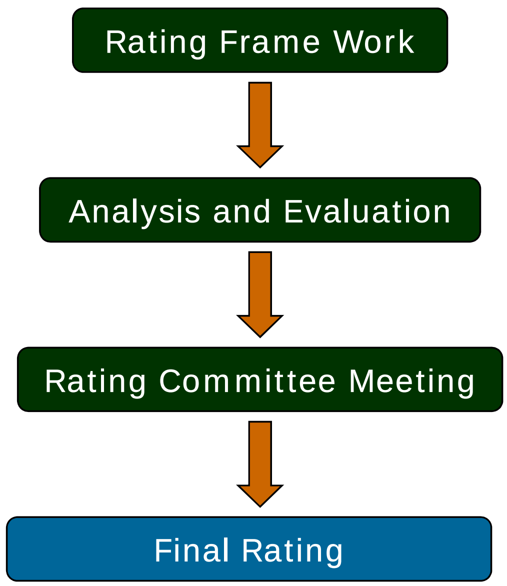
GENERAL INSURANCE RATING METHODOLOGY

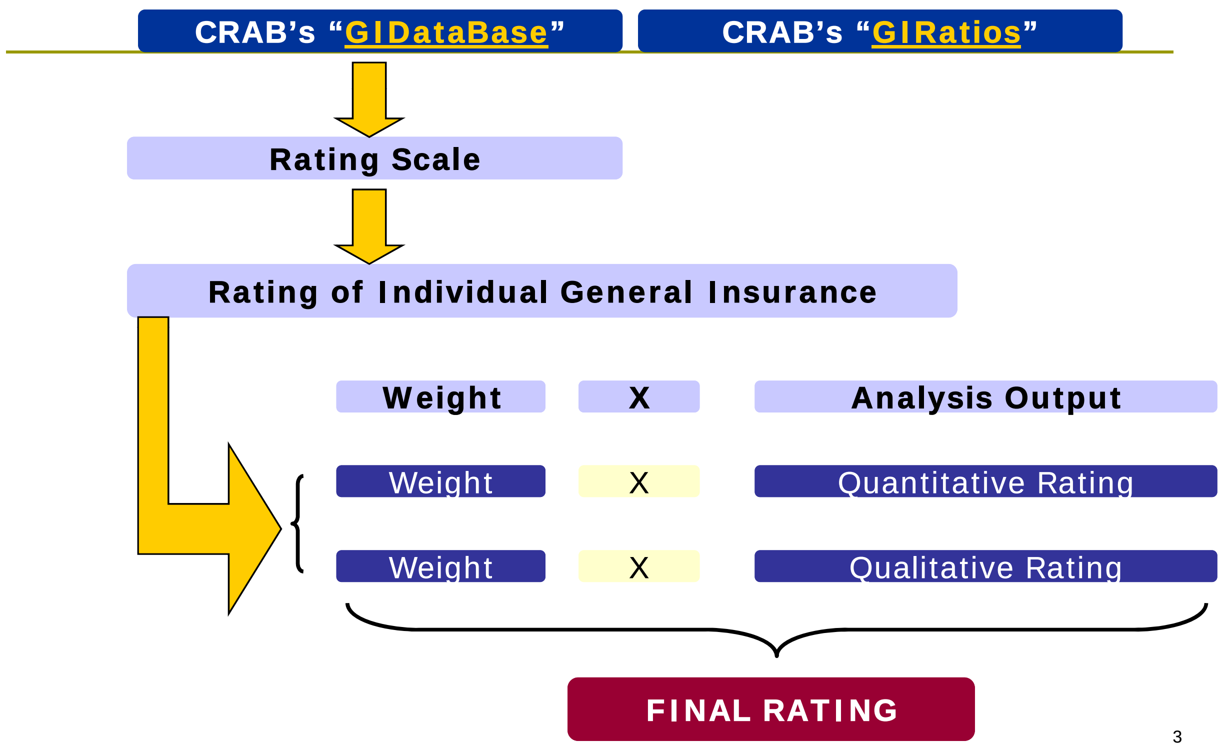
Presented by:

CREDIT RATING AGENCY OF BANGLADESH LIMITED

RATING PROCESS FLOW



Rating Framework



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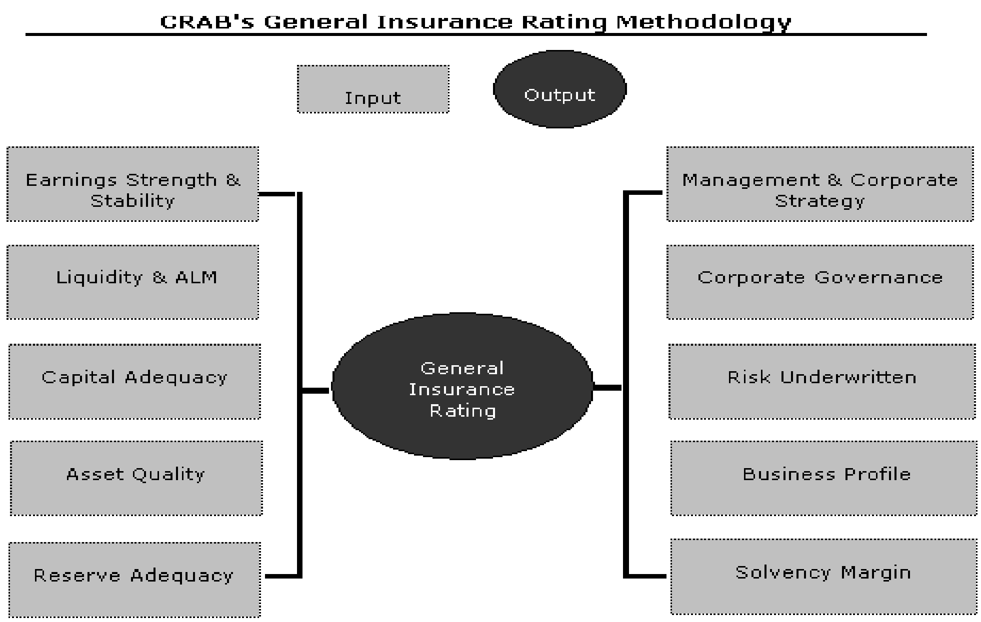
General Insurance Rating Methodology



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FACTOR: BUSINESS PROFILE

- Competitive position - lines of business, premium volumes, market shares, and technical performance.

- Portfolio of business units and product lines, distribution systems, degree of business diversification, and appropriateness of niche strategies.

Indicators

Market Share Ratio	=	Premium as % of Industry Premium
Relative Market Presence Ratio	=	Premium relative to the average industry premium by the country

FACTOR: BUSINESS PROFILE

Insurance Company Scoring Guidelines:
Competitive Position

Attribute	Most Favorable	Favorable	Least Favorable
Distribution	Has loyal distribution system providing high-quality business. Company has clear control over product distribution.	Maintains average control over distribution, which provides good-quality business. Persistency is average, and the company is usually the preferred provider of products to this distribution system.	Distribution system has low level of loyalty to company, often sells competitors' products, and produces poor-quality business leading to poor persistency.
	Uses multidistribution systems and/or has strong control over a distribution system that has good access to a variety of markets.	Distribution system has good access to a couple of markets.	No apparent distribution strengths in any market.
	Distribution system is highly cost efficient	Distribution system does not place company at a competitive disadvantage due to high cost structure, nor does it give the insurer a competitive advantage.	High cost of distribution places company at a competitive disadvantage.

FACTOR: BUSINESS PROFILE

Insurance Company Scoring Guidelines:
Competitive Position

Attribute	Most Favorable	Favorable	Least Favorable
Market Advantages/ Market Share	High market share in significant markets.	High market share in smaller markets or "middle of the road" competitor in larger markets.	Low market share.
	Maintains cost advantages or sustainable product advantages over competition. Alternatively, maintains extremely strong competitive advantages in niche markets.	Competitive product structure.	No sustainable competitive advantages.
	Operates in markets that afford strong financial performance.	Operates in competitive markets, but still produces good financial performance.	Operates in highly competitive or irrational markets.
	Low threat of potential competitors disrupting the insurer's financial performance.	Moderate threat of potential competitors disrupting the insurer's financial performance.	High threat of potential competitors disrupting the insurer's financial performance.
	Favorable regulatory environment.	Moderately favorable to neutral regulatory environment.	Unfavorable regulatory environment.

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FACTOR: BUSINESS PROFILE

Insurance Company Scoring Guidelines:
Competitive Position

Attribute	Most Favorable	Favorable	Least Favorable
Product Diversification	Offers multiple products over a broad range of business lines.	Offers a small range of products over one or two business lines.	Narrow product focus over one or two business lines.
	Most product lines maintain competitive advantages in their markets and offer long-term profitability.	Only a couple of product lines offer good prospects of long-term viability.	The long-term viability of most products and lines of business is in question.
		One product line accounts for more than 50% of long-term company profitability.	One product line accounts for more than 80% of long-term company profitability.

FACTOR: EARNINGS STRENGTH AND STABILITY

Major Indicators:

Return on Assets (ROA)
Sharpe ratio of Growth in Net Income
Pre-tax Return on Revenue (Net Premium)

- Diversification across multiple product lines and markets can result in more stable levels of earnings, increasing the predictability of internal capital growth and strengthening claims/debt-paying ability.
- Profits for general insurers are sourced from two primary functional areas -- underwriting and investment income. The focus of analysis of profitability is to understand the sources of profits, the level of profits on both and absolute and relative basis and potential variability in profitability.
- The Sharpe ratio of growth in net premium gauges the inherent volatility in a company's earnings and helps us to formulate an opinion about the predictability and sustainability of a company's earnings.
- The ratio's analytic value has little meaning on its own but is most useful in comparing companies' earnings volatility to each other and in identifying trends relative to business mix. We use five years worth of data in all these ratios to attempt to "see through" the cycles of the business.

FACTOR: LIQUIDITY & ASSET LIABILITY MANAGEMENT

• Liquidity risk is the exposure to risk in the event that insufficient liquid assets will be available from amongst the assets supporting the policy obligations to meet the cash flow requirements of the policy holders obligations when they are due.

• It would be inappropriate for too large a proportion of a fund's assets to be invested in marketable and illiquid assets.

• It would also be dangerous for too great a concentration in unquoted assets with values which are difficult to ascertain.

FACTOR: LIQUIDITY & ASSET LIABILITY MANAGEMENT

Indicators

- Absolute level of cash flow from underwriting

- Absolute level of cash flow from operation

- Cash Inflows [premium collected and others] as % of Cash Outflows [paid losses, paid loss expenses, and underwriting expenses]

- *Liquid Assets as % of Total Liability – cash, short-term assets, bank deposits, investment grade bonds, preferred stock, and common stock as % of Total Liability*

FACTOR: CAPITAL ADEQUACY

- **Capital Maintenance Ratio (CMR) = Capital Position as % of Regulatory Required Capital**

- **Gross Underwriting Leverage = Gross Premiums plus Gross Reserves divided by Shareholder's Equity**

FACTOR: ASSET QUALITY

- Quality of assets has to be of excellent standing to ensure high rate of return on investment.

- CRAB evaluates rate of return on each class of asset and the risk associated with each class.

- CRAB considers the following factors while analyzing the asset quality
  - Investment Strategy
  - Diversification
  - Credit Risk
    - ⇒ Business credit risk (Policy holder Loan)
    - ⇒ Investment asset credit risk
    - ⇒ Political risk
    - ⇒ Sovereign risk

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ASSET QUALITY (contd.)

- **Market Risk**
  - ⇒ **Interest rate risk**
  - ⇒ **Equity and property risk**
  - ⇒ **Reinvestment risk**
- **ALM Risk**
- **Provisioning against loss on investment**

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Key Indicators

Indicators

- Risky assets as % of Invested Assets
- Reinsurance Recoverable as % of Equity
- Investment Portfolio Quality and Limit Position
- Market Risk
- Investment Yield (Interest Rate Risk)

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FACTOR: RESERVE ADEQUACY

Indicators

- Reserve for Unexpired Risks [Technical Reserve] Maintenance Ratio = Reserve for Unexpired Risk for each business line as % of Regulatory Required for each business line

- Funding Ratio = Reserve for Exceptional Losses as multiple of average last five years claim paid during the concerned year plus total estimated liability in respect of outstanding claims at the end of the concerned year where due or intimated.

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FACTOR: RESERVE ADEQUACY

- Statistical analysis of statutory filing data or other quantitative data
- Historical track record in establishing adequate reserves
- Management's reserving targets relative to the point estimate on the actuarial range (high, low, middle)
- Key reserving assumptions
- Management's propensity to reflect expected future improvements (such as claim handling enhancements designed to lower claim costs) in current reserves before "proven"
- Speed at which negative trends in frequency or severity are reflected in reserves
- General market and competitive pricing environment, and propensity of management to carry weaker reserves during down cycles
- Use of discounting, financial reinsurance or accounting techniques that reduce carried reserves
- Comparison of company loss development trends relative to industry and peers

FACTOR: MANAGEMENT EVALUATION

- Management quality is a very important factor, which can make substantial difference to the life insurers performance.

- CRAB evaluates the performance of the management team by focusing on :
  - Strategic Positioning
  - Operational Effectiveness
  - Financial Risk Tolerance
  - Organizational Structure and Management breadth and experience and how they fit the company's strategy

FACTOR: MANAGEMENT EVALUATION

Insurance Company Scoring Guidelines:
Management & Corporate Strategy

Attribute	Most Favorable	Favorable	Least Favorable
Strategic	Has a formal process for strategic analysis.	Strategic planning process is informal or lacks depth.	No strategic planning process exists, or plans are superficial.
	Entire management team thinks strategically and has a record of converting plans into action.	Only some managers are capable of thinking strategically. Company is often unable to convert strategic decisions into positive action.	Most managers are not capable of thinking strategically. Company is often unable to convert strategic decisions into positive action.
	Strategy chosen is consistent with the organization's capabilities and makes sense in its marketplace.	Strategy includes some contradictions with the organization's capabilities. Achievement of some objectives appears unlikely.	Strategic thinking includes many contradictions with the organization's capabilities, and many goals appear unattainable.
	Has an effective system in place to communicate its plans to lower levels of management.	Communication of strategic decisions to lower levels of management is incomplete.	Little, if any, communication of strategic planning to lower levels of management exists.
	Board is independent, highly qualified, and willing to exercise proactive judgment.	Board is independent.	Board is heavily populated with insiders.

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FACTOR: MANAGEMENT EVALUATION

Insurance Company Scoring Guidelines:
Management & Corporate Strategy

Attribute	Most Favorable	Favorable	Least Favorable
Operational	Management has considerable expertise in operating lines of business company is engaged in and has demonstrated an ability to exercise strong control over its operations.	Management lacks expertise in operating some lines of business, but maintains good control over its business.	Management lacks ability to understand and control its business.
	Audit and control systems are extensive.	Audit and control systems are average.	Audit and control systems are weak and/or are
	Company has performed well against plan.	Company usually performs well against plan.	Company often misses plan.
	Management has good depth and breadth.	Some holes exist in management depth or breadth.	Many holes exist in management depth or breadth.
	Management has demonstrated a stable history of financial performance without interference of unusual items (i.e., few surprises).	Unusual items disrupt the balance sheet or income statement occasionally.	Unusual items commonly disrupt the balance sheet or income statement.
	Organizational structure fits strategy.	Organizational structure does not fully foster strategy.	Organizational structure impedes implementation of strategy.

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FACTOR: MANAGEMENT EVALUATION

Insurance Company Scoring Guidelines:
Management & Corporate Strategy

Attribute	Most Favorable	Favorable	Least Favorable
Financial	Has set of financial standards in place.	Has set of financial standards in place.	Has no defined set of financial standards.
	Has set of above-average standards for operational performance.	Standards for operational performance are similar to industry levels of performance.	Lacks standards for operational performance or has low standards.
	Maintains very conservative operating performance.	Has no commitment to maintaining conservative operating and/or financial leverage.	Disregards any reasonable standards for operating and/or financial leverage.
	Has conservative reserving practices and uses reinsur-ance judiciously.	Reserving practices are acceptable, and use of rein-surance is not aggressive.	Is aggressive in setting reserves and in its use of reinsurance.

FACTOR : CORPORATE GOVERNANCE

Key Analytical Area

- ***Corporate Governance***
  - Relationship between the BoD, Management and Shareholders
  - Degree of relationship to balance effectively shareholders and creditors interest
  - Board Effectiveness
  - Board Independence
  - Ownership and Organizational Complexity
  - Management Compensation
  - Key Personnel Risk
  - Insider and Related Party Risk
  - Integrity of Accounting and Audit

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FACTOR : RISK UNDERWRITTEN

- **CRAB examines the nature of risks underwritten by a general insurer.**
- **CRAB considers the following factors while analysing the nature of risks:**
- **Pricing of Insurance Products**
- **Underwriting Risks**
  - ⇒ **Underwriting process risk**
  - ⇒ **Claims risk**
  - ⇒ **Economic environment risk**
  - ⇒ **Policy holders behavior risk**
  - ⇒ **Reserving risk**

RISK UNDERWRITTEN (contd.)

- **Reinsurance**
  - ⇒ **Terms of reinsurance arrangement**
  - ⇒ **Credit worthiness of the re-insurer**
  - ⇒ **Net retention**

Indicators

- Loss Ratio: Net Claim as % of Net Premium
- Management Expenses as % of Net Premium
- Actual Mgt. Exp. as % of Allowable Mgt. Exp.
- Risk Retention Ratio
- Claim Settled as % of Total Claims

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Controls and Risk Management

- ***Risk Governance:***
  - Involvement of directors in reviewing risk appetites and control effectiveness, director's awareness of risks, relevance of their backgrounds to assess risks
  - Collective and individual responsibilities of and awareness by executive management on risk matters, integration of risk considerations in budgeting, capital allocation, and determination of capital adequacy
  - Organization, staffing, resources, enterprise –wide role of risk function(s)

- ***Risk Management:***
  - Risk control process- mandates of units controlling credit and operational risk, practices to ensure limit disciplines
  - Relationship of risk to earnings, capital, limit setting, portfolio mix and diversification
  - Risk mitigations

- ***Risk Analysis and Quantification:***
  - Quantification, measures used for setting of limits and running the business, stress testing, capital determination
  - Monitoring and Reporting- rigor, appropriateness and usefulness of reports and alert systems

- ***Risk Infrastructure and Intelligence:***
  - Risk infrastructure – information and knowledge systems
  - Risk intelligence – validity of scorecard and data used

FACTOR : SOLVENCY MARGIN

- In its broad sense, solvency represents the excess of an insurer's value of assets over the value of its liabilities. Valuation of its assets and liabilities plays an important role in the determination of solvency of an insurer. Risk associated with reserving are also taken into account.
- Actual solvency margin is the actual excess of an insurer's value of assets over its value of liabilities.
- Required solvency margin is the required excess amount of an insurer's value of assets over its value of liabilities as defined by the regulatory authority.
- Solvency Ratio
- Statutory Requirement of Solvency Margin
- CRAB's Test of Solvency

A. Actual Solvency Margin = Adjusted Assets – Adjusted Liabilities

1. Adjusted Assets:

Total Assets
Less:

i. Outstanding premium
ii. Amounts due from other parties
iii. Sundry debts, to the extent they are not realizable
iv. Fixed assets excluding land and building (written down value)
v. Stock and stationary
vi. Stamps in hand
vii. Deferred expenditures
viii. Preliminary expenses

Adjusted Assets = Total Assets – Total less amount

2. Adjusted liabilities: (total capital & liabilities – shareholder's equity)

i. Provision for bad debt and doubtful debts
ii. Reserve for dividends declared or recommended and outstanding dividend
iii. Amount due to insurance companies carrying on insurance business in full
iv. Sundry creditors
v. Provision for taxation
vi. Foreign exchange reserve
vii. Balance of fund account
viii. Outstanding claims – whether due or intimated.
ix. Deposit premium
x. All kind of loan.

B. Required Solvency Margin

i) Gross Premium x Factor x 20%
Factor: Fire = 0.50; Marine Cargo = 0.70; Marin Hull = 0.50; Motor = 0.85; Miscellaneous = 0.70
ii) Net Premium x 0.20

Required Solvency Margin shall be the higher of the amounts of (i) and (ii).

This measure assists in testing the adequacy of the company's financial strength and in particular its ability to absorb fluctuations in loss experience without destabilizing its financial condition.