

## Capital Management for Takaful Business: Issues and Challenges

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### ABSTRACT

The objective of this study is to highlight need to understand the concept of capital management for the takaful business in light the Solvency and Risk-Based Capital (RBC) Requirements for takaful companies in Malaysia. This is a qualitative study which discusses the theoretical and practical aspects of capital management in takaful through literature review and secondary data from published sources. This study highlights the practices of capital management for commercial takaful business. It outlines the theory of capital in takaful business in terms separation of the Shareholder Fund (SHF) and the Participants' Risk Fund (PRF). This study contributes to the currently dearth on literature and research on takaful and retakaful as a nascent industry, compared to the more matured insurance and reinsurance industry. Hence, the conventional insurance capital management and practice is also referred as a benchmark. The study would provide better insight for the takaful industry in undertaking the solvency and RBC requirements. Better understanding and management of capital by takaful operators will assist in bolstering the financial position of the takaful operation as a whole.

### Keywords:

Takāful; capital; Solvency; Risk-Based  
Capital; participants' risk fund;  
shareholders fund

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## 1. Introduction

The concept of capital in Islam has captured that interest of many scholars such as Zamir Iqbal, *et.al* [56], Muhamad Ayub [41], Muhammad Taqi Usmani [43], Fahim Khan [20], Muhammad Nejatullah Siddiqi [42]\*. In classical economic theory, capital (where income is earned through interest) is one of the factors of production. The others being, land, labour and entrepreneurship. For example, Muhammad Taqi Usmani [43], argues that Islam does not recognize capital and entrepreneurship as two separate factors of production. Instead, capital provided by a person into a commercial enterprise has an 'intrinsic element of entrepreneurship' by assuming the risks of the

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business for a share of the profit generated. In another perspective, Askari, *et al.*, [6], posits that capital is generally made-up of to two strands: (i) capital as physical goods or real assets, which may generate profit; (ii) and capital as a pool of funds or financial assets, which may attract interest income. Culp [13], described financial asset as a legal claim on a future cash-flow. In the context of a financial institutions, such as insurance and takāful, capital basically refers to financial assets.

Financial capital is described by Culp [14], as “a collection of contracts and claims that a firm needs to raise cash required for the operation of the business, as an on-going enterprise”. It is usually in the form of equity and debt.

The Geneva Association [23], explains that financial capital, may be classified into three types consisting of Regulatory Capital, Economic Capital and Rating Agency Capital as appended below:

- (i) Regulatory Capital - is the minimum capital that an insurer must hold as dictated by law, in order to meet its financial obligations to its customers, even under unexpected and adverse conditions<sup>†</sup>. Regulatory capital - is a mechanism which acts as a buffer in place of economic capital.
- (ii) Economic Capital - also known as the risk capital, is the amount of capital from the insurer’s own perspective. It is needed to cover unexpected future economic and non-economic risks and losses, based on its own experience and assumptions about the future. Normally, economic capital tends to be lower than regulatory capital.
- (iii) Rating Agency Capital - is the level of capital determined by rating agencies, in order to obtain and sustain a certain credit rating. Similar to regulatory capital, it is also solvency-driven.

## 2. Capital for Insurance and Takāful

The need for capital between insurance and takaful are generally similar – in the business as well as the legal and regulatory sense. As commercial entities, both insurance and takaful need to be adequately capitalized in order to satisfy the business needs as well as the legal and regulatory requirements. However, due to the different philosophical and operational underpinnings of insurance (as a risk transfer mechanism) and takaful (as a risk sharing mechanism), the concept of capital also differs. In the same context, the costs and income from the deployment of capital between insurance and takaful also differs.

Due to the sale of risks by the insured to the insurance company – the premium collected is registered as income to the company. Hence, insurance claims and benefits, reinsurance, reserves, operational costs and other expenses will be borne by the insurance company. In addition, whatever surplus from the premium, less the claims and other expenses will be credited as income to the company; in addition to investment income from its own capital and the premiums received [4].

For a takaful operation, due to the role of the takaful operator as manager of the takaful funds, the accounting treatment is different. The operator is required to fund its operational cost from its own capital. Takaful claims and benefits, retakaful and reserves are paid by the PRF. The main source of income of the operator is in the form of *wakalah* fees (charged upfront)<sup>‡</sup>, share of the distributable surplus, and investment income from its own capital. It is also a legal and regulatory requirement for takaful operators to provide *qard* to the PRF when necessary [4].

Financial theory has discussed the symbiotic relationship between capital and risk. This is more so for insurance (and takāful)<sup>§</sup> business, which is directly involved in intermediation of risk in the

<sup>†</sup> In the case of Malaysia, the minimum regulatory capital for insurance and takaful is RM100 million per license.

<sup>‡</sup> For wakalah and hybrid model.

<sup>§</sup> Addition by the researcher.

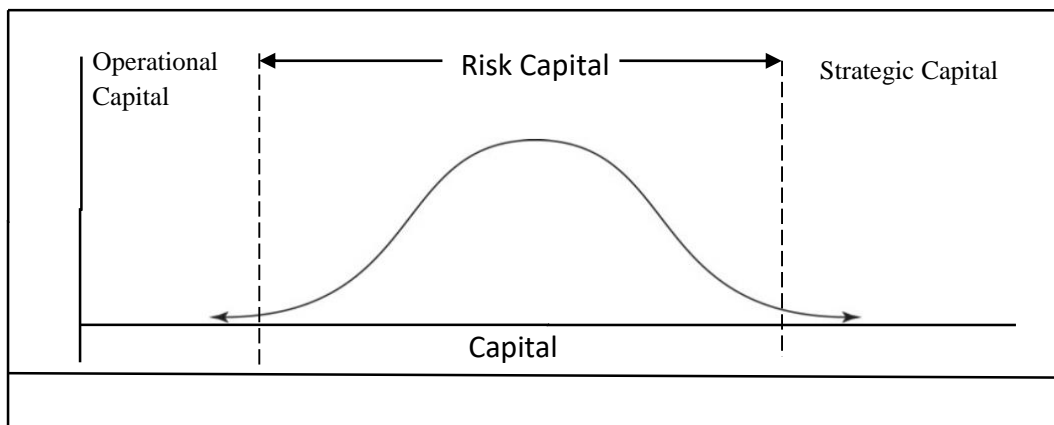
economy [12,39,51]. In this respect, investors should be aware of the risk appetite of an insurance (and takāful) company as highlighted by Kapel *et al.*, [32] i.e. to meet the obligations to the policyholders as determined under the insurance policies, to adhere to regulatory solvency requirements, and to attain a good credit rating to future additional capital raising.

This is the reason for the push for higher RBC standards for the industry. The key role of capital for an insurance company, is primarily to cater for: the need to meet its obligations under the insurance contracts; to meet its operational and liquidity needs; and to act as a buffer, in case on unexpected financial distress, which may happen in the future [26]. Besides the regulators and the insureds, other stakeholders which have interest in the financial security of takaful and insurance companies, are rating agencies and fund managers.

Grubisic and Leadbetter [26], further explained that capital for an insurance company normally consist of operational capital, risk capital and strategic capital as described below:

- (i) Operational capital - facilitates cash-flow, maintain liquidity and to cater for current operational needs of the company such as salaries, rent and equipment.
- (ii) Risk capital -also known as solvency capital, it represents a major portion of the capital, in order to cover the financial consequences of its business, i.e. to meet the claims obligations to the insureds, and reduce the probability of financial ruin in financial distress.
- (iii) Strategic Capital - is the additional capital which may be required in order to mitigate information asymmetries in the business. In addition, it is to reassure external stakeholders, of the company's financial capacity to survive catastrophic shocks, or its ability to pursue other strategic goals.

The capital structure as explained above is depicted in figure 1,



**Fig. 1.** Components of Capital of an Insurance Company [26]

The importance of capital of an insurance and takaful company, taking into account the different stakeholders perspective collated by SCOR [50], is shown in the table 1:

**Table 1**

Insurance Capital in Stakeholders Perspective [50]

	Shareholders	Regulators	Rating Agencies
<b>Role of Capital</b>	Source of risks and profits from investment to be remunerated.	Cushion to absorb shocks in order to protect policyholders.	Cushion to pay policyholders and then bond-holders.
<b>Optimum Level of Capital</b>	Not too high (otherwise, profitability drags)	As high as possible.	Comfortably in excess of ratings thresholds.

In the context of using capital in order to enhance shareholder value in an insurance (and takāful) enterprise, Kapel *et al.*, [32], articulates the following:

- (i) Higher capital will strengthen the overall financial position of the company. Hence, it will also open new opportunities for the company to write and retain more risk, and may even venture into writing more sophisticated risks; which in-turn will increase its franchise value.
- (ii) Higher capital will reduce costs of financial distress.

### 3. Return on Capital

Providers of capital (shareholders) in a commercial insurance, takaful and retakaful undertaking, expects a fair return of the capital. While the regulators are concerned with the rights of the participants in the takaful transactions, the rights of the shareholders must also be preserved. Simply, without the shareholders, a takaful operation will not exist. Considerable literature has been written on the subject as an important topic in the study of financial management such as Weert [55]; Dionne [16]; Hughes [28]; Kregel [36]. There are many ways to measure the return on capital such as: Return on Capital Employed (ROCE); Dividend Yield Ratio (DYR), Return on Equity, etc. [46].

Many shareholders in the takaful industry are fully aware of the long-haul nature of the takaful business; where profits might take a number of years to materialize. However, the main point here is, if the takaful industry is unable to consistently provide fair returns to the shareholders, they may opt for other profitable investment avenues. This will cause problems for the industry to attract capital, in meeting both the short and long-term capital requirements [24].

### 4. Raising Capital for Insurance and Takāful

Raising capital for an insurance or takaful business either for a new venture, or raising additional capital to meet regulatory and business requirements, is not easy. The primary interest of an investor is to measure the potential of the company to create value (wealth) to them as shareholders. Therefore, investors demand information about a company's potential that can create shareholder value [48].

Common options for raising capital, are as described in the Pecking Order Theory<sup>\*\*</sup>, Trade-Off Theory<sup>††</sup> and Market Timing Theory<sup>‡‡</sup>[17,37,40,46] as briefly discussed below:

- (i) Pecking Order Theory - capital is raised through internal sources involving retained earnings and offering of new shares to existing shareholders, as a priority. Another method is through external sources (which are generally more costly) such as: through third party borrowings;

<sup>\*\*</sup> This theory was popularized by Myers and Majluf (1984)

<sup>††</sup> Originally formulated by Kraus & Litzenberger (1973)

<sup>‡‡</sup> Formulated by Baker & Wurgler (2002)

offering new shares to the public through Initial Public Offering (IPO) or Private Placement; and through mergers and acquisitions<sup>§§</sup>.

- (ii) Trade-Off Theory - involves balancing the costs and benefits, of using debt and equity to raise capital.
- (iii) Market Timing Theory - firms raise capital by issuing new stock, when their share price is overvalued; thereafter, the firm will repurchase the stock when the share price is undervalued.

Another method to raise capital, is by means of innovative financial solutions through securitisation<sup>\*\*\*</sup>. For example, Anshuman, *et al.*, [2], and Holzheu, *et al.*, [27], highlighted that insurance companies can use securitization to reduce their regulatory capital requirements. Here, the company will be able to immediately realize the value of cash-producing assets - through the creation of securities<sup>†††</sup>. This may improve the ROE, reduce cost of capital, and enhance liquidity through more efficient use of capital.

## 5. Cost of Capital for Insurance and Takāful

Cost of capital<sup>†††</sup>, is basically the minimum rate of return, which can attract capital to an investment. It is benchmarked against prevailing rate of returns in the capital market for corresponding risks. Thus, the higher the investment risk, the higher will be the expected return on capital [33,34]. Research on this subject, has permeated across academia and industry players over the years; in line with the advancement of the financial and capital markets [3,25,47,49].

On the other hand, cost of capital for insurance companies, is defined by Kielholz [33], as “*the rate of return insurers has to pay for the equity they use. The rate of return demanded depends on demand and supply of capital in general and the risk the insurance business is involved in*”. The most common methodology for estimating cost of capital are:

- (i) Capital Asset Pricing Model (CAPM) - here, the cost of capital is the function of risk-free asset plus beta or volatility measure of the difference between risk free rate and return on equities.
- (ii) Discounted Cash Flow Analysis (DCF) - this is based on the premise that the price of an asset should be equal the present value of all future cash flows [33].

## 6. Concept and Practice of Capital in Commercial Takāful Undertaking

A report by CIBAFI [22], indicates that capital management is a major concern by global takāful operators as shown below:

Takāful Effective Business Drivers (ranking in order of importance)

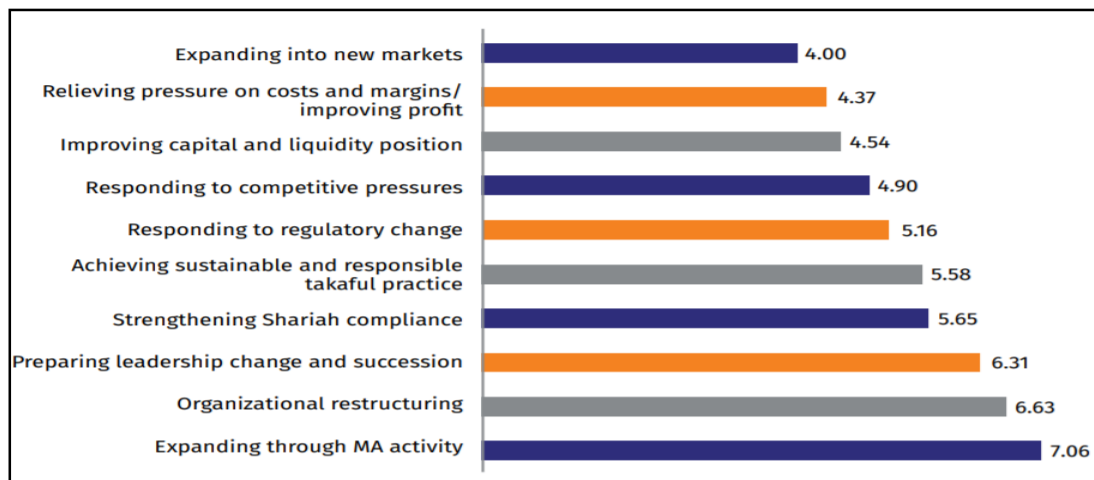
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§§ Ter (2017), citing KPMG Survey revealed that about 84% of insurers polled worldwide intend to make between one to three acquisitions.

\*\*\* For example, Alternative Risk Transfer (ART) products are used by insurance companies to raise funds through issue of bonds. In Malaysia, Etiqa Takāful raised RM300 million through issue of Sukuk Musharakah in 2014.

††† For example, through securitization, future cash-flow from life insurance is transformed into cash assets which may be used to satisfy solvency requirements.

††† Also known as ‘opportunity cost of capital’ and ‘fair rate of return’.



**Fig. 2.** Capital management by global takaful operators [22]

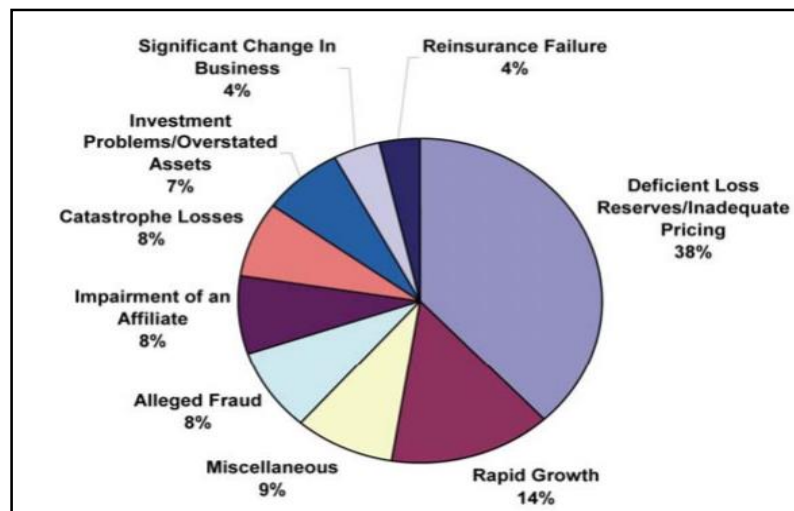
In the context of takāful, even-though in takaful theory there is a distinct separation of the SHF and PRFs, most regulators have basically applied the same regulatory guidelines – in terms of regulatory capital for both insurance and takaful business. Nonetheless, in assessing the capital requirements for takaful undertakings, the two-tier structure consisting of PRF & SHF, should be taken into consideration. A survey conducted on takaful companies by Tolefat and Asutay [53], revealed that 72.6% of respondents believed that SHF should be regulated; 18.2% stated that SHF should not be regulated. The balance of respondents opined that, both SHF and PRFs should be regulated.

With respect to the capital requirements of the PRF, Asafa and Archer [4], observes that the PRF has no independent means, of raising capital to meet the initial capital requirement; as well as in mitigating future capital strain. This is exacerbated by the fact that, in most cases, it may take many years for the PRF to be fully solvent; thus, the need for the takaful operator to provide *qard*. IFSB-11 (2010), provides a two-level approach in determining the capital requirements for PRF.

- (i) Level 1 - seeks to ensure that the PRF has adequate capital resources to pay claims when they are due - referred to as “Solvency Capital Requirement (SCR).
- (ii) Level 2 - is referred to as “Minimum Capital Requirement (MCR)”. A proportion of the SCR, is a threshold that will trigger supervisory intervention; as the ultimate buffer to protect the participants interests’ in case of winding-up, or run-off scenario.

## 6. Risk-Based Capital (RBC)

The legal and regulatory framework on solvency and RBC for the takaful industry is to ensure that takaful operators are well capitalised to meet the related financial risks of the business. This was brought about due to the weak capital structure of the insurance companies that has not been able to withstand the financial impacts of such risks – resulting in insolvencies. Over the years, the insurance industry has recorded many cases of insolvencies due to a multitude of reasons as shown in figure 3:



**Fig. 3.** Triggering Events for General Insurance Insolvencies [15]

The above are lessons to be learnt by the takaful industry in managing the takaful business in general, and capital management in particular. As a nascent industry which based is business on Islamic principles, the takaful industry cannot expose itself to failure, as it may cause a serious trust deficit by the public.

Considerable literature has been written on Solvency and RBC such as: by Fadzli, *et al.*, [19]; Frenz and Soualhi [21]; Cummins and Phillips [15]; Eling and Holzmüller [18]. The Solvency Capital Requirement (SCR) implemented in many jurisdictions refers to the minimum solvency control level above which the regulator deems adequate; measured as excess of admitted assets over liabilities, say 120% or more. Therefore, a solvency ratio of below 100% will result in regulatory intervention. On the other hand, Risk Based-Capital (RBC), represents the amount of capital held by a takaful operator, based on an assessment of risks; which will be sufficient to meet the financial obligations to the participants. At the same time, it will enable the company to continue business; even in the case of adverse business conditions. The RBC framework, is intended to create a strong risk management culture. It facilitates more efficient capital structures, and thus provide greater investment flexibility to takaful operators; without compromising on prudential standards. RBC, is normally computed by applying the risk factors, to which the operator is exposed to. It is usually expressed as a risk-based capital ratio, or Capital Adequacy Ratio (CAR). For example, it can be simply deduced that, a takaful operator, with a 200% RBC ratio, will require a total capital - equal to twice its risk-based capital. Other means to measure capital adequacy, in relation to solvency requirements are: ratio of regulatory capital to premium income; ratio of regulatory capital to losses; and ratio of regulatory capital to technical provisions [30].

In a broader context, Asafa and Archer [4] cited IAIS [29], highlights the benefits of a “Total Balance Sheet Approach”, in determining capital requirements for a takaful undertaking. This is undertaken, through consistent measurement of the overall financial position of the company. Here, it recognises the interdependence of risks, and its potential impact to the company’s balance sheet - with regards to its assets, liabilities and regulatory solvency requirements.

In essence, it is aimed at achieving the following: to meet future business risks, even in unfavourable conditions; to ensure availability of adequate assets for business continuity; to support the new business as well as the one in force; to set capital adequacy requirements, in a manner that reflects the particular risks that it is subject to; to relate to the classes of business underwritten, the

size, complexity and time horizon of such business. Examples of RBC frameworks promulgated by BNM and Solvency II, are discussed below:

(i) RBC Guidelines by BNM

The guidelines on risk-based capital, as promulgated under BNM's Risk-Based Capital Framework for Insurers, as well as Risk-based Capital Framework for Takaful Operators (2017). It provides a standard formula for the computation of Capital Adequacy Ratios (CAR), which serves as a key indicator on the financial resilience of a takaful operator as follows:

$$\text{CAR} = \frac{\text{Total Capital Available}}{\text{Total Capital Required}} \times 100\%$$

The guidelines imposed a minimum Supervisory Target Capital Level (STCL) - where the takaful operator shall maintain the CAR, to be above the STCL of 130%. Takaful operators operating below the above threshold, will be subjected to supervisory sanctions by BNM. In addition, IFSA (2013, Sec 92(1)), has provided that takaful operators, will at all times maintain that the assets of the PRF; shall be equivalent or more than its liabilities - in order to meet all the liabilities of the fund.

(i) RBC Guidelines by Solvency II

Solvency II, is a European Union directive for insurance companies to implement a risk-based prudential supervisory regime, which came into effect on 1<sup>st</sup> January 2016.

The Association of British Insurers' (2019), has summarized the main aspects of the Solvency II Standards into the following:

- (i) Enhancing policyholder protection.
- (ii) Establishing uniform regulatory standards for insurance across the European Union.
- (iii) Ensuring that the financial resources of an insurance company, has a 95.5% confidence level, in paying its claims in any one year. Conversely, the chance of the insurance company not able to meet its claims liabilities in any year, is not more than 1-in-200 (0.05%).
- (iv) Ensuring that valuation of assets and liabilities and capital requirements - sets out how insurance companies value their assets and liabilities.
- (v) Implementing governance and risk management - determines how insurance companies identify, measure, monitor, manage and report risk exposures.
- (vi) Instituting proper reporting and disclosure - describes the degree of disclosure insurance companies need to report on their business to the various stakeholders involved.

## 7. Specificities of Capital Management in Takaful

A critical aspect of takaful business, is the need to undertake capital management in a different perspective as compared to insurance. An insurance business, is conducted based on a contract of exchange (buying insurance cover for a price- insurance premium). Here, the risk that is transferred is now the responsibility of the insurance company, to make good any loss as defined in the contract. If there is insufficient money in the insurance fund to pay the loss, the burden is borne by the shareholders, to make good such deficit. In takaful business, which is a risk sharing contract between the participants, the takaful operator only acts as the manager of the PRF; hence not theoretically liable to make good any deficit of the risk fund [19].

For this purpose, in order to protect the interest (*masalah*) of the public, the regulators such as BNM, have issued guidelines requiring the shareholders of the takaful operators to provide a loan



(*qard*) to the PRF to meet the deficit (IFSA 2013-Section 93 and Takaful Operational Framework, 2019). However, the SAC of BNM does not allow the deficit in the general PRF, to be funded by the family PRF and vice versa. Similarly, for family takaful business, using Participant Investment Fund (PIF) to cover deficit in Participant Risk Fund (PRF) is not allowed. Nevertheless, using PRF to cover deficit in another PRF fund, is allowed [1,11].

The accounting treatment for *qard*, as determined by both AAOIFI and IFRS, will be treated as: an ‘expense item’ for the SHF and its recovery as ‘other income’; or as ‘equity’ of the SHF in the PRF; or as a ‘financial instrument’ [4].). In this respect, in the case of Malaysia, BNM under the “Guidelines on Takaful Operational Framework (2019), has placed certain provisions, to ensure prudential management of the *qard* by takaful operators.

Normal investment deficiencies and losses in the PIF, will be absorbed by the participants; particularly where the contract underlying the PIF is a *muḍārabah* contract. Usage of *qard* to top-up investment deficiencies, will effectively lead the *muḍārib* guaranteeing the *muḍārabah* capital. This contradicts Sharī’ah principles underlying a *muḍārabah* contract. As such, *qard* shall not be used to top-up investment deficiency in the PIF, or to ensure PIF meet specified returns. For this reason, in discharging its fiduciary duties, it is the responsibility of takaful operators to manage the PIF investments with due care. Therefore, the investment strategy employed should be sound and prudent, to ensure the sustainability of takaful contract, to the end of its contractual term [11].

Besides the provision for *qard*, there are other options for takaful operators to meet the deficit of the risk fund. For example, early precautionary measures (pre-deficit status) can be undertaken by making adequate provisions such as contingency reserves and claims equalization reserve to meet future deficits. Alternatively, the deficit may be funded by increasing future takaful contributions. However, this approach will not augur well for competitive nature of the business. The key to managing the PRFs, is to ensure that they are sufficient to meet all their liabilities (of paying claims); timely and equitably by using all the necessary management, actuarial and financial tools [11,19].

## 8. Capital Management Through Retakaful

Retakaful may also play a critical role for a takaful operator to achieve solvency margin requirements – where its is required to have additional capital to meet its growing book of business. For example:

- If Solvency Margin Requirement is 25% of net retained contribution
- Shareholder’s Fund : RM10,000,000
- Net retained contribution : RM38,000,000
- Solvency Margin :  $\frac{\text{Shareholders Fund}}{\text{Net Retained Contribution}} = \frac{RM10,000,000}{RM38,000,000} = 26.3\%$  (This is within the requirement)

- However if Net Retained Contribution increased in line with business growth to RM50,000,000  
 $\frac{RM10,000,000}{RM50,000,000} = 20\%$  (this breached the Solvency Margin Requirement)

Solution: raise additional capital or reduce contribution through retakaful placement as substitute for capital.

For example: out of the RM50,000,000 net retained contribution, RM15,000,000 is ceded to retakaful through takaful placements on the risks. The balance in the net retained contribution of the takaful operator is now reduced to RMRM35,000,000. The effect will be as follows:

$\frac{RM10,000,000}{RM35,000,000} = 28\%$  (this is more than minimum solvency margin requirement)

Retakaful also plays an instrumental role in the provision of 'capital', whereby the takaful operator is able to leverage on the higher capital of the retakaful operator, to write bigger and more complex risks; over and above its own financial and technical resources. Here, the underwriting capacity of the takaful operator is enhanced, in order to compete in the market. Therefore, when a retakaful operator covers over parts of risk/risks underwritten by the primary takaful operator, it commits its own capital to cover these risks [11].

## 9. Conclusion

Capital management, is part and parcel of the overall enterprise risk management of the takaful business. The objective is to enhance prudence, cost-effectiveness and efficient management of capital– and in doing so, will also help to boost the standing of the takaful operator in the competitive market environment. This study has highlighted the pertinent aspects of capital as applied to insurance and takaful for a better understanding on the subject.

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