



Retakaful – An Integrated Mechanism to Enhance Prudence, Cost Effectiveness and Efficiency

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Abstract: The objective of this study is to highlight the current practice of retakaful and to explore means to enhance prudence, cost effectiveness and efficiency in managing retakaful which represents a major cost to the Participant Risk Fund (PRF). This is a qualitative study which discusses the theoretical and practical aspects of retakaful through literature review from published sources; articulated from the practitioner's perspective. This study explains the concept and importance of retakaful, outlines the methods of retakaful, discusses the theory of efficiency, and analyses the cost of retakaful and its impact on the takaful business. This study highlights the best practices for prudent management of retakaful and outlines the methodologies for measuring the efficiency of retakaful. This study contributes to the current dearth of literature and research on takaful and retakaful as a nascent industry, compared to the more matured insurance and reinsurance industry. Hence, the conventional insurance and reinsurance theory and practice are also referred to as a benchmark. The study would provide better insight for the takaful industry on the mechanism to improve the management of retakaful as a critical component of the Enterprise Risk Management (ERM) of a takaful operation. Better management of retakaful will assist in bolstering the financial position of the PRF as a whole.

Keywords: Takaful, retakaful, participants' risk fund, prudence, efficiency

1. Introduction

A takaful operator has the fundamental obligation and fiduciary duty to ensure that the interest of the participants is preserved and protected; by ensuring that the PRF has the financial capacity to meet all the liabilities, as determined in the takaful contracts (Al-Amri, et.al, 2020; Asafa & Archer, 2018). Major costs to the Participants' Risk Fund (PRF) consist of claims, reserves and retakaful. The PRF will be in deficit if such costs exceed the net contributions in the PRF. Retakaful is a pre-funded cost to ensure that the PRF has the added financial capacity, primarily, to meet all its obligations of paying claims to the participants, and secondarily, as a function to enhance the underwriting capacity of the takaful operation (Lee & Lee, 2012). BNM under its Takaful Operational Framework (2019) has laid out specific guidelines for retakaful undertakings by takaful operators as follows;

...A licensed takaful operator must establish and implement a retakaful management strategy that is consistent with the risk appetite of its takaful business...the licensed takaful operator must establish and implement policies and procedures for selecting and monitoring retakaful arrangements that

include, at the minimum, the following: (a) risk tolerance level of the takaful funds; (b) risk retention levels appropriate to the risk tolerance level of the takaful funds; (c) types of retakaful arrangements most appropriate to manage the risk exposure in relation to its risk tolerance; (d) criteria and process for selecting a panel of takaful operators or retakaful operators, which shall include considerations for level of risk tolerance, diversification and financial strength of takaful operators or retakaful operators; and (e) process for monitoring, reviewing and updating the retakaful arrangement in response to changes in the market and the risk profile of the takaful funds...

2. Concept and Practice of Retakaful

The Standing Committee for Economic and Commercial Cooperation of the Organisation of Islamic Countries (COMCEC) (2019), provides a succinct illustration of retakaful as

...Takaful and Retakaful are like Siamese twins that are highly dependent on each other. Retakaful functions as the primary risk-mitigating tool for the TOs in the form of providing a balance of the portfolios of the TOs, assisting them in attaining the homogeneous risks, avoiding unnecessary exposures of the TO's portfolio and strengthening of capital for TO as required by domestic laws or regulations. Retakaful mainly involves two parties to its contract – that is, the TO, which is also known as a ceding company, and the RTO. The TO needs to limit the risks undertaken from the Takaful participants by ceding it to the RTO that assumes a portion of the risk transferred by the TO...

Retakaful plays a critical role in the overall development of the takaful industry. In the current environment, the business of takaful will not be able to survive without the support of a sound retakaful environment - in other words, retakaful is a necessity in order to protect and sustain the PRF from adverse financial stress (Asafa & Archer, 2018). Its main function is to provide leverage as well as spreading of risks in the takaful market (Fadzli, et.al. 2015). Retakaful as an enterprise risk management tool, enables a takaful operator to evaluate, assess, share and transfer its risk exposures beyond what it can manage within its own financial and technical capacities, capabilities and resources. In addition, it provides benefits to the takaful and insurance industry in various ways such as:

- (i) Efficiency in the allocation of financial resources of a takaful/retakaful operator and insurance/reinsurance company, through pre-funded financial allocation for risks and liabilities underwritten. Similarly, an economy, through the mechanism of takaful/retakaful and insurance/reinsurance also benefits from the pre-funded financial allocation for disaster financing.
- (ii) Retakaful, through diversification is more efficient in managing risk, where its cost of risk bearing is less than the cost to the primary takaful operator. For example, takaful cover for natural catastrophes is often undertaken by national primary takaful operators and covered by retakaful by international retakaful operators. Since correlations between catastrophes in different parts of the world are low, the retakaful operator can provide coverage to primary takaful operators operating in many different locations. Here, retakaful exploits the comparative advantage in diversification, by re-assigning risk between parties, for whom the costs of bearing risk differ.
- (iii) Retakaful 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.
- (iv) Retakaful helps a takaful operator to optimize and homogenize its portfolio of risks, by improving the balance and homogeneity of its portfolio - by getting rid of peak exposure and reducing volatility.
- (v) Retakaful helps to limit the impact of catastrophe losses which will affect the PRF, as well as the capital of the takaful operator (to meet any deficit in the PRF through *Qard* in case such catastrophic losses). This is in relation to the fact that takaful claims/losses, generally follow a predictable pattern, which can be sufficiently managed by the takaful operator; whereas a catastrophic loss/losses may disrupt this pattern, and may affect the solvency of PRF and takaful operator. An important feature of catastrophe events is that, while the losses have low frequency, the severity of the losses is very high. For normal claims, the takaful operator stabilizes its financial results through application of the mathematical "law of large numbers" to the risks covered over a one-year period; while for catastrophes, it is the application of law of large numbers for events covered over a period of years.
- (vi) Retakaful also helps to stabilise the net operational result of the PRF. This is achieved by reducing the potential variability/fluctuation of actual result over a period of years; where an unusually bad year in terms of claims experience, can be balanced at some time by good years of satisfactory claims experience. A major fluctuation in claims cost, whether caused by inadequate spread of risk or by a change in the background circumstances, can

seriously expose the PRF to financial difficulties. The stabilising effect of reinsurance (and retakaful) is best described by F.L Tima as cited by Carter (2013) as

...The purpose of reinsurance is pure technical. It is a means which an insurance company uses to reduce, from the point of view of possible material losses, the perils which it has accepted. When a carriage fitted with a shock absorber passes over a rough street, the road becomes no smoother, but the passenger will feel the jerks less as these are absorbed by the contrivance carried as a special addition to the vehicle. So it is with reinsurance; it does not reduce the losses but makes it easier for insurance to carry the material consequences...

- (vii) Enable newly established takaful operators to enter the market in a secure and confident manner, as well providing for similar security for writing new lines of business. On the other hand, a takaful operator who wishes to reduce or withdraw product offerings in a particular market, can transfer all or part of its business to a new takaful operator through the use of retakaful.
- (viii) Retakaful provides for the enhanced security and long-term stability of the takaful industry, making it feasible for takaful operators to write more complex risks beyond its financial and technical capacity, helps develop new products and tap on the retakaful operator's specialised underwriting expertise from its vast knowledge and experience of the business because of the international nature of the retakaful business both in scale and scope.
- (ix) Due to the global nature of the retakaful business, it helps spread risks across geographical boundaries, thus reducing the impact of losses in any single company, market, or economy
- (x) Atomisation of risk – where risks are efficiently distributed in the market through various successive methods, beginning from the direct takaful operator to the co-takaful to retakaful and retrotakaful. The principle of successive diminishing portions of the risk through the above chain, renders risks originally written by primary takaful operators to be financially tolerable.
- (xi) Arbitrage – the practice of assuming risk at one price and transferring or distributing risk at another (lower) price, deepens risk sharing both in scale and scope. For example, original takaful contribution is RM10,000 but passed to retakaful at a lower contribution of RM10,000–X. Practically, this may arise where there are abundant retakaful capacity at relatively cheap prices.
- (xii) In tandem with the increased role of retakaful, it is common for retakaful operators to also provide other value-added services to the market such as: facilitating mergers and acquisitions, help business growth through the enhancement of technology and development of expertise, facilitate access to new markets, providing access to valuable data to facilitate product development, benchmarking, and trend and market analysis, assist in complex underwriting and claims cases, promote higher risk management and corporate governance standards.
- (xiii) Retakaful recovery for claims (especially from foreign retakaful operators) is considered as external source of income to the local economy.(Billah, et.al, 2019; Fadzli, et.al, 2015; NuHtay, et.al, 2014; Gerathewohl, 2013; Wan Zamri, 2011; Geonka, 2003; Schwepcke, 2004)

3. Methods of Retakaful

Retakaful may be effected either on facultative basis or treaty basis (Fadzli, et.al, 2015; Gerathewohl, 2013). Facultative arrangement is generally defined as a retakaful method under which a risk is ceded individually. Under this arrangement it would not be obligatory on the part of the original takaful operator to cede the risk. Similarly, the retakaful operator would be free to either accept or decline such offer. Normally under facultative retakaful, each risk is ceded as an individual contract covering a period of 1 year and not subject to automatic renewal. A certain commission will be levied on the retakaful operator. Claims will be in proportion to the risk accepted by the retakaful operator (Merkin, 2013).

On the other hand, treaty retakaful is an obligatory contract, under which everything that is ceded by the takaful operator within the terms as agreed must be accepted by the retakaful operator, and nothing can be declined unless outside such terms. No underwriting of the risks by the retakaful operator is possible; no particulars are given other than in an abridged form of treaty bordereaux. The obligatory nature of treaty retakaful thus obviates the necessity of the takaful operators to refer each risk to the retakaful operators, provided that the risks ceded fall within the scope of the treaty. Unlike facultative retakaful arrangement, the retakaful operator under a treaty arrangement must rely almost entirely on the takaful operator's full disclosures on the risks portfolio to be covered under the treaty during the treaty negotiations and formation of the retakaful contract. This method of retakaful are in the form Quota Share Proportional Treaty, Surplus Proportional Treaty, Excess of Loss Non-Proportional Treaty and Stop Loss Non-Proportional Treaty (Pohl & Iranya, 2018; Frenz & Soualhi, 2010).

4. Theoretical Aspect of Efficiency

Efforts in managing risks seek to attain prudence through the efficient use of resources to generate utilities and avoidance of wastage and damage (*daf a-mafasid wa jalb al-masalih*) (Khatib 2009, Hassan and Kayed 2009).

Efficient use of resources will definitely result in higher productivity and at the same time reduce risk of losses. Management of risks which results in wastage, poor utilization of resources and inefficiency is counter-productive. In the realms of economics and finance, efficiency may be categorized and measured into three major components (Mama, 2010; Savage et. al, 2012):

- (i) Transactional efficiency- This refers to the speed of reliably transferring a large number of transactions at low costs between market participants.
- (ii) Informational efficiency- This refers to among others, efficiency of existing information set, efficiency of information gathering activities, transparency of the process by which relevant information is disseminated to market participants, information on prices.
- (iii) Allocational efficiency- This refers to the allocation of resources among competing ends according to where the expected rates of financial returns are the highest.

In the management of retakaful risks, similar approach needs to be adopted to enhance its prudence, cost effectiveness and efficiency.

5. Cost of Retakaful

Cost of reinsurance in general, (also applies to retakaful) according to Cummin, et.al, (2008) is not cost effective and may sometimes be more than the actuarial price of the risks underwritten Including the high retakaful cost for catastrophic risks. A study undertaken by Wan Zamri (2013), has proven that the current retakaful practice is not cost efficient. In the study, statistics derived from Bank Negara Malaysia (BNM) revealed that that on average from the period 2002-2011, takaful operators pay about 25% of their takaful contribution for retakaful purposes as against the average of 19% for the conventional insurance industry. The study also revealed that for every RM1 spent on retakaful, only RM0.36 was recovered in terms of retakaful recoveries. This is affirmed by another recent study by the Organisation for Economic Development (OECD) (2018), where it reported that for the period 2014-2016 reinsurance companies have collected more premiums as against paying claims. In the case of Malaysia, BNM has urged that retakaful expenses should not exceed more than 15% of gross takaful contributions to contain the unnecessary retakaful outflow especially to the international market as a strategy to improve the nation's balance of payments policy.

Another factor affecting the costs of retakaful is the periodic retakaful cycle. Meier & Outreville (2003) attributed the cause of reinsurance cycles to: disequilibrium between supply and demand – due to competition-driven prices, capital related capacity constraints, imperfection of the naïve rate-making process; external shocks - such as movements in interest rates, catastrophic losses, regulatory lags and accounting rules; general business influences – such as changes in economic performance and GDP of a country, and other business practices.

This refers to the market cycle for retakaful capacity: involving abundant capacity with lower price – called the soft market (the buyers' market); followed by depressed capacity with higher prices - hard market (sellers' market), which are usually triggered by heavy losses paid-out by the retakaful operators, which is usually attributed to natural catastrophic claims (OECD, 2018; Neuthor, 2013). This may be exacerbated by the international nature of retakaful, whereby retakaful and reinsurance companies business portfolio, are not normally restricted to a particular country. This also means that the retakaful capacity and pricing in a country or market, will directly and indirectly be influenced by the overall experience of the retakaful operator business in all its markets. This is described by Pollner (2001), as 'contagion effect' where retakaful capacity are depressed and ensuing increase in pricing globally due to certain significant losses.

6. Best Practices for Prudent Management of a Retakaful Program

The key objective of a retakaful program is to achieve an optimum retakaful protection, which is cost effective, and at the same time provides latitude for its efficient of management (Neuthor, 2013). A good management strategy for retakaful, involves the critical factors in determining the retakaful to be arranged and entered into such as: types of retakaful, classes required, its limits, the price/cost; the retakaful selection process involving legal and regulatory, Shari'ah compliance, security, reputation, other value-added features; adequate monitoring and the reporting and internal control systems, and renewals. According to Fadzli, et.al (2015); Kriele & Wolf (2014); and Geonka (2003), to ensure the optimum benefits from a retakaful program, a takaful operator need to undertake the following measures:

- (i) All risks accepted over and above the specified retention limits ought to be covered by an appropriate treaty backed by retakaful operator(s) of sound and impeccable security in accordance with the strict guideline established by the takaful operator. Such guideline would contain an established system for vetting the security, reviewing the retakaful operator's financial standing and setting limits of exposure on any one participating retakaful operator.
- (ii) Risk ceded is in accordance with the terms of the retakaful agreement and contribution ceded on the retakaful arrangement must be properly recorded and reported to the retakaful operator
- (iii) Facultative retakaful arrangements will have to be confirmed prior to the takaful operator's acceptance of the original participation or risk from the participant. All risks accepted must be securely and comprehensively

placed for retakaful, leaving no gap in the cover. Any gap would mean an unnecessary exposure of liability on the shareholders' fund

- (iv) Utilisation of the XOL treaty is monitored and the reinstatement contribution must be properly computed.
- (v) Any retakaful placement through the broking channel, the brokers selected should be of reputable standing with prompt submission of placement slips as a standing requirement, ensuring all treaty agreements and related documents concluded duly signed. To ensure competitiveness with high standard of broking service, the selection ought to be through a process of bidding and be reviewed on a periodical basis, say every five (5) years.
- (vi) Retakaful program must be reviewed annually to ensure that the retakaful needs are properly and adequately met.
- (vii) Retakaful statement of accounts regularly reconciled with any outstanding items be timely followed up and reconciled.
- (viii) Retakaful Recoveries - The financial position of the retakaful operator is paramount to the success of any retakaful program. Cedant will not benefit if the retakaful operator does not have the financial capability to pay valid claims despite the undertaking "without undue delay" as expressed in the agreement. Recoveries from claims covered by retakaful will be credited into the takaful funds.
- (ix) Retakaful Expenses - This represents a portion of the takaful contributions employed for the purpose of securing the necessary retakaful cover. Proportional retakaful expenses will usually be payable on quarterly basis in arrears, whilst the non-proportional will be payable on quarterly basis in advance.

7. Measuring Efficiency of Retakaful

Retakaful expenses account for a major component of the total expenditure of a primary or direct takaful operation. These expenses are obviously borne by the PRF. The International Association of Insurance Supervisors (IAIS) (2010) has formulated a number of methods to gauge the efficiency of the retakaful program such as:

- (i) Net Contribution Ratio analysis

It measures the extent of the retakaful outgo.

$$\frac{\text{Gross Contribution} - \text{Re takaful Ceded}}{\text{Gross Contribution}} \times 100 \quad (1)$$

If the ratio is a low, it reflects a relatively higher dependence on retakaful, which is not tenable and deemed inefficient. This criterion is usually applied by rating agencies in its measurement of the retakaful or reinsurance costs by takaful operators and insurance companies. It is important to have a balanced retakaful program taking into account its cost against the scope of cover with participating takaful operators backed by strong and sound securities. All endeavors ought to be taken by a takaful operator to see and ensure the takaful fund under its trusteeship and care is not suffering from unwarranted "bleeding".

- (ii) Credit Risk Ratio

It measures the unrecoverable retakaful and other bad debts will reduce the Takaful Fund by the same amount.

$$\frac{\text{Re takaful Unrecoverable and Bad debts}}{\text{Takaful Fund}} \quad (2)$$

The higher number, the worse off the takaful operator is. The greater the proportion of the Retakaful Unrecoverable to the Takaful fund, the bigger risk from bad debts. Rating agencies measures the riskiness of retakaful recoverables as a criterion in their rating methodology to measure financial strength of a takaful operator.

- (iii) Retakaful Dependency Ratio

It measures the extent to which a takaful operator relies on outwards retakaful capacity.

$$\frac{\text{Net written Contribution}}{\text{Gross written Contribution}} \quad (3)$$

A higher number is worst off for the takaful operator. Retakaful is, in effect, a capital substitute and a takaful operator that is overly reliant on it may lack bargaining power with its retakaful partners and be overly exposed to changes in retakaful pricing. The degree and nature of the exact protection gained from the retakaful program may be only loosely correlated with the contribution amount of retakaful. Too little use of retakaful protection, especially for smaller takaful operators and those in volatile lines of business, is risky.

Other methods to measure effectiveness of retakaful as recommended by IAIS (2010) is tabulated below:

Risk Concentration	<p>Concentration of insurance risk by territory and by economic sector</p> <p>Risk concentration in reinsurance coverages to examine the extent to which the risk is reduced by reinsurance and other risk mitigating elements:</p> <ul style="list-style-type: none"> ❖ Gross premiums and net of reinsurance premiums ❖ Sum of premiums ceded to five largest reinsurers, as a ratio of total reinsurance premiums ceded
Reinsurance Quality	<p>Balance sheet information</p> <ul style="list-style-type: none"> ❖ Reinsurers' share of technical provision ❖ Receivables from reinsurers on settled claims ❖ Reinsurance result (cost of reinsurance less recovery from reinsurance of incurred claims), where the cost of reinsurance includes reinsurance premiums and foregone investment return from these reinsurance premiums <p>Qualitative information</p> <ul style="list-style-type: none"> ❖ Credit quality of the reinsurers (e.g. grouping reinsurance assets by credit rating) ❖ Credit risk concentration of reinsurance assets ❖ Proportion of reinsurers that are supervised ❖ Nature and amount of collateral held against reinsurance assets ❖ Development of reinsurance assets over time

Source: IAIS (2010)

8. Conclusion

Retakaful is a critical tool for the takaful industry to ensure that financial obligations to participants and claimants are secured and sustainable in the long run. For this purpose, the task of managing the PRF is onerous on the part of the takaful operator as custodian of public funds, and in keeping with the Shariah, legal and regulatory requirements. The management of retakaful, 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 retakaful – and in doing so, will also help to boost the standing of the takaful operator in the competitive market environment.

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