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A survey of the Islamic insurance literature – takaful

Abstract

The increasing wealth of the Muslims and growing awareness of the necessity for protections are generating demand for takaful, a risk sharing that is obedient with Islamic law. The purpose of this paper is to survey the literature on Islamic insurance (takaful) covering conceptual and practical aspect of it. The authors start by defending the takaful concept, how it is different from the conventional insurers, different models of takafuls, example of takaful insurance. It is then highlighted the growth history of takaful insurance globally, and finally the authors survey the literature of takaful insurance.

Keywords: takaful, Islamic insurance, literature survey, surplus distribution.

Introduction

The word takaful, originates from the Arabic word *kafala*, which means “guaranteeing each other” or “joint benefit” or “shared responsibility.” To conform to the *Shariah*, firstly, takaful insurance must be policyholder-oriented, not shareholder-oriented. Secondly, the length of the policy period has to be finite and the amount of exchange the premium and the benefits to be known as *ex-ante*. Thirdly, the contract must possess not only an element of mutual cooperation among participants in dealing with losses but also an element of sharing investment income between the insurer and its policyholders according to a predetermined ratio.

In fact, takaful is a cooperative system of reimbursement in case of loss, paid to people and companies concerned about hazards, compensated out of a fund to which they agree to donate small regular contributions managed on behalf by a takaful operator. Takaful insurance is a concept which is based on Islamic *muamalat*¹, observing the rules and regulations of Islamic *Shariah*. This concept has been practiced in various forms since 622 (Omar and Dawood, 2000). Muslim jurists acknowledge that the basis of shared responsibility in the system of *aqila* as practiced between Muslims of Makkah and Madinah laid the foundation of mutual insurance.

Theoretically, takaful is perceived as cooperative or mutual insurance, where members contribute a certain amount of money to a common pool. The purpose of this system is not making profits, but to uphold the principle of “bear ye one another’s burden”². Commercial insurance is strictly disallowed

for Muslims because it contains the following three harmful elements:

- ◆ *Al-Gharar* (uncertainty)
- ◆ *Al-Maisir* (gambling)
- ◆ *Riba* (usury/interest)

Under the framework of takaful, the contributions collected from the policyholders are considered as donations and they constitute the takaful fund from which all claims are reimbursed. After deduction of all expenses, any remaining cash surplus will not be retained by the company or its shareholders, but returned to the policyholders in the form of cash dividends or distributions at the end of each financial year. In this respect, takaful business is different from the conventional insurance in which the policyholders, rather than the shareholders, are solely benefitted from the profits generated from the takaful and investment assets. The investment assets representing the takaful fund that accumulate over the retained reserves, surpluses and provisions are invested by the shareholders who manage the company on behalf of the policyholders. The shareholders are rewarded with a percentage of the profit on these investments.

There are four different models for implementation of takaful insurance:

- ◆ *Mudharabah* model (profit and loss sharing): the shareholders are sharing profits and losses with the policyholders; used initially in Far East;
- ◆ *Wakala* model: agency fee, received up front from the contributions and transferred to shareholders fund;
- ◆ Hybrid model (a combination of *Mudharabah* and *Wakala*): used in Bahrain, UAE and Middle East countries;
- ◆ *Waqf* model: mainly used in Pakistan and South Africa; part of the contributed capital is irredeemable.

The fundamental principles of takaful are as follows:

- ◆ Policyholders cooperate among themselves for their common interest;

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¹ Muamalat is a set of rules (*fiqh*) related to worldly matters such as business/trading/commerce transactions, lending and borrowing contracts. Muamalat also involves the rules regarding the social interactions between human such as marriage, inheritance (*waqaf*, *faraidh*) and other human activities.

² Have sympathy; feel for each other; and consider the case of a distressed brother as your own.

- ◆ Policyholders' contributions are considered as donations to the fund (pool);
- ◆ Every policyholder pays his subscription to help those who need assistance;
- ◆ Losses are divided and liabilities spread according to the community pooling system;
- ◆ Uncertainty is eliminated concerning subscription and compensation;
- ◆ It does not derive any advantage at the cost of others.

1. An example of takaful insurance: takaful life insurance

Takaful life insurance acts as a savings tool for the accumulation of a target amount by the end of the policy period and concurrently as a protection instrument with which all policyholders guarantee each other against certain events that could alter the financial well-being of those affected. Under the conventional life insurance arrangement, policyholders make periodic contributions of level premiums for a finite period. Suppose we wish to see how takaful life insurance works based on the *mudharabah* model. Under this model, the insurer allocates premium contributions to two separate accounts of the policyholders' fund. The "individual account" called savings account, to which the major portion of the premium is commonly allocated, is for each policyholder to accumulate his or her target savings amount. As the account name implies, the contribution by each policyholder is earmarked to that policyholder in this account.

The "special account" called "risk account" on the other hand, is for the insurer to meet insurance obligations during the current period and to build reserves for future obligations. The insurer, therefore, helps policyholders practice *tabarru*¹ using the special account where all contributions are technically pooled. Each policyholder's share of the operating profit is added to his or her individual account and to the pooled special account for reinvestment, until policy expiry or the death of the insured, whichever comes first. Takaful insurers may also use money from the special account to cover premium payments for certain qualified policyholders, e.g., those who become totally disabled during the policy term. Takaful life insurance policies possess several unique characteristics as compared to conventional life insurance. They can be summarized as follows:

1.1. Underwriting and pricing. The amount of premium contribution varies from policyholder to policyholder, depending primarily on the amount that each person targets to accumulate at the end of

the policy period. The policyholder may be subject to a minimum entry age of the insured life as well as a minimum payment of each installment. The insurer may consider age, gender, health and other socio-demographic factors allowed in the jurisdiction for underwriting. For example, policyholders with a poor health condition can be asked to increase their *tabarru* to the special account (Ali, 1989).

1.2. Beneficiaries. Eligible beneficiaries in takaful life insurance are restricted to the heirs of the deceased insured. This is mainly because use of the insurance is strictly for the protection of financial well-being of the family members of the insured².

1.3. Causes of death. In order to claim death benefits, the beneficiary needs only proof of death. The cause of death, whether natural, accidental or unlawful, all these matter very little. Muslims believe that death is deemed to be the will of Allah. Therefore, even in the event of suicide, the rights and claims of the surviving family members cannot be ignored.

1.4. Death benefits. Upon having verified death of an insured, the insurer returns the beneficiaries (heirs) the entire amount in the individual account of the deceased. In addition, the heirs are entitled to a "fair" share of the balance in the special account, where the balance refers to the estimated net profit in the account. Differences exist on how to calculate the fair share. Some insurers calculate it based on the deceased's contribution to the special account. Other insurers apply an economic needs test such that, all others being equal, those heirs in a financially destitute situation get a greater amount than wealthier heirs.

1.5. Maturity benefit. When the insured survives the protection period, the insurer returns all the money in his or her individual account plus a "fair" share of the surplus in the special account.

1.6. Policy surrender. When an insured wishes to surrender his or her policy, the insurer returns him or her what has been accumulated in the individual account. No refund is usually made from the special account. Existing takaful life insurance products resemble, albeit not exactly, endowment insurance in the conventional market. Extensions of the pure life insurance products in the conventional market can be found from insurers offering takaful mortgage insurance, takaful education insurance and takaful annuity, all with known sizes of benefits and benefit payment periods. A takaful life insurance

¹Tabarru is derived from Arabic noun that means donation, gift, and contribution.

²An insured may appoint a trustee in addition to beneficiaries. Upon the death of the insured, the trustee receives insurance proceeds from the insurer and distributes them to the beneficiaries according to the principles of *mirath* ("inheritance") and *wasiyah* ("bequest").

scheme can be on an individual or group basis, see for a more detailed discussion, Kwon (2007).

1.7. Surplus distribution. Takafuls have to be mindful about the management of surplus arise in well positioned takaful operations. Yet, in practice the management of surplus differs significantly from one country to another and among different takaful firms in the same country. This absence of uniform standards cause challenges in accounting for and observing takaful business. According to the standards established by the Accounting and Auditing Organization for Islamic Financial Institutions, there are three core approaches to distribute surplus to participants (Ismail and Birch, 2012).

- ◆ In percentage to the amount of tabarru' paid by a participant, irrespective of whether a participant had incurred a claim or not.
- ◆ Simply to participants who have not incurred any claims, in proportion to the amount of tabarru' paid by them.
- ◆ To participants who have not incurred any claim as well as participants whose claim is lower than the tabarru' paid, the latter's surplus being the difference between the tabarru' paid and the amount claimed.

2. Growth history of takaful insurance globally

The first *takaful* insurance industry in the modern economy was established in 1979 in Sudan. Later on, three other firms in the country namely, the Al Baraka Insurance Company, Sheikan Insurance Company of Sudan and Watania Cooperative Insurance Company were established in Sudan (Ahmed, 1997). Following the enactment of the insurance law of 1992 (revised in 2003), all insurance firms in Sudan are required to transact insurance and reinsurance businesses only in Islamic ways particularly based on the wakala model.

The first takaful company called SALAMA Islamic Arab Insurance Company was established in 1979 in the UAE. Its operation has been multinational and now working in Algeria, the Bahamas, Egypt, Jordan and Tunisia. It is also a major holding company of Best Re, a Tunisia-based retakaful company established in 1985.

In Saudi Arabia, according to Saudi Arabia Monetary Agency (SAMA) there are 43 companies applying *takaful* with US\$1.39 billion indemnities in 2008 compared with US\$680.52 million in 2005. Here, the National Company for Co-operative Insurance (NCCI) was the first company to apply Islamic cooperative insurance. As a joint venture, established in 1986 by three government agencies, this type of insurance underwrites risks in the oil industry worldwide, as well as the aviation fleet risks of Arab nations. In fact, the NCCI recently

achieved 1st position with stock market shares valued at US\$200 million. However, in order to enhance the insurance market, SAMA stipulates SAR 100 million for insurance companies and SAR 200 million for reinsurance.

In Kuwait, the Ministry of Commerce and Industry granted a license for the first takaful insurance company as recently as February 1998. This new company, capitalized at US\$98 million, has eight major shareholders including Kuwait Finance House, the International Investor and International Murabaha (the main Islamic financial institution in the country). This company is expected to offer a full range of *takaful* products in the near future. There are now more than 9 *takaful* and *re-takaful* companies in Kuwait. The Islamic insurance market will grow five fold over the next ten years and the Shariah-compliant insurance is expected to be \$14 billion worth by 2015 (Al-Amri et al., 2012).

The development of takaful insurance in Malaysia is worth noting. Being a Muslim-majority country, Malaysia has well incorporated Islamic principle into its banking and insurance systems. Indeed, Malaysia was one of the first governments that responded to the call for takaful insurance around the time of the Majma al-Fiqh meeting in 1985. It introduced the Takaful Act in 1984 (revised in 1999) and appointed Bank Negara Malaysia, the central bank of Malaysia, to supervise Islamic financial institutions. Syarikat Takaful Malaysia (Takaful Malaysia) was the first to obtain license in 1985 under the act. MNI Takaful, licensed in 1993, is probably the first firm in the world that has entered into banca takaful business via a strategic alliance with post offices to market its insurance products and to offer ancillary services to policyholders (Sharif, 1997). Nine takaful insurers, including joint ventures between domestic and foreign partners such as Hong Leong Tokyo Marine Takaful, and two retakaful companies operate in Malaysia. The law in Malaysia requires takaful insurance firms to establish and maintain a Shariah supervisory council as the overseer of the firm's compliance with Islamic principle.

Like those companies in Malaysia, takaful insurers in Indonesia compete with conventional insurers comprising pure domestic firms and joint ventures with foreign insurers. PT Asuransi Takaful Keluarga, established in 1994, was first to offer takaful life insurance and annuity products, and PT Asuransi Takaful Umum, established in 1995, to offer non-life products. Later, in 1996, PT Syarikat Takaful Indonesia was founded as a holding company of these two takaful insurers. Indonesian takaful insurers are known for their strong ties with various Islamic organizations.

In Singapore, *takaful*, together with Islamic banking, has been viewed as a tool to promote the economic development of the Islamic community and comprises approximately 15 percent of the population. Currently, two *takaful* insurers are in operation, both created in 1995. The Ampro-Income *takaful* Company is a joint venture between Ampro Holdings of Singapore (mainly in manufacturing business) and NTUC-Income Insurance Co-operative (a local mutual insurance company dominating personal lines of insurance and with a relatively large number of Muslim insurance agents). The other *takaful* insurer is Syarikat Takaful Singapura (STS), a joint venture business between Keppel Insurance Company and Singapore Malay Teachers' Multi-purpose Co-operative Society.

In Pakistan, the Securities and Exchange Commission of Pakistan (SECP) is the regulatory authority of the insurance industry operating in accordance with the Insurance Ordinance 2000. Here, thus far, the *takaful* business has not been introduced. However, the Insurance Ordinance, 2000 has made provisions for *takaful* business. Islamic banking institutions require the support of *takaful* businesses. As such, the SECP has constituted a four-member task force, which will frame rules and regulations for *takaful* businesses in Pakistan. *Takaful* insurance is also observed in, among other places, Brunei, Egypt, Jordan, Bangladesh, Qatar, Senegal, South Africa and Sri Lanka.

Interestingly, *takaful* is observed in the non-Islamic world too. The USA hosts the largest insurance industry in the world, accounting for 30% of total worldwide premium income, compared with 11% in Japan. The US has many *takaful* operators, for example, USA *takaful* Management Services; LLC (Wayne, NJ) is just one of several *takaful* insurers in operation. Established in 1996, this company provides *takaful* life and non-life insurance coverage's in both personal and commercial lines. Other US *takaful* insurers, or financial institutions operating under Sharia principles include Failaka Investments (Chicago, IL), Samad Group (Dayton, OH), North American Islamic Trust (Indianapolis, IN), Baitul Mai., Inc. (Secaucus, NJ), Abar Investments, Inc. (Stamford, CT) and MSI Finance Corporation (Houston, TX).

The UK insurance industry is the largest in Europe and the third largest in the world after the USA and Japan, accounting for 11% of total worldwide premium income. The UK's annual per capita insurance spend is approximately £2,500 (US\$4,600), which is the second highest in the world after Switzerland (as of 2005). Most people in the UK purchase some form of insurance and over 60% of

households in the UK subscribe to home-related insurance, while more than 70% are covered for motor insurance.

A UK survey conducted by British Islamic Insurance Holdings (BIIH), revealed that the first *takaful* Company in the UK (founded in May 2008), decided to launch with capital of £80 million. The survey actually indicated a strong preference for Sharia compliant insurance solutions amongst UK Muslims with 50% responding that they were "extremely likely" or "very likely" to buy Motor *takaful*, as long as all aspects of the policy, including cost and level of cover, are comparable with their existing conventional insurance policy. A further 26% said that they would be "fairly likely" to buy Motor *takaful*. The corresponding figures for Household *takaful* were 46% and 28% respectively. However, *takaful* insurance is also found in Switzerland, Sweden, Russia, Belgium and Australia.

3. Literature survey

Starting in the 1970s and increasingly in the 1990s, Islamic countries and other countries with a significant Muslim population have encouraged the provision of financial services, including insurance, under Islamic principles. As a result, a number of Islamic insurance companies, called *takaful* insurers, have been established to provide Muslim individuals and businesses with insurance coverage both in the life and non-life sectors. These insurers are found not only in Islamic countries and other countries with a significant Muslim population. They are also found in North America, Australia and some European countries. This type of modified cooperative insurance mechanism is expected to further influence the supply and demand for insurance in the Muslim community. Nevertheless, no thorough studies have been conducted yet regarding the application of Islamic principles into insurance and how this type of insurance arrangement works.

Based on the above ideas, R.C. Maysami and W.J. Kwon (1999) were the pioneers who first examine four important issues for Islamic insurance namely, (1) Islamic socioeconomic principles applied to insurance, especially regarding the concepts of uncertainty, interest and investment arrangements; (2) described the basic structures of *takaful* life insurance, non-life insurance and reinsurance; (3) investigated *takaful* insurer operations in selected countries; and (4) discussed existing regulations as well as suggestions for better *takaful* insurance operations through a detailed study.

Saad et al. (2006) investigate efficiency of the life insurance industry in Malaysia during the period 2002 to 2005. To measure their efficiencies, the output-input data consisting of a panel of 13 life

insurance companies are utilized. Both conventional insurances and takaful companies are comparatively analyzed. The most commonly used non-parametric approach, namely, Data Envelopment Analysis (DEA) is adopted to investigate efficiency of the Malaysian insurance companies and takaful operators. In the DEA technique, efficiency is measured by the Malmquist index¹. The Malmquist efficiency measures are decomposed into two components: efficiency change and technical change index. Efficiency change is further decomposed into pure efficiency and scale efficiency. From this analysis, the authors hope to compare the performances of takaful operators vis-à-vis their conventional counterparts.

Wahab et al. (2007) examine the basic principles of takaful and then analyze the mechanics of the two models most commonly used in the takaful industry namely, the mudarabah system that was developed by the Malaysians and the wakala (agency) system that is now being used by most takaful operators and has achieved tremendous popularity and acceptance in recent years even in countries where the mudarabah model was earlier implemented. Shariah scholars have, however, expressed some misgivings about both approaches, but because of its wider acceptability among Shariah scholars in the case of the wakala approach, this is more urgent. With regards to the mudarabah model for risk management, there are major discrepancies that have been highlighted by Shariah scholars effectively rendering it inappropriate to apply this for insurance contracts. For this reason, the authors outline a third model, a wakala with waqf fund, which seeks to remain within the wakala framework while incorporating modifications that may render it more acceptable from a Shariah perspective.

W.J. Kwon (2010) investigates the microfinance – principally microinsurance – market at the global level and the business structure of over 600 microfinance institutions (MFIs) in 83 countries that were in operation during 1998-2007. The author then empirically examines the impact of market, organizational and socio-cultural factors on the supply of insurance, lending and savings services by MFIs in developing countries. Findings from a series of probit analyses indicate that a rise in the financial expense ratio, loan repayments in arrears, years of operation, number of borrowers, woman borrower ratio, life insurance penetration ratio and family size positively affect MFIs' willingness to expand their operations, certainly to microinsurance business. In

contrast, they are likely to stay away from the insurance market when their loan asset ratio, bad loan write-off ratio or average loan size in comparison to GNI per capita is on the rise. It seems MFIs focus on lending service in Muslim populous countries. Finally, the study found no evidence that presence of insurance affects availability of savings service, and vice versa, in the microfinance market.

Kader et al. (2010) examine the cost efficiency of non-life takaful insurance firms operating in 10 Islamic countries. Non-parametric data envelopment analysis is used to compute cost efficiency scores and a second-stage logit transformation regression model is then estimated to test the influence of corporate characteristics on these efficiencies. The authors find that nonexecutive directors and separating the Chief Executive Officer and Chairman functions do not improve cost efficiency. However, board size, firm size and product specialization have positive effects on the cost efficiency of takaful insurers. In contrast, the regulatory environment is found not to be statistically significant in terms of improving cost efficiency. They finally conclude that their results could have important commercial and policy implications.

Erlbeck et al. (2011) examine microinsurance schemes based on the Islamic law (Shariah), which is called *Microtakaful* schemes. They conduct a field study of two *Microtakaful* insurance providers in Indonesia. One of the two companies studied is owned in majority by Muslim shareholders, whereas the other company is owned by a large international commercial insurance company. The authors document the forms and characteristics of their microtakaful credit life insurance products as well as the organizational structure of these two companies. They then discuss the *microtakaful* schemes in the light of best practices in microinsurance and socio-cultural Islamic principles. The results suggest that both companies have a similar product design and business operations, and that best practice microinsurance services can be offered in a Shariah-compliant way. Their findings also demonstrate that an international commercial insurer can successfully offer *microtakaful* schemes and, hence, participate in this untapped market segment.

Z.A. Ansari (2011) attempts to find out the impact of reforms on insurance industry of Saudi Arabia. The study finds out the impact of reforms vis-à-vis premium growth, regulation of insurance industry and entry of new companies in the industry. The study is based on secondary data collected mainly from the annual reports of the Saudi Arabian Monetary Agency (SAMA) from 2005 through 2009. The study made a comparative study of the performance of insurance industry in pre and post reforms era.

¹ The Malmquist Index (MI) is a bilateral index that can be used to compare the production technology of two economies. It is named after Professor Sten Malmquist, on whose ideas it is based. It is also called the Malmquist Productivity Index.

Further the author analyzes the impact of reforms on standardization of insurance industry through regulatory framework and participation of new companies from Saudi Arabia and other foreign multinational companies in the industry. Since reform in 2004 Saudi Insurance is growing fast registering remarkably high growth rate in premium. Besides premium large numbers of indigenous companies have entered the insurance market. The government has established sound regulatory system to develop the insurance industry of Saudi Arabia to international standard.

Ismail et al. (2011) provide an empirical study on the relationship between efficiency and organizational structure for takaful operators in Malaysian dual financial system. A sample of 19 firms is chosen over the period 2004-2009. The selection of inputs and outputs are based on flow approach consistent with Leverty and Grace (2009). The study employed Data Envelopment Analysis (DEA) with input orientation measurement to estimate the technical efficiency for both industries. This study applied constant return to scale (CRS) and variable return to scale (VRS) to separate the scale efficiency from the technical efficiency. A Mann Whitney test is employed to examine any significant difference in efficiency between takaful and insurance industry. The findings indicate that there is a significant difference in technical efficiency between takaful industry and conventional insurance industry. It is found that the conventional insurers have still higher scale efficiency than takaful industry. The study also shows that the organizational form has an influence on the efficiency.

Altuntas et al. (2011) provide in depth a field study of microtakaful schemes. They show that takaful insurance can indeed be successfully offered on a non-profit basis. The authors also show that an international insurer can successfully enter the growing microtakaful market in developing countries.

Outreville (1990) investigates empirically the relationship between property-liability insurance premiums and economic and financial development. A model is specified for property-liability insurance demand and it is tested with a cross-section of 55 developing countries. The empirical results clearly indicate the importance of financial development and if it is true that the developing countries have a supply-leading causality pattern to development, then more attention should be paid to supply forces in insurance markets. More research needs to be done on the supply side to analyze the impact of the market structure.

Lester (2011) studies the causes of the low development of the insurance sector in the Middle East

and North African (MENA) region, particularly for long term insurance. The author shows that life and non-life premiums, as well as assets, are very low relative to expected levels given per capita income and demographic characteristics, and examine the causes of such poor performance. The author found a wide range of factors constraining the development of the industry, including the absence of mandatory insurance in key areas, the predominant presence of the state in some countries, gaps in regulation and supervision, unsupportive tax regimes, fragmented market structures, a chronic lack of suitably skilled people, as well as the absence of products that conform with cultural/religious preferences, especially in the case of life insurance.

Feyen et al. (2011) examine the determinants of insurance premiums (both life and non-life premiums) and total assets for a panel of about 90 countries during the period 2000-2008. The results show that life sector premiums are driven by per capita income, population size and density, demographic structures, income distribution, the size of the public pension system, state ownership of insurance companies, the availability of private credit, and religion. The non-life sector is affected by these and other variables. While some of these drivers are structural, the results also show that the development of the insurance sector can be influenced by a number of policy variables.

Khan and Noreen (2014) compare the Pakistan's takaful and conventional insurance firms in terms of efficiency and productivity for the period 2006-2010. They utilize Data Envelopment Analysis to assess technical, allocative and cost efficiencies. The results show that the insurance industry is cost inefficient because of high allocative inefficiency. Yet, technical efficiency parts show improving trends. Moreover, results show that takaful firms are more efficient comparing to conventional insurance firms. Malmquist productivity index indicates a significant improvement in scale efficiency. Yet, they do not find any significant influence of technology to increase overall productivity. The study recommends introducing innovative and diversified products in insurance industry of Pakistan, mostly for Takaful companies.

Tahira and Arshad (2014) conduct a comparative performance study of Islamic and conventional insurance companies in Pakistan. They find that takaful insurance company profitability results are not significant. The results show that the Islamic insurance company's liquidity is higher than conventional insurers and Islamic insurance companies are less risky. They also find that Islamic insurance companies are well capitalized than the conventional insurance companies.

Yakob et al. (2012) offer a base for policyholders to get an idea of the solvency of the insurers/takaful operators. They categorize issues that affect the solvency of the insurers/takaful operators in Malaysia. Utilizing random effects regression on panel data for 2003-2007, they found that investment income, total benefit paid to capital and surplus ratio, financial leverage, and liquidity are significantly related to solvency, in which the investment income has a positive relationship, while the other three have a negative relationship. To some extent, this information can help policyholders/consumers to make smarter choices in choosing the insurers/takaful operators.

Singh and Zahran (2013) compare the cost efficiency of Islamic and conventional insurers operating in eight countries. They analyze data collected from 32 insurers using stochastic frontier analysis, data envelope analysis and a partial frontier approach with order-alpha free disposal hull. They compare the efficiency of Islamic and conventional insurers and conclude that Islamic insurers are no more or less efficient than conventional insurers in carrying out insurance activities. Any differences arise in the investment side of the business, where Shariah restrictions render Islamic insurers less efficient than their conventional counterparts.

Yusop et al. (2011) examine the efficiency of risk management of life insurers and takaful operators in a competitive environment of the insurance industry in Malaysia. There are very few studies concentrated on the risk management efficiency of life insurers and combining such study on both life insurers and takaful operators. The study utilizes the data envelopment analysis (DEA) model to obtain the efficiency score of risk management activity for each company. The results indicate that the efficiency score of both types of companies is moderately high and the standard deviations show a declining trend. It is hard to confirm the interaction between the firm size and the risk management efficiency but, yet, it reasonably seems that there is an association between the organizational forms (stock vs mutual) and the risk management efficiency.

A more recent paper is Al-Amri et al. (2014). The research examines the scope of economies, organizational form, and insolvency risk for a sample of takaful firms in 19 countries. Firm efficiency is assessed using DEA, and insolvency risk is measured utilizing distance to default. The authors test the strategic focus and conglomeration hypotheses for takaful operators. They also investigated the differences in performance between the two major takaful organizational forms – the mudharaba (profit-sharing) and the wakala (fee-based) models for

compensating managers. The profit-sharing design is hypothesized to be more effective in aligning the incentives of managers and policyholders. The findings suggest that strategic focus is superior to conglomeration for takafuls in terms of performance, efficiency, and insolvency risk. The results also show that the profit-sharing model performs better than the fee-based model.

Conclusion

The takaful industry promotes cooperative risk-sharing and mutual assistance. As has already been mentioned in the introductory part of the paper that conventional insurances are unacceptable in Islamic Shariah due to the presence of three elements such as *riba* – lending and borrowing funds/investment at fixed interest; *gharar* – uncertainty resulting from deception or lack of clear terms and conditions; and *maisir* – speculation or gambling. Thus takaful is being practiced now as an alternative to the conventional insurance. The progress of *takaful*, however, depends on a number of issues raised by various Islamic scholars.

Such issues must be resolved before *takaful* insurance can progress globally. First, takaful insurers need to take some policies to increase the public awareness of the importance of insurance, particularly Islamic insurance of both life and non-life cases. Second, the majority of takaful insurers currently operate only in their local market. They need to expose themselves to the international insurance market as well. They can serve Muslim individuals and businesses in other countries but without having the benefit of takaful insurance. Moreover, identification of *halal* investment sources both within Islamic and non-Islamic countries can help takaful insurers to improve their competitiveness and investment results.

Third, there is no general agreement as to the needs for takaful insurance yet. Some have still doubts about the need for a separate insurance system based solely on religious view (Ali, 1989), while others question about the competitiveness of takaful insurance. In fact, takaful insurance policies would require relatively higher premiums than conventional insurance policies in order to survive in its competitive market. Takaful insurers also need to keep focusing more on the development of a wide range of competitive products, both pricing and quality-wise, before they recommend Muslim individuals and businesses to purchase their products. Fourth, takaful insurance is, from one point of view, a profit-sharing arrangement between an insurer and its insureds.

Takaful insurers are expected to exercise judgement in making investment decisions and not to subject

such funds to potentially high return and high risk situations. From another point of view, takaful insurers would prefer those takaful funds that generated higher return than other takaful funds, *ceteris paribus*. Takaful insurers would also desire to maximize higher investment income because their compensation is directly related to their own investment performance.

Further, losses of the investment principal due to poor investment are to be borne totally by insureds. For instance, it is roughly estimated that about five percent of Islamic firms may become bankrupt, merged or need to be re-capitalized in the near future (Al-Rifai, 1998). This clearly indicates the presence of a classical principal agent conflict. For example, some takaful insurers may invest their funds in the riskiest *halal* areas and some others may operate over their capacity. Takaful non-life insurers increasingly provide liability insurance coverages where underwriting performance can be highly unstable.

Finally, there must be a formal supervisory system that monitors takaful operations efficiently. The mere existence of a Shariah supervisory board within a takaful insurer may not be effective in this regard. Moreover, it is highly desirable to set certain minimum capital standards and to limit the size of business, e.g., based on the insurer's own capital, expertise and the line(s) of business. It is also highly desirable for the market to employ some form of

guaranty fund system in case of insolvency of a member takaful insurer. Takaful insurers must also strengthen their financial capabilities and improve other essential skills in providing insurance services. Focus on quality of coverage as well as price is also recommended for efficiency in operation and enhancing competitiveness with non-Islamic insurers.

There are various challenges that face the takaful industry including: raising customer awareness and education about insurance in general and takaful insurance in particular. Also creating new insurance products that complied with Islamic Sharia is still remaining a big challenge to Islamic finance in general including Islamic banking and Islamic insurance – takaful, in addition to creative product design and distribution channels. Moreover, proposing attractive investment options, and finding an 'AAA rated' international reinsurance company willing to accept a retakaful. Such attainments would also improve customer understanding and general consumer satisfaction level.

Given that rapid growth of takaful industry and the coexistence with conventional insurers, one might investigate the phenomena of takaful insurers acquiring conventional insurers, and conventional insurer convert to takaful insurer (takafultization). Most of the major European reinsurers have at least one takaful; hence, it would interest to investigate the difference in the performance of foreign owned versus domestic takaful insurers.

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