

THE SHARIAH VIEWPOINT ON THE PRACTICE
OF UNDERWRITING AND RISK RATING FOR
INDIVIDUAL PARTICIPANTS
IN FAMILY TAKAFUL

BY

MOHAMMAD KHALID JAWAHIR

A research paper submitted in partial fulfilment of the
requirements for the degree of Master of Science in
Islamic Banking and Finance

Institute of Islamic Banking and Finance
International Islamic University
Malaysia

JUNE 2011

ABSTRACT

The practice of underwriting and risk rating for individual participants in family *takaful* stems from the underwriting practice in life insurance, and thus could contain elements which contravene the essence of the *shariah*. A review of literature on *takaful* indicates that there are very few materials which look at the underwriting practice from a *shariah* perspective. The aim of this study was to find out the *shariah* viewpoint on the underwriting and risk rating practice for individual participants in family *takaful*. More specifically, it sought to gather the opinions of *shariah* scholars on the factors being used in the process of selection and classification of risks for individual participants to a family *takaful* pool. This study also explored the level of exposure and knowledge that *shariah* experts on *takaful* have pertaining to the underwriting practice. The study sample consisted of five purposefully selected *shariah* experts on *takaful*. The research method used was based on the Delphi technique and included two rounds of semi-structured face to face interviews with each participant. This study found that most of the *shariah* scholars interviewed did not seem to have a deep exposure to the underwriting and risk rating practice in family *takaful*. They however declared that underwriting and risk rating is permissible, although they had some concerns regarding some of the factors used in the underwriting process. The findings of this study will be of interest to the *shariah* scholars, *takaful* operators, regulatory bodies, academicians, and other stakeholders.

ملخص البحث

ممارسة التأمين وتقدير المخاطر الفردية للمشاركين في التكافل العائلي ينبع من ممارسة الاكتتاب في التأمين على الحياة ، وبالتالي يمكن أن تحتوي على العناصر التي تتعارض مع جوهر الشريعة. استعراض للأدب على التكافل يشير إلى أن هناك عدد قليل جدا من المواد التي تبدو في ممارسة التأمين من منظور الشريعة الإسلامية. وكان الهدف من هذه الدراسة لمعرفة وجهة نظر الشريعة على الاكتتاب ومخاطر ممارسة التصويت للمشاركين الفردية في التكافل العائلي. وبشكل أكثر تحديدا، وسعت إلى جمع آراء علماء الشريعة على العوامل التي تستخدم في عملية اختيار وتصنيف المخاطر الفردية للمشاركين إلى تجمع التكافل العائلي. هذه الدراسة بحثت أيضا مستوى التعرض والمعرفة أن خبراء الشريعة على التكافل والمتصلة ممارسة الاكتتاب. وقد تكونت عينة الدراسة من خمسة خبراء الشريعة مختارة عمدا على التكافل. ويستند منهج البحث المستخدمة على تقنية دلفي وشملت جولتين من وجه شبه منظمة لمواجهة مقابلات مع كل مشارك. توصلت هذه الدراسة أن معظم علماء الشريعة العميق مقابلتهم لا يبدو أن يكون التعرض للخطر وضمان الاكتتاب في التصويت ممارسة التكافل العائلي. ومع ذلك أعلنوا أن الاكتتاب والمخاطر يجوز التصويت، لكنهم أعربوا عن قلقهم بشأن بعض العوامل التي استخدمت في عملية الاكتتاب. إن نتائج هذه الدراسة تكون ذات فائدة لعلماء الشريعة ، وشركات التكافل، والهيئات التنظيمية، والأكاديميين، وأصحاب المصلحة الآخرين.

APPROVAL PAGE

I certify that I have supervised and read this study and that in my opinion, it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a research paper for the degree of Master of Science in Islamic Banking and Finance.

.....
Sheila Nu Nu Htay
Supervisor

This research paper was submitted to the Institute of Islamic Banking and Finance and is accepted as a fulfilment of the requirement for the degree of Master of Science in Islamic Banking and Finance.

.....
Mohd. Azmi Omar
Dean, Institute of Islamic
Banking and Finance

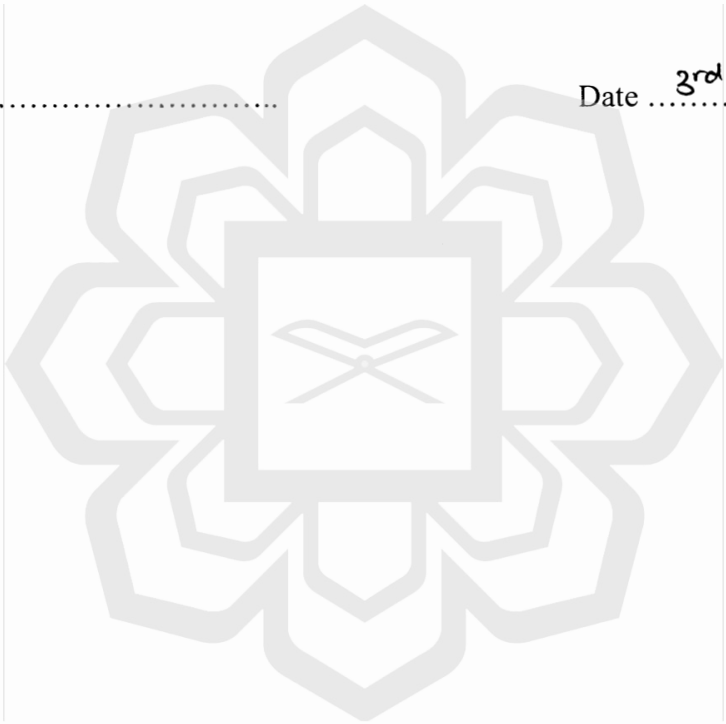
DECLARATION

I hereby declare that this research paper is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

Mohammad Khalid Jawahir

Signature

Date3rd JUNE 2011.....

The logo of the International Islamic University Malaysia (IIUM) is centered on the page. It features a large, stylized, light-gray floral or geometric pattern. In the center of this pattern is a square containing a white background with a stylized, light-gray calligraphic symbol, possibly representing an open book or a specific Islamic motif.

INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

**DECLARATION OF COPYRIGHT AND
AFFIRMATION OF FAIR USE OF UNPUBLISHED
RESEARCH**

Copyright©2011 by International Islamic University Malaysia. All rights reserved.

**THE SHARIAH VIEWPOINT ON THE PRACTICE OF
UNDERWRITING AND RISK RATING FOR INDIVIDUAL
PARTICIPANTS IN FAMILY TAKAFUL**

I hereby affirm that the International Islamic University Malaysia (IIUM) holds all rights in the copyright of this work and any reproduction or use in any form or by means whatsoever is prohibited without the written consent of IIUM. No part of this unpublished research may be reproduced, stored in a retrieval system, or transmitted, in any form or by means, electronic, mechanical, photocopying, recording or otherwise without prior written permission of the copyright holder.

Affirmed by Mohammad Khalid Jawahir

.....
Signature

3rd JUNE 2011
.....
Date

ACKNOWLEDGEMENTS

All praises and thanks to the Almighty Allah, without whose favours and blessings, I would not have had the opportunity to study at the International Islamic University Malaysia, an amazing educational institution which has empowered me in ways I could not have imagined. Peace and blessings of Allah on his beloved Messenger, Prophet Muhammad (s.a.w), whose patience and steadfastness in hard times stand as a model for humanity.

My deep and profound appreciation goes to my supervisor, Dr Sheila Nu Nu Htay for her unflinching support and cooperation. Indeed, I cannot thank her enough. She has shown tremendous patience and understanding and has provided constant guidance and motivation throughout the duration of this work. My sincere thanks go to Prof Dato Dr Mohd Azmi Omar, dean of the IIUM Institute of Islamic Banking and Finance, for his support, trust, attentiveness and guidance during my time at the institute. My appreciation also goes to Prof Dr Ahamed Kameel Mydin Meera, Prof Dr Abdul Rahim Abdul Rahman, Prof Dr Younes Soualhi and Ustaz Hamidon Abd Hamid for the support and kindness shown to me during my time at IIUM. My appreciation would be incomplete without mentioning Prof Dr Muhammad Arif Zakaullah, a wonderful man and amazing lecturer, who has inspired me since my first semester at IIUM. He instilled in many of us, a love and drive for excellence and we owe him our deepest gratitude. I would also like to express my deepest thanks to the staff at IiBF, namely Sr Haslina, Sr Syakirah, Sr Syuhada and Sr Norma. They have been my friends and family and will always hold a special place in my heart. My gratefulness also goes to all my lecturers for having educated me and made me a better human being.

I am also indebted to my beloved parents who have been my first university, who have toiled so hard in life in order to make me successful, and whose prayers have always assisted me during difficult times. I will never be able to repay them. My deepest thanks also go to my brothers and sister, and to my friends and well wishers for their help and support. Last but not least, my deepest gratitude goes to the Malaysian Government for awarding me a scholarship to pursue my postgraduate studies at IIUM.

May Allah repay your kindness and bestow his blessings on all of you.

TABLE OF CONTENTS

Abstract.....	ii
Abstract in Arabic.....	iii
Approval Page.....	iv
Declaration Page.....	v
Copyright Page.....	vi
Acknowledgements.....	vii
CHAPTER 1: INTRODUCTION.....	1
1.1 Introduction.....	1
1.2 Background to the Study.....	2-4
1.3 Problem Statement.....	4-5
1.4 Research Questions.....	5
1.5 Purpose of the Study.....	5
1.6 Objectives of the Study.....	6
1.7 Research Method.....	6-7
1.8 Significance of the Study.....	7-8
1.9 Scope of the Study.....	8
1.10 Organisation of the Study.....	8-9
CHAPTER 2: LITERATURE REVIEW.....	10
2.1 Introduction.....	10-11
2.2 Overview of Insurance.....	12-17
2.2.1 Types of Insurance.....	17
2.2.1.1 Life Insurance.....	17-18
2.2.1.2 Health Insurance.....	18
2.2.1.3 General Insurance.....	18
2.2.2 Shariah Issues with Insurance.....	18-22
2.3 Overview of Takaful: Islamic Alternative to Insurance.....	22-23
2.3.1 Types of Takaful.....	23
2.3.1.1 Family Takaful.....	24
2.3.1.2 General Takaful.....	24
2.3.2 Shariah Issues with Takaful.....	24-26
2.4 Underwriting and Risk Rating in Life Insurance.....	26-28
2.5 Underwriting and Risk Rating in Family Takaful.....	28
2.6 Factors Affecting Risk Rating.....	29-33
2.7 Underwriting and Risk Rating Issues.....	34-36
2.8 Interpretive Summary.....	37
CHAPTER 3: RESEARCH METHODS.....	38
3.1 Introduction.....	38-39
3.2 Rationale for Qualitative Research Design.....	39

3.3 Rationale for Delphi Study Technique.....	39-40
3.4 Research Sample.....	40-41
3.5 Research Design.....	41-43
3.6 Summary.....	43
CHAPTER 4: RESEARCH FINDINGS AND SYNTHESIS.....	44
4.1 Introduction.....	44
4.2 Research Findings.....	44
4.2.1 Findings Related to Research Question 1.....	44-45
4.2.2 Findings Related to Research Question 2.....	45
4.2.3 Findings Related to Research Question 3.....	45-47
4.3 Discussion on Findings.....	47-49
CHAPTER 5: CONCLUSION AND RECOMMENDATIONS.....	50
5.1 Introduction.....	50-51
5.2 Summary of Research Findings.....	51-52
5.3 Recommendations.....	52
5.3.1 Recommendation for <i>Shariah</i> Advisors.....	52
5.3.2 Recommendation for <i>Takaful</i> Operators and Actuaries.....	52
5.3.3 Recommendation for Regulatory Bodies.....	52
5.3.4 Recommendation for Further Research.....	52
5.4 Conclusion.....	53
BIBLIOGRAPHY.....	54-57

CHAPTER 1

INTRODUCTION

5.2 INTRODUCTION

This study seeks to explore the *shariah* viewpoint on the practice of underwriting and risk rating for individual participants in family *takaful*. The purpose is to gauge the level of understanding and exposure that *shariah* scholars have pertaining to the underwriting and risk rating practices in family *takaful* and to get their opinions on the underwriting process and the factors which underwriters use to select and assign risk ratings to participants. It was anticipated that the knowledge generated from this study would offer us new insights on how *shariah* scholars deal with areas which are not in their immediate fields of expertise. It was also expected that this inquiry would inform us on the seriousness of *takaful* operators in ensuring the *shariah* compliance of their operations. This study employed the Delphi technique to gather the opinions of the scholars. Participants of this research included a purposefully selected panel of *shariah* experts who sit on *shariah* advisory boards within the *takaful* industry in Malaysia. This chapter begins with an overview of the context and the background that frames the study, followed by the problem statement, the research questions, the objectives of the study, a brief overview on the research method employed as well as the significance of the inquiry and its scope and limitations. It ends with a section on the organisation of the study.

5.2 BACKGROUND TO THE STUDY

According to the Ernst & Young World Takaful Report 2011, the *takaful* industry has shown significant business potential and could reach US \$11.9 billion by year 2011. This expansion can be attributed to the popularity wave of islamic finance worldwide and the increasing awareness on *takaful* created by conferences and seminars. *Takaful*, in simple terms, is the islamic alternative to insurance and basically performs the same function as insurance, namely providing compensation to participants who are victims of random loss events. The idea of *takaful* originated from the concept of *aqila*, an ancient Arabian tribal custom whereby members of a community would contribute and shoulder responsibility to pay blood money on behalf of a member who unintentionally killed someone (Dusuki & Abdullah, 2009; Billah, 2003). The modern form of *takaful* was introduced in Sudan in 1979 and was based on a model similar to a mutual insurance organisation (Dusuki & Abdullah; Abdul Wahab, Lewis, & Hassan, 2007). Insurance, despite its noble purpose, was long despised in the Muslim world (Abdul Wahab, Lewis, & Hassan). This is because the insurance contract contained elements which were prohibited by islamic law, such as *gharar* (uncertainty), *maysir* (gambling) and *riba* (usury) (Engku Ali & Odierno, 2008). However, insurance was increasingly seen as an economic necessity and the added complications of our lifestyles as well as the magnitude of damages called for specific institutions to deal with these situations (Arbouna, 2008). There was a need to come up with an islamic solution which would provide the Muslims with the same benefits as insurance. Thus, *takaful* came into being so that Muslims could have access to the benefits arising out of insurance. Engku Ali and Odierno state that the insurance contract was modified and was ridden of its prohibited elements. Thus the contract of exchange on which insurance was based was replaced by a contract of donation or

unilateral contract. Insurance thus became available to Muslims through its *halal* form - *takaful*. However, as mentioned by Engku Ali and Odierno, in order to come up with *takaful*, the scholars simply needed to modify the insurance contract and get rid of the prohibited elements such as *gharar*, *riba* and *maysir*. They state as follows: “...it is clear that the most essential modification that needs to be undertaken in order to ‘islamise’ insurance, is to substitute the contract of sale and purchase of insurance policy with a contract of donation with a condition of compensation” (p. 23). This is very much similar to what was done in islamic banking. In its inception, the implementation of islamic banking was done by removing the *riba* element from the conventional banking and the existing banking structural pattern was adopted (Hasan, 2008). In the case of *takaful*, the contract was modified to rid it of the prohibited elements and some *shariah* features were introduced into the operations (Arbouna). However, by and large, the structural pattern of insurance was adopted. The *takaful* operator has similar underwriting and risk rating practices as the insurance company (Frenz & Soualhi, 2010). It is here pertinent to observe that if the *takaful* operators have similar underwriting practices to insurance companies, it can be assumed that any issue being faced by the insurance company as regards to its underwriting process is likely to be faced by the *takaful* operator as well. It so happens that there are concerns regarding the underwriting practices of insurance companies. Palmer (2007) states that there are claims that the underwriting process gives rise to situations of unfairness and that there could be moral and fairness issues with the use of factors such as age, family history, gender and others, in the selection and classification of risks. He quotes various studies which have been done on the insurance side looking into these issues. However, these concerns have barely been raised on the *takaful* side. Daud (2009) seems to express concerns regarding the rigorous underwriting

practices as adopted by *takaful* operators. She states as follows: “The underwriting process, especially those involving medical underwriting with rigorous tests and detail(sic) analysis of the health condition of a person does not conform to the spirit of *ta’awun* or mutual cooperation”. She is one of the rare persons from the *takaful* industry who dared to express concerns about the underwriting practice not conforming to the spirit of mutual cooperation that *takaful* was meant to embody. Since the underwriting practice of *takaful* was adopted from that of insurance, the same questions of unfairness raised within the insurance industry are likely to be raised within the *takaful* industry and more so because *takaful* is expected to embody the high ideals of islamic fairness and justice. This should have warranted the attention of *shariah* scholars. However, much of the research in *takaful* have focused on other issues facing the industry namely, the nature of the *takaful* contract, the sharing of surplus, the operational models, insurable interests and ownership issues among others. It is thus important to conduct a study looking into the underwriting practice of *takaful* operators and find out the *shariah* viewpoint on the risk rating process and the factors used in the selection and classification of risks.

5.2 PROBLEM STATEMENT

The practice of underwriting and risk rating for individual participants in family *takaful* stems from the underwriting practice in life insurance, and thus could contain elements which contravene the essence of the *shariah*. This should have warranted the attention of *shariah* scholars. However, materials and research conducted on the underwriting practice from a *shariah* perspective are very scant. It is thus pertinent to explore the exposure of *shariah* scholars to the underwriting process and gather their opinions on the permissibility of the use of factors such as age, medical history,

gender, occupation and others, in the selection and classification of risks for individual participants in family *takaful* underwriting.

5.2 RESEARCH QUESTIONS

To shed light on the problems, the following research questions are addressed:

1. To what extent are *shariah* experts advising the *takaful* industry exposed to and knowledgeable about the underwriting and risk rating process in family *takaful*?
2. What issues have these *shariah* experts come across as regards to the underwriting and risk rating process for individual participants in family *takaful*?
3. What is the *shariah* viewpoint on factors which underwriters use in the selection and classification of risks for individual participants in family *takaful*?

5.2 PURPOSE OF THE STUDY

The purpose of this research was to find out the *shariah* viewpoint on the practice of underwriting and risk rating for individual participants in family *takaful*. More specifically, it sought to gather the opinions of *shariah* scholars on the factors being used in the process of selection and risk rating for individual participants to a family *takaful* pool. It was anticipated that a better understanding of the *shariah* viewpoint on the underwriting process would dispel any doubt which might arise therefrom and would provide a framework for *takaful* operators to conduct their underwriting process in line with the essence of the *shariah*.

5.2 OBJECTIVES OF THE STUDY

1. To gauge the level of understanding and exposure of *shariah* experts advising the *takaful* industry with regards to the underwriting and risk rating process in family *takaful*.
2. To find out about potential issues which these *shariah* experts might have come across pertaining to the underwriting and risk rating process for individual participants in family *takaful*.
3. To gather the opinions of *shariah* experts on factors which underwriters use in the selection and classification of risks for individual participants in family *takaful*.

5.2 RESEARCH METHOD

This study was conducted using a qualitative research method known as the delphi technique. According to Sekaran and Bougie (2010), this technique of interview is used when the objective of the inquiry is to have a collective view from a panel of experts about issues where there is little or no definite evidence and where opinion is important. They further state that the participants in a delphi study are interviewed in successive rounds until a certain level of consensus to any specific issue is reached. An important feature of the Delphi Technique is that the identities of the participants are kept secret (Sekaran & Bougie). Thus, questionnaires were sent to each scholar separately, and the interview was conducted face to face and in private. Each interviewee was identified by a pseudonym, and all interviews were recorded and transcribed verbatim. The interview was done in two successive rounds to gauge their understanding of the underwriting and risk rating process and to gather their opinions on the factors underwriters use in the selection and risk classification process. No

further interview was needed beyond the second round since there was not much divergence in the opinions gathered. The information obtained from the interviews formed the basis for the overall findings of this study.

5.2 SIGNIFICANCE AND CONTRIBUTION OF THE STUDY

This research is very significant in that it deals with an area which seems to have received little attention so far from *shariah* scholars. The outcome of the research will be very useful to various stakeholders, amongst whom are the *shariah* advisory members, *takaful* operators, actuaries, industry regulators, academicians and students. They will be in a better position to evaluate the current situation and be able to propose changes to better reflect the essence and objectives of the *shariah* and the true concept of *ta'awun* and *takaful*. This study fills an important gap in the literature and it is hoped that it will spur further research in the field. This study is expected to contribute in the following standpoints:

1. It is expected to help dispel potential doubts which people may have pertaining to the *shariah* compliance of the underwriting and risk rating practices of *takaful* operators.
2. It is expected to provide a basis for a *shariah* framework for underwriting and risk rating for individual participants in family *takaful*.
3. It is also anticipated that the study will provide information to stakeholders in the *takaful* industry on areas which could be improved within family *takaful* underwriting to better meet the standards and objectives of the *shariah*.
4. Furthermore, the outcome of this study is expected to highlight the level of exposure, knowledge and access that *shariah* scholars have as regards to

the operation aspects of the *takaful* operators which they advise. It is hoped that the issues raised in this study will act as a catalyst for better *shariah* compliance audit practices in the *takaful* industry.

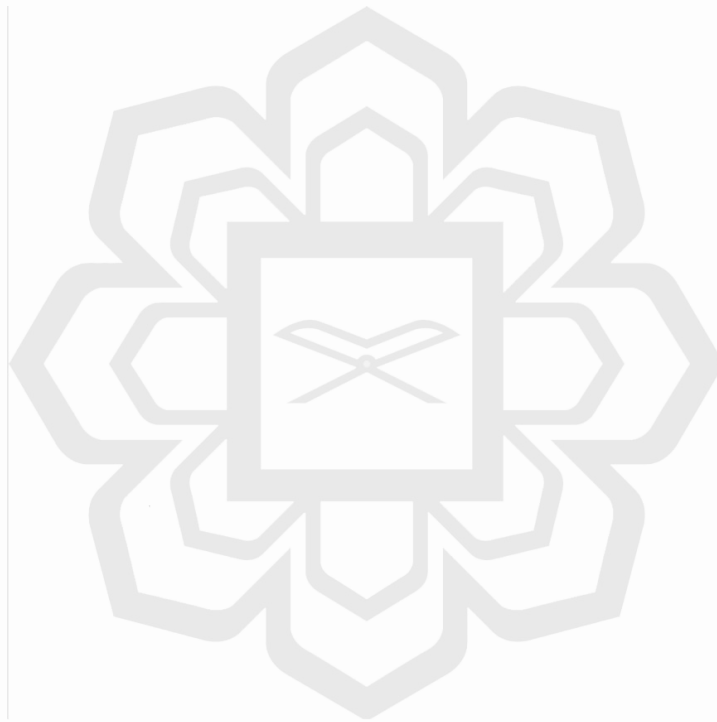
5.2 SCOPE AND LIMITATIONS OF THE STUDY

This study focused only on the underwriting and risk rating process for individual participants in the family *takaful* segment. The researcher did not look into the general *takaful* segment. It is also not within the scope of this research to delve into the operational models and other issues affecting the *takaful* industry. The researcher has chosen to focus only at the possible issues surrounding the risk rating process for individual participants in family *takaful* underwriting. Furthermore, this study only looked at the *shariah* aspects of underwriting and risk rating and did not delve into the mathematical aspect of actuarial practices.

5.2 ORGANISATION OF THE STUDY

This study is divided into five chapters. Chapter one is the introduction to the study and comprises of the background and context that frames the study, the problem statement, the purpose, the objectives and the research questions, a brief overview on the research method employed as well as the significance of the inquiry and its scope and limitations. Chapter two gives an overview of both insurance and *takaful* and the underwriting practices in both. It also gives a critical review of past literature regarding insurance and *takaful* underwriting and highlights issues that the researcher raises as regards to the current practice in the industry. Chapter three covers the research design and methodology. It deliberates on the sampling, the research approach, and the rationales of the approach as well as the techniques chosen to gather

information and to elicit response from the participants. Chapter four is devoted to reporting the findings as well as the analysis and interpretation of the findings. Chapter five gives an overall conclusion on the study and provides actionable recommendations as well as suggestions for future research.



CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

The purpose of this research is to find out the *shariah* viewpoint on the practice of underwriting and risk rating for individual participants in family *takaful*, and more specifically on the factors which underwriters use in the selection and classification of risks. Basically, the researcher sought to understand (a) the extent to which *shariah* scholars are exposed to and are knowledgeable about the underwriting process, (b) any potential issue which *shariah* scholars might have come across as regards to the underwriting and risk rating practice, and (c) whether it is permissible and legitimate, from a *shariah* perspective, to use factors such as age, medical history, gender, lifestyle and others as a basis for participant selection and risk classification. To carry out this study, it was necessary to complete a critical review of current and past literature. This review was a continuous process and was conducted throughout the data collection, data analysis and synthesis phases of the research.

This critical review explores the interconnectedness and close proximity between the practices of insurance companies and *takaful* operators when it comes to the underwriting process. In light of this, the review covered both insurance and *takaful* in order to better appreciate their similarities and differences. For the sake of providing context and familiarity to the discussion, the researcher gave an overview of insurance and the *shariah* concerns regarding its practice, as well as an overview of the underwriting process in life insurance. To the same end, the researcher also gave an introduction to the concept and practice of *takaful*, the underwriting process in

family *takaful*, as well as a bird's eye view of some of the most pertinent *shariah* issues regarding the current practice of *takaful*.

The review provides an exposé of the issues raised by scholars on the practice of underwriting and risk rating in life insurance. Due to the similarity in the underwriting practice between life insurance and family *takaful*, the researcher posits that these concerns are likely to be reflected on the *takaful* side as well and thus combined the discussion under the same heading. On that note, the researcher observed that there seems to be very scant materials and research done on the possible *shariah* concerns regarding the underwriting and risk classification practices within the *takaful* industry. Since the literature on the underwriting practices of *takaful* operators are quite scarce, the researcher had to rely on the few available materials on the subject and gather further information from underwriters in the *takaful* industry.

To conduct this selected literature review, the researcher used several information sources, including books, research papers, internet resources, academic journals as well as professional publications. The search for literature was not subjected to any delimiting time frame. Throughout the review, the researcher attempted to identify and discuss relevant contested areas and issues, as and when they became apparent. Each section of the review closes with a synthesis on the gist of what has been covered and its relevance to the study. The interpretive summary that concludes the chapter illustrates how the literature has informed the researcher's understanding of the material and how the material contributes to the development of a framework for the research.

2.2 OVERVIEW OF INSURANCE

In order to provide context to the meaning of insurance, it is important to understand a concept that lies at the heart of it, namely 'risk'. Risks are present in the day to day lives of people. A house may explode due to a gas leakage. A car may involve in an accident. A person may injure himself and be in need of medical care. According to Teale (2008), "Risk is a condition where there is a possibility of an adverse deviation from an expected outcome". He states that risk has many definitions, but that the common three elements in all definitions are (a) uncertainty of the outcome, (b) possibility of loss and (c) variability in possible outcomes. Since the outcome is uncertain and the possibility of loss is very much present, people tend to have a negative notion of risk and tend to avoid risky scenarios. However, it is important to note that risks are not always bad and are not always to be avoided. There are some risks which are worth taking, while there are other risks which should be avoided because of the burden they bring (Treischmann, Hoyt and Sommer, 2005). Treischmann et al. state that bearing risks can be either a burden or an opportunity. They further clarify that bearing risks becomes a burden when there is only the possibility of loss but that, it becomes an opportunity if there is the possibility of profit, for example, in business ventures. They thus classify risks into two broad categories, namely (a) pure risks and (b) speculative risks. A house explosion due to a gas leakage is a pure risk, since it involves only the potential for loss and there is no possibility of gain. On the other hand, there is speculative risk when there is uncertainty about an event which can entail either a potential for profit or a potential for loss (Treischmann et al.). For Example, in the launching of a new product, there is either the potential for gain or the potential for loss. A risk savvy business person may go for risky ventures for the sake of earning high returns. However, most people

are risk averse, and seek to manage their risks (Dorfman, 2005). This is probably because risks can be costly and the losses can be burdensome when they occur. Harrington and Niehaus (2004) state that there are three major methods people use to manage their risks and handle potential loss exposures. According to them, these are (a) loss control, (b) loss financing, and (c) internal risk reduction methods. They state that loss control would entail having a reduced level of risky activity and increased precautionary measures. On the other hand, loss financing would entail finding ways to pay for losses when they occur, while internal risk reduction would entail taking measures to have better forecasts of expected losses (Harrington & Niehaus). They classify insurance as being a loss financing method. Teale mentions something on the same line. He however gives two main approaches to handle potential loss exposures. According to him, these two approaches can be broadly categorised under (a) controlling the loss exposure, or (b) financing the potential loss exposure through an insurance policy or a contract. From this, it can be inferred that insurance is basically a risk management and loss handling mechanism which provides financing for losses when they occur.

A simple and easy definition of insurance is given by Dorfman (2005). He defines insurance as “a contractual arrangement whereby one party agrees to compensate another party for losses”. He further states that this is done through the purchase of an insurance policy whereby the party which has the loss exposure (the insured) transfers it to the other party which is willing to accept the loss exposure (the insurer) against the payment of a premium. It is pertinent to note here that the subject matter of the contract cannot be ascertained, and that the insured is paying for something which does not exist at the time of the contract and may never occur in the future. This is what possibly makes the insurance contract problematic from an

islamic perspective. But it cannot be denied that the concept of insurance, in itself, is noble in nature since it provides coverage and financing to those who incurred losses due to unexpected events. In brief, insurance allows the insured to gain financial security by transferring the risk of loss to the insurer. How this is done is quite simple. Dorfman states that the insurer collects regular premium payments from many insureds so that if an insured has a loss, the insurer has a pool of money to cover the loss. This brings us to the discussion regarding the mechanism of insurance and the pooling of homogeneous risks, which is very crucial to a proper understanding of the role of underwriting and risk rating practices.

Insurance is only possible when a sufficient number of insureds pool their risks, such that the few who have a loss can be financed by the many that do not (Dorfman, 2005). Insurance is thus a risk transfer achieved through the pooling of homogeneous risks (Harrington & Niehaus, 2004). The use of the term 'homogeneous risks' here is deliberate and homogeneity has a crucial role to play in the accurate prediction of average losses in a pool of risk exposures. It is here important to note the use of the term 'prediction of average losses'. This is because insurance can at best predict the average losses for the pool and not the actual losses suffered by each participant. Insurance relies a lot on probability theory to make predictions about future losses. This is why insurance companies employ actuaries. They basically measure the likelihood that something will happen and then make predictions on the basis of this likelihood. It should not be forgotten that insurance companies deal with random events. Their predictions of future losses are based on the premise that some events, even though they appear to be random, actually occur with regularity over a large number of trials (Harrington & Niehaus). This is referred to as the law of large numbers (Dorfman). The key parameter which actuaries are interested in when they

perform their analysis, is the population mean, or the average frequency of occurrence (Harrington & Niehaus). They make statistical inferences of a population based on sample data (Teale, 2008). For example, if actuaries want to estimate the probability of death of 40 year olds, they will take samples of several thousands of people aged 40 and observe how many die on average between age 40 and 41. These estimates will then give them a measure of the probability of death of 40 year olds. Their estimates will be more accurate if they take larger numbers. Indeed, according to the law of large numbers, the greater the number of observations, the more accurate is the prediction. Thus, there must be a sufficiently large number of exposure units to make the future losses predictable (Dorfman). An important condition, however, in the pooling of risks is that the risk exposures should be homogeneous or similar (Teale; Mehr & Gustavson, 1987). This is to ensure that the average losses are minimised and that the insurance is not expensive to the public. For example, people with similar risk exposures, such as those with low cholesterol, are grouped into one pool. The pooling of similar risks basically implies that the losses suffered by a few are spread over the entire group, such that the average loss is substituted for the actual loss (Dorfman). By pooling a large number of homogeneous or similar risks together, the average loss is lowered down and thus the premium that the insureds pay are lower. However, if the insurer groups people with high risks and low risks together in the same pool, the average loss will increase, and so will the premium charged. Thus, people with lower risks will end up paying higher premiums and end up subsidising those with higher risks (Teale). This may be considered as being unfair to the people with low risks who may then shift to other insurers where the premium is lower (Mehr & Gustavson). This in turn might have solvency implications for the insurer. Indeed, if the good risks decide to leave the insurer, the latter may end up with only high risks