

Risk-Based Capital Framework: Conventional vs. Takaful Operators

Aida Yuzi Yusof (Corresponding author)

Dept. of Applied Statistic, Faculty of Economic & Administration, University of Malaya

Kuala Lumpur 50603, Malaysia

Tel: 60-3-7967-3701 E-mail: aidayuzi@siswa.um.edu.my

Wee-Yeap Lau (Dr)

Dept. of Applied Statistic, Faculty of Economic & Administration, University of Malaya

Kuala Lumpur 50603, Malaysia

Tel: 60-3-7967-3627 E-mail: wylau@um.edu.my

Ahmad Farid Osman (Dr)

Dept. of Applied Statistic, Faculty of Economic & Administration, University of Malaya

Kuala Lumpur 50603, Malaysia

Tel: 60-3-7967-3665 E-mail: faridosman@um.edu.my

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Abstract

Malaysia introduced an RBC framework for its conventional insurance industry in 2009. In 2011, enhancements to the RBC framework were completed. In an effort to improve the overall Takaful regulatory framework, BNM issued new operational and valuation guidelines on 23 September 2010. BNM further issued the draft of risk-based capital (RBC) guidelines for Takaful operators in April 2011 and gathered the industry's feedback (Dhesi, 2012). The proposed Takaful RBC framework appears to be similar to that imposed for a conventional business. Parallel to its counterpart, Takaful operators are obliged to have at least 130% of

supervisory capital-adequacy ratio (CAR). The minimum CAR imposed is formulated so that Takaful operators have sufficient capital in the shareholders' fund to meet any shortage in Takaful fund. Capital adequacy is a theoretical amount of capital that is required by each insurance company in order to meet payment obligations and support everyday operation without becoming insolvent. The same methodology and assumptions as outlined in the RBC requirements for conventional business have been used to determine each of these capital charges (Dhesi, 2012). However, Conventional insurer and Takaful operators are having different types of risk for their operations (Obaidullah, 1998). Takaful operators also adopt different types of operating models (mudharabah, wakalah and hybrid). The RBC-framework for conventional insurers provides detailed guidelines on the estimation of assets by considering the different types of risks related. Still, the RBC framework for Takaful operators insufficiently addresses the risk that relevant to Takaful operator's activities. The main point that distinguishes Takaful operators and its counterparts is in terms of the sharing of risk with customers.

Keywords: Risk-based capital, Capital adequacy ratio, Takaful

1. Introduction

Insurance is an important component of the evolving financial services industry. It is one of the most regulated and monitored industries in Asian Region including Malaysia. Insurance business in Malaysia is divided into two kinds, conventional insurance and Takaful, which is based on Islamic principles. Both businesses are regulated by Bank Negara Malaysia (BNM). Conventional insurance is governed by Malaysian Insurance Act 1996 while Malaysian Takaful Act 1984 governs the Takaful industry. These acts provide laws for the licensing and regulation of conventional and Takaful insurance business in Malaysia, insuring broking business, adjusting business and for other related purposes.

In order to maintain stability and financial soundness of the insurance industry, BNM adopts a risk-based supervision approach for insurers including Takaful (Lai, 2011). Under the risk-based supervision regime, the regulatory authorities are concern on the stability of the insurer's financial system. The nature and level of supervisory activity to insurer are conducted by profiling risk and assessment of risk management. By focusing on risk, such supervision could help BNM detects potential risks that would jeopardize the financial system. In order to perform its duties, The Banks through its units issues guidelines, regulations and frameworks covering various aspects such as valuation of assets and liabilities, solvency regulations and risk management practice to monitor insurance and Takaful companies. BNM uses various methods to ensure the financial strength of insurance company and further protect the policyholders.

Malaysia introduced an RBC framework for its conventional insurance industry in 2009. In 2011, enhancements to the RBC framework were completed. This includes the convergence of valuation rules for financial instrument with Financial Reporting Standards 139 (BNM, 2011). In an effort to improve the overall Takaful regulatory framework, BNM issued new operational and valuation guidelines on 23 September 2010. BNM further issued the draft of risk-based capital (RBC) guidelines for Takaful operators in April 2011 and gathered the industry's feedback (Dhesi, 2012). The proposed Takaful RBC framework appears to be similar to that imposed for a conventional business. Parallel to its counterpart, Takaful operators are obliged to have at least 130% of supervisory capital-adequacy ratio (CAR). The minimum CAR imposed is formulated so that Takaful operators are able to meet any shortage in the Takaful fund by having sufficient capital in the shareholders' fund. Capital adequacy is a theoretical amount of capital that is required by each insurance company in order to meet payment obligations and support everyday operation without becoming insolvent. Risk-based capital charges must be determined at a funding level and comprise of credit risk capital charges, market risk capital charges, liability risk capital charges (including expenses) and operational risk capital charges. The same methodology and assumptions as outlined in the RBC requirements for conventional business have been used to determine each of these capital charges. The difference between the proposed RBC framework for Takaful operators and its counterpart is the interest free loan or "Qard" which requires Takaful operators to provide for Qard in any event of a deficit in Takaful funds.

However, Conventional insurer and Takaful operators are having different types of risk for

their operations (Obaidullah, 1998). The RBC-framework for conventional insurers provides detailed guidelines on the estimation of assets by considering the different types of risks related. Still, the RBC framework for Takaful operators insufficiently addresses the risk that relevant to Takaful operator's activities. The main point that distinguishes Takaful operators and its counterparts is in terms of the sharing of risk with customers. Thus, it is interesting to investigate the differences between RBC for Takaful operators and its counterpart as both have different risks and should be distinguished. This paper is significant in order to understand the concept of RBC and identify the differences that would give impact to Takaful operators as well as the participants.

2. Literature on Risk-Based Capital

Risk is generally defined as uncertainty of an event of a loss or uncertainty about the future. On the other hand, it also can be defined as the relative variability of actual loss from expected loss and is calculated by the measure of dispersion (Rejda, 2011). In order to prevent or reduce the variation of a loss, a suitable and valid risk management approach is required especially in the policy making.

Risk management for an insurance company is very complex as it involves internal and external stakeholders. Internally, an insurance company would set up a department focusing solidly on management of risk. External stakeholders such as policyholders and policy maker are concerned about the soundness of an insurance company. Thus, policy maker or regulatory/supervisory body issues various guidelines and regulations to maintain the stability of the insurance industry. Jiang Cheng and Weiss (2012) stated that in order to protect the policyholders from losses due to insolvency, regulators use various methods to ensure the financial strength of insurance company.

Insurance companies in the United States are regulated by The National Association of Insurance Commissioners (NAIC) while insurers in the European Union's (EU) are supervised by the Organization for Economic Co-Operation and Development (OECD) (de Haan & Kakes, 2010); (Pitselis, 2009). NAIC adopted three risk capital measurement which is the Insurance Regulatory Information System (IRIS), Risk-Based Capital (RBC) and the Financial Analysis and Surveillance Tracking (FAST) to monitor the financial condition of an insurance company and to prevent insolvency. OECD transforms the current supervisory framework, Solvency I to Solvency II, which is more based on risk-based capital (Pitselis, 2009).

The NAIC developed the Risk-Based capital (RBC) in the year 1992 and was adopted by the US property-liability insurance company in 1993. RBC is a theoretical minimum or an adequate amount of capital required according to the risk taken by the insurance company in order to support its business activities and minimize insolvency (J. Cheng & Weiss, 2013); (Norazliani Md Lazam, 2012); (Jaaman, Ismail, & Majid, 2007). RBC measures the capital required by individual company based on the size of the firm (related to capital and asset) and the degree of risk taken by each insurer (Pitselis, 2009). The primary objective of RBC is to promote the financial soundness of insurers and to avoid insolvency. Malaysia also used the similar approach developed by the NAIC for its capital adequacy regulation when the

regulatory body, Bank Negara Malaysia (BNM) implemented the RBC framework for its conventional insurance industry in 2009. Under this framework, conventional insurers are required to meet the minimum statutory level of 130% of capital adequacy ratio (CAR). According to The Star (2014), the CAR in the year 2013 stood at 220.7% with a capital buffer of RM22.9bil which proved a strong capitalization of the insurance industry. Even though Malaysia adopted the similar approach of RBC as the US, the guidelines and concept of the framework are different as the insurance industry in Malaysia is at different stages of development (Chen & Wong, 2004).

In order to measure the capital adequacy of an insurance company under RBC, several methods have been studied and proposed to be used as a measurement of RBC ratio. The generally utilized measurement is Value-at-Risk or VAR which has been used as risk reporting for both insurance and banking industries (Gebizlioglu & Dhaene, 2009). VAR expresses the maximum claim amount random variable that may be paid up or lost with a certain confidence level. However, this measure has its drawback as it does not take into account the degree of potential losses that arises from the claim amount (Gebizlioglu & Dhaene, 2009). Several measures have been developed to tackle the issue of VAR which not capture the loss magnitude and the loss characteristics at any extended ranges of values (Artzner, Delbaen, Eber, & Heath, 1999); (M. Denuit, Dhaene, Goovaerts, & Kaas, 2006); (H. Denuit, Dhaene, Goovaerts, & Kaas, 2008). Although several approaches have been developed along with the standard VaR to measure the capital adequacy, Jarrow (2013) suggested a new rule that based on conditional expected losses as VaR could increase the systematic risk as well as the probability of catastrophic financial institution failure.

Studies on the impact of RBC to insurance company are mostly done using US dataset. There is very limited study on the impact of RBC towards the conventional insurance company in Malaysia. Jaaman et al. (2007) assessed the risk and financial strength of general insurers in Malaysia prior to RBC implementation and found that only one fifth out of twenty insurers requires regulatory intervention. Norazliani Md Lazam (2012) performed a case study on the impact of post-RBC and found that the Capital Adequacy Ratio (CAR) exceed the minimum requirement of 130%. As for Takaful, there is no published paper pertaining the RBC and CAR of Takaful operators in Malaysia. This is could be due to fact that the RBC has only taken effect starting 1 January 2014.

2.1 Risk-Based Capital Framework for Conventional Insurance

When BNM first introduced the RBC for conventional insurer in 2009, the framework concentrated on financial risk such as credit, market, underwriting and concentration risk. As the insurance industry is evolving and Malaysian insurance industry is towards a developed market, the RBC needed a revamp in terms of risks which were not specified by the earlier framework. Thus, in year 2011, BNM introduced the enhanced RBC framework with broad risks to be managed. The revised RBC framework gives focus on credit risk (assets default and failure of counterparty), market risk (reduction in assets market value and non-parallel in asset-liability), liability risk (insurance liabilities underestimation and adverse claims experience) and operational risk (failed system and human capital process) (BNM, 2011).

According to Frenz and Soualhi (2010), the principles surrounding the framework are as follows:

- The fair value of asset and liability is used to reflect the true value.
- Using a total balance sheet approach to reflect the correlation values between assets and liabilities.
- The calculation of CAR should reflect all risks that relevant to assets and liabilities.
- The investment assets are valued at market value and the company can decide their own investment policy with adequate internal control.
- The company may hold a risky investment depending on its willingness and match it with high risk capital charges.

2.2 Risk-Based Capital Framework for Takaful Operators

Takaful or Islamic insurance in Malaysia was first introduced in the year 1984 when the Takaful Malaysia was set up. Currently there are 15 Takaful operators in Malaysia. In 2010, new operational and valuation guidelines were issued in order to improve the Takaful regulatory framework. Further, in year 2011, the first draft of Risk-Based Capital Guidelines for Takaful Operators was issued and already taken effect starting 1 January 2014. The framework is a part of requirement for solvency as described in the Islamic Financial Services Board (IFSB) “Standard for Solvency Requirements in Takaful Undertakings” (E&Y, 2012). The RBC for Takaful Operators is similar to its counterpart in the area such as:

- BNM imposes 130% minimum supervisory target capital level or Capital Adequacy Ratio (CAR) to assess the financial strength at an operational level.
- The high management of Takaful operators must set an individual capital level target that matches the risk profiles and risk management practices. The dividend payout is available if the target capital level is achieved.
- Similar to conventional insurer, the risk-adjusted capitalization or the available capital is based on Tier 1 and Tier 2 categories (Black, 2010).

3. The Key Differences between RBC Conventional and Takaful

Each insurance and Takaful company will be classified based on Capital adequacy Ratio (CAR) formula which is:

$$CAR = \frac{TCA}{TCR}$$

Where TCA is total capital available and TCR is total capital required. TCA is comprised of total equity whereas TCR is the sum of credit risk capital charges, is market risk capital charges, liability risk capital charges and operational and expenses risk capital charges. These charges must be determined at a funding level. The CAR is used to assess the financial strength with BNM imposes a minimum supervisory target capital level of 130%The

available capital is separated into Tier 1 and Tier 2 categories where total Tier 2 capital must not exceed Tier 1 capital.

In order to align with Shariah principles and to address the differences in concepts between Takaful and conventional insurance, BNM has made several adjustments particularly for Takaful business:

- Takaful operators must provide what is known as “Qard” or interest-free loan from the Shareholders Fund (SHF) in any event of shortage in the Participant’s Risk Fund (PRF). This would enable the PRF to meet its obligations. This arrangement does not exist in conventional RBC.
- The TCR in the above formula is determined separately for SHF and PRF. For SHF, the TCR is the sum of capital charges for credit risk, market risk, liability risk and operational risk or surrender value capital charges, whichever is higher. The TCR for PRF exclude the liability risk capital charges in its calculation. The TCR for conventional insurance is determined using the same formula for SHF as there is only one insurance fund.
- The TCA is total capital available in SHF and each PRF but does not include the excess capital above the capital required amount for PRF.

The new RBC framework for Takaful operators requires additional capital requirements from shareholders in order to meet capital charges, namely operational, expense and surrender charges. Apart from that, Takaful operators also need to meet supervisory or internal target for risk funds with a minimum amount of 130% of CAR. Moreover, if there is claim fluctuation or a deficit in Takaful fund, a Qard or interest-free loan is required to Takaful fund to meet benefit payout obligations.

Takaful operators are less vulnerable to volatility in interest rate as one of the components in market risk. This is due to the fact that Takaful transactions are supposed to be free from any element of interest (Archer et al, 2010). In terms of operation, Takaful operators are not meant to collect surpluses at levels excessively higher than the required fund. The capital resources that can be recognized in a particular Takaful fund are limited to the amount of capital required for the fund. The guidelines are to reflect the limitations of capital support cross-subsidiaries between Takaful funds, due to segregated ownership of the different funds in accordance with Shariah requirements. However, the fund should be enough to protect its stakeholders from volatile results and to support future growth. The profits or fees to cover for management and capital costs should be in an ample amount in order to run the company smoothly. Thus, this would affect the asset and liability management of Takaful operators which at the same time must meet the minimum capital adequacy ratio set by BNM.

4. Conclusion.

RBC for conventional insurers has taken effect in the year 2009. In year 2011, the RBC framework for Takaful operators was issued. There have been similarities in term of CAR calculation for both operators. The difference is set at the fund level where Qard and

limitation of capital required for the shareholder's fund are introduced.

One significant difference between conventional and Takaful RBC is the proposed interest-free loan or "Qard" between shareholders fund (SHF) and participant risk fund (PRF). Takaful operators are obliged to provide the said loan where the underlying formula for CAR has captured the need for sufficient capital to meet any shortage in participant's fund. Another key difference is the way the total capital required (TCR) is calculated between SHF and PRF where operational risk capital charges is captured in TCR for SHF only. Thus, it can be concluded that the RBC for Takaful operators appears to be more penal on Takaful business compared to its counterpart. This paper is significant to understand the concept of RBC and identify the differences that would give impact to Takaful operators. Further study on the impact of RBC to other stakeholders, such as participants is recommended.

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