



**MICRO AND MACROECONOMIC DETERMINANTS OF
NET ASSET VALUE OF ISLAMIC EQUITY UNIT
TRUST FUNDS: A CASE STUDY OF MALAYSIA**

BY

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ABSTRACT

Over the past two decades, the Islamic unit trust industry in Malaysia has experienced rapid growth and continues to grow at a fast pace. This high growth highlights the uniqueness of the Islamic unit trust investment which diversifies *Shari`ah* compliant asset investments and provides several advantages. Even though the unit trust industry has witnessed high growth in portfolio size, performances, and regulations, various aspects of the industry remain poorly understood due to a general lack of information on the funds' unit price behaviours and mechanisms. Forecasting the price movements in the equity unit trust industry has been a major challenge for various investors, management funds, brokers, and policy makers. This research investigates the effects of microeconomic and macroeconomic variables and the 2007-2008 Global Financial Crisis on the NAV of the Islamic equity unit trust funds. This research utilised the Autoregressive Distributed Lag (ARDL) model and the Vector Autoregression (VAR) model to analyse this relationship over the January 2006 to December 2012 period using monthly data. The results showed a significant long-run equilibrium relationship between the Fund Dividends, Fund Historical Performance, Fund Size, Hedge Funds, Industrial Production Index, Money Supply (M3), Foreign Exchange Rate, Crude Oil Price, Corruption Index, and the NAV of the Islamic equity unit trust funds in the Malaysian capital market. In addition, the causality tests results showed that the Industrial Production Index, National Political Election, and 2007/2008 Global Financial Crisis have significant unidirectional causal effects on the NAV of Islamic equity unit trust funds, while Crude Oil Price has bidirectional causal effect with the NAV of the Islamic equity unit trust funds. The findings of this research will assist investors, fund managers, industry players, and policy makers to estimate and predict the future trend direction of the NAV of Islamic equity unit funds and accordingly make sufficient investment decisions.

Key words: Net Asset Value, Islamic Unit Trust, Micro and Macroeconomic Variables, Malaysia

ملخص البحث

شهدت أسواق أسهم وحدات الائتمان الإسلامي في ماليزيا نمواً سريعاً على مدى العقدين الماضيين ، ولا يزال هذا النمو مستمراً بوتيرة عالية في الوقت الراهن. و يدل هذا النمو المتزايد على قدرة أسهم وحدة الائتمان الإسلامي في توفير مزايا استثمارية فريدة للمستثمرين فضلاً عن تنوع أصولها الاستثمارية التي تتوافق مع مبادئ الشريعة الإسلامية. وبالرغم من أن أسواق أسهم وحدات الائتمان الإسلامي في ماليزيا شهدت نمواً كبيراً في حجم معدلات حقائبها الاستثمارية ، تحسناً كبيراً في أدائها ، هذا بالإضافة الي التطور الكبير في جوانبها التنظيمية والتشريعية ، إلا أنه لا يزال هناك الكثير من القصور في فهم العديد من الجوانب المختلفة لها، على سبيل المثال عدم توفر معلومات كافية عن الاستراتيجيات والآليات السعرية المتبعة لفهم التغير في سلوك سعر أسهم وحدات الائتمان الإسلامي. وهذا يعتبر بمثابة تحدٍ كبير للكثير من المهتمين على سبيل المثال: المستثمرين ، السماسرة ، وأيضاً صناع القرار. لذا يهدف هذا البحث إلى دراسة تأثير عوامل الإقتصاد الجزئي والإقتصاد الكلي وأيضاً دراسة تأثير الأزمة المالية العالمية 2007\2008 على أسعار أسهم وحدات الائتمان الإسلامي. استخدم هذا البحث نموذج الإنحدار الذاتي Autoregression (VAR) model وايضاً Auto-Regressive Distributed Lag (ARDL) model في تحليل هذه العلاقة باستخدام بيانات شهرية للفترة من يناير 2006 حتى ديسمبر 2012م. أظهرت نتائج البحث أن هناك علاقة ذات دلالة إحصائية على المدى طويل الأجل بين كلٍ من الأرباح الموزعة ، الأداء التاريخي للصناديق ، حجم الأصول ، حجم الإستثمارات في صناديق التحوط ، مؤشر الإنتاج الصناعي ، عرض النقود ، سعر صرف العملة الاجنبية ، أسعار النفط الخام العالمية ، ومؤشر معدل الفساد وأسعار أسهم وحدات الائتمان الإسلامي في سوق الأوراق المالية الماليزية ، بالإضافة إلى ذلك، أظهرت نتائج الاختبارات أن مؤشر الإنتاج الصناعي ، الانتخابات الوطنية السياسية والأزمة المالية العالمية 2007\2008 لها علاقة سببية ذات دلالة إحصائية وذو إتجاه أحادي على سعر أسهم وحدات الائتمان الإسلامي، في حين هناك علاقة سببية ثنائية الإتجاه بين أسعار النفط الخام العالمية والتغير في أسعار أسهم وحدات الائتمان الاسلامي في ماليزيا . وبالتالي فإن نتائج هذا البحث ستساعد المستثمرين ، مدراء الصناديق والحقائب الاستثمارية و صناع القرار في ماليزيا على التنبؤ و معرفة الإتجاه المستقبلي للتغير في أسعار هذه الوحدات وبالتالي اتخاذ قرارات إستثمارية كفؤة.

APPROVAL PAGE

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DECLARATION

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

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To My Beloved Parents
To My Brothers, Sisters & Friends
To All Aspiring Muslim Youth

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GLOSSARY OF TERMS AND ACRONYMS

<u>Terms & Acronyms</u>	<u>Description</u>
NAV	Net Asset Value, which represents the fund's unit price
UTFs	Unit Trust Funds
Fund manager	The person(s) responsible for managing fund's portfolio investment strategy and trading activities.
Unit-holders	The providers of the funds.
Trustee	Who holds the assets of the trust for the unit holders
Purification	Purify company income by donating the interest income received as a charity.
<i>Sharī`ah</i> compliance	Islamic law as revealed in the Qur'an and <i>Sunnah</i> .
<i>Sukūk</i>	It refers to the Islamic bonds, where the translation of the Arabic word of <i>Sukuk</i> is "Islamic Investment Certificates". In which the <i>Sukuk</i> holders hold an undivided beneficial ownership in the <i>Sukuk</i> assets (Thomas et al., 2005, p.154).
<i>Takāful</i>	It refers to Islamic Insurance, where the translation of the Arabic word of " <i>Takāful</i> " is "joint Guarantee", whereby a group of participants agree among themselves to support one another jointly for the losses arising from specified risks (Swartz1& Coetzer, 2010).
<i>Halal</i>	It is an Arabic word meaning "lawful" or Permissible according to the Islamic <i>Sharī`ah</i> Law.
<i>Riba</i>	It is an Arabic word and translated into English as "usury" or "interest", that technically in <i>Sharī`ah</i> refers to the 'premium' amount that must be paid to the lender by the borrower along with the principal amount as a condition for the loan or for an extension in its maturity (Chapra, M. Umar, 1986, pp.56-57).
<i>Umum balwa</i>	According to Islamic juristic terminology, <i>Umum balwa</i> is a negative widespread circumstances or Common plight affecting most of the people and difficult to avoid (Azahari, 2010).
<i>Uruf</i>	It is an Arabic word, refers to the customs or General rules and practices that have become commonly adopted through consistent habit and common use among the society (Ghani, 2012).
<i>Maslahah</i>	It is an Arabic word refers to Consideration of Public Interest such as seeking benefits and repelling harm. Al-Shatibi, (1990), defines <i>Maslahah</i> as "all concerns that promote the subsistence of human life, the completion of man's livelihood and the acquisition of all his physical and intellectual qualities which are required for him' (Shaharuddin, 2010).
<i>Gharar</i>	It is an Arabic word which in Islamic economic refers

	to uncertainty (Al-Saati, 2003).
<i>Maysir or Qimar</i>	It is an Arabic word which means Gambling, where the Muslim Scholars such as Al-Shawkani, 1357H define it as “a situation where there must be one of the player gains and another loses” (Abdullah, 2013).
<i>Haram</i>	Forbidden according to the Islamic law
<i>Fatwa</i>	A legal opinion or ruling issued by Islamic scholar
<i>Murabahah</i>	It is an Arabic term refers to a contract of sale, in which a financial institution purchases the item upon the request of customer who makes payment that covers cost and profit margin and specified the time of payment in an initial contract (Isa et al., 2012).
<i>Mudarahah</i>	It is an Arabic term refers to partnership (with pre-agreement on Profit-sharing ratio) contract between two parties, one is called <i>Rabb al-mal</i> (Financier) and another is the <i>Mudarib</i> (finanee) (Anwar, 1987).
<i>Ijarah</i>	It is an Arabic word refers to leasing, it defines as a long term contract of rental that is subject to specified conditions as approved by the <i>Shari`ah</i> guideline (Rahman, 2007).
<i>Musharakah</i>	It is an Arabic term refers to partnership or joint venture, in which the partners share the capital and profit (Saripudin et al., 2012).
<i>Ijtihad</i>	It is an Arabic term, which means “independent reasoning” or “the utmost effort an individual can put forth in an activity.
FZ	Fund Size as measured by (Total Asset) of the fund
M EX	Fund Management Experience
HP	Fund Historical Performance
S	Fund Risks
DIV	Fund Dividends
HF	Hedge Funds Index
CPI	Consumer Price Index
IPI	Industrial Price Index
TBR	Three-Month Treasury Bill Rate in Malaysia
M3	Broad Money Supply
FER	Foreign Exchange Rate
OP	Crude Oil Price
NPE	National Political Elections
CI	Corruption Index
FC	The 2007/ 2008 Global Financial Crisis
KLSI	Kuala Lumpur <i>Shari`ah</i> Index
FTSE	Financial Times Stock Exchange
S&P	Standard & Poor index
FBMES	FTSE Bursa Malaysia Emas <i>Shari`ah</i> Index
DJIM	Dow Jones Islamic Market Index
MSCI	Morgan Stanley Capital International Index
IDB	Islamic Development Bank
IFSB	Islamic Financial Services Board

MIFC	Malaysia International Islamic Financial Centre
SCM	Securities Commission of Malaysia
FMUTM	Federation of Malaysia Unit Trust Managers
BNM	Bank Negara Malaysia
SAC SC	<i>Sharī`ah</i> Advisory Council of the Securities Commission. It is established in 1996 under the Securities Commission Act 1993 for the screening process of the products and the primary objective of this organization is to advise Securities Commission on <i>Sharī`ah</i> matters and <i>Sharī`ah</i> guidance for Islamic capital market in Malaysia (Jamal et al., 2010).
CAPM	Capital Assets Pricing Model Theory
APT	Arbitrage Pricing Theory
PT	Portfolio Theory
GRT	Granger's Representation Theorem
VAR	Vector autoregressive
VECM	Vector Error Correction Terms
IRF	Impulse Response Function
FEVD	Vector Error Variance Decomensation

CHAPTER ONE

INTRODUCTION

1.0 BACKGROUND OF THE STUDY

The overriding concept of the Unit Trust Funds (UTFs) is to pool the capital of numerous investors, who share the financial objectives, investment schemes and risk tolerance with the subsequent full use of the experiences of the fund managers to trade in the securities (Choong, 2001 and Othman, 2011). The pooled money is then invested by the fund managers in various investment instruments such as stock market, bonds, money market investments and other securities as well as diversified portfolio of authorized investments, which must be approved by the Malaysian Securities Commission (Keng, 2000 and Choong, 2001). The unit trust investment plays a very significant role in the Malaysian capital market and it has witnessed a substantial sustainable growth during the last few decades.

The UTFs represent 20.12 percent of Net Asset Value (NAV) of the Bursa Malaysia market capitalization (Securities Commissions (SC) Report, 2012). The UTFs are believed to have an overriding influence that attracts the small investors to prudently invest in the capital market. The UTF provides low income group of the population to participate in a professionally managed portfolio of investment without being exposed to the risk of a large sum of money through direct investment in securities. Thus, the sustainability of this vital part of the financial market institution is very important to inculcate the investment culture among the low-income group as well as the corporate organizations. It serves as a source of diversification for a lucrative wealth management.

Furthermore, in the dual capital market system, typical of the Malaysian capital market, where the conventional and the Islamic equity markets are traded side by side. This brings in the impetus for the Muslim investors with a choice or alternatives to invest their funds in line with the *Sharī`ah* rules or principles that are consistent with their faith. Hence, the Islamic unit trust investment is considered as an alternative investment window through which Muslim investors can participate in the stock market with a clear Islamic conscience. Thus, it is imperative to have a comprehensive and in-depth understanding of the rational investment mechanism on the lucrative but intricate working of the Islamic equity unit trust investment, specifically, understanding the funds unit pricing mechanism.

There are groups of investors such as individual investors, institutional investors, fund managers of companies, portfolio managers, financial analysts, government agencies and brokers that are all interested in fully understanding the nature of price movement patterns of financial assets and what events can change or determine the persistence of the price movement over time (Malik and Hassan, 2004). This type of information is important to establish an accurate model of asset price trend and volatility that may assist them to analyze the risk of holding an asset in the investment portfolios, and to provide indicators for the investors to diversify their portfolio investments. For example, investors would adjust their equity holding assets within their portfolios to either enhance their portfolio returns or at least mitigate the portfolio risks as a consequence of the potential implications of the micro and the macroeconomic information available that may have an influence on the equity prices in different sectors.

Price movement also plays a central role in determining the investment decision and spending in which excessive movement and high volatility of equity

share prices may cause investors in the financial markets to shift their funds investments towards risk-free assets rather than investing in equity market that has a high risk factor. A high fluctuation of the equity prices may also be interpreted by investors as indicators of unstable financial markets. This may cause them to shift their investments to other equity markets overseas that are more stable than the local equity markets. As a result, the local capital markets will shrink and cause deterioration to the performance of the local equity markets.

In addition, from the policy makers' point of view, understanding of the relationship between the macroeconomic variables and the equity market price behaviour are useful inputs in formulating economic policies for promoting a sustainable economic growth (Junkin, 2011). This is due to the fact that much empirical researches have found that equity markets development is increasingly dominant in promoting an economic growth in both the developing and the emerging investment markets (Levine and Zervos, 1996; Kose, Prasad, Rogoff and Wei, 2006; Deb and Mukherjee, 2008).

According to the efficient market hypothesis (EMH), price efficiency refers to asset prices that fully incorporate all the relevant information relating to their fundamental values (Fama, 1965). For instance, the efficient market share prices of a company should be equal to the present values of the company's expected future cash flows. This means that the past information is useless in forecasting future asset price behaviours and only new relevant information can be applied to explain the current trend of the market share price movements to a certain extent of the time frame (Fama, 1965). However, there are at least two difficulties encountered in empirically testing the EMH validity. Firstly, it may be difficult to build or obtain a truly reliable proxy of the relevant fundamental factors, (Andersona, Beardb and Kimb, 2012). For example,

Miller and Modigliani (1961) found that it was misleading to interpret the share market price as the present value of expected earnings per share when some earnings of the companies are logically retained. Secondly, it is difficult to create the right method for modeling the expected formation mechanisms of equity market participants, most probably due to different participants having different market perceptions, intuitions and sentiments.

This phenomenon of price inefficiency is popular in financial market as prior empirical studies show that, somehow, there often exists a large and persistent deviation of asset prices from the fundamentals (Shiller, 1981; Campbell and Shiller, 2001; and Boswijk et al., 2007). These deviations may be due to the irrational behaviour or incorrect decision made by market participants or unexpected adverse events occurring either locally in other parts of the globe (Shiller, 1981; Daniel, Kent, Hirshleifer and Subrahmanyam 1998; and Barberis and Thaler, 2003). Thus, it can be quite prudent for decision makers in modeling equity market prices to have more knowledge and information from both the microeconomic and the macroeconomic levels to timely capture this deviation.

The theoretical groundwork of the relationships between the equity market prices and the microeconomic as well as the macroeconomic variables is illustrated and explained by many earlier models, such as the original capital asset pricing models (CAPM) (Sharpe (1964), Lintner (1965) and Black, Jensen and Scholes (1972)), the Intertemporal CAPM model (Merton, (1973), the arbitrage pricing theory of Ross (1976) and the version of consumption based on the CAPM Breeden model (1979), as well as the EMH (Fama, 1965). These models offer the theoretical foundation for the asset pricing mechanism which provides an explanation of how

changes in the micro and macroeconomic variables are transmitted into the equity share price unpredictable variations.

The existing empirical financial literatures in the developed and developing or emerging markets show the movement of the equity price as a direct consequence of the movement of the micro and macroeconomic variables (Castanias, 1979; Hardouvelis, 1988; Ross, 1989; Aug and Chiona, 2010; Shubiri, 2010; Nazir, Nawaz, Anwar and Ahmed, 2010; Buyuksalvarci, 2010; and Pilinkus, 2010, Govindarajan, Balachandran, Anand and Vijesh, 2012, Sirucek (2012)). Microeconomic variables fall directly under the company or funds management control that directly reflect the perception of the weaknesses or strengths of the business itself. An analysis of the microeconomic level helps to investigate how individual asset prices are established through understanding the variables that have an influencing effect on the decisions made by the individuals and the groups of investors that ultimately may reflect on the fund unit price level. The macroeconomic variables represent the factors or events that a company or fund has no control over.

According to the stock valuation model, the macroeconomic variables may have systematic influences on the equity share prices through their influences on the expected discounted future cash flows that consequently affect the NAV of the Islamic equity UTFs invested in the stock market (Othman, 2011). These variables include the gross domestic products, the industrial production index, the consumer price index, the inflation, the interest rates, the exchange rate, the money supply and such global events like crude oil price erratic fluctuations and financial crisis (Fama, 1981; Chen, Roll and Ross, 1986; Sirucek, 2012; Maysami, Howe and Hamzah, 2004; Dash and Kumar, 2008; Acikalin, Aktas and Unal, 2008; Mahmood and Dinniah, 2009; Kuwornu, 2011; and Rasool, Fayyaz and Mumtaz, 2012). In the Malaysian equity

market, financial literature also shows that a lot of studies have been conducted to examine the variables that influence equity share price fluctuation in the short or long-term scenarios. For instance, Ibrahim and Aziz (2003); Majid and Yusof (2009); Hussin *et al.*, (2012); Thaker et al. (2009); Rahman, Sidek and Tafri (2009); and Bekhet and Mugableh (2012) found that there were significant short-run (causes and effects) and long-run relationships existed between the equity prices or returns and the micro and macroeconomic variables in the Malaysian capital market.

In addition, the financial market stability, especially, the market share prices can be extremely affected by the situation of local instability of the country, such as, political conflicts and unmitigated corruption levels. Local stability factor is usually referred to as the absence of excessive fluctuations in the country political risks and corruption levels (Durnev, 2010). According to the EMH, new information that affects companies' returns will quickly be capitalized into their share prices. Thus, the degree of political surprise will affect the level of the response in the share prices of affected firms (Milyo, 2012). Several political incidents can influence the equity market fluctuations such as revolutions, death of powerful politicians, political conflict and political election uncertainty (Asiedu, 2006 and Milyo, 2012).

Political election can be very dominant in influencing the share price of companies because different investors generally have different sentiments and different understanding of the expected newly elected government that can probably fare better under one party administration than another in leading the country's economy (Milyo, 2012). Additionally, an increase in uncertainty before and during the election year may negatively impact the decision makers to invest in the Malaysian equity market or at least for a rational decision they may discreetly delay their investments. This in turn, may affect the current equity market performance and