IMPACTS OF DERIVATIVES AND MANAGERIAL OWNERSHIP ON THE FINANCIAL PERFORMANCE OF SHARI'AH COMPLIANT FIRMS

BY

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ABSTRACT

Most of the firms in the U.S, U.K, Australia and other developed countries have been using derivatives as an effective risk management instruments. Despite that, in Malaysia, many firms do not use derivatives as a risk management tool where the financial derivatives trading is low as compared to the neighboring countries as the use of derivatives by Malaysian is not comprehensive, derivatives are deemed to be complex and costly. Due to that, managers in Malaysia do not realise the advantages of taking positions in the derivatives market. Further, the firms are recognised as Shari'ah compliant firms, the risk management is still in the preliminary stage and the use of hedging instrument is found to be limited. This study covers 177 Shari'ah compliant firms that listed on Bursa Malaysia from 2000 to 2017, which 59 firms are the user of derivatives and the rest of 118 firms are non-users of derivatives. This study employs Logit Regression analysis to identify the users and non-users of derivatives. This study also employs the two-stage system GMM estimator for the total derivatives and foreign currency derivatives. While 2SLS GMM employs specifically for interest rate derivatives and commodity derivatives. This study finds Shari'ah compliant firms that are engaged in derivatives users seem to have performed better than non-users. Further, the results show that firm size, firms access to financial market, industry effect, and investment growth are the factors that influencing the decision to Shari'ah compliant firm to use derivatives. While managerial ownership and industrial diversification indicate negatively significant related to the probability of using derivatives. In the second part of analysis, it was extended to the performance context and impact on firms' performance after the implementation of IFRS disclosure requirement. Using a two-step system GMM, the finding shows that derivatives has positive significant relationship with firm performance. Further, the third part of analysis, it was extended to non-linear relationship and interaction between derivatives use and managerial ownership. The analysis proved that a non-linear relationship exists between derivatives and firms performance of Shari'ah compliant firms. However, there is no non-linear relationship occurred for both interest rate derivatives and commodity derivatives on firms' performance. Meanwhile, managerial ownership plays important role to engage in derivatives and eventually increase firm performance. This is based on the significant positive interaction between derivatives and managerial ownership. The results are also robust to different performance indicator of ROA, ROE and Probit regression. Overall, this study has important implications. The first is on the policymaker. The finding from this study has highlighted the importance of quality reporting on derivatives usage by firms and information symmetry in line with the required accounting standard on derivatives. The second is on Shari'ah compliant firms which highlight on the use of derivatives/hedging practices by Shari'ah compliant firms to reduce risk exposure, act as an effective tool for managing risk and to increase firm performance. Lastly, on the manager and shareholder where they will be able to design and strategize their derivatives activities to match the specific needs of the firms and also to reduce the risk exposures faced by the firms.

خلاصة البحث

تستخدم العديد من الشركات في الولايات المتحدة والمملكة المتحدة وأستراليا وغيرها من البلدان المتقدمة المشتقات باعتبارها أداة فعالة من أدوات إدارة المخاطر. على الرغم من ذلك، في ماليزيا، لا تستخدم العديد من الشركات المشتقات كأداة لإدارة المخاطر حيث يكون تداول المشتقات المالية منخفضًا مقارنة بالدول المجاورة لأن استخدام المشتقات من قبل الماليزيين ليس شاملاً، وتعتبر المشتقات معقدة ومكلفة. نتيجة لذلك، لا يدرك المدراء في ماليزيا مزايا تولي مناصب في سوق المشتقات. علاوة على ذلك، حتى الشركات المعروف عنها أنها شركات متوافقة مع الشريعة الإسلامية، لا تزال إدارة المخاطر فيها في مرحلتها الأولية، كما أن استخدام أداة التحوط محدود. تغطي هذه الدراسة 177 شركة متوافقة مع أحكام الشريعة الإسلامية مدرجة في بورصة ماليزيا في الفترة من 2000 إلى 2017، منها 59 شركة تستخدم المشتقات وبقية 118 شركة غير مستخدمة للمشتقات. تستخدم هذه الدراسة تحليل الانحدار لوجيت (Logit Regression Analysis) لتحديد المستخدمين وغير المستخدمين للمشتقات. تستخدم هذه الدراسة أيضًا نظام تقدير GMM ذي المرحلتين لمجموع المشتقات ومشتقات العملات الأجنبية. بينما تستعمل SLS2 GMM خصيصًا لمشتقات أسعار الفائدة ومشتقات السلع. توصلت هذه الدراسة إلى أن الشركات المتوافقة مع الشريعة الإسلامية والتي تعمل في المشتقات حققت أداءً أفضل من غير المستخدمين. علاوة على ذلك، تظهر النتائج أن حجم الشركة، ووصول الشركات إلى السوق المالية، وتأثير الصناعة، ونمو الاستثمار هي العوامل التي تؤثر على قرار الشركة المتوافقة مع الشريعة لاستخدام المشتقات. بينما تشير الملكية الإدارية والتنويع الصناعي إلى علاقة سلبية مرتبطة باحتمالية استخدام المشتقات. تم توسيع الجزء الثاني من التحليل ليشمل سياق الأداء والتأثير على أداء الشركات بعد تنفيذ متطلبات الإفصاح عن المعايير الدولية لإعداد التقارير المالية. باستخدام نظام من خطوتين GMM، تظهر النتيجة أن المشتقات لها علاقة إيجابية مهمة مع أداء الشركة. علاوة على ذلك، تم توسيع الجزء الثالث من التحليل ليشمل العلاقة غير الخطية والتفاعل بين استخدام المشتقات والملكية الإدارية. أثبت التحليل وجود علاقة غير خطية بين المشتقات وأداء الشركات للشركات المتوافقة مع الشريعة الإسلامية. ومع ذلك، لا توجد علاقة غير خطية لكل من مشتقات أسعار الفائدة ومشتقات السلع على أداء الشركات. وفي الوقت نفسه، تلعب الملكية الإدارية دورًا مهمًا للانخراط في المشتقات وزيادة أداء الشركة في نهاية المطاف. يعتمد هذا على التفاعل الإيجابي الكبير بين المشتقات والملكية الإدارية. أظهرت الدراسة نتائج قوية أيضًا عند استخدام مؤشرات أداء مختلفة للعائد على الأصول (ROA)، والعائد على الأسهم (ROE)، والانحدار الاحتمالي (Probit regression). هذه الدراسة لها آثار مهمة أولها على صانع السياسة. أبرزت النتائج المستخلصة من هذه الدراسة أهمية الإبلاغ عن جودة استخدام المشتقات من قبل الشركات وتماثل المعلومات بما يتماشى مع المعيار المحاسبي المطلوب المتعلق بالمشتقات. والثاني يتعلق بالشركات المتوافقة مع الشريعة الإسلامية والتي تسلط الضوء على استخدام المشتقات / ممارسات التحوط من قبل الشركات المتوافقة مع الشريعة لتقليل التعرض للمخاطر، وتعمل كأداة فعالة لإدارة المخاطر وزيادة أداء الشركة. أخيرًا، بالنسبة للمدير والمساهم حيث سيكونون قادرين على تصميم أنشطة المشتقات الخاصة بهم ووضع استراتيجيات لها لتتناسب مع الاحتياجات المحددة للشركات وأيضًا لتقليل التعرض للمخاطر التي تواجهها الشركات.

APPROVAL PAGE

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DECLARATION

I hereby declare that this thesis 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.

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……..…………………….. ………………………..

Signature Date

To my beloved late father and my mother for their dua' and support:-

Zamzamir @ Zamzamin Husin

and

Umi Kelsom Shariff

" My lord, enable me to be grateful for Your favour which You have upon me and upon my parents and to do righteousness of which You approve. And admit me by Your mercy into (the rank of) Your righteous servant."

(Qur'an, an-Naml:19)

Thank you to my lovely husband and my sweety childrens:-

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Zuyyin Zulaikha Izzuddin

Zehra Zafeera Izzuddin

Zairah Zakyrah Izzuddin

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

2SLS	Two Stage Least Square
BMB	Bursa Malaysia Berhad
BMDB	Bursa Malaysia Derivatives Berhad
CMP2	Capital Market Master Plan 2
FEM	Fixed Effect Model
FRA	Financial Reporting Act
GMM	Generalized Method of Moments
IASB	International Accounting Standard Board
ICM	Islamic Capital Market
IFRS	International Financial Reporting Standard
IFIs	Islamic Financial Institutions
KLSE	Kuala Lumpur Stock Exchange
MASB	Malaysia Accounting Standard Board
MDEX	Malaysian Derivatives Exchange
MFRS	Malaysia Financial Reporting Standard
OTC	Over-The-Counter
POLS	Pooled Ordinary Least Square
Q	Tobin's Q
REM	Random Effect Model
ROA	Return on Asset
ROE	Return on Equity
SAC	Shari'ah Advising Council
SC	Securities Commission

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Risk management can be described as the activities designed to minimize the negative effect of the risk due to the potential losses (Schmit & Roth,1990; Shao et al., 2019). Besides, risk management is essential to firms' operation because without it, firms' performance will be affected since it is closely related to the effectiveness of handling and managing firms in a proper way. Due to the importance of risk management practices, it has become shareholder's priority. Bouwman (2014) states that firms use derivatives as an effective tool for managing risk. In line with this argument, Antônio, Lima, dos Santos and Rathke (2019) confirm that firms use derivatives mainly for protection purpose. In addition, Barton (2001) states that firm manager use derivatives to minimize the impacts of earnings volatility and interest rate risk on the assumption that managers want to mitigate high degree of earnings volatility. This argument is also supported by Dewally and Shao (2013) where it was noted that derivatives are used to reduce risk exposure as well as for trading purposes to generate profit for financial firms. Hence, derivative is an instrument for risk management that is used for hedging position during the crisis; at the same time, it can be used to manage risk and ultimately increases firms' performance.

Recently, most of the non-financial firms have been using derivatives as risk management tools and as such, derivatives have become the most effective and efficient tool for corporate hedging (Bartram, 2019). Based on the available data about the international settlements by banks, the markets for Over-The-Counter (OTC) instruments and exchange-traded derivative financial instruments on foreign exchange rates and interest rates have exhibited exponential growth over the past 14 years as seen in Figure 1.1. The Figure 1.1 shows the notional amounts outstanding (in trillions of USD) by year for exchange rates and interest rate derivatives, separated for OTC and exchange-traded derivatives from year 2006 to 2019. As seen in the Figure 1.1, notional amounts outstanding of foreign currency derivatives shows an upward trend starting in 2010 and keep increasing over the years, reaching $99 trillion in 2019. Whereas, interest rate derivatives rose significantly between 2017 and 2019 and the OTC notional amounts outstanding at the end of 2019 stood around $60 trillion. This situation is similar to the derivatives Malaysian market. In 2003 the total notional amounts of total outstanding of OTC derivatives, comprising foreign currency derivatives and interest rate derivatives, grew by more than twofold to RM171 billion in four years from 1999 to 2003. Meanwhile, derivatives trading that includes both OTC and exchange traded derivatives are expected to account for the major of this growth, with the notional amounts traded projected to increase from $171 billion to $1.4 trillion by 2020. This trend analysis shows that the use of derivatives has grown over the years, indicating the importance of derivatives as risk management instruments.

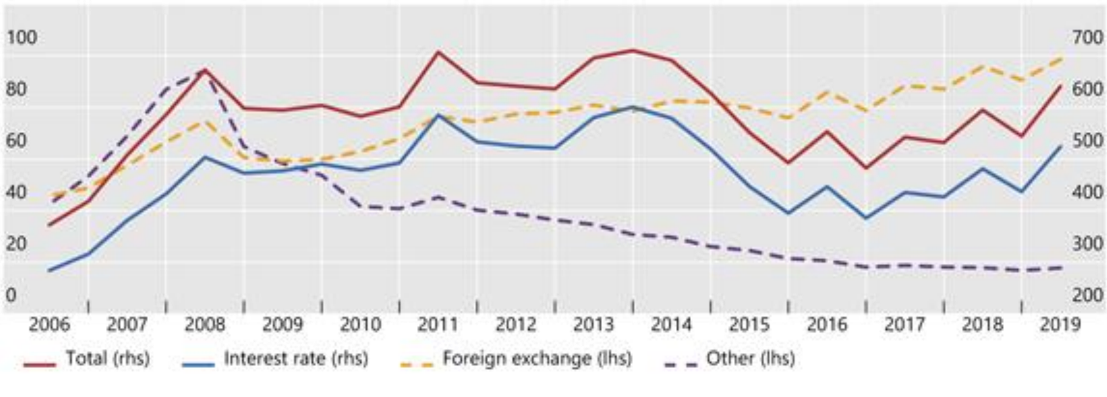

Figure 1.1 The Notional Outstanding Amounts from 2006 to 2019 in trillion of USD
Source: Bank for International Settlements (2017)

The global financial crisis of 2007 and 2008 has shaped the scope of derivative instruments in most of the countries. The collapse of some established and prominent U.S banks and other institutions, such as the Lehman Brothers, Merrill Lynch and National City Bank have raised many questions about the effectiveness of risk management; and questions about applying derivatives in financial institutions have also been brought forward. Moreover, failure of proper financial management has led to the collapse of the firm as demonstrated during the financial crisis in 2007 and 2008. For instance, firms in Brazil collapsed due to the failure of risk management (Zeidan & Rodrigues, 2013). Also a study by Dodd (2009) documents that, 12 countries incurred losses in derivatives due to poor risk management. In addition, the huge losses correlated with derivatives have encouraged the demands for increased reporting of derivatives activities (Blankley, Lamb, & Schroeder, 2002). Due to this, derivatives have become hugely popular as a hedging instrument among firms as they have been using these instruments to manage risk (Ayturk, Gurbuz, & Yanik, 2016; Seng & Thaker, 2018), since the use of hedging during the financial crisis is value enhancing (Alam & Gupta, 2018).

However, Chong, Chang and Tan (2014) report that the volume of financial derivatives trading in Malaysia is low as compared to the neighboring countries, such as Singapore, Hong Kong, and South Korea. As such, market players need to be educated on how to use derivative instruments to minimize risk. They also maintain that financial firms and non-financial firms are pressured when operating in a more diverse market where they have to reduce risk and improve profitability. This is consistent with a survey conducted by the Future Industry Association, where it was reported that Malaysia is one of the developing market economies with comparatively low derivatives trading as it was ranked 40, in the use of top 30 Derivatives in 2012. Therefore, a vibrant and comprehensive derivatives market is required to improve dynamism in other segments of the Malaysian capital market. According to the Capital Market Master Plan 2 (CMP2) from 2000-2020, Malaysia is expected to expand and grow to a more diversified and innovative environment supported by a governance strategy to enhance the soundness and confidence of its capital market. Figure 1.2 shows the growth prospect for Malaysia's Capital Market from 2000 until 2020. From Figure 1.2, the growth prospect for derivatives is the highest (RM4169.5 million), followed by the Islamic capital market (RM2882.6 million), then equity (RM2430.2 million), investment management (RM1610 million), and the last growth prospect is bond with RM53.5 million. This discussion, therefore, indicates the importance of derivatives strategy in enhancing the capital market confidence.

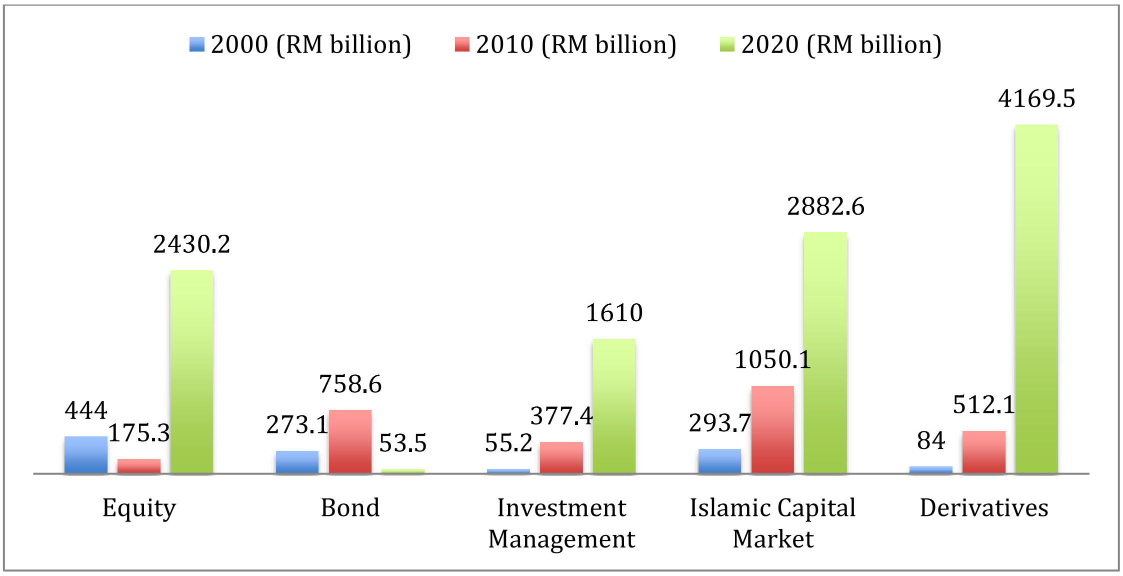

Figure 1.2 Growth Prospects for Malaysia's Capital Market (2000 -2020)
Source: Securities Commission (2011)

In relation to the growth prospects for Malaysia's Capital Market, the foreign exchange market in Malaysia has been growing over the years. Bank Negara (the Central Bank) states that the net export on foreign exchange recorded a cumulative amount of US$8.8billion as at December 2016. The central bank also noted that the foreign currency market in 2017 sustained a daily average volume of US$9.9billion compared to US$8.8billion in 2016. This demonstrates the essence of derivatives engagement in firms to manage risk due to the increased exposure to the exchange rate risk. In 2017, the total turnover of the foreign currency market for forward and swap transactions recorded an average of US$3.8billion higher than the forex spot and options. Thus, forward and swap instruments are the most used by firms in their transactions. Hong, Chu and Song (2018) state that 23.6% of Malaysian listed firms faced significant foreign exchange exposure from 2014 to 2016. The financial derivatives are now widely traded around the world on many exchanges' platform. Bhagawan and Lukose (2017) report that firms that are exposed to higher foreign exchange risk tend to engage in more derivatives positions for hedging purposes. Moreover, Belghitar, Clark and Mefteh (2013) find that derivative instruments are effective in decreasing foreign currency risk exposures. This is in line with the finding of Wahab, Rahim and Janor (2019) that foreign currency derivatives exposure have roles to play in determining the hedging practices in Malaysian firms.

Risk management is practiced by the firms to reduce various kinds of risk such as currency risk, interest rates risk and commodity risk. Understanding the most important risks facing the firms will enable the stakeholders, especially the managers and the regulatory authorities, to undertake necessary measures to minimize the adverse impacts of these risks on the performance of the institutions. Adam, Fernando, and Salas (2017) in their study on hedging explains that, firms hedge by varying the size and the timing of their derivatives transactions based on managers' market views, a practice known as "selective hedging". In this type of hedge, managers will only be taking a hedging position subject to market timing where managers incorporate their market views into firms' hedging programs. This practice according to them is widely spread in the U.S. and other countries. Stulz (1996) argued that selective hedging could enhance the value of firms that possess an information advantage relative to the market and have the financial strength to withstand the additional risk from market timing. Adam et al. (2017) also found that the selective hedging is most prevalent among firms that are most likely to have private information about future prices; as in the current study, the future movement of foreign currencies.

With regard to that, Arif, Muda, Alam and Mohamad (2019) report the attitude of managers in relying on the current structure of conventional instruments is one of the key concerns that could threaten Islamic risk management tools in the financial market. Besides, hedging practices between its Shari'ah compliant firms are still not well explored and very much lag behind against firms in the developed countries (Wahab, Abdul Rahim, & Janor, 2020). Abdul Rahim, Wahab and Yusoff (2019) also document that Shari'ah compliant firms are found twice as likely as conventional firms to adopt hedging instruments and the Shari'ah compliant status does not hinder the respecting firms from using the contractual hedging instrument to mitigate risk exposure. However, the growing of Islamic risk management instruments increasing based on the average volume of foreign exchange forward transaction (BNM, 2017) and Malaysia is the leading country in Islamic finance and having the most advanced Islamic capital market (Ledhem & Mekidiche, 2020). Therefore, the managers of Shari'ah compliant firms will only participate in selective hedging if they deemed appropriate to take such positions subject to market timing. Besides, the development of the Islamic financial industry is essential for the global financial system and as such, the Shari'ah compliant firms have to be accustomed with the latest risk management instruments and skills to sustain the challenges of the present financial environment. In other word, Shari'ah compliant firms need to engage in derivatives in order to mitigate risk exposure.

Besides, Mitchell (2010) reports that one of the factors that contribute to the global financial crisis is the failure of risk management. This is in line with Ahmed (2009) findings where it was noted that failure of risk management at different levels may lead to financial crisis. Thus, due to the weaknesses of the conventional financial system, Islamic finance has become an alternative (Baber, 2018; Nafis & Mohammad Shadique, 2016). Furthermore, researchers have documented that Islamic financial institution are better equipped to cope with the economic downturn during the financial crisis compared to conventional financial institution (Baber, 2018; Nafis & Mohammad Shadique, 2016). Consequently, financial crisis has exposed the weaknesses of the conventional financial system, triggering the proponents of Islamic financial system to suggest that Islamic financial system is an alternative. The complexity of financial instrument in Islamic financial system has led to a similar increase in the risk posed on the asset. The Shari'ah compliant firms also experience the same risks as its conventional counterparts, such as currency risk, interest rates risk, commodity risk, and operational risk. Moreover, Islamic financial institutions were developed four decades ago as an alternative to conventional financial institutions primarily to provide Shari'ah compliant investment, transactions, and financing. The Islamic financial industry has grown rapidly and occupied important landscape in the global financial system. Thus, the future of the institution's sustainability is dependent on its capacity to deal with the rapidly changing financial landscape. The Shari'ah compliant firms need to be well positioned to overcome the challenges posed by the current financial landscape in terms of the latest risk management capabilities and operational system. Identifying how these firms handle