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Malaysian Association of Risk and Insurance Management (MARIM)

Risk-Based Capital Framework

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Insurance Pricing

- Driven by historical data as to claims frequency or claims frequency and claims severity.
- For big claims can also be driven by the cost of reinsurance.

Risk Transfer

- In an insurance contract there is a transfer of risk from the insured to the insurer.
- The insurer may then seek to mitigate this risk in the "wholesale risk market" i.e. reinsurance market.
- The reinsurance market allows the direct insurer to increase its capacity than what its capital could otherwise support.

Capacity

- Defined as the ability to take risk.
- The bigger the capacity the bigger the risk that the insurer can insure.
- Capacity is determined by the amount of capital that is available to the insurer, the reinsurance support that is available to the insurer and the risk portfolio size and diversity.

What determines the capital required per unit of risk?

- Capital required per unit of risk can be determined as the likelihood that there are sufficient funds to cover the total losses in a portfolio -199 times in 200 years (say).
- If the company is willing to be less certain of solvency, say level of sufficiency targeted is one in two years, more risks can be taken per unit of capital.
- Capital required can also be determined by Regulations.
- In practice the capital required will be the greater of the above two computations.

How is premium determined?

- The underlying principle is risk can be identified and quantified.
- In insurance the level of risk is quantified by the rating factors.
- Examples of rating factors in motor insurance could be say, age of driver, engine capacity of vehicle and past accident record.
- A value amount of the risk premium is determined through the assessments of past claims experience of those with these rating characteristics.
- The risk premium is then loaded for expenses of the insurer, distribution costs and cost of capital required to be held for the risk assumed.

What are the risks the insurer faces?

- The first obvious risk is that the premiums are mispriced.
- Where claims amount for any particular event is dependent on external factors (e.g. court awards) there is an additional risk of claims escalation, claims provision may be inadequate.
- Where premiums need to be invested before claims are paid there is the risk of loss on investments.
- And then there is operational risk….

Risk identification and Risk quantification

- A mean or an average does not adequately define a Risk.
- Two additional requirements to modeling risk is variance and distribution.
- These parameters can be subjective in nature, especially those with a very low probability of occurrence (e.g. Tsunami).

Can Risk be marked to market?

- Perception of risk can differ widely.
- The subprime crisis has brought home the fact that pricing of risk requires absolute transparency.
- Even with transparency, market can be subject to speculative pressure.
- A risk mitigation tool e.g. the Credit Default Swap market, can easily transform to a speculators hive.

The idea behind Risk Based Capital

- Insurers currently have regulations on the amount they can invest in equities, bonds, properties etc. They also have to invest a certain amount in government securities. The capital required for different products are currently insensitive to the product features. As a result, the capital requirement can be excessive for some insurer but inadequate for others.
- Risk based capital will see many investment restrictions removed and replaced with specific capital charges. These charges will vary by the level of risk (defined as volatility).

The idea behind Risk Based Capital

- There will be similar charges on premiums and outstanding claims provision designed to ensure that a certain level of capital is being held for the (i.e. volatility) risk taken.
- Some credit can be taken where the risk portfolio is diversified.

Cost of capital

- Capital is required in any business. Usually as working capital.
- But do you know that there is a price on capital?
- Capital in an insurance company is held in reserve, not to be used unless the premiums are inadequate. This capital has a carrying cost.

Will RBC increase premium rates?

- Insurers will allocate capital where it gives the highest return.
- If a higher capital is required under the RBC environment then premiums would have to go up to satisfy shareholders return on capital.
- Alternatively if prices cannot go up due to market conditions, the product range will change.

Impact on Insurers

- It is likely the weaker companies will be forced to merge or sell out to bigger players.
- Where there is no tariff, the lower number of insurers may lessen competition and increase premium rates.
- Where certain products now require less capital under RBC, the premium rates should drop.

Why do regulators want RBC?

- It is a globally accepted principle.
- However, it has yet to be adopted by many countries.
- Convergence with Banking Regulations (Basel II).

Ultimate aim of RBC

- To motivate insurer to manage their risks on an active basis, RBC is not only for meeting statutory requirement but also for internal “use”.

Impact on the equity and bond markets

- High charges on equity investments may discourage insurance company investing in the stock market.
- If this happens it could be positive for the bond market.

Challenges for RBC

- Under RBC, the theory is that liability can be marked to market, in practice it is more marked to model.
- Is market price/yield on investments indicative of true demand? Malaysia equity and bond markets still lack depth and liquidity.
- How can credit be given for portfolio diversification?
- Is a tariff structure compatible with RBC?

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