBC impact would have been 1 point
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MEAF Example

- At historically low loss rates, the MEAF’s ability to quantify relative company performance breaks down
- Life Company level of problem loans improves by 20% (0.005% to 0.004%)
- Industry level of problem loans improves by 38% (0.008% to 0.005%)
- Life Company mortgage RBC requirement increases from 1.6% to 2.1%
- Life Company’s RBC ratio decreases by 8 points
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Regulatory Goals for RBC Replacement

• Differentiate companies’ Portfolios
• Differentiate risks of loans
• Factors are based on independent auditable information
• Rely on objective measures to assess risk
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Industry Goals for RBC Replacement

• Rely on objective measures to assess risk
• Balance precision with a framework that is workable for company reporting
• Can be audited / verified by regulators
• Do not discourage sound economic decisions by companies with regard to investment management
• Commercial mortgages are held to a similar standard as other assets
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Alternatives Evaluated But Not Accepted by Regulators or Industry

• LTV approach
• DSC approach
• Modeling (Commercial Mortgage Metrics/Compass/Proprietary) only
• Single factor
• Company loss history
• Modifying MEAF with long term industry average
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RBC Proposal Overview: Commercial Mortgages

- Mortgages will be assigned a capital requirement based on the risk profile of each mortgage
- DSC and LTV will be used as the drivers to determine risk categories
- DSC determined for each loan and updated annually
  - Actual interest rate
  - Amortization standardized to 25 years
  - Income defined by last statement actual NOI – CREFC standard
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RBC Proposal Overview: Commercial Mortgages

• LTV
  - Value determined at origination, updated via NCREIF index

• Each loan assigned one of five RBC factors applied to Book Value

• Sum of loan by loan values constitutes RBC for performing loans

• RBC factors developed based on modeling provided by Moody’s Commercial Mortgage Metrics
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Proposal Overview: Commercial Mortgages

• Proposed RBC factors for the five risk categories for performing loans:

<table>
<thead>
<tr>
<th>Risk Category</th>
<th>Recommended RBC Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM1</td>
<td>0.90%</td>
</tr>
<tr>
<td>CM2</td>
<td>1.75%</td>
</tr>
<tr>
<td>CM3</td>
<td>3.00%</td>
</tr>
<tr>
<td>CM4</td>
<td>5.00%</td>
</tr>
<tr>
<td>CM5</td>
<td>7.50%</td>
</tr>
</tbody>
</table>

• DSC and LTV ranges used to assign loan to a risk category
  - DSC is the dominant factor
  - Broadly speaking, CM1: DSC ≥ 1.50x and LTV < 85%, CM2: DSC ≥ 0.95x and LTV > 55% but < 75%
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Proposal Overview: Commercial Mortgages

• Loans secured by office, retail, industrial / warehouse, apartment properties use the same LTV and DSC ranges

• Loans secured by hotel and other properties use more conservative DSC and LTV ranges

• Delinquent and in-process of foreclosure factors remain unchanged
  - 18% factor for delinquent loans, 23% factor for in-process of foreclosure
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RBC Proposal

• Reduces RBC volatility caused by MEAF
  - “Problem” loans impact their own RBC, not the overall portfolio
  - Since DSC is the dominant factor, volatility is reduced
  - Differentiates risk by company and within each company’s portfolio

• Highest credit quality mortgages receive a RBC requirement close to, but still above, NAIC 1
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Status Update

• NAIC approved short-term RBC extension through December 2012, which is MEAF based with a floor of 80% and cap of 175% x 2.6% base requirement
• Seeking NAIC approval by November 1, 2012
• Proposal targeted to be effective in 2013
• Proposal submitted to the NAIC in May
• Review proposal with NAIC (May to August)
• Proposal to be reviewed by the American Academy of Actuaries (July to August)