DETERMINANTS OF FINANCIAL PERFORMANCE
OF GENERAL TAKAFUL AND CONVENTIONAL
INSURANCE COMPANIES IN MALAYSIA

BY

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ABSTRACT

Preserving financial stability is integral in developing financial institutions that are robust, resilient, effective and competitive. As such, this study examined factors that would affect the financial performance of the general takaful and conventional insurance companies in Malaysia. The main contribution of this study is that it is the first attempt to empirically investigate the determinants of the financial performance of general takaful and conventional insurance companies in Malaysia using a panel data set consisting of firm-specific data and economic data. In addition, this study pooled the data of the general takaful and conventional insurance companies to determine the overall perspective of the determinants of financial performance of the insurance industry in Malaysia. Two financial performance measures, which are investment yield and combined ratio, are used to capture the different aspects of the general takaful and conventional insurance operations in Malaysia. In analysing the determinants of the financial performance of the general takaful companies, the study examined the profit rate levels, equity returns of Shariah-compliant investments, size of company, retakaful dependence, solvency margin, liquidity, and contribution growth. In the case of conventional insurance, the factors examined in this study are interest rate levels, equity returns, size of company, reinsurance dependence, solvency margin, liquidity, and premium growth. The data covered a four-year period from January 2004 to October 2007. Three models of panel data estimation were employed, which are generalized least squares with non effects, generalized least squares with fixed effects and generalized least squares with random effects. These models were estimated for both performance measures. Based on the empirical results, this study found that size of company, retakaful dependence and solvency margin are statistically significant determinants of the investment performance of takaful companies. For conventional insurance, all factors are statistically significant determinants of investment performance, except for equity returns. In terms of underwriting performance, which is represented by the combined ratio, this study found that profit rate levels, equity returns, size of company, solvency margin and liquidity are significant determinants for the takaful sector. The findings for conventional insurance indicate that all factors are statistically significant determinants of the underwriting performance, with the exception of liquidity. The findings for the pooled data of the general takaful and conventional insurance companies are mostly consistent with the findings of the takaful and conventional insurance sectors.

خلاصة البحث

إن تحقيق الاستقرار المالي أمر ضروري لتطوير مؤسسات مالية قوية ومرنة وفعالة وقادرة على المنافسة. ولذلك تنظر هذه الدراسة في العوامل التي يمكن أن تؤثر في الأداء المالي لشركات التكافل العام وشركات التأمين التجاري التقليدي في ماليزيا. ويتمثل الإسهام الرئيس لهذه الدراسة في كونها أول محاولة للبحث الميداني التجريبي في محددات الأداء المالي لشركات التكافل وشركات التأمين التقليدي في ماليزيا باستخدام معطيات إحصائية خاصة بالشركات المعنية ومعطيات اقتصادية عامة (panel data). وفضلاً عن ذلك فقد تم تجميع المعطيات الخاصة بالشركات المذكورة في إطار واحد من أجل تحديد المنظور الكلي للعوامل المحددة لأداء الصناعة التأمينية في ماليزيا. وللوقوف على الجوانب المختلفة لعمليات التكافل العام والتأمين التقليدي في ماليزيا، تم استخدام مقياسين اثنين للأداء المالي، هما ناتج الاستثمار بالنسبة لشركات التكافل، والنسبة المركبة (combined ratio) بالنسبة لشركات التأمين التقليدي. ففي تحليل محددات الأداء المالي لشركات التكافل العام، نظرت الدراسة في مستويات معدل الربح، وعائدات حقوق المساهمين من الاستثمارات المتفقة مع أحكام الشريعة، وحجم الشركة، ومدى الاعتماد إلى إعادة التكافل، وهامش الملاءة المالية، والسيولة، وزيادة الاشتراكات. أما بالنسبة لشركات التأمين التقليدي، فقد اهتمت الراسلة بدراسة مستويات معدل الفائدة، وعائدات حقوق المساهمين، وحجم الشركة، والاعتماد على إعادة التأمين، وهامش الملاءة المالية، والسيولة، وزيادة الأقساط التأمينية. وقد شملت البيانات المعتمدة في الدراسة مدة خمس سنوات من يناير 2004 إلى أكتوبر 2007. كما استخدمت في تحليلها ثلاثُ طرق هي: المربعات الصغرى المعممة مع عدمِ وجود آثار، والمربعات الصغرى المعممة مع وجود آثار ثابتة، والمربعات الصغرى المعممة مع وجود آثار عشوائية. وقد تم تطبيق هذه الطرق الثلاث لكل من مقياسي الأداء المالي المذكورين من قبل. وبينت الدراسة بناء على المعطيات الميدانية التجربية أن حجم الشركة والاعتماد على إعادة التكافل وهامش الملاءة المالية محددات ذات دلالة إحصائية للأداء الاستثماري في شركات التكافل. أما بالنسبة للتأمين التقليدي، فإن كل العوامل المذكورة بشأنها ذات دلالة إحصائية في تحديد أدائها الاستثماري، ما عدا عائدات الأسهم المملوكة للمساهمين. فمن حيث الأداء في الاكتتاب الذي تمثله النسبة المركبة، توصلت الدراسة إلى أن مستويات معدل الربح، وعائدات أسهم المساهمين، وحجم الشركة، وهامش الملاءة، والسيولة محددات ذات دلالة إحصائية بالنسبة لقطاع التكافل. كما بينت الدراسة أن كل المحددات ذات دلالة إحصائية في الأداء الاكتتابي لقطاع التأمين التقليدي، باستثناء عامل السيولة. أما البيانات المجمعة لشركات التكافل العام وشركات التأمين التقليدي فإن النتائج المستخلصة منها متوافقة بالنسبة للقطاعين.

APPROVAL PAGE

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DECLARATION

I hereby declare that this dissertation 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.

Muhaizam Binti Ismail

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CHAPTER ONE

INTRODUCTION

1.1   INTRODUCTION

Investigation on the performance of insurance companies has been the focus of a large body of past and current research such as the studies by Adams (1996), Chidambaran, Pugel and Saunders (1997), Adams and Buckle (2003), Shiu (2004) and Hrechaniuk, Lutz and Talavera (2007). In general, firm performance refers to a firm's actual outputs or results as measured against its intended outputs which are the goals and objectives.[1] In terms of financial performance, Venkaratnam and Vasudevan (1986) define it as the narrowest concept of business performance which focuses on the use of financial based indicators that reflect the fulfillment of the economic goals of the organisation. The aim of this study is to gain insight into the determinants of financial performance of the general Islamic and conventional insurance companies in Malaysia. Studies on the financial performance of the Islamic and conventional insurance companies are of interest to various stakeholders such as the shareholders, regulators, participants and policyholders. This is because preserving financial stability is one of the key requirements in developing Islamic and conventional insurance companies that are robust, resilient, effective and competitive.

1.2   BACKGROUND OF STUDY

The study on firm performance draws on a number of disciplines such as economics, business management, business policy, finance and accounting. According to Lentz

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[1] Wikipedia, "Organizational Performance," <http://www.en.wikipedia.org> (accessed 30, January 2008).

(1981) there are six categories of research on firm's performance. The first category is the study of the relationship between environment and performance. The most extensive studies in this area are found in the literature of economic industrial organisation.[2] In this discipline, environment is the market or industry in which a firm competes.[3] The measure for market structures typically reflects the overall arrangement of a competitive setting.[4] Numerous studies have linked firm or total industry performance with industry structure such as the number of buyers and sellers, industry growth, costs structure, product differentiation, concentration ratio and entry barriers (Bain, 1956, 1959; Scherer, 1970). Most industrial organisation researchers have been interested in the relationship between industry structure and total industry performance. Over the years, researchers have begun to examine the relationships between performance and characteristics unique to a business or group of businesses within an industry. This leads to the second category of research on firm performance, which is the study of the relationships of environment, strategy and performance. Studies by Hunt (1972) and Newman (1973) which focus on firm-related variables prove that the characteristics or relative competitive position of firms within industries affect performance. Schoeffler, Buzzell & Heany (1974) adopt the profit impact of market strategies (PIMS) model to analyse business unit performance in different industries for competitive position and industry structure. The features of competitive position are the relative market share, product quality and investment intensity, marketing expenditure, research and development expenditure and breadth of product line. The study shows that the joint effects of market conditions and corporate strategy

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[2] Lentz, R.T., "Determinants' of Organizational Performance: An Interdisciplinary Review", *Strategic Management Journal,* vol. 2, no. 2, (1981): 131 – 154.
[3] Ibid.
[4] Ibid.

explain up to eighty percent of the variation on return on investment.[5] Research on industrial organisation provides convincing evidence that industry structure and the competitive position of the firm influence performance.

The third category is the study of the relationship between organisation structure and performance. Hall (1977) suggests that organisation structure has two basic functions, each of which is likely to affect individual behaviour and organisational performance. The first function is to minimise or at least regulate the influence of individual variations on the organisation.[6] Second, it provides the setting in which power is exercised, decisions are made and the organisation's activities are carried out.[7] According to Campbell, Bownas, Peterson and Dunnette (1974), the structural qualities of an organisation are its physical characteristics, such as absolute size, span of control, flat/tall hierarchy and administrative intensity. The type of organisation structure which is often studied is the absolute size and multi-divisional structure (M-form).[8] Hall and Weiss (1967) discover a positive relationship between size and profitability from a sample of over 300 Fortune companies. In terms of M-form structure, Armour and Teece (1978) observe a positive relationship between M-form structure and return on equity of 28 petroleum companies, studied during the period of 1955 to 1973.

The fourth is the study which relates organisation performance with the degree of congruence between environment and organisation structure (Burns and Stalker, 1961). According to White and Hamermesh (1981), the predominant line of thought in organisational theory has come to be known as contingency theory whereby

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[5] Ibid.
[6] Ibid.
[7] Ibid.
[8] Campbell, J. P., Bownas, D. A., Peterson, N. G. & Dunnette, M. D., "The Measurement of Organizational Effectiveness: A Review of the Relevant Research and Opinion", *Report Tr-71-I (Final Technical Report), San Diego: Navy Personnel and Research Center*, (1974).

organisations are responsive to their environment, and that the fit between the environment and the organisation structure determines performance. Dill (1958) is one of the first to closely examine the environment/organisation relationship. Burns and Stalker (1961) use the relationship to demonstrate that the environment in terms of change in the markets and technologies are reflected in the internal organisation form. The study identifies two ideal types of organisation which are organic and mechanistic. Organic form, which is characterised by an ambiguous role, decentralisation and lateral communication, is found in a changing environment.[9] On the other hand, firm in a stable environment exhibits a mechanistic form with centralisation and well-defined chain of command and communication.[10] The study concludes that high-performing firms are those that adopt structures consistent with environmental demand, also known as structural-contingency theory.[11] Thus, the appropriate organisational form is contingent on the characteristic requirement of the environment.[12]

The fifth category is the study of the relationships of strategy, organisation structure and financial performance. These relationships are based on the work by Chandler (1962) who finds that changes in strategy towards product diversification give rise to administrative strain and this is dealt by structural modification that leads to the formation of multi-divisional form of organisation. The study by Rumelt (1974) indicates that the kind of diversification and use of efficient administrative structure contribute towards exceptional firm performance.[13]

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[9] Burns, T. & Stalker, G. M., *The Management of Innovation,* (London, Tavistock Institute, 1961).
[10] Ibid.
[11] Ibid.
[12] Ibid.
[13] Lentz, R.T., "Determinants' of Organizational Performance: An Interdisciplinary Review", *Strategic Management Journal,* vol. 2, no 2, (1981): 131 – 154.

The last category is the study of the relationship between administration and performance.[14] Administration refers to the quality of management in an organisation such as skill of administrator and level of motivation.[15] Examples of research conducted in this area are the study of the comparative performance of owner-controlled and management-controlled corporations (Palmer, 1973: Radice 1971), the study of the relationship between managerial succession and firm's performance (Allan, Panian and Lotz, 1979) and the study of the relationships between managerial beliefs and perceptions, and firm performance.[16]

In terms of the determinants of firm's performance, Hansen and Wernerfelt (1989) are of the view that there are two main schools of research in this area. The two areas of research are based on the economic and behavioural and sociological paradigms. The research on the economic aspect emphasises on the importance of external market factors in determining firm success.[17] The behavioural and sociological paradigm deals with the behaviour of an organisation or the internal factors of the firms. Examples of the organisational factors are organisation structure (span of control), system and size. Research on behavioural and sociological paradigm views organisational factors and their fit with the environment as the major determinants of success.[18] Hansen and Wernerfelt (1989) adopt two models of firm performance in their studies of the determinants of performance which are the industrial organisation economics and organisational models. The economic model provides the perspective on the influence of market structure on a firm's strategy and

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[14] Ibid.
[15] Ibid.
[16] Ibid.
[17] Hansen, G.S. & Wernerfelt, B., "Determinants of Firm Performance: The relative Importance of Economic and Organizational Factors", *Strategic Management Journal,* vol. 10, (1989): 399 – 411.
[18] Ibid.

performance.[19]   The model consists of three major determinants of firm-level performance which are industry variables, variables relating the firms to its competitor and firm variables. Industry variables refer to the characteristics of the industry in which the firm competes.[20]   This would include variables such as industry growth, concentration, capital intensity and advertising intensity.[21]   Variables linking the firm's position relative to its competitor include the relative market share. The firm variables refer to the quality or the quantity of the firm's resources and this includes variables such as firm size. Fiegenbaum and Thomas (1990) in their study of the performance of the strategic groups of the insurance industry, use leverage, reinsurance and investment portfolio as measures of firm variables.

The aim of this study is to examine the determinants of financial performance of the general Islamic and conventional insurance companies[22]   in Malaysia. The study utilises the economics paradigm in analysing performance and not behavioural paradigm. The Islamic insurance, also known as takaful, is a Shariah-compliant mutual risks arrangement based on the concepts of *taawun'* (mutual protection) and shared responsibility. In a takaful arrangement, a group of participants mutually agree to jointly guarantee among themselves against a defined risk or catastrophe befalling one's life, property or any form of valuable things (Mohd. Ma'sum Billah, 2007). The participants agree to relinquish a sum of contribution as *tabarru'* (donation) into a pool of fund to fulfill their obligation of mutual help and joint guarantee should any of the participants suffer a defined loss.[23]   In contrast, conventional insurance is a risk transfer mechanism whereby an individual or business enterprise known as the

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[19] Ibid.
[20] Ibid.
[21] Ibid.
[22] The terms general takaful and conventional insurance companies use in this study is also referring to the general takaful and conventional insurance funds.
[23] Bank Negara Malaysia, "Takaful Annual Report 2004, 20 Years of Takaful In Malaysia", (2005): 2.

insured, transfer risks for a premium (price) to another party known as the insurer (Bickelhaupt, 1974). From the economic perspective, conventional insurance is a method which reduces risks by transfer and combination (pooling) of uncertainty with regard to financial loss. Both takaful and conventional insurance have a common primary objective of reducing the burden of financial loss to individuals or firms. The operational activities undertaken by both sectors such as product development, marketing, underwriting and claims are mostly similar. However, in the case of takaful, the company has to ensure that all its activities are in accordance with the Shariah principles.

The study of the financial performance of the takaful and conventional insurance companies is particularly significant in view of the current financial landscape that is becoming increasingly challenging. It is also due to the recent global financial crisis that has rippling effects across the international financial system. The latest turmoil which has caused shocks to the world financial market is the failure of the largest insurer in the world, the American International Group. The present United States Federal Reserve Chairman, Ben S Bernanke, pointed out that the failure of the insurance giant, American International Group, could have resulted in a "1930s-style global financial and economic meltdown" with catastrophic implication.[24] One of the causes of American International Group's failure is due to the liquidity crisis following the downgrade of its credit rating.[25] In March 2009, American International Group reported a fourth quarter losses of $61.7 billion for the final three months of 2008, which was the largest quarterly loss in corporate history.[26] In the Asian region, Japan's Yamato Life Insurance Company, which is a medium-size life insurance

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[24] Ben S Bernake, "AIG," < http://www.bis.org/reviewed> (accessed 30 December, 2009).
[25] Ibid.
[26] Ibid.

company, collapsed in 2008. The company failed with $2.7 billion in liabilities and it became the first Japanese financial institution to fail during the time of the global financial crisis.[27] The failure of Japan's Yamato Life Insurance Company was largely due to its problematic investments in securitisation products.[28] The company was also taking bigger risks than it could absorb and had been actively pursuing investment returns to cover high operational costs, allocating a relatively large proportion of its investments to alternative assets, including hedge funds.[29] In the case of Malaysia, Tahan Insurance Malaysia Berhad which is a general insurance company, was taken over by the Central Bank of Malaysia in May 2009. The takeover was due to the failure of the company to comply with the capital requirement standard. In this regard, the company reported a shortfall of RM29.2 million in margin of solvency, against the required RM50 million, for the financial year end 2008.[30] The company recorded a net loss of RM301.8 million for financial year 2008 as compared to a net profit of RM2.5 million in 2007.[31] In safeguarding the interest of the policyholders, the Central Bank of Malaysia appointed PricewaterhouseCoopers Capital, to act on its behalf to oversee the whole of the property, business and affairs of Tahan Insurance Malaysia Berhad.[32] This is to ensure the smooth operations of the company's business activities and to turn the company around within a year.[33] The above development reflects the growing number of cases of insurance companies' failures in recent years, and this has caused further concerns on the financial stability of the takaful and conventional insurance industries, particularly to stakeholders such as the participants, investors and

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[27] Agencies, "Japan's Yamoto Life Insurance files for Bankruptcy," <http: //www.financialexpress. com/news> (accessed 30 December, 2009).
[28] Ibid.
[29] Ibid.
[30] Central Bank of Malaysia, "Assumption of Control of Tahan Insurance Malaysia Berhad," <http:// www.bnm.gov.my> (accessed 25 July, 2009).
[31] Ibid.
[32] Ibid.
[33] Ibid.

regulators. Therefore, against this backdrop, it is important to investigate the factors that could affect the financial performance of the takaful and conventional insurance businesses.

In terms of takaful, the study is also particularly relevant in view that the general takaful sector in Malaysia has yet to make a significant impact as compared to its counterpart, the conventional insurance. In terms of financial performance, the general takaful business constitutes only a smaller segment of the total insurance business in Malaysia, representing 8.2% (2008)[34] of the combined gross contributions of the insurance industry. For takaful to develop into a viable alternative to the more entrenched conventional insurance, takaful companies have to maintain their competitive positions and to be financially strong and resilient to the challenges of the local and global market environment.

This study investigates the factors that could have material impact on the financial performance of the general takaful and conventional insurance businesses in Malaysia. These factors can be termed as the determinants of the financial performance or risks factors. Among the factors affecting the financial performance of the general conventional insurance business that had been previously studied are:

    i)   Interest rates

    ii)   Equity returns

    iii) Company size

    iv) Reinsurance dependence

    v)   Solvency margin

    vi) Stability of underwriting operation

    vii) Liquidity

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[34] Central Bank of Malaysia, "Annual Takaful Statistics," <http://www.bnm.gov.my> (accessed 30 November, 2009).