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Takaful (Islamic Insurance), Risk Management and Maqasid Al- Sharī‘Ah

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ABSTRACT

Risk presents in the life of a human being from beginning of his/her life until the end. Daily transactions, financial operations are not exceptions from subjects of a risk. Moreover, risk does not differentiate between Islamic and non-Islamic financial transactions. However, the question boils down is "what is view of Islam to a risk and should it be managed and how?" This paper attempts to analyse and examine risk management in takaful from a standpoint of Sharī‘ah objectives. The study is limited to general overview, in other words the paper describes concepts and practices in general without going deep into details. Therefore, qualitative research method was used to analyse risk management in takaful and its relation to the objectives of Sharī‘ah. Findings of this paper are the concepts of risk management in takaful and its relation with Sharī‘ah objectives as it ought to be, as well as disclosure of current practices, issues and challenges to be precise. The study has shown its significance, since there is a lack of literature on this topic. Moreover, this paper shows some issues of current practice of risk management in takaful related to Maqaṣid al- Sharī‘ah.

Keywords: Risk Management, Takaful, Islamic Insurance, Maqasid al-Shari'ah

Tekaful (İslami Sigortacılık), Risk Yönetimi ve İslamın Hedefleri

ÖZ

Risk, insan yaşamının başından sonuna dek her alanında mevcuttur. Günlük ticari ve finansal işlemler de riskten azade değildir. Bu demektir ki risk, konvansiyonel ve İslami finans arasında ayrım yapmaz. Böylece ortaya, "İslam'ın riske bakışı nasıldır ve risk nasıl idare edilir?" sorusu çıkmaktadır. Bu makale İslam Hukuku açısından tekaful'deki risk yönetimini inceler. Çalışma genel bir çerçeve ile sınırlandırılmıştır, diğer bir ifade ile ana kavramlar ve uygulamalar derine inilmeden açıklanacaktır. Bu bağlamda, tekafuldeki risk yönetimi ve bunun İslam Hukuku'yla bağlantısı niteliksel bir yöntemle incelenecektir. Bu çalışmanın sonundaki bulgular tekafuldeki risk yönetimi kavramı ve bunun İslam Hukuku'yla bağlantısı, mevcut uygulamaların dökümü ve bunların durumu ve problemleri gibi olacaktır. Bu çalışmanın önemi ve literatüre katkısı, ilgili konu üzerindeki literatür eksikliğinin giderilmesi olacaktır. Özetle, bu makalede tekaful'deki risk yönetiminin pratiğiyle alakalı tespitler İslam'ın Hedefleri bağlamında ifade edilecektir.

Anahtar Kelimeler: Risk Yönetimi, Tekaful, İslami Sigortacılık, İslam'ın Hedefleri

INTRODUCTION

Islamic banking and finance or commonly abbreviated as IBF, is a movement that has become an industry over time, a solution designed to help Muslims around the world for their daily financial transactions and to prevent the consumption of *riba* (interest) in their life. Despite complex problems in different financial markets and the global uncertainties it has grown substantially, it emerged in the markets of Muslim-majority as well as Muslim-minority countries.

Conformity and correspondence to the principles of *Sharīʻah* is a distinguishing feature of IBF that sets it apart from its conventional counterpart. It comprises of not only the ways and the details of financial transactions, but primarily, the values, which drive IBF operations (Dusuki & Abozaid, 2007). These principles and values have extensive roles in realising objectives of *Sharīʻah* (*Maqaṣid al-Sharīʻah*). Fundamentally, *Sharīʻah* objectives disclose the complete understanding of Islam, as this religion is a holistic, perfective and cohesive pattern of lifespan incorporating personal and public in this world and the Hereafter. Therefore, these divine objectives intend that each person and organisation realises justice, brotherhood and social welfare. Hence, the realisation of society, in which everyone collaborates with each other, and even competes constructively to achieve the ultimate success (*falah*), is brought.

Consequently, ordinary maximisation of profits and increase of wealth cannot be the only driving goal of a Muslim society. Maximisation of profits and increase of wealth should go along with efforts to ensure spiritual well-being and awareness, fairness and honesty at all levels of social dealings. Thus, IBF in particular and Islamic economics in general are assumed to be based on the *maṣlahah* prescribed by *Maqaṣid al-Sharīʻah*. Only aforementioned development is in accordance and harmony with the *Maqaṣid al-Sharīʻah* (Siddiqi, 2006).

Unfortunately, the movement that was initiated by all good intentions has over time diverted from its true purpose due to the competitive pressure from conventional financial institutions. For instance, due to absence of Islamic tools of managing risk *takaful* operators had to accept conventional tools, which have been develop for years. While there is nothing wrong in adapting or even adopting the conventional mechanisms, the importance of *Sharīʻah* regulation and legal compliance with forum laws remains paramount. Undoubtedly, a sprouting niche of an established financial system within a competitive environment requires standardization, proper regulation and supervision, and resilience to record a breakthrough. Moreover, in order to fulfil the aspirations, which are stated by *Maqaṣid al-Sharīʿah*, mechanisms used by IBF institutions in general and *takaful* operators in particular should be assessed from Islamic point of view.

This paper attempts to analyse and examine risk management in *takaful* from a standpoint of *Sharīʿah* objectives. It defines the risk, *takaful* and types of the risk. In addition, paper studies different methods and techniques of mitigating the risk by *takaful* operators and view of *Maqaṣid al-Sharīʿah* on them, their relationship with objectives of *Sharīʿah*, proper comprehension, meaning, and appropriate application of *Maqaṣid al-Sharīʿah*, along with challenges facing in realising these divine objectives.

The structure of this paper is as follows: Chapter 2 offers a brief review of the literature relevant to the topic of research. Chapter 3 discusses objectives of IBF in line with *Maqaṣid al-Sharīʿah*, theory and practice. Chapter 4 provides definition of risk, definition of *takaful*, classification of risks in general finance as well as in *takaful* in particular. This is followed by Chapter 5, which talks over risk management in *takaful*. Chapter 6 analyses issues and challenges pertaining *takaful* industry and offers short practical recommendations. A brief conclusion is offered in the final section.

LITERATURE REVIEW

There is a lot of literature focusing on risk management, *takaful* and objectives *Sharīʿah*. Most of the articles discuss and analyse either all of the aforementioned topics separately emphasizing on a particular issue pertaining major topic, either they talk about risk management in *takaful*, or risk management and *Maqaṣid al-Sharīʿah* or *takaful* and objectives *Sharīʿah*. For proper literature review, we structure the literature in below main categories, namely

- *Maqaṣid al-Sharīʿah*,
- risk and risk management,
- *takaful* and insurance
- *takaful* and *Maqaṣid al-Sharīʿah*,
- *takaful*, risk and risk management,
- regulations and guidelines.

Maqaṣid Al-Sharīʿ Ah

Books and articles regarding *Sharīʿah* objectives such as "Role of Finance in Achieving Maqasid Al-Shari'ah" (Ahmad A.-R. Y., 2011) and "Role of Finance in Achieving Maqasid Al-Shari'ah" (Chapra, 2011) discuss about role of finance, namely Islamic finance, in achieving objectives of *Sharīʿah*.

Moreover, "The Islamic Vision of Development in the Light of the Maqasid Al-Shariʿah" (Chapra, 2012) and "A Critical Appraisal On The Challenges Of Realizing Maqasid Al-Shariah In Islamic Banking And Finance" (Dusuki & Abozaid, 2007) talk about challenges in realisation of *Sharīʿah* objectives in Islamic banking and finance industry, however they merely touch the topic of Islamic insurance in their discussions.

Nevertheless, Kamali in his books "Source, Nature and Objectives of Shari'ah" (1989) and "Maqasid al-Shariah Made Simple" (2008) deeply discusses about *Maqaṣid al-Sharīʿah*, the history and nature of this subject.

Dusuki & Abdullah in "Maqasid al-Shari`ah, Maslahah, and Corporate Social Responsibility" (2007) relate corporate social responsibility (CSR) to *maṣlahah* and *Maqaṣid al-Sharīʿah*. Specifically, *Sharīʿah* objectives incorporate CSR activities, therefore Islamic financial institutions (IFIs) should be systematically involved in CSR activities.

Other articles like "The Foundations of Islamic Finance and The Maqasid al-Shari'ah Requirements" (Laldin & Furqani, 2013), "The Objectives of Islamic Banking: A Maqasid Approach" (Mohammed, 2009) and "Maqasid Al-Shari'ah in Islamic Finance: An Overview" (Vejzagic & Smolo, 2011) deliver overview of *Sharīʿah* objectives and Islamic finance and provide recommendations for IFIs in order to achieve *Maqaṣid al-Sharīʿah*.

Risk and Risk Management

Papers pertaining aforementioned topic such as "Risk Management: An analysis of Issues in Islamic Financial Industry" (Khan & Ahmed, 2001), "Risk Management and Mitigation Techniques in Islamic Finance: A Conceptual Framework" (Kumaran, 2012) and "Risks in Islamic Banks: Description And Analysis" (Meshaal, 2013) provide overview of risks and risk management in Islamic financial industry, most fully emphasizing on Islamic banks only.

"Enterprise Risk Management (ERM) Practices Among Government-Linked Companies (GLCs) in Malaysia" (Yazid, Wan Daud, & Hussin, 2008) discusses relatively new phenomenon of ERM. Again, all of these articles do not mention *takaful* at all or mention only in passing.

Takaful and Insurance

First of all, there are reports about *takaful* industry. "International Takaful Report 2012-2013: Shariah and Legal Analysis" (Khan & Hasan, 2013) presents *takaful* from *Sharīʿah* and legal regulatory considerations in the Gulf Cooperation Council countries. "The World Takaful Report" (A MEGA Brand, 2012) and "Takaful Review" (A.M.Best, 2011) provide global report of Islamic insurance industry, showing financial strengths of the companies as well as discussing issues pertaining industry.

Books such as "Essential Guide to Takaful (Islamic Insurance)" (Engku Ali, Odierno, & Ismail, 2008), "Takaful and Retakaful: Advanced Priciples and Practices" (Frenz & Soualhi, 2010), "Insurance and Takaful" (Salleh, 2010), "Fundamentals of Takaful" (Yusof, Wan Ismail, & Abdullah, 2011) generally review *takaful*, also the subjects related to Islamic insurance starting with explanation of Islam, Islamic finance and Islamic financial contracts; covering such topics as *takaful* operations and models, markets, *retakaful* as well as risks in *takaful*. However, they are silent on objectives of *Sharīʿah* topic. "Islamic Financial System: Principles & Operations" (ISRA, 2012), in its turn, provide overview of Islamic finance and its operations, taking into account all the main topics regarding it as well as risk management, *takaful* and objectives *Sharīʿah*. However, these topics are discussed separately and in general manner.

"The Concept and Challenges of Takaful Investment in Malaysia" (Abdullah, et al., 2013) and "A Shariah Compliance Review On Investment Linked Takaful In Malaysia" (Noor, 2009) articles discuss mainly issues regarding investment activities of Islamic insurance companies in Malaysia.

Other articles such as "Problems and Prospects of Islamic Banking: A Case Study of Takaful" (Ahmad, Masood, & Khan, 2010), "Takaful: An Innovative Approach To Insurance And Islamic Finance" (Masud, 2011), "Islamic Insurance and Reinsurance: Theory and Practice" (Mulhim & Sabbagh), "Takaful Models and Global Practices" (Akhter, 2010b) and "The Concept of Takaful"

(DarAlTakaful, 2013) have a broader coverage, but again it is general review of *takaful* and *retakaful* without referring to risk management and objectives of *Sharīʻah*.

"Insurance Solvency Supervision, European Regulation and Takaful Products" (Dreassi, 2009) and "Solvency of Takaful Fund: A Case of Subordinated Qard" (Onagun, 2010) talk about solvency of Islamic insurance companies.

Takaful and Maqaṣid al-Sharīʻah

"Fulfillment of Maqasid al-Shariah via Takaful" (Abdul Aziz & Mohamad, 2013) and "Takaful From A Maqasid Al-Shari'ah Perspective" (Abdullah S. , 2012b) are one of the rare articles discussing *takaful* and *Maqaṣid al-Sharīʻah.* However, all discussion concludes that Islamic insurance concept is in line with *Maqaṣid al-Sharīʻah*, without referring to the techniques of risk management in and them being in line with *Sharīʻah* objectives.

Takaful, Risk and Risk Management

"The Parameter of Permissible Risks In Takaful" (Ahmad & Hashim, 2011), "Risk Management in Takaful" (Akhter, 2010a), "Risk and Risk Management of Takaful Industry" (Aris, Tapsir, & Abu Talib, 2012), "Takaful and Mutual Insurance: Alternative Approaches to Managing Risks" (Gönülal, 2013) and "Risk Management Efficiency of Conventional Life Insurers and Takaful Operators" (Yusop, Radam, Ismail, & Yakob, 2011) cover risk and risk management aspect of *takaful* industry. Although these articles and books analyse methods and techniques of risk management in Islamic insurance industry as well as the efficiency of the companies unlike the articles from previous section they are silent about *Maqaṣid al-Sharīʻah.*

It is obvious from literature review that there is lack of literature that discusses all three aspects, namely risk management, *takaful* and objectives *Sharīʻah* together, except "Risk Management via Takaful from a Perspective of Maqasid of Shariah" (Abdullah, 2012a). Nonetheless, even this article just shows that risk management is a concept that lies within the spirit of *Sharīʻah* in general and in *takaful* in particular.

Therefore there is a gap in research, which this paper will cover. To be more precise, there is scarce literature that discusses aspects of risk management in *takaful* from *Sharī'ah* objectives perspective, in other words are the techniques and concepts used by *takaful* operators in harmony with the concept of objectives of *Sharī'ah*?

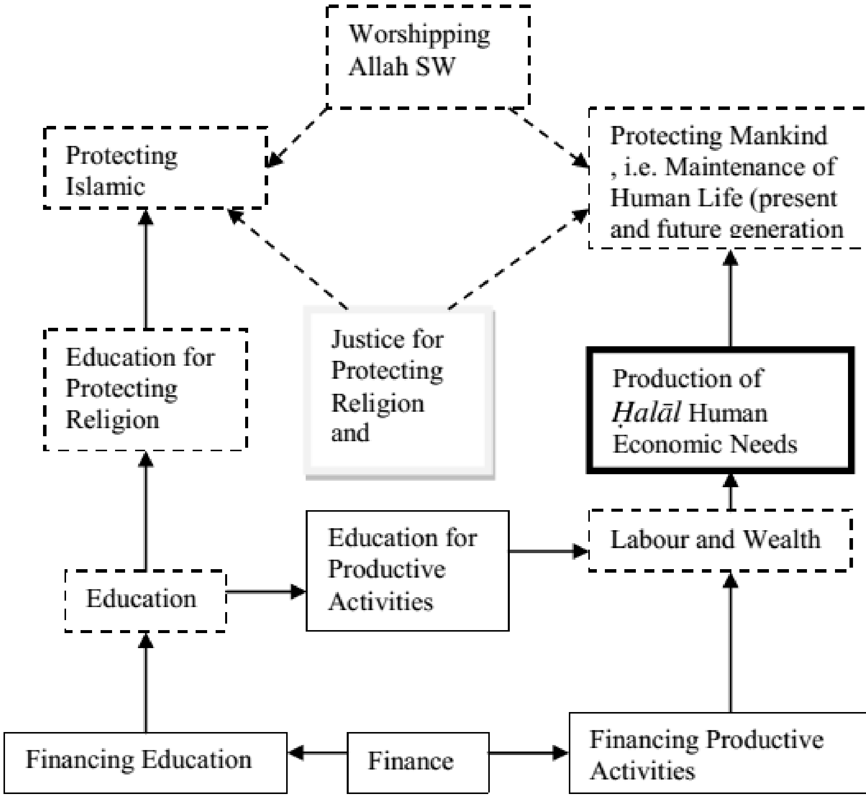
OBJECTIVES OF IBF

As Islamic economics uses Qur'an and Sunnah as a primary sources from which the rules and values are derived, likewise the objectives or goals of IBF in principle are based on the same sources by using the approach of *maṣlahah* and *Sharī'ah* objectives. To better understand objectives of IBF we need to understand the meanings of *Maqaṣid al-Sharī'ah* and *maṣlahah*. Indeed, these two categories very close to each other, however there are differences between them.

Maqaṣid Al-Sharī'Ah

Maqaṣid al-Sharī'ah is an Arabic term means aims and objectives of the *Sharī'ah*, its rationale. *Maqaṣid al-Sharī'ah* is the goals and objectives of Islam as a system of life that constitutes criteria and standards, guidance and values based on sacred revelation (*wahy*) to be applied in practical life to solve human problems and guide the direction of human life. More narrowly framed, *Maqaṣid al-Sharī'ah* is the purposes upon which the *Sharī'ah* is established (Laldin & Furqani, 2013). "*Maqaṣid al-Sharī'ah* aims at the attainment of good, welfare, advantage, benefits, etcetera, and warding off evil, injury, loss, etcetera for the creatures" (Ahmed Z. , 2013) in all aspects and segments of life. Altogether, in Arabic language it can be defined as *maṣalih al-'ibad* or *maṣlahah*. It is clear that all *Sharī'ah* rulings come with purpose to benefit the creatures and protect them anytime and anywhere, therefore, "*Maqaṣid al-Sharī'ah* allows flexibility, dynamism and creativity in social policy" (Dusuki & Abozaid, 2007). *Sharī'ah* recognises three areas, which constitute wellbeing, namely, educating individual (*tahdhib al-fard*), establishing justice (*iqamah al-'adl*) and endorsing benefits (*maṣlahah*) to people (Vejzagic & Smolo, 2011).

Figure 1. The Relationship of Finance with Maqaṣid Al-Sharī'Ah.



Source: *Ahmad, 2011.*

Tahdhib Al-Fard

Educating people is essential, because firstly, one gains knowledge, which shows him or her the path of performing any activities that he or she might and will perform, secondly, education inspires people with faith and God-consciousness and instils with qualities of being trustworthy and righteous, it helps them to purify their souls. Only a truthful and moral person can be relied on him or her in achieving Islamic social goals (Kamali, 1989).

Iqamah Al-'Adl

Establishing justice is the next paramount objective of *Sharī'ah*. *'Adl* literally means to put things in their right place where they belong. It means to establish balance by the approach of gratifying obligations and rights on one side and by removing inequality and unfairness on the other side, in all spheres of life of human being. It comprises of not only punitive and penal aspects such as adjudicating grievances, but distributive aspects as well, such as establishing equilibrium of benefits and advantages in society. It seeks justice on individual level as far as on social level without taking into consideration race, colour of skin, nationality, ethnicity, religion, wealth, status of people, because Islam proclaims that aforementioned matters cannot put someone higher than others. Only the matter that distinguishes people one from another is God-consciousness and it is a matter, which only Allah knows, therefore Islam declares equality among humankind.

Maṣlahah

Under the last, but not least, objective of *Sharī'ah*, which is endorsing benefits (*maṣlahah*) to people there are three main categories: *daruriyat* (essentials), *hajiyat* (necessities) and *tahsiniyat* (embellishments).

Daruriyat (essentials) refers to the matters which are heavily depended upon, when neglecting them will lead to total collapse of the society. These essential elements are further divided into five categories. On the word of al-Imam Al-Ghazali: The aims of the *Sharī'ah* are to endorse the wellbeing of the whole menfolk, which constitutes the preservation and maintenance of their faith/religion (din), their human self/life (nafs), their intellect/reason ('aql), their lineage/descendants/procreation (nasl) and their wealth/property (mal) (Dusuki & Abdullah, 2007). "Whatever ensures the safeguard of these five serves public interest and is desirable" (Chapra, 2000).

Hajiyat (necessities) refers to that kind of interest whose neglect leads to hardship, nonetheless it will not lead to total distraction of regular life.

And, *tahsiniyat* (embellishments) refers to interest whose realisation leads to improvement in the quality of life, its disappearance will lead to lack of comfort, but will not interrupt normal life and bring hardship.

In this way, all these worldly purposes come to one ultimate target, which is the success (*falah*) in the hereafter through establishing justice, eliminating prejudice and alleviating hardship. Thereby, collaboration and mutual support among individuals and society are required. Thus, takes place the implementation of *maṣlahah*, which means public interest. In general, Muslim intellectuals have regarded it as the all-pervading value and target of the *Sharī'ah* and it is for all meanings and objectives, tantamount to commiseration (Dusuki & Abozaid, 2007).

Misinterpretation of Maqaṣid Al-Sharī'ah by IBF

It is worthy to mention that *Maqaṣid* and *maṣlahah* principles must not and cannot contradict *Sharī'ah* texts, because Qur'an and Sunnah are the core from which other principles and rules are derived. Unfortunately, in current situation there are some misconceptions when priority over *Sharī'ah* texts is given to *maṣlahah*, which at the same time derived not from *Sharī'ah* texts, rather it has taken from the practical approach and reasoning only. In this scenario, it is clear that the interpretation of *maṣlahah* and *Maqaṣid* has been somewhat abused to justify the actions and norms by some IBF institutions that are currently and continuously happening.

Maqaṣidic Approach of Objectives of IBF

Therefore, we need to shed the light on objectives of IBF through the *Maqaṣid* approach. In short, "the general objectives of IBF are to promote virtues and avoid vices" (Mohammed, 2009). In addition, they are multidimensional, which appear in addressing both material and, most importantly, spiritual needs of human being. Thus, they have effects on the conducts of man in the Hereafter. Since the list of virtues and vices is almost infinite, we would like to emphasise on the main and the most important objectives of IBF. Namely, IBF institutions as a good corporate citizen shall:

- contribute in various educational and training programs that develop not only knowledge and skills, but more importantly proper moral values;
- support educational institutions along with scholars and students;
- provide scholarships, research grants, finance *da'wa* activities, Qur'an memorisation programs, educational conferences and workshops, and publications;
- ensure fair dealings in all their business activities, which includes their products, pricing, and contract terms and conditions;

- ensure that all their business ventures are free from negative elements that may create injustices, such as *riba*, fraud, corruption, etc.;
- use funds wisely and direct them to those vital areas that can help reduce income and wealth inequalities, for example, investments in real sectors that have large spheres of public goods;
- promote welfare, which includes not only profitability, proper risk management and efficiency, but public interest as well;
- ensure that their policies and programs on public interest take into consideration the preservation of the five aforementioned essential elements.

Thereby, it is clear those IBF institutions, which pursue these objectives, are 'really' Islamic, while others, who do not pursue them are *quasi*-Islamic.

Moreover, IBF development and structure must go in line with dimensions of *Maqaṣidic* approach which are as follows.

- In the *Maqaṣidic* orientation, the *Sharī'ah* compliance in Islamic finance does not mean a mere satisfaction of the minimum legal requirement of Islamic jurisprudence. Instead, *Sharī'ah* compliance means to structure and orient Islamic finance in the Islamic spirit and value system and achieve the ideals and purpose of Islam in the financial sphere. "The Islamic in Islamic finance should relate to the social and economic ends of financial transactions, rather than the contract mechanics through which financial ends are achieved" (El-Gamal, 2006).
- Objectives of *Sharī'ah* in IBF refers to the general objectives and meaning that the *Sharī'ah* targets to attain from its philosophy, doctrines and rulings in the transactions and financial activities. As a consequence, as Siddiqi (2006) claims, "a move towards goals and policy rather than the mechanistic and legal structure of IBF will serve human well-being much better" (Asutay, 2007).
- In developing a sound IBF system, an integrative approach and comprehensive perspective on the overall Islamic vision in financial sphere is required.
- To understand *Maqaṣid* prior to outlining the guideline or setting up the practical rules (*ahkam al-Shar'iyyah*) is essential with the purpose of getting right output in an *ijtihad* process of structuring financial

contracts and to determine the operational framework and direction of Islamic finance (Laldin & Furqani, 2013).

The question boils down to whether "IBF institutions follow all these aforementioned objectives and perspectives in their day-to-day transactions, in their products and services development and etc.?" With this in background, the next section discusses risk, *takaful*, classification of risks in general finance as well as in *takaful* in particular.

RISK, TYPES OF RISK AND TAKAFUL

In the previous section, we discussed objectives of IBF through explanation of objectives of *Sharī'ah*. This chapter, on the other hand, provides definition of risk, definition of *takaful*, classification of risks in general finance as well as in *takaful* in particular.

Definition of Risk

Many institutions are exposed to risks in work, but the banking institutions as well as insurance companies be it Islamic or conventional are exposed to the risk more than others. This is because of the importance of these institutions and their nature in the use of money. There are several definitions of risk we are summarized below:

The concept of risk refers to the situation of uncertainty of occurrence of desirable results and the possibilities of those results are not likable to the human-self. This is exactly what risk means in the language of fiscal studies; it refers to the situation, in which we are facing two possibilities, both can be happening loss or gain. There is no doubt that there are cases where it is very much likely to face the risk situations (Elgari, 2003).

According to writers, the definition of risk is the situation, which includes the possibility of deviation from the road, which leads to the expected result or hoped to be leading to it (Vaughan & Vaughan, 2007). And another defines it as simply the possibility of loss (Megginson, 1997). The risk is a part of any work done by human, but it is very important to study a risk as a part of the process of making financial decisions. The ability of any asset to generate the expected return is not guaranteed, and therefore we always try to study those things that could affect the ability of the asset to generate revenue (Elgari, 2003). The COSO committee defines the risk as events of the negative impact that will prevent the institution from achieving value or lead to reduce of the existing value.

The definition of risk in *takaful* as well as in the insurance industry means the possibility of the occurrence of any untoward event in the future, which leads to a financial loss and *takaful* word in Arabic means "*ta'azur*" which is based on the principle of cooperation and support among members of society. Human beings use the practice of the concept of "risk-sharing" in multiple forms for more than 1,400 years (DarAlTakaful, 2013).

General Types of Risks in Finance

Credit Risk

Credit risk is one of the most significant risks, which any particular financial institution faces in its relationship with financiers (Elgari, 2003). It is the risk that results from the failure of borrowers to repay their obligations, whether in whole or in part, but if a financial institution received out of money in addition to the benefits fully there is no risk. In the case of bankruptcy of the borrower or due to problems, which prevent the borrower from payment, it could lead to the loss of earnings by the financial organization and to the loss of part of loans (Ahmed M. H., 2012). This kind of risk is considered to be the core in relation with Islamic financial institutions as well as conventional. Thus, the replacement of loaning in conventional banks by investment and partnership in the Islamic banking system can eliminate this type of risk. Despite that, Islamic bank has a problem with credit risk because the value of the traded commodity is unsteady (Tariqullah, 2007).

Liquidity Risk

According to Van Greuning (2007) liquidity risk is known as one of the most absolute risks faced by Islamic financial institutions. The organisation can be exposed to liquidity risk due to the flow of unexpected deposits of its clients to the outside because of the sudden change in the behaviour of depositors and such situation can be imposed on the activity of banks is a regular in the short-term financing to refinance gap resulting from the lack of liquidity in the market at high prices (Alkhateeb, 2005). The responsibility for ensuring sufficient liquidity in the organisation on its senior management, and therefore the company should develop comprehensive policies considering the liquidity activities within the budget as well as external-budget activities (Alchrisana, 2006).

Market Risk

The reason behind this risk is change in pricing as well as in policies on the high level of economy in general, whereas, in particular, market risk occurs when there is change in price of assets or specific trading tools which impacts the situation related to it (Khan & Ahmed, 2001). According to (IFSB, 2005a) market risk refers to likely effects on economic value, which exists as a result to volatilities in prices, such as coupling prices and foreign exchange rates, stock prices and commodity prices.

Operational Risk

The risks are caused by poor internal controls or incompetence of people and systems or because of external circumstances. In addition, there are dangers resulting from failures of information technology systems, control systems violation and natural disasters. Thereby, all of them are unexpected losses (Alchrisana, 2006). There are several potential sources of operational risk. Legal risks are relevant to operational risks in Islamic financial institutions as well. There is always risk how to understand contracts of Islamic modes of financing by those who practice it and applying them in legal frameworks for documenting various Islamic financial instruments. And this shows that operational risks are less than fixed-income assets that arise from *murabahah* and *ijarah* financing (Meshaal, 2013). The core operational risks relation with Islamic financial organizations are people risk, technological and system risk, and legal risks.

Takaful

Takaful is a word derived from *kafalah*. That means a common guarantee between participants. Thus, the concept of *takaful* based on the mutual participation and shared responsibility and then it is adapted to the practice (Engku Ali, Odierno, & Ismail, 2008). Currently, participants agree to contribute certain amount of money in the form of donation where their intention to help each other. In Malaysia

Takaful act 1984 defines "*takaful* as a scheme based on brotherhood, solidarity and mutual assistance, which provides for mutual financial aid and assistance to the participants in case of need whereby the participants mutually agree to contribute for that purpose" (BNM, 2012a).

Types of Risks in Takaful

There are a lot of risks, which exist in business and industry sector. In business, they have around five kinds of those risks. IAIS (2004) and BCBS (2006) have specified that are pertinent to business of *takaful*. Two kinds of risks have been directly associated with *takaful* operator operations, which are operational and underwriting risks whereas credit risk, market risk as well as liquidity risk are relevant to the investment activities of a particular company. IFSB in "Standard on Solvency Requirements for *Takaful* (Islamic Insurance) Undertakings" (IFSB, 2010) provide table of categories of the risks faced by *takaful* operators.

In theory, the main risks under risk-based capital (RBC) such as market, underwriting and credit risk are not very different from those that conventional insurers experience. The operational risk, however, is prominent due to the requirements of *Sharī‘ah* compliance and the principal agent relationship between *takaful* operator and participants.

RISK MANAGEMENT IN TAKAFUL

After discussion about risk, *takaful* and types of the risks in *takaful* in previous chapter, this chapters offers a discussion regarding risk management in *takaful*.

There are three most important areas in *takaful* risk management, namely human resources, investment management and *Sharī‘ah* compliance. Moreover, *Sharī‘ah* compliance is continuous and non-stop process, which should take place in all activities of *takaful* operator to fulfil the objectives set by *Sharī‘ah*. Otherwise, when *takaful* operator neglect *Sharī‘ah* compliance, it will face losses in all areas such as decrease of number of customers, loss of reputation and, finally, loss of the business and bankruptcy.

Table 1. Categories of Risks Faced by *Takaful* Operators

Categories of Risks	PRFs	Shareholders' funds
Provisioning and Reserving Risks The risks of underestimation of the underwriting liabilities and adverse claims experiences	General *Takāful* is exposed to losses due to random events such as natural perils, fire, pollution, crime, war, terrorism, and others. Family Takāful is exposed to losses arising from severity and frequency of claims due to changes in anticipated mortality, morbidity and longevity as well as catastrophic events such as epidemic, major accident or terrorist attack.	
Underwriting Management Risks The risks of poor management of accepting risk and claim payouts	Family *Takāful* and General *Takāful* are exposed to losses arising from poor selection, pricing and acceptance of risks and inappropriate product design.	
Credit Risks The risk of a counterparty failing to meet its obligations in accordance with agreed terms	Exposed to profit and capital receivables from invested assets, Takāful contributions receivable and Retakāful recoveries.	Exposed to risk of non-receipts of profit and capital receivables from invested assets, Wakalah fee (due to contributions receivable) and other trade debtors
Market Risks The risk of losses arising from movements in market prices i.e. fluctuations in values in tradable, marketable or leasable assets (including Sukūk) and a deviation of the actual rate of return from the expected rate of return	The risks relate to the current and future volatility of market values of specific assets (for example, the commodity price of a Salam asset, the market value of a Sukūk, the market value of assets purchased to be delivered to a Murābahah customer over a specific period, the market value of Ijarah assets) and of foreign exchange rates.	The risks relate to the current and future volatility of market values of specific assets (for example, the commodity price of a Salam asset, the market value of a Sukūk, the market value of assets purchased to be delivered to a Murabahah customer over a specific period, the market value of Ijarah assets) and of foreign exchange rates.
Operational Risks The risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. Sharī'ah non-compliance risk should also incorporate possible causes of loss resulting from noncompliance and failure in the TO's fiduciary responsibilities	Loss of income from the purification of tainted income due to Sharī'ah rulings. Losses due to claims fraud. Losses due to legal risk (e.g. in court interpretations of policy terms).	Administration and acquisition expenses for developing and maintaining the Takāful contracts. This relates to the business risks whereby the fund will not have adequate cash flow to meet the operating expenses. Also liable for losses arising from its negligence, misconduct or breach of fiduciary duties in the management of PRFs (fiduciary risk).

Source: *IFSB, 2010*.

Different organisations have different risk preferences, profiles and policies. Importance of risk management is crucial for *takaful* operators, which is evidenced by introduction of committee for risk management at the level of board of directors of the company (Aris, Tapsir, & Abu Talib, 2012). Despite the fact that CEO initiates and puts into action company's plans and policies as well as risk policies, there is a need in a separate department for reviewing the assessment and management of risk.

In *takaful* industry risk management is a process, which identifies possible and impending operator's losses and selects suitable techniques to treat them. *Takaful* operators, depending on the legislation of the country they are operating in, are obliged to follow the guidelines from the authorities, in the case of Malaysia it is the Guidelines on Directorship for *Takaful* Operators from Bank Negara Malaysia (BNM). These Guidelines in order to ensure the efficiency of the whole management govern selection and nomination of chief executives and directors as well as board committees. Furthermore, observation of conditions and limits, which are compulsory for the management of *takaful* funds, is very crucial in order to ensure that the funds are managed properly in line with the recognized framework of risk management (BNM, 2005).

No less important factor in risk management is compliance with *Sharī'ah* requirements, which calls Chief Risk Officer to keep that in mind in forecasting all the risks together with operational. One of his main roles is to make all the process of reporting on key risks integrated (Yazid, Wan Daud, & Hussin, 2008).

Central Bank of Malaysia for instance emphasizes on significance of operation of the whole Islamic financial system in line with principles of *Sharī'ah*. It can be realised through proper governance and supervision by *Sharī'ah* Advisory Council of BNM and *Sharī'ah* Supervisory Board of each particular Islamic financial institution (IFI). BNM introduced "*Sharī'ah* Governance Framework" in order to assure that the structure, arrangement and processes of business activities and operations of Islamic financial institutions comply with *Sharī'ah*. "*Sharī'ah* Governance Framework" can be used by Islamic financial institutions as a guide in matters regarding *Sharī'ah* risk management, *Sharī'ah* audit, *Sharī'ah* review as well as *Sharī'ah* research (BNM, 2010)

"*Sharī'ah* risk management is a systematic process of control and monitoring of the identification and assessment of *Sharī'ah* risk to avoid any *Sharī'ah* non-compliances" (Aris, Tapsir, & Abu Talib, 2012). Well-organised and centralised

Sharīʻah risk management will facilitate Islamic financial institutions in general and *takaful* operators in particular to perform their activities and execute operations efficiently without baring the unacceptable level of risk, which then can possible cause major problems for the reputation of IFI and drive the company from the course of fulfilling *Maqaṣid al-Sharīʻah*.

Managing the Risk by Takaful Operators

There are several objectives of managing risk by *takaful* operators, among them:

- to secure the *takaful* fund
- to assure ability of the *takaful* fund to pay all obligations and claims
- to realise maximum investment rate of return or at least keep the required rate of return
- to assure ability of the *takaful* fund to bear up with adverse conditions
- to assure going concern continuity

It is crucial for *takaful* operators to identify and then categorise the risks, since it will help them to manage the risks in the most appropriate way. Majority of *takaful* companies categorise their risks into three main classes such as financial risk, business risk as well as operational risk.

The way of integrated risk management should have several aspects, which are common terms used in industry for classification, definition and concepts, robust corporate governance, self-assessment and continuous improvement. Adoption of this way can bring the Islamic insurance industry to new frontiers and make it more competitive with its conventional counterpart.

Still, Islamic insurance operators implement risk management techniques used by conventional insurance companies. While there is nothing wrong in adapting or even adopting the conventional mechanisms, the importance of *Sharīʻah* compliance is paramount. Not only that, but the whole spirit of the company's work must be in line with *Maqaṣid al-Sharīʻah*, in other words besides legal and *Sharīʻah* compliance *takaful* operators should implement proper corporate social responsibility (CSR). Therefore, some of the mechanisms used by conventional insurers cannot be implemented by *takaful* operators such as investment in interest-based securities or usage of futures, forwards and swaps in order to mitigate market risks. Nonetheless, most of the mechanisms or techniques of risk management are neutral, in other words they do not contradict to *Sharīʻah* rules, as a result risk management practice of Islamic insurers most of the time is similar to that of conventional insurance companies. Among such techniques are

- business continuity management
- asset liability management (ALM)
- key risk indicators (KRI) informing the organisation about chance of any losses and risk
- *retakaful* or risk transfer program
- self-assessment risk
- capital solvency
- enterprise risk management (ERM)

Recently, the insurance industry went on a trend of enterprise risk management (ERM) adoption, including *takaful* operators. Hence, top management of insurance companies as well as shareholders want serious implementation of ERM. This constitutes in formalization of essential interconnection of overall risk management plan of company with its business activities. Consequently, initial stage comprises of corporate governance and compliance (Shimpi & Lowe, 2006). In case of Islamic insurance companies it is including *Sharīʻah* compliance.

ERM emerged as a recent phenomenon, which focuses on management of a set of the risks faced by particular organization, which motivates policy makers to improve mechanisms of risk management and corporate governance.

"ERM is the process of planning, organizing, leading, and controlling the activities of an organization in order to minimize the effects of risk on an organization's capital and earnings" (Aris, Tapsir, & Abu Talib, 2012). ERM as a systemic holistic way in risk managing covers all risks including accidental losses, operational risk, strategic risk, financial risk as well as other types of risks. Therefore, effective risk management should help companies attain their aims and purposes. Islamic insurance companies may include non-compliance with *Sharīʻah* rules risk under operational risk in ERM model that can be recognized as a proper tool for risk managing.

Now let's look to each of the risks management separately. Each type of risk in Islamic insurance should be managed individually since each of them requires specific strategy to manage.

Underwriting Risk Management

Management of underwriting risk could be done through establishment of typical selection method, which includes a good ranking strategy and must be in line with the objectives of a particular operator. A good ranking strategy and underwriting procedure should distinguish risks and appropriately rate and give accurate price to them in order to generally collect more money than paid out. To avoid adverse selection a particular *takaful* operator's aptitude to distinguish risks and its underwriting procedures to quantify risks must be comparable or better than its rivals. For general *takaful*, which involves standardized underwriting procedure, operators usually use computerized underwriting system. If a particular customer meets the standard requirements he or she is accepted automatically. However, if the case is sub-standard, then *takaful* operator may charge more for *takaful* subscription or reject client. Therefore, the actuary's performance is crucial; hence the actuary is the one who determines the price based on measurement of the risks. As for family *takaful*, operators require customers to perform full medical check-up as a result of which then the price of a particular plan is determined.

To alleviate the *retakaful* risk, *takaful* operators may diversify *retakaful* risk through subscribing to more than one *retakaful* operators. Moreover, to choose suitable *retakaful* operator *takaful* operators should assess financial strength of *retakaful* companies.

Operational Risk Management

Since operational risk is arising "from inadequate or failed internal processes people and systems, or from external events" (IFSB ED-14), it is more complex to manage this type of risk. Thus, board of directors of *takaful* operator together with top management of the company should formulate the policies and develop proper schemes to mitigate this type of risks. Causes of this risk like people, technology, processes, etc. should be kept in mind. Again, the question of importance of robust corporate governance culture boils down. Not only this, having in background unique characteristics of Islamic insurance, adoption of IT framework used by conventional insurance companies might not be relevant all the time. This requests the development of new software, which takes into account all the specific characteristics and needs of Islamic insurance industry.

Furthermore, it may require the employment of IT specialists to create the software. Since, the process is costly, *takaful* operators should collaborate in it all together. Conversely, only software is not enough, internal and external audit is no less important, since the auditors are able to show the weaknesses and errors in internal processes of the company. Again, there is a need in a secure and independent reporting system and correct disclosure of activities.

Credit Risk Management

With the purpose of managing spread risk, migration risk, concentration risk and default risk under the credit risk conventional insurance companies establish their investment policies, which sets limits for credit exposures. International Association of Insurance Supervisors in "Guidance paper on investment risk management" (IAIS, 2004) states guidelines for credit exposure limits as follows:

- Internal and external ratings as well as results of stress testing could be used as a measurement tools to limit the insurer's credit risk exposure
- Limit of maturity of the credit (should be stated according to needs of insurer)
- "Limit on maximum investment amount or a certain percentage of investment exposure to a single issuer, industry, geographical region or any other risk classification" (Akhter, 2010a).

When it comes to *takaful* operators, their investment activities should comply *Sharīʿah* rulings, hence they cannot invest in the instruments and securities based on interest. Besides that, *takaful* operators cannot use financial derivatives to mitigate the credit risk. Nonetheless, as for Al-Suwailem (2006) these instruments considered as a factors of not gain, but loss since not less than 70% of the instances such tools as futures or options result in losses. Since Islamic derivatives as well as their markets are not developed as well as conventional counterparts *takaful* operators should rely on internal control tools to make sure that exposures of credit risk are kept within prudential standards limits.

Liquidity Risk Management

There are two main categories for managing liquidity risk:

- liquidity ratios
- cash flow modelling

These tools should be updated and run periodically whenever there are any changes in business in order to monitor liquidity risk profile of a particular company.

Takaful operators use cash flow modelling to evaluate the level of surpluses, deficits and the capacity of provisional funding to meet the needs of operator (Akhter, 2010a). Islamic insurance companies should have adequate liquid assets in the fund for the purpose of meeting unexpected, but not very unlikely, liquidity requirements.

Liquidity ratios use helps *takaful* operators to determine the level of liquid assets in order to address the requirements of liability portfolio. These will also help in determining the investment policies, since *takaful* operator will not be able to invest all the funds in one way.

Revoking money from *retakaful* policies as well as setting contingency or emergency plans can help to mitigate capital funding risk. This type of liquidity protection could be used after determining liquidity ratios. Again, raises the importance of appropriate disclosure of information and the internal control in the company, because it is crucial to have systematic independent reports. Moreover, the liquidity risk management process should be periodically reviewed by means of internal audit in order to make necessary changes at the time needed.

Market Risk Management

Conventional insurance companies face commodity price risk, equity price fluctuations, interest rate risk along with exchange rate risk under the market risk. To manage each type of these risks they use different strategies. However, Islamic insurance companies due to the nature of their business, its compliance with *Sharīʻah* requirements should not face the risks associated with interest. Nevertheless, although *takaful* operators do not face the risks related to interest directly, indirectly they do face. This is because Islamic Banking and Finance (IBF) Industry does not have its own benchmark to determine mark-up price and IBF industry functions within conventional one and not separated from it as well as because IBF institutions compete with conventional counterparts. Therefore, interest is still used as a benchmark. For example, in Malaysia KLIBOR (Kuala Lumpur Interbank Offered Rate) is used by IBF institutions to determine the mark-up in their financial activities.

Takaful operators are not able to manage the market risk as their conventional counterparts, which use such financial derivatives as swaps, options, futures and forwards since these financial derivatives according to majority of Islamic scholars are *Sharīʿah* non-compliant. Nonetheless, Al-Suwailem (2006), proposes bilateral mutual adjustment to mitigate rate of return risk and cooperative hedging to mitigate currency risk as *Sharīʿah* compliant risk management instruments.

Likewise, Value at Risk (VaR) methods as well as stress tests could be applied by *takaful* operators to mitigate equity risk as well as commodity price risk. Being one of the risk management instruments stress testing can be used to evaluate the exposures and weaknesses of portfolios to conditions of market as well as abnormal shocks, "Value at Risk is the probability of portfolio losses exceeding some specified proportion" (Akhter, 2010a).

ISSUES AND CHALLENGES

As seen from the previous chapters, there are certain types of risks pertinent to *takaful* industry, which *takaful* operators should manage using specific methods or techniques. Nevertheless, as we seen most of the techniques and methods are just adapted from conventional counterparts. While there is nothing wrong in adapting or even adopting the conventional mechanisms, the importance of *Sharīʿah* compliance is paramount, which Islamic insurance companies try to observe. However, there are still some issues and challenges in *takaful* industry, which are needed to be solved. This chapter, thereby, sheds light on some of them as well as it provides some recommendations.

Issues Regarding Market, Credit and Liquidity Risk

A rather small and illiquid Islamic capital market and comparably with conventional money market inefficient Islamic money market could potentially lead to a higher liquidity, market and credit risk in view of the following factors:

- Limited availability of Islamic investment options (in particular fixed return assets such as *sukuk*).
- Lack of long term and high quality investment opportunities.

Consequently, operators suffer the following disadvantages:

- A lack of investment options naturally also result in potentially higher concentration, liquidity and forex risks.
- Hedging and asset liability matching is also more challenging.
- Operators are forced to hold a high proportion of equity investments to achieve competitive returns.
- Limited product innovation, e.g. annuities cannot be matched in the absence of long term *sukuk*.
- In markets where access to first grade *retakaful* operators is limited, the *takaful* operator might have to select a *retakaful* operator with a low rating or no rating at all if *Sharīʻah* compliance is the key decision factor. This results in a higher credit risk charge (Frenz & Soualhi, 2010)

The *Sharīʻah* compliant investment avenues suitable for *takaful* remain relatively scarce. *Takaful* operators are restricted from involvement in instruments such as hedging, derivatives and options which could expose the funds to certain *Sharīʻah* risks.

To help this situation, a considerable number of *Sharīʻah* compliant investment portfolios of various types have been endorsed by the Securities Commission of Malaysia. These portfolios include debt-based transactions and asset-based *sukuk*. However, on the global level, *Sharīʻah* compliant investment avenues for Islamic financial institutions, including *takaful* operators, have been very limited because most *Sharīʻah* compliant investments focus on equities and asset-backed *sukuk*.

According to the World Takaful Report (A MEGA Brand, 2012), most *takaful* funds in Malaysia are invested in *sukuk* while *takaful* funds in the Middle East are more heavily invested in equities. Investments in *sukuk* by the Malaysian *takaful* industry for the financial year 2011 made up just over half of the total funds invested (57%) with only a small minority (20%) invested in equities in the same year. On the other hand, 38% of *takaful* funds in the Middle East were invested in equities in 2011 while 31% were invested in *sukuk* in the same year.

The issue of limited *Sharīʻah* compliant investment avenues, particularly long-term high-quality instruments that yield high returns, is very apparent in countries outside Malaysia. The funds are usually invested in selected portfolios which, though compliant with *Sharīʻah* principles, may potentially lead to lower returns, restrict product innovation and increase concentration and liquidity risk (Frenz & Soualhi, 2010). Most of these funds also have a very limited duration, which makes the investing *takaful* companies unable to meet their liabilities efficiently. Thus, in order to comply with statutory requirements, *takaful* operators in some jurisdictions are even forced to invest in non-*Sharī'ah* compliant instruments such as treasury bills (Yusof, Wan Ismail, & Abdullah, 2011).

Obviously, the solution is to develop Islamic money and capital markets, so that their efficiency will be as well as their conventional counterparts. This, however, calls for development of new instruments to facilitate these markets.

Another issue is cross-border investments. Some parent *takaful* companies reside in foreign jurisdictions and adopt a different investment approach from the local jurisdiction where the subsidiary *takaful* companies operate. For example most of investment activities of *takaful* companies in Malaysia, are involved with *sukuk* of different types. All *sukuk* structures, such as *musharakah sukuk*, *mudarabah sukuk* and *ijarah sukuk*, to name a few are endorsed by the Malaysian Securities Commission, which issue a list of permissible securities twice a year.

However, some parent *takaful* companies that are based in the Middle East will usually adopt their scholars' views, who mostly do not allow the equity-based *sukuk* due to the element of guarantee. A similar conflict of fatwas arises with regard to Islamic debt securities structured on the basis of the sale of debt (*bay' al-dayn*), which is a potential investment instrument for *takaful* companies.

Conflicting fatwas may also be reflected in the standards adopted for stock screening; for instance, those of the FTSE *Sharī'ah* Global Equity Index Series, the Dow Jones Islamic Market Indexes, AAOIFI and the Malaysian Securities Commission. This conflict of opinion may cause a conflict between holding and subsidiary companies in determining the desirable approach to cross-border investment and the specific investment avenues.

In addition, there could be *Sharī'ah* compliant investment portfolios offered in a foreign country in a different currency, for instance, a *sukuk* issuance in USD. If a *takaful* operator subscribes to this kind of cross-border investment, it may be potentially exposed to currency exchange risk.

To address the currency exchange risk, in 2006 the Malaysian regulator set up the Malaysian International Islamic Financial Centre (MIFC), which offers attractive incentives for *takaful* companies that deal in international currencies. Under MIFC, a new license may be issued to reputable foreign and domestic financial institutions according to the Central Bank of Malaysia Guidelines (Establishment of International Takaful Operator). Besides, an existing *takaful* company may establish an International Currency Business Unit to conduct non-ringgit *takaful* business according to the Central Bank of Malaysia Guideline (International Currency Business Unit). Moreover, offshore *takaful* operators are allowed to open their operation offices anywhere in Malaysia without having to maintain a physical presence in Labuan.

Issues Regarding Underwriting and Liability Risk

The liability risk could be lower than for conventional insurance if the *takaful* operator stays away from providing contribution guarantees, especially for long term family *takaful* business. On the other hand, operators are faced with a potentially more volatile and less diversified portfolio in view of the small market place. However, this could easily be managed through an appropriate *retakaful* arrangement. Strong competition, together with lower economies of scale and lower investment returns, could result in mispricing or under-pricing and premium insufficiency.

The lack of clams experience data poses a challenge when it comes to establishing loss reserves. In the absence of credible experience data, more conservative assumptions need to be used for reserving (Frenz & Soualhi, 2010).

Moreover, *takaful* operators having *Sharīʻah* Supervisory Board have higher financial expenses comparing to conventional counterparts, which do not need this board. Eventually, *Sharīʻah* compliance together with the salaries of *Sharīʻah* Supervisory Board reduces the income of *takaful* operators.

The *takaful* operator as an investor faces a challenge in matching assets to liabilities. Though long-term investment is potentially more profitable than short-term investment, the *takaful* operator has to maintain a sufficient amount of liquid assets in the *takaful* funds to be able to pay out arising claims. The problem with fully liquid assets is that they are not invested and, therefore, do not earn profits. Conventional insurance companies have access to a wider array of highly liquid assets, such as bonds, that can be sold on short notice in the secondary market. Malaysian *takaful* companies have access to a fairly well developed *sukuk* market, which allows them similar facilities, but *takaful* companies outside Malaysia are handicapped in this regard (Abdullah, et al., 2013).

"The Guidelines on *Takaful* Operational Framework" (BNM, 2012a) emphasizes that *takaful* operators must formulate policies for prudent fund management in order to avoid any adverse impact. To do so, they need to take into account the amounts and timings of the *takaful* liabilities and, based on that, choose investments commensurate with the particular fund's tolerance of risks (BNM, 2012a).

Having realized the importance of proper asset-liability management in a financial institution, the study views this duty as very challenging to the *takaful* operator. It not only needs to manage the shareholders' fund, but also the *takaful* fund, a separate entity from the company's fund. Therefore, the *takaful* operator must ensure transparent reporting in the asset and liability management that ensures segregation of the two funds.

Issues Regarding Operational Risk

Operational risk is all risks other than market, credit and underwriting risks. With *takaful* being at a young stage, it is naturally subject to higher operational risks for various reasons:

- Evolving *takaful* regulations and accounting standards resulting in uncertainty and potentially additional compliance costs, e.g. changes expected in:
- Valuation requirements and RBC,
- Regulations detailing how to ensure intergenerational equity in surplus sharing, which is currently at the discretion of the operator or appointed actuary, and
- Potential conflicts due to dual supervision by both regulator and *Sharīʿah* board.
- Potential mismanagement.
- Conflict between *Sharīʿah* compliance and professional risk management might result in sacrificing one for the other.
- Lack of *takaful* professionals and *Sharīʿah* scholars is a natural source of mismanagement.
- In dual markets, there is fierce competition with conventional insurers for market share. However, *takaful* operators are often less well capitalised, and enjoy lower economies of scale and potentially lower investment returns. This could result in;
- Under-pricing or expense overrun;

- Failure to adhere to underwriting and claims guidelines for the sake of increasing the top line.
- Risk of mis-selling:
- Although transparency is an objective of *takaful*, it is often lacking in *takaful* contracts,
- There is also a general lack of *takaful* understanding amongst agents and the public. The perception is often that *takaful* is the same as insurance, which is clearly not the case.

As mentioned above, IT framework used by Islamic insurance companies is still the same that used by conventional insurers. It calls to develop own IT framework, which will take into account features pertaining *takaful* business (Frenz & Soualhi, 2010).

Not only that the lack of any control have mechanism for the funds invested by the fund manager. This is due to the fact that most of the investment activities are assigned to an external fund manager whose activities are governed by the operator's outsourcing service policies. To date, there is no standardized parameter regulating the policy, except a general provision in the "BNM *Sharī'ah* Standard on *Mudarabah*", which gives an option to the *mudarib* to assign the capital under his management to another *mudarib* or another manager (as agent), subject to the conditions agreed to by the capital provider (BNM, 2012b).

Among the most important duties of the fund manager appointed as a sub-investment manager is to stay updated on the *Sharī'ah* compliant investment avenues, particularly securities, which are continuously reviewed by the respective authorities such as the Securities Commission. The proper and continuous mechanism of control is important to ensure that all funds are invested in a *Sharī'ah* compliant manner and *Sharī'ah* compliant instruments.

The issue becomes potentially critical in a subsidiary structure where the investment duties are outsourced to the parent or to other companies in the same group or to a third-party fund manager against an agreed fee. The shared-service practice or outsourcing will result in a *Sharī'ah* non-compliance issue if the outsourced investment activities involve non-permissible investment avenues.

This study is of the view that the outsourcing service policy adopted by the operators with their fund managers must clearly spell out the nature of the contract between them, either *mudarabah* (*al-mudarib yudarib*, i.e., a sub-investment manager), or *wakalah* (investment agent), or *ijarah 'ala al-'amal* (a hire of service) and their respective rights and obligations as reflected by the unique principles of the defined contract (Abdullah, et al., 2013).

The outsourcing service agreement should also clearly define the method of fee calculation, which must be consistent with the type of contract adopted. The outsourcer (*takaful* company) should also have ways to review and examine the investment undertaken by the subcontractor (fund manager) so as to ensure that such activities do not involve prohibited transactions which may taint the company's *halal* income. The *takaful* operator can provide the requirements on the screening, purification and remedial processes in the outsourcing policy and the agreement with the fund manager.

In addition to the risk fund surplus, prudent management of the investment fund in a way that accumulates profits is another indicator of a solvent *takaful* operator. The issue, which needs serious investigation is how surplus and profit are each defined in the surplus and profit management policy and, consequently, how they are recorded in the financial report.

A close scrutiny of the internal surplus and profit management policy in various *takaful* operators may reveal that, in many instances, the two are referred to as the same item and the terms are used interchangeably. While 'profit' may also be referred to, linguistically, as a 'surplus', in the context of *takaful*, each results from a different fund, and they may be managed under different contracts that impose different rights and liabilities upon the *takaful* operator as the party managing the funds.

As such, the financial report should separately disclose the profit from the Investment Fund (PIF) and the underwriting surplus from the Risk Fund (PRF) in detail before the *Sharīʿah* committee and the board for their further deliberation. Even if the Risk Fund is invested, its profit portion must be separately reported from that of the Investment Fund. Therefore, constant *Sharīʿah* review of the Surplus and Profit Management Policy and the Annual Financial Report must be carried out to ensure continuous standardization and transparency in the *takaful* operator's reporting.

Issues Regarding Sharīʿah Non-Compliance Risk

This is a sort of operational risk which *takaful* operators face. It can possibly result in subsequent losses and non-recognition of income (IFSB, 2005b). At risk are both their investment and underwriting activities:

- Investments based on Islamic contracts could have flaws that make them invalid. Income would then have to be returned or donated to charity. In any event, it results in a loss of income.
- Risks that have been accepted could turn out to be unacceptable, again requiring the operator to cancel the contract or donate any income to charity.
- Some features of *takaful* products could be invalid, e.g. if they incorporate capital guarantees. For instance, the family *takaful* investment-linked product structure is currently very similar to a conventional life insurance investment-linked product in terms of its basic features as well as investment. However, some of the inherent features of conventional life insurance, such as a guaranteed investment return, cannot be mirrored in *takaful*. As guaranteeing the investment return is not allowed in an investment contract such as *mudarabah*, the *takaful* industry currently uses indicative returns in describing what contributors might expect from the *takaful* operator's investment strategy (Abdullah, et al., 2013).

The extent of losses that might arise from *Sharīʻah* rules and principles non-compliance cannot be easily determined due to lack of experience.

Takaful funds naturally have a different asset-risk profile from conventional insurers. This is due to *Sharīʻah* restrictions on certain kinds of investment; for example, hedging using risky transactions such as options and other derivatives. Therefore, *takaful* operators as the fund manager must adopt standard *Sharīʻah* governance and supervisory rules to continuously monitor the whole process. These include reviewing the investment policies, outsourcing guidelines, and other necessary documents; updating the status of investment portfolios; ensuring sufficient product disclosure and transparency; and improving the competency of distribution channels.

The regulator can also play a significant role in formulating effective governance in this respect and ensuring that regular reviews are carried out. Accordingly, the Central Bank of Malaysia, as the regulator of *takaful* business in the country, has established a centralised *Sharīʻah* Advisory Council (SAC) whose function is to advise on *Sharīʻah* compliance in issues pertaining to the Islamic banking and *takaful* industry. In addition, the BNM "*Sharīʻah* Governance Framework" (SGF), provides an effective structure of *Sharīʻah* governance to enhance the accountability, competency, independence and consistency of *Sharīʿah* Supervisory Board members in discharging their supervisory and monitoring duties at their respective Islamic financial institutions, including *takaful* companies.

The real challenge in executing the duties prescribed by the SGF is twofold. The first is faced by subsidiary *takaful* companies leveraging on their parent companies or sister subsidiary companies in the same group. Such companies face inherent constraints in communicating the *Sharīʿah* expectations and requirements to these conventional entities; for example, the need to continuously monitor investment activities and avenues for *Sharīʿah* compliance. As such, the *Sharīʿah* Supervisory Board must be very committed and confident in ensuring that such expectations are duly conveyed to the relevant entities involved.

Secondly, there could be a potential conflict of opinion between the *Sharīʿah* Supervisory Board members sitting in a *takaful* company and the *Sharīʿah* Advisory Council (SAC) at the regulatory level (Central Bank). For example, when the *Sharīʿah* Supervisory Board members produce an innovated product structure that is unfamiliar to the SAC or adopt different rulings from the SAC, the *takaful* company's operation will be impeded until the conflict is resolved. Thus, both the *Sharīʿah* Supervisory Board members and the SAC, both of which are supported by secretariats, must ensure that their *Sharīʿah* opinions and decisions are smoothly communicated to one another in order to ensure consistent growth of *takaful* operations, including the investment activities.

On the other hand, there could be another potential conflict of opinion between the *Sharīʿah* Supervisory Board members and Board of Directors, where Board of Directors members could enforce policies compromising *Sharīʿah* principles in order to increase the profitability of the company. Therefore, standard *Sharīʿah* governance and supervisory rules to continuously monitor the whole process should be adopted by the company.

Issues Regarding Reputational Risk

This risk is related to fiduciary risk. *Takaful* is not a mature industry and might have some reputational issues due to lower professionalism in the past. Reputation cannot be built overnight, but can be easily lost within a day. The runs on banks and insurance companies in the recent financial crisis are well known examples of what can happen when customers lose their trust in a financial institution.

Therefore, despite the fact that corporate social responsibility (CSR) is voluntary activity for conventional insurers in particular and financial institutions in general, it however should be included in the basic activities of *takaful* operators as IFIs as stated by Islamic economics. Since *Maqaṣid al-Sharīʻah* directly refers to the social and economic development as well as environmental concerns *takaful* operators must be not only *Shari'ah* compliant, but also CSR compliant. This would most probably increase the reputation of Islamic insurance companies.

Nonetheless, as shown by Dusuki & Abdullah (2007), Farook (2007) and Abuznaid (2009) CSR activities of IBF institutions in general and *takaful* operators in particular are poor. Most of the time, CSR activities are limited to *zakah* distribution and other non-systemic charitable activities.

Issues Regarding Displaced Commercial Risk

IFIs are subject to a "displaced commercial risk", i.e. "the risk arising out of assets managed on behalf" of their clients (the investment account holders, for short IAH) (IFSB, 2005b). The risk is transferred to the IFI own capital because of a high pressure of competition in the market and unwillingness of IFI to lose the customers it foregoes part of its profit share of profit to IAH. However, principles and rules of *Sharīʻah* do not permit this, as it would be tantamount to a capital guarantee by the *mudarib*.

How does this relate to *takaful*? *Takaful* equally operates in accordance with the agency or profit-sharing principle where the *takaful* operator is not liable for underwriting losses. However, the operator has to provide a *qard hasan* in the event of a deficit in the *tabarru'* fund. Commercial pressure rather than goodwill might force the *takaful* operator to forego the full repayment of its *qard hasan*. This is a particular risk for *retakaful* operators that have significant higher exposures.

Displaced commercial risk is not systematic and significant for the *tabarru'* fund, but it certainly represents an interesting analogy with Islamic banks.

Legal Issues

Despite the *takaful* industry's promising future and its rapid development today, many jurisdictions still lack the proper regulatory framework to support its continuous growth. Indeed, *takaful* cannot operate in isolation from other financial activities; thus, it needs strong legal support and enforcement to govern its operations and relations with others. The *takaful* industry in Malaysia is governed by the Takaful Act 1984 and a newly launched Islamic Financial Services Act 2013, which provides the framework for the licensing and regulation of *Sharīʿah* compliant *takaful* businesses. Despite having been recognised as the only piece of legislation exclusively governing the *takaful* operation, Takaful Act 1984 is silent on many matters, including the structure for managing the funds and the governance structure, which both have a direct impact on the investment activities.

Furthermore, in most of the Muslim minority countries there is no legislation regarding Islamic finance in general and *takaful* in particular. Therefore, *takaful* operators do not have any choice except fit into the legislation framework of a particular country and act in accordance with it. Sometimes it causes problems of *Sharīʿah* compliance, since in order to comply with statutory requirements, *takaful* operators in some jurisdictions are even forced to invest in *Sharīʿah* non-compliant instruments such as treasury bills (Yusof, Wan Ismail, & Abdullah, 2011).

Structural Issues

The structure by which *takaful* is operated is one of the issues that requires serious attention. Most modern *takaful* operators are set up as a company subject to the respective country's company laws and regulations. For the regulator, a company as an entity can be directly regulated and supervised in a way that the regulated parties, i.e., the management, board of directors and shareholders can be made accountable for any action that may prejudice the related parties' interest, i.e., the participants as customers.

Having fulfilled the necessary requirements as a corporation that is expected to possess operational expertise in managing the *takaful* fund, the *takaful* operator is under a duty to manage the funds contributed by the *takaful* participants. This arrangement reflects the existence of two inter-connected entities, each with a different setup; namely, a *takaful* company as the fund operator/manager, and the cooperative or mutual entity formed by the participants' mutual undertakings.

According to Hussain (2009), the current pragmatic approach adopted in *takaful* operations results in the unintended creation of "a firm within a firm", i.e., a mutual cooperative operating within the set-up of a corporate body. This is particularly true because the *takaful* funds are comprised of the participants' mutual contributions. As such, they apparently belong to the participants, yet they are operated and managed with almost absolute discretion by the *takaful* operator acting on behalf of the participants in accordance to a certain agreed contractual arrangement (Archer, Abdel Karim, & Nienhaus, 2009).

This unique structure may trigger the issue of the parties' liabilities; would the liabilities of one party implicate the other? For instance, in the event of investment loss to the participants' *takaful* or *tabarru'* fund, the shareholders of the operator (as a corporation) have a legal duty, in Malaysia, to give an interest-free loan (*qard hasan*) to the *tabarru'* fund. This practice is evidence of a strong legal implication of the performance of both shareholders' and the *tabarru* funds. An insolvent *tabarru'* fund is probably an indicator of the operator's mismanagement, which too may have legal repercussions (Abdullah, et al., 2013).

This structural issue requires the serious scrutiny of regulators and industry players in order to formulate the appropriate governance structure that will address any possible legal implications which may arise from it. The legal framework for *takaful* in most countries is not sufficient to govern this issue, even though it is of fundamental importance.

CONCLUSION

The *takaful* industry, with its rapidly evolving landscape, is currently facing numerous regulatory and technical challenges. The industry is constantly seeking improvements in its effort to improve competitiveness and to meet *Sharīʻah* requirements as well as treating customers and *takaful* operators fairly, which is in line with *Maqaṣid al-Sharīʻah*. It must also survive side-by-side with the conventional insurance industry. The lack of suitable human resources means that actuaries can add significant value to assist *takaful* operators in tackling these current issues faced by the industry.

Mutuality is a concept that has existed for centuries in the insurance world. Actuarial expertise and knowledge in the management of mutual insurance business can be adopted within *takaful* to enhance its success. The *takaful* industry is continuously striving to develop best practices in the management and valuation of the business. Actuarial principles and practices in the conventional insurance context such as embedded value calculations, asset liability management, enterprise risk management, capital management, surplus determination, and distribution methodologies have direct application to the *takaful* industry, sometimes compromising *Maqaṣid al-Sharīʻah*.

In addition to technical challenges, there are also regulatory challenges within the industry. Due to the varying degrees of *Sharīʻah* interpretation, there are difficulties in developing global *takaful* standards or regulations, although the IFSB has issued *takaful* consultation papers in an attempt to achieve some consistency in the industry. Actuaries can work closely with the regulators to develop a framework that is appropriate and relevant to *takaful*. With the conventional insurance industry moving towards a risk-based capital assessment regime, and with the current changes in the global accounting standards, considerations need to be given to their application to *takaful*.

The problems of development of new prospects of Islamic finance at the conceptual and practical levels still exist. There are three main points that should be kept in mind to develop Islamic finance: formal issues related to appropriate products and instruments to serve the goals, the human capital involved in the industry and the systemic matters of concept, paradigm, goals, structure and directions of an Islamic financial system.

Obviously, substantial works should be employed not only in the foundational area of *takaful* but also in the operational area. As a result, *takaful* will be able to provide genuine Islamic alternatives to contemporary insurance practices. For this purpose, a clear and coherent philosophical foundation that originates from an Islamic worldview is required.

REFERENCES

AMEGA Brand (2012). *The World Takaful Report*. Dubai: A MEGA Brand.

A.M. Best (2011). *Takaful Review*. New Jersey: A.M.Best.

Abdul Aziz, A., & Mohamad, S. (2013). *Fulfillment of Maqasid al-Shariah via Takaful*. MPRA.

Abdullah, A. (2013). The Elements of Qimar (wagering) and Gharar (uncertainty) in the Contract of Insurance Revisited. *Journal of Islamic Economics, Banking and Finance,* 9(2), 89-102.

Abdullah, N., Laldin, M., Ali, M., Ahmad, M., Abdullah, S., & Zuki, M. (2013). *The Concept and Challenges of Takaful Investment in Malaysia*. ISRA Research paper No51, 1-28.

Abdullah, S. (2012a). Risk Management via Takaful from a Perspective of Maqasid of Shariah. *Procedia - Social and Behavioral Sciences,* 65, 535-541.

Abdullah, S. (2012b). Takaful from a Maqasid Al-Shari'ah Perspective. *ISRA International Journal of Islamic Finance,* 4(2), 167-171.

Abuznaid, S. (2009). Business Ethics in Islam: the Glaring Gap in Practice. *International Journal of Islamic and Middle Eastern Finance and Management,* 2(4), 278-288.

Ahmad, A.R.Y. (2011). Role of Finance in Achieving Maqasid Al-Shari'ah. *Islamic Economic Studies,* 19(2), 1-18.

Ahmad, M., & Hashim, A. (2011). The Parameter of Permissible Risks In Takaful. *ISRA International Journal of Islamic Finance,* 3(2), 159-161.

Ahmad, M., Masood, T., & Khan, M. (2010). *Problems and Prospects of Islamic Banking: a Case Study of Takaful*. MPRA.

Ahmed, M. H. (2012). Risk Management in Islamic Banks. ESLSCA Business School.

Ahmed, Z. (2013). *Achieving Maqasid al Shariah through Takaful*. Retrieved December 1, 2013, from Islamic Fiqh Business Researches Center.

Akhter, W. (2010a). Risk Management in Takāful. *Enterprise Risk Management,* 1(1), 128-144.

Akhter, W. (2010b). *Takaful Models and Global Practices*. MPRA.

Alchrisana, I. (2006). *Basic and Contemporary Frameworks in the Oversight of Banks and Risk Management*. Abu Dhabi: Arab Monetary Fund (IMF), Economic Policy Institute.

Alkhateeb, S. (2005). *Measuring and Managing Risk in Banks*. Al-Eskandariah: Knowledge Institution.

Al-Suwailem, S. (2006). *Hedging in Islamic Finance*. Occasional Paper No.10. Jeddah: King Fahad National Library Cataloging-in-Publication Data, Islamic Development Bank (IDB).

Archer, S., Abdel Karim, R. A., & Nienhaus, V. (2009). *Takaful Islamic Insurance: Concepts and Regulatory Issues*. Singapore: John Wiley & Sons.

Aris, N. A., Tapsir, R., & Abu Talib, M. (2012). Risk and Risk Management of Takaful Industry. *Journal of Global Business and Economics,* 4(1), 29-39.

Asutay, M. (2007). Conceptualization of the Second Best Solution in Overcoming the Social Failure of Islamic Banking and Finance: Examining the Overpowering of Homoislamicus by Homoeconomicus, 15(2), 167-195.

Bakar, M. (2008). *Hedging Instruments in Islamic Finance*. A paper presented to the 7th conference of the Shari'ah Boards of Islamic Financial Institutions. Bahrain: The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI).

BCBS. (2006). *International Convergence of Capital Measurement and Capital Standards: A Revised Framework Comprehensive Version*. Basel: Basel Committee on Banking Supervision.

Beekun, R. (1996). *Islamic Business Ethics*. Herndon: International Institute of Islamic Thought.

BNM. (2005). G*uidelines on Directorship for Takaful Operators*. Kuala Lumpur: Bank Negara Malaysia.

BNM. (2010). *Shariah Governance Framework for Islamic Financial Institutions*. Kuala Lumpur: Bank Negara Malaysia.

BNM. (2012a). *Guidelines on Takāful Operational Framework*. Kuala Lumpur: Bank Negara Malaysia.

BNM. (2012b). *Shariah Standard on Mudarabah*. Kuala Lumpur: Bank Negara Malaysia.

Chapra, M. (2000). *The Future of Economics: An Islamic Perspective*. Leicester: The Islamic Foundation.

Chapra, M. (2007). *Challenges Facing the Islamic Financial Industry*. In M. Hassan, & M. Lewis, Handbook of Islamic Banking (pp. 325–360). Cheltenham: Edward Elgar.

Chapra, M. (2008 & 2009). Ethics and Economics: An Islamic Perspective. *Islamic Economic Studies*, 16(1 & 2), 1-24.

Chapra, M. (2011). Role of Finance in Achieving Maqasid Al-Shari'ah. *Islamic Economic Studies*, 19(2), 1-18.

Chapra, M. (2012). *The Islamic Vision of Development in the Light of the Maqasid Al-Shari'ah*. In A. Ahmad, Development and Islam: Islamic Perspectives on Economic Development (pp. 237-296). New Delhi: Institute of Objective Studies.

COSO. (2004). *Enterprise Risk Management — Integrated Framework: Executive Summary*. Committee of Sponsoring Organizations of the Treadway Commission.

DarAlTakaful. (2013). *The Concept of Takaful*. Retrieved from http://www.daraltakaful.com

Dreassi, A. (2009). Insurance Solvency Supervision, European Regulation and Takaful Products. *Savings and Development*, 469-491.

Dusuki, A. (2009). Shari'ah Parameters On The Islamic Foreign Exchange Swap As A Hedging Mechanism In Islamic Finance. *ISRA International Journal of Islamic Finance*, 1(1), 77-99.

Dusuki, A., & Abdullah, N. (2007). Maqasid al-Shari`ah, Maslahah, and Corporate Social Responsibility. *The American Journal of Islamic Social Sciences*, 24(1), 25-45.

Dusuki, A., & Abozaid, A. (2007). A Critical Appraisal on the Challenges of Realizing Maqasid Al-Shariah in Islamic Banking and Finance. *IIUM Journal of Economics and Management*, 15(2), 143-165.

El-Gamal, M. (2006). *Islamic Finance: Law, Economics, and Practice*. New York: Cambridge University Press.

Elgari, M. A. (2003). Credit Risk in Islamic Banking and Finance. *Islamic Economic Studies,* 10(2), 1-24.

Elgari, M. A. (2008). *Hedging Mechanisms in Islamic Financial Operations*. A paper presented to the 7th conference of the Shari'ah Boards of Islamic Financial Institutions. Jeddah: King Abdul Aziz University.

El-Khatib, H., & Patel, Z. (2009). *Workshop on Risk Management: Islamic Economic and Islamic EthicoLegal Perspectives on the Current Financial Crisis*. Cambridge: Harvard Law School.

Engku Ali, E., Odierno, H., & Ismail, A. (2008). *Essential Guide to Takaful (Islamic Insurance)*. Kuala Lumpur: CERT Publications Sdn Bhd.

Ethica Institute of Islamic Finance. (2013). *Ethica's Handbook of Islamic Finance*. Dubai: Ethica Institute of Islamic Finance.

Farook, S. (2007). On Corporate Social Responsibility of Islamic Financial Institutions. *Islamic Economic Studies,* 15(1), 31-46.

Frenz, T., & Soualhi, Y. (2010). *Takaful and Retakaful: Advanced Principles and Practices*. Kuala Lumpur: IBFIM.

Gönülal, S. (2013). *Takaful and Mutual Insurance: Alternative Approaches to Managing Risks*. Washington: International Bank for Reconstruction and Development.

Hassan, M., & Lewis, M. (2007). *Handbook of Islamic Banking*. Cheltenham: Edward Elgar Publishing Limited.

Hussain, M. M. (2009). *Legal Issues in Takaful*. In S. Archer, R. Abdel Karim, & V. Nienhaus, Takaful Islamic Insurance: Concepts and Regulatory Issues. Singapore: John Wiley & Sons.

IAIS. (2003). *Insurance Core Principles and Methodolog*y. Basel: International Association of Insurance Supervisors.

IAIS. (2004). *Guidance Paper on Investment Risk Management*. Basel: International Association of Insurance Supervisors.

Ibrahim, M., & Ahmad Mokhtar, H. (2010). Islamic Liquidity Management – The Malaysian Experience. *ISRA International Journal of Islamic Finance*, 2(2), 129-156.

IFSB & IAIS. (2006). *Issues in Regulation and Supervision of Takaful (Islamic Insurance)*. Kuala Lumpur: Islamic Financial Services Board & International Association of Insurance Supervisors.

IFSB. (2005a). T*he Guiding Principles For Risk Management For Institutions Except Insurance Institutions*. Kuala Lumpur: Islamic Financial Services Board.

IFSB. (2005b). *Capital Adequacy Standard for Institutions (Other Than Insurance Institutions) Offering Only Islamic Financial Servic*es. Kuala Lumpur: Islamic Financial Services Board.

IFSB. (2010). *Standard on Solvency Requirements for Takaful (Islamic Insurance) Undertakings*. Kuala Lumpur: Islamic Financial Services Board.

IFSB. (2012). *Exposure Draft - 14 Standard on Risk Management for Takaful (Islamic Insurance) Undertaking*s. Kuala Lumpur: Islamic Financial Services Board.

ISRA. (2012). *Islamic Financial System: Principles & Operations*. Kuala Lumpur: Pearson Custom Publishing.

Kamali, M. H. (1989). Source, Nature and Objectives of Shari'ah. *Islamic Quarterly,* 33, 215-234.

Kamali, M. H. (2008). *Maqasid al-Shariah Made Simple*. London: The International Institute of Islamic Thought (IIIT).

Kayed, R., & Mohammed, K. (2009). Unique Risks of Islamic Modes of Finance: Systemic, Credit and Market Risks. *Journal of Islamic Economics, Banking and Finance,* 5(3), 9-34.

Khan, B., & Hasan, B. (2013). *International Takaful Report 2012-2013: Shariah and Legal Analysis*. London: Dome Publications.

Khan, T., & Ahmed, H. (2001). *Risk Management: An Analysis of Issues in Islamic Financial Industry*. Occasional paper No. 5. Jeddah: Islamic Development Bank, Islamic Research Training Institute.

Kumaran, S. (2012). Risk Management and Mitigation Techniques in Islamic Finance: A Conceptual Framework. *International Research Journal of Finance and Economics*, (98), 83-97.

Laldin, M. A., & Furqani, H. (2013). The Foundations of Islamic Finance and The Maqasid al-Shari'ah Requirements. *Journal of Islamic Finance*, 2(1), 31-37.

Lambak, S. (2013). Shariah Juristical Effect of Gharar in Predetermining Takaful Contribution. I*nternational Journal of Education and Research*, 1(2), 1-12.

Masud, H. (2011). Takaful: An Innovative Approach to Insurance and Islamic Finance. *Journal of International Law*, 32(4), 1133-1164.

Megginson, W. (1997). *Corporate Finance Theory*. Boston: Addison Wesley.

Meshaal, A. (2013, November 27). *Risks in Islamic Banks: Description and Analysis*. Retrieved November 27, 2013 from Global Islamic Economics Magazine

Mohammed, M. O. (2009). *The Objectives of Islamic Banking: A Maqasid Approach*. In A. Meera, & Y. Soualhi, IIiBF Series in Islamic Banking and Finance (pp. 243-269). Kuala Lumpur: Kaci Trading Sdn Bhd.

Mohd Razif, N., Mohamad, S., & Abdul Rahman, N. (2012). Permissibility of Hedging in Islamic Finance. *Middle-East Journal of Scientific Research*, 12(2), 155-159.

Mulhim, A., & Sabbagh, A. (n.d.). *Islamic Insurance and Reinsurance: Theory and Practice*. Amman: Jordan University.

Noor, A. (2009). A Shariah Compliance Review On Investment Linked Takaful In Malaysia. *Islamic Economic Studies*, 17(1), 1-20.

Onagun, A. (2010). Solvency of Takāful Fund: A Case of Subordinated Qard. *Islamic Economic Studies*, 18(1&2), 1-16.

Rejda, G., & McNamara, M. (2012). *Principles of Risk Management and Insurance* 12th ed., Prentice Hall.

Salleh, M. (2010). *Insurance and Takaful*. Kuala Lumpur: Institut Bank-Bank Malaysia.

Shimpi, P., & Lowe, S. (2006). Risk Management: ERM for Insurers - From Compliance to Value. *Risk Management*, (8), 34-38.

Siddiqi, M. (2006). Islamic Banking And Finance in Theory and Practice: A Survey of State of the Art. *Islamic Economic Studies,* 13(2), 1-48.

Siddiqui, S., & Al Athmey, A.A. (2007). Resolving Controversial Issues and Setting Goals for Islamic Insurance: An Evaluation of Takaful Companies of Brunei. *Journal of Islamic Economics, Banking and Finance,* 3(2), 129-158.

Tariqullah, K. (2007). *The Challenge of Fixed to Floating Rate Swap*. The 3rd International Seminar on Challenges Facing Islamic Financial Service Industry. Kuwait.

Van Greuning, H., & Iqbal, Z. (2007). *Risk Analysis for Islamic Banks*. Washington: The World Bank.

Vaughan, E., & Vaughan, T. (2007). *Fundamentals of Risk and Insurance,* 10^{th} ed. Boston: Wiley.

Vejzagic, M., & Smolo, E. (2011). *Maqasid Al-Shari'ah in Islamic Finance: An Overview*. 4th Islamic Economic System Conference 2011 (iECONS 2011). Kuala Lumpur: Faculty of Economics and Muamalat (FEM) and Islamic Finance and Wealth Management Institute (IFWMI), Universiti Sains Islam Malaysia.

Yazid, A., Wan Daud, W., & Hussin, M. (2008). Enterprise Risk Management (ERM) Practices among Government-Linked Companies (GLCs) in Malaysia.

Yusof, M., Wan Ismail, W., & Abdullah, A. (2011). *Fundamentals of Takaful*. Kuala Lumpur: IBFIM.

Yusop, Z., Radam, A., Ismail, N., & Yakob, R. (2011). Risk Management Efficiency of Conventional Life Insurers and Takaful Operators. Insurance Markets and Companies: Analyses and Actuarial Computations, 2(1), 58-68.