Solvency Modernization Initiative
Country Comparison Analysis
November 2009
(Note: Portions excerpted directly from BMA materials.)

Country: Bermuda

1. Background Description

The Bermuda Monetary Authority (BMA) is responsible for regulating all financial institutions in Bermuda. Bermuda insurers are regulated by the Supervisor of Insurance, which is part of the BMA. BMA is a fully empowered insurance regulator with extensive operational and financial autonomy. The Mission of insurance regulators is to seek to act in the best interests of both current and prospective policyholders while facilitating the continued development of a viable, healthy, competitive, and innovative insurance industry.

Insurers in Bermuda are categorized into several classes:

Class 1: Single parent captives
Class 2: Multi-owner pure captives and captive insurers deriving up to 20% of net premiums from unrelated parties
Class 3: Insurers not included in other classes. As of 2008, insurers in this class are further subdivided into captives, small commercial, and large commercial insurers. The reason for the subgrouping is that these subgroups are considered to have different risks from each other.
Class 4: Insurers with minimum capital and surplus of $100M and underwriting direct excess liability and/or property catastrophe reinsurance

Two other classes have been added recently:

"Long-term" insurers consist of firms that write life and or long-term accident and health insurance.
"Composite" insurers include firms that write property-casualty and long-term insurance.

The objective of the class system is to retain light regulation for firms such as single captives, which insure only the risks of the parent corporation, while increasing the regulatory stringency for firms that write business more broadly.

2. Solvency Regulation Description

A risk-based supervisory framework for Class 4 insurers has been implemented since 2007. This framework directs supervisory attention to companies with risky company ratings. Company ratings are designed to take into account the impact and the probability of failure.

The framework will be extended, as appropriate, for the other classes of insurers.

3. Minimum Capital Standards

The Minimum Margin of Solvency (MSM) is the higher of (i) \$100 M USD; (ii) 50% of net premiums written (with 25% maximum credit for reinsurance) and (iii) 15% of loss reserves.

4. Enhanced Capital Requirement/Target Capital Requirement

Insurers should have available statutory capital and surplus to cover 120% of the Enhanced Capital Requirement (ECR). The ECR is the higher of the MSM and either a risk-based capital model or an approved internal model (approval must have been granted for the internal model).

The risk based requirement is called the Bermuda Solvency Capital Requirement (BSCR) and is computed as follows:

$$BSCR = sqrt[C_{fi}^2 + C_{eq}^2 + C_{int}^2 + C_{prem}^2 + (0.5C_{cred}+C_{rsvs})^2 + (0.5C_{cred})^2 + C_{cat}^2] + C_{op}$$

C_{fi} = fixed investments risk
C_{eq} = equity investments risk
C_{int} = interest rate risk
C_{prem}= premium risk
C_{cred} = credit risk
C_{rsvs} = reserve risk
C_{cat} = catastrophe risk (NPML less catastrophe premium plus associated credit risk)
C_{op} = operational risk (1% to 10% pre-operational risk BSCR)[1]

Class 4 insurers may use an internal model, but must meet certain requirements in order to do so. First the insurer must submit a pre-application pack. The pre-application pack must demonstrate that the insurer uses a comprehensive and effective approach to risk management and uses a prudent approach to capital management (e.g., in terms of minimum calibration levels). The next stage is the application and review process. In this process, the insurer provides specified quantitative and qualitative information. On-site and off-site reviews occur; and extensive dialogue and further information is exchanged about the use, statistical quality and calibration benchmarks of the model. A post-approval monitoring and control process takes place after an internal model has been approved. That is, periodic reviews are scheduled, the insurer must notify the supervisor

[1] Determined from company's rating from off-site analysis

authority of any material changes in the firm or model, and the supervisory authority has the power to revoke approval for failure to comply with conditions.

5. Peer Review

As part of the statutory return, insurers must file an:

Approved auditors' opinion
Approved loss reserve specialist/Actuary's opinion[2]
Solvency certificate

Finally, peer review of : emerging risks; impact study reports; on-site inspections (scope and final report recommendations/actions); capital add-ons; and internal model approvals/revocations takes place by the Risk Committee. Membership of the Risk Committee consists of BMA Executives from Supervisory, Risk/Analytics, and Actuarial.

6. Reporting

Insurers must submit

a. Statutory financial return which includes

Approved auditors' opinion
Approved loss reserve specialist/ Actuary's opinion
Statutory financial statements
Solvency Certificate
Statement of Statutory Ratios
Statement of Ceding Reinsurers

b. General purpose financial statements (US GAAP, IFRS)

c. Public filings – SEC/earnings calls

d. Capital and Solvency Return which includes

Description of risk management program
Risk Exposures
- Investments (concentration, effective duration, convexity, etc.)
- Underwriting (Gross/net exposure limits and gross/net PMLs by statutory line of business, statutory territory, separated into insurance and reinsurance

[2] Actuarial certification of loss reserves is required annually for Class 3 and Class 4 companies and triennially for Class 2 companies.

Stress tests/ Scenario Analysis
- Underwriting stress/scenarios
- Economic stress/scenarios (e.g., interest rate change)
- Result of ratings downgrade stress/scenario
- Other prescribed stress scenarios

8. On-Site Examinations

A formalized on-site inspection program was begun in 2006. Initially applying to Class 4 insurers only, now it applies to all insurer classes. An assessment of the adequacy and actual implementation of insurers' corporate governance is part of the on-site inspection.

Inspections are conducted at least once every 3 years. More frequent inspections may occur depending on the off-site analysis conducted by the supervisory authorities.

9. Off-site Analysis

The process used by the supervisory authority in its off-site analysis is as follows:

Assessment of the *Inherent Risk*:
- Credit Risk
- Balance Sheet & Market Risk
- Insurance Risk
- Operational Risk
- Liquidity Risk
- Legal and Regulatory Risk
- Strategic Risk
- Organizational Risk
- Market Conduct

Mitigated by *Management & Control*:
- Corporate Governance
- Management
- Operational Management
- Financial Controls
- Risk Management
- Compliance
- Independent Review

Results in **Net Risk/Direction of Risk** (for each significant activity)

Mitigated by *Capital Support*:
- Current Coverage/ Surplus
- Earnings
- Access to Additional capital

Results in **Composite Rating/Direction of Risk**

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Supervisory Attention Ranking[3]

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Supervisory Action

Under the umbrella of peer, industry and company specific analysis, work includes:

Peer identification/ assignment model
Vertical and horizontal common size analysis
Confirmation tests that company characteristics are consistent with underlying model assumptions.
Financial Stability Indicators are reviewed:
- Capital Adequacy
- Asset Quality
- Earnings and Profitability
- Liquidity
- Group Exposure

Trend analysis that looks at the market beta and class of business exposure base outlook.
Stress tests are studied and separate verification of regulatory capital requirements and capital adequacy takes place.
Risk management and risk exposure analysis is reviewed.

[3] Firms risk ratings are Fundamental (calling for base monitoring); Enhanced (calling for prudential visits); Oversight (calling for more extensive reporting); Mandatory Action (calling for mandated improvement/remedial plan); and Restructure (meaning the insurer is no longer viable).