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THE ROLE OF NON-BANK FINANCIAL INTERMEDIARIES (NBFIs) IN ECONOMIC GROWTH (1971-2004): AN EMPIRICAL CASE STUDY OF MALAYSIA

BY

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ABSTRACT

The importance of financial development (bank and the stock market) in accelerating economic growth has been extensively discussed in both theoretical and empirical studies over the past three decades. The findings of these studies generally suggest that a well-developed financial system tends to have positive impacts on economic growth. However, unlike bank and stock market development, literature examining the role of non-bank financial intermediaries (NBFIs) in influencing economic growth is sparse. This research aims to fill that gap by examining empirically the role of NBFIs in economic growth for the case of Malaysia. The study employs a recently developed autoregressive distributed lag (ARDL) bounds testing approach to cointegration to examine the long-run relationship between NBFIs and economic growth in Malaysia using annual data covering the period 1971-2004. Unlike the other widely used cointegration approach such as Johansen and Juselious (1990), this approach is particularly promising as it is suitable for a small sample size like the present study and also capable of testing the existence of long-run relationship irrespective of whether the underlying variables are of order $I(0)$ or $I(1)$ or mutually cointegrated. The study finds evidence of long run cointegrating relationship between the indicators of NBFIs development and the economic growth in Malaysia. The regression results show that the total assets of NBFIs have positive long run relationship with economic growth and the private credit (other indicator of NBFIs) has positive and significant impact on long run economic growth. Furthermore, the positive and significant coefficient of NBFIs assets supports the concept that NBFIs assets can influence long run growth indirectly through investment channel. Granger causality test shows that in the long run there is bidirectional causality between the indicators of NBFIs and economic growth. In the short run, there is evidence that the NBFIs assets Granger cause economic growth with no reverse effect but in the case of private credit causality is bidirectional. In addition, the study finds evidence that NBFIs assets have significant causal impact on other financial sectors' development (banks and stock market) and also independent causal influence on economic growth. The study suggests that the development of NBFIs is important for both long run economic growth and for other financial sectors' (banks and stock market) development. As such, promoting the NBFIs can simultaneously meet the objective of achieving a sound financial system and hence sustainable long run economic growth in Malaysia.

ملخص البحث

إن أهمية التطور المالي (المصرفي وسوق البورصة) في إنعاش النمو الإقتصادي ، قد نوقشت كثيراً في كلا الدراسات النظرية والتجريبية خلال العقود الثلاثة الماضية . وتشير نتائج تلك الدراسات إلى أن النظام المالي المتطور بصورة جيدة لديه تأثيرات إيجابية على النمو الإقتصادي . بيد أنه وبعكس تطورات المصارف وسوق البورصة ، فإن ما كتب عن دور الوساطة المالية الغير مصرفية (NBFIs) في التأثير على النمو الإقتصادي ضئيل جداً . وهذا البحث يهدف لسد تلك الفجوه وذلك بالفحص التجريبي لدور الوساطة المالية الغير مصرفية في النمو الإقتصادي في ماليزيا. تستخدم هذه الدراسة طريقة حديثة ، وهي الحركة التراجعية الذاتية لتوزيع الحدود المتباطئة لإختبار عملية التكامل المتساوية وذلك لفحص العلاقة بعيدة المدى بين NBFIs والنمو الإقتصادي في ماليزيا؛ وذلك بإستعمال بيانات سنوية من العام ١٩٧١- ٢٠٠٤ . وعلى العكس من اختبار جوهانسين وجوسليوس (١٩٩٠) ؛ ذات الاستخدام الواسع ، فإن هذه الطريقة مناسبة، وخاصة عندما يكون حجم العينة صغيرة كالتي تتضمنها الدراسة كما إنها قادرة على إختبار وجود العلاقة البعيدة المدى، وذلك بغض النظر عما إذا كانت المتغيرات في المراتب I(0) و I(1) أو في حالة تكامل متساوي متبادل . وقد توصلت هذه الدراسة إلى وجود علاقة تكامل متساوية على المدى البعيد بين مؤشرات الوساطة المالية الغير مصرفية، والنمو الإقتصادي في ماليزيا. وقد أظهرت نتائج العمليات الإحصائية بأن هناك علاقة أيجابية بين أصول الـ NBFIs والنمو الإقتصادي والضمان المالي . إضافة إلى ذلك ، فإن العلاقة الإيجابية والمهمه لأصول الـ NBFIs تدعم المفهوم القائم على. إمكانية تأثير أصول الـ NBFIs على النمو في المدى البعيد بطريقة غير مباشرة وذلك عن طريق القنوات الإستثمارية . إن إختبار قرانقير السلبي (Granger causality) يظهر بأن هناك دلائل على المدى القصير وذلك بأن أصول الـ NBFIs هي المسببة للنمو الإقتصادي، وذلك بطريقة قرانقير السببية بدون أي أثر رجعي ، بينما يوجد أثر ، علاقة سببية متبادلة في حالة الضمان المالي . زيادة على ذلك ، فإن الدراسة أظهرت دلائل على أن أصول الـ NBFIs لديها تأثير سببي مهم على تطور قطاعات مالية أخرى مثل القطاع المصرفي وسوق البورصة. كما أنها أظهرت تأثير سببي مستقل على النمو الإقتصادي . تطرح هذه الدراسة اقتراحات عن أهمية تطور الـ NBFIs لكلاً من النمو الإقتصادي على المدى البعيد وقطاعات مالية اخرى مثل القطاع المصرفي وسوق البورصة . وبذلك ، فإن فبتعزيز الـ NBFIs يستطيع أن ينجز في آن واحد النظام المالي القوي وبالتالي النمو الإقتصادي على المدى البعيد في ماليزيا .

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 whole for any other degrees at IIUM or other institutions.

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LIST OF ABBREVIATIONS

ADF	Augmented Dickey-Fuller
AFF	Armed Forces Fund
AIC	Akaike Information Criterion
AR	Annual Report
ARDL	Autoregressive Distributive Lag
ASMB	Amanah Saham Mara Berhad
ASNB	Amanah Saham National Berhad
ATM	Automatic Teller Machine
BNM	Bank Negara Malaysia
BNM *AR*	Bank Negara Malaysia *Annual Report*
BRM	Bank Rakyat Malaysia
BS	Banking System
BSN	Bank Simpanan Nasional (National Savings Bank)
BW	Bandwidth
CDC	Colonial (Commonwealth) Development Corporation
CPI	Consumer Price Index
CUSUM	Cumulative Sum
CUSUMQ	Cumulative Sum of Squares
DFIs	Development Finance Institutions
DOLS	Dynamic Ordinary Least Squares
ECM	Error Correction Mechanism/Model
ECT	Error Correction Term
e.g.	*exempligratia* (for example)
EMEs	Emerging Market Economies
EPF	Employee Provident Fund
et al.	*et alia* (and others)
etc.	*et cetera* (and so forth)
FSMP	Financial Sector Master Plan
GDCF	Gross Domestic Capital Formation
GDP	Gross Domestic Product
GMM	Generalized Method of Moment
GNP	Gross National Product
GNS	Gross National Savings
IFS	International Financial Statistics
IRF	Impulse Response Function
KLSE	Kuala Lumpur Stock Exchange
LTH	Lembaga Tabung Hajj (Pilgrims Management and Fund Board)
MC/MCAP	Market Capitalization
MENA	Middle Eastern and North African
MGS	Malaysian Government Securities
MIDF	Malaysian Industrial Development Finance Berhad
MIDFIC	MIDF Industrial Consultants Sendirian Berhad
MIDFIH	MIDF Investment Holdings Sendirian Berhad
MIEL	Malaysian Industrial Estates Sendirian Berhad

NAV	Net Asset Value
NBFIs	Non-Bank Financial Intermediaries
NPLs	Non-Performing Loans
OECD	Organization for Economic Cooperation and Development
OFIs	Other Financial Intermediaries
OLS	Ordinary Least Squares
PPI	Pension, Provident and Insurance
PVAR	Panel Vector Auto Regression
SBC	Schwartz-Bayesian Criterion
SIs	Savings Institutions
SOCSO	Social Security Organization
TPF	Teachers Provident Fund
UECM	Unrestricted Error Correction Model
VAR	Vector Auto Regression
VDC	Variance Decompositions
VECM	Vector Error Correction Model
VT	Value Traded
WDI	World Development Indicators

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

The strong and stable macroeconomic foundation of the contemporary Malaysian economy is the result of a rapid and consistent structural change since its independence, 1957. In concomitant with the changes in the economic structure, the structure of financial system has also gone through a massive transformation. This transformation is rooted in a process of innovation aiming at reform and liberalization as to feed the needs of a healthy and vibrant economy. The remarkable achievements of the Malaysian economy have been made possible by its exemplary performance rooted in an average growth rate of 11.48 per cent per annum in nominal terms (7.26 per cent in real terms) over the last 34 years (1971-2004). Along with economic growth, the financial system in Malaysia has also been witnessed a rapid expansion over time. Today the financial system of Malaysia is relatively more matured, sophisticated, broader and better structured. This is primarily reflected in its assets size of RM 1,762.6 billion in 2004 which is nearly 4 times (or 394 per cent) higher than the Gross Domestic Product (GDP) of RM 447.5 billion in nominal terms (Bank Negara Malaysia, *Annual Report 2004* [BNM *AR-2004*]). The total assets of the financial system[1] have grown at an annual average rate of 16.25 per cent in nominal terms as compared to the GDP growth of 11.48 per cent per annum over the period 1971- 2004.

[1] There is a distinction between financial sector and financial system. Financial sector comprises of banking and non-banking financial institutions, while financial system comprises of financial sector and financial markets (See figure 2.1). As far as total financial assets are concerned, we are referring to the aggregate data of banking and non-banking financial institutions throughout this study as used in BNM *Annual Reports* (e.g., BNM *AR*-2004: 102) unless otherwise stated.

Numerous studies have widely acknowledged that a well-developed financial system is crucial in accelerating growth in any economy for the functions[2] it plays particularly in mobilization and allocation of resources needed to undertake productive investment activities by various economic agents. The financial system of Malaysia is no exception to this. The healthy growth of Malaysian economy is believed to have greatly benefited (among others) from the development of a sound and strong financial system that effectively mobilizes and allocates resources for productive investments.[3] The well-structured financial system[4] of Malaysia has contributed immensely towards the growth of the country's economy on two strategic fronts namely: financial sectors and financial markets. Non-Bank Financial Intermediaries (NBFIs)[5], which are the focus of this study, form one of the important components of the Malaysia's financial sectors.

Traditionally in the early stages of development, banking system plays a crucial role in supporting economic growth through the extension of credit mostly by means of loans and advances. However, as the economy grows, the need for wide ranging financial services also arises. As such, the NBFIs and other financial markets and instruments as alternative sources of financial services emerge and gain importance due to their ability to meet the diverse financial requirements of the investors. In other words, expansion of banking activities and the development of other financial intermediaries (i.e., NBFIs, capital markets etc.) move hand in hand as a complementary to each other in supporting the financial needs of the economy. This is

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[2] For details of the financial functions, see Levine (1997)
[3] See for example, BNM, 1994; Ansari (2002); Jamil (1988); Viksnins (1980).
[4] Structurally, the financial system of Malaysia is comprised of two namely: financial institutions and financial markets. The financial institutions are further subdivided into two-Banking institutions and Non-banking financial institutions. See for details, BNM (1999: 67).
[5]There is no distinction between Non-Bank Financial Intermediaries or NBFIs and Non-Bank Financial Institutions or NBFIs. They are sometimes used synonymously. Like banking institutions, Non-Bank Financial Institutions also play intermediary role between the savers and the users of financial resources and hence they are also termed as Non-Bank Financial Intermediaries or NBFIs.

indicated by the rapid expansion of total resources of the financial system in Malaysia. From the sectoral point of view, the total assets of banking system in 1971 had amounted to RM 8.29 billion (63.96 per cent of GDP) and by 2004 this figure increased to RM 1,189.90 billion (265.9 per cent of GDP). In terms of shares in the total financial sectors' assets, the total assets of banking system represent nearly 64 per cent in 1971 and 67.7 per cent in 2004. The total assets of NBFIs, on the other hand, also exhibited significant expansion from RM4.67 billion (35.98 per cent of GDP) as at end-1971 to reach RM 568.25 billion (127 per cent of GDP) as at end-2004. These figures (NBFIs assets) represent 36.0 per cent and 32.3 per cent shares in the total assets of the financial sector in the respective periods (For the source of data, please refer to Table 2.4).

Within the components of NBFIs, institutions such as contractual savings comprising Provident, Pensions and Insurance (PPI), leasing companies, and investment companies are the fast-growing sectors. Available data show that in 1971 the total assets of PPI alone was RM 3.59 billion or 77.0 per cent of total NBFIs assets and in 2004, this component held RM 378.91 billion or 66.7 per cent of NBFIs financial assets. The fall in percentage share is mainly attributed to the increased number of other non-bank financial institutions which were established in the subsequent periods.[6] It is worth mentioning here that this component of NBFIs mobilizes the largest share of national savings next-second only to the commercial banks in Malaysia. The trend thus indicates that although banking institutions still hold the major share of total financial sector's assets, the growing size of NBFIs as a group in the financial intermediation has also gained importance in mobilizing and channelling financial resources to expand economic activities in Malaysia.

[6] For the years of establishment of the major NBFIs, please refer to Figure 2.3 in chapter 2.

Development of NBFIs is important for both supplementing the services of traditional banking in mobilizing resources and competing in funnelling those resources to the productive enterprises and industrial projects particularly for medium and long-term financing. This is because traditionally banks are biased to provide short-term loans and usually to the established firms whose nature of business is familiar to them. As the banks are mostly private and profit-oriented institutions, they do not show much interest in development financing (e.g., industrial and agricultural development) as their main priority. This is because development financing involves medium and long-term financing which to they are also a risky business. The NBFIs fill that gap by providing medium and long term investment financing.

The NBFIs in Malaysia comprise broadly of 4 groups of institutions namely; the provident, pension and insurance (together also called contractual savings, PPI) funds, development financial institutions (DFIs), savings institutions (SIs) and a group of other non-bank financial institutions (OFIs). They play an important role in creating opportunities to strengthen the financial intermediation for the economy. The most striking function through which NBFIs perform growth stimulating role is the direct help to the development of capital market by making available those long-term financial resources to productive investments, which are in general unsuitable for banking system particularly the commercial banks. This is because the financial assets that NBFIs mobilize are mainly of long-term nature much of which are channelled to the economy via direct participation in equity, bonds, government bills or securities. On one hand, this enhances capital market depth; on the other, it also eases the stress of liquidity risk of the firms/entrepreneurs with competitive cost.[7] Besides assisting the development of capital market, the NBFIs in their various forms (such as leasing

[7] The availability of investible funds in the market tends to reduce liquidity risk of the borrowing firms and hence the transaction costs of raising funds.

and factoring companies) also help to overcome the financial needs of small and medium sized enterprises which have limited or no access to bank lending due to collateral constraints and, other regulations and conditionalities.

Like banking institutions and the NBFIs, the capital markets[8] which represented a relatively small sub-sector of the Malaysian financial system particularly in the early stages of economic development in the early 1970s, also experienced significant expansion over time. In the capital market, however, the equity market is by far the more active component in Malaysia. The Malaysian stock market (Now known as Kuala Lumpur Stock Exchange or KLSE) was established in 1973 with the aim of developing it into a well-structured and sophisticated financial system, and it indeed has undergone rapid development and transformation process over the years. Since its inception the KLSE has experienced rapid expansion and today, it is the largest in the Association of Southeast Asian Nations (ASEAN) region and the fifth largest in Asia in terms of market size (BNM, 1994). Market capitalization[9], which amounted to RM 12.54 billion or 44.6 per cent of GDP at the end of 1976, expanded steadily to reach RM 722.04 billion or 161.3 per cent of GDP at the end of 2004. Thus to assist the economic activity on all the fronts, financial intermediation regime has been aided with the development of a more modern capital market.

In overall terms, the development of financial system and the economy in Malaysia has been moving forward simultaneously. The vital role played by the country's financial system in promoting the economic growth by channelling financial capital building resources to the prospective and productive economic agents has

[8] Capital markets comprise of equity market and bond market. The equity market provides the avenue for corporations to mobilize funds by issuing stocks and shares, while the bond market provides the avenue for the private and public sectors to raise funds by issuing private debt securities and government securities respectively.
[9] KLSE market capitalization data are available starting from 1976. Data for 1976, *Investors' digest*, KLSE, 1976 and data for 2004, BNM-*AR 2004,* p. 204

established it as an important aid to economic growth. The underlying aspirations of introducing a 10-year Financial Sector Master Plan (FSMP) in 2001 manifest this vision as stated clearly in the BNM annual report (2003: 8). The significance of developing financial system for maintaining a strong and sustainable economic environment stems from its emphasis on the theoretical and empirical grounds. The role of financial system development in influencing economic growth has been discussed extensively in the literature[10] of development economics since the pioneer works of Schumpeter in *The theory of economic development* (1932).[11] This topic has been extensively discussed and subsequently reached a generally accepted view that financial factors have close association with economic growth despite a few contending arguments that financial development is simply a response to meet the demands of the development process or the role of financial development in economic growth has been overstressed. Today, most economists have come to acknowledge that finance matters much for elevating the pace of economic development than it was thought earlier.

1.2 STATEMENT OF THE PROBLEM

The idea that an efficient and well-developed financial system is important for influencing economic growth is well acknowledged. A great deal of empirical work (e.g., King and Levine, 1993a, 1993b; Levine, 1997, 2003; Neusser and Kugler, 1998; Levine, Loayza and Beck, 2000; Fase and Abma, 2003; Luintel and Khan, 1999; Odedokun, 1996; Rioja and Valev, 2004 etc.) has tested the finance-growth link in various ways using different indicators of financial development in cross-country or

[10] See also Blum, Federmair, Fink and Haiss (2002).
[11] The original book was written in German in 1912 and translated into English, which was published in 1932.

time series studies. The empirical findings in general conclude that a well-functioning financial system has beneficial impact on economic growth.

However, the issue we are concerned here is that most of the empirical studies (e.g., King and Levine, 1993a; De Gregorio and Guidotti, 1995; Demetriades and Hussein, 1996; Demirguc-Kunt and Levine, 1996; Levine and Zervos, 1996, 1998; Luintel and Khan, 1999; Beck et al., 2000; Levine et al., 2000; Rousseau and Watchel, 2000; Demetriades and Luintel, 2001; Levine, 2002; Christopoulos and Tsionas, 2004; Beck and Levine, 2004 and so on) emphasizing financial development mean either banking sector development or stock market development. The emergence of NBFIs as one of the important sub-sectors in the financial system and hence their role in economic development is largely ignored. Empirically, the association between NBFIs development and economic growth has not been examined. This is particularly true for the case of Malaysia. Although in recent years there have been some studies (e.g., Impavido and Musalem, 2000; Impavido, Musalem and Tressel, 2002, 2003; Harichandra and Thangavelu, 2004; Devis and Hu, 2004 etc.) attempted to address this issue, they mainly focussed their attention on the developed economies (e.g., OECD). The scopes of these studies are also limited to either institutional investors (pension funds, insurance companies and investment companies) or contractual savings (pensions, provident and insurance funds) institutions only. The findings of these studies generally suggest that the development in institutional investors or contractual savings[12] have beneficial effect on economic growth.

It has been mentioned earlier that in Malaysia, NBFIs include a large number of institutions including contractual savings institutions (For the complete list of NBFIs,

[12] Harichandra and Thangavelu (2004) used institutional investors, which include pension fund, insurance fund and investment companies. Impavido and Musalem (2000) used contractual savings, which include pension and insurance funds, while David and Hu (2004) used pension fund only in their studies.

see figure 2.3). Although contractual savings institutions form the leading component of NBFIs, there are many other components (i.e., development finance institutions, unit trusts, leasing and factoring, venture capital, housing institutions etc) which are also growing in importance over time. They are all contributing to the economic development process in Malaysia in various ways.[13] The NBFIs in the Malaysian financial system are relatively wider in scope and better structured as highlighted above. As such, a study merely focused on contractual savings aspect or pension fund may not be adequate to represent the impact of NBFIs as a whole on economic growth particularly with respect to the Malaysian case. Furthermore, looking only at the banking sector or stock market development and ignoring the development of NBFIs from the purview of finance-growth literature may amount to incomplete analysis of the strength of financial development in influencing economic growth. It is due to this limitation of the existing studies together with the growing presence of NBFIs in the financial system of Malaysia that the present study attempts to examine the role of NBFIs and empirically test the growth impact of NBFIs development on Malaysian economy.

This study differs from the previous studies in many respects. Firstly it encompasses a wide range of non-bank financial institutions than merely institutional investors or contractual savings institutions that the previous studies used. Secondly this study uses two NBFIs development indicators (ratio of NBFIs assets to GDP and

[13] NBFIs play several important functions that are closely related to affecting economic activities such as -savings mobilization and raising investment, supporting governments' development activities by playing the role of non-inflationary source of government financing, extending credit to private sector for long term investment financing. They also help to increase capital market depth by participating in equity market.

the ratio of private credit to GDP[14]) while the previous studies used the ratio of NBFIs assets to GDP as the only indicator of NBFIs development. The estimation technique also differs. In this empirical study, we employ a recently developed econometric technique (bounds testing approach) using time series data covering the 34-year period (1971-2004) to address the main issue whether the development of NBFIs can influence the economic growth in Malaysia. Specifically, this research focuses on the empirical issues: the existence of long-run cointegrating relationship between the indicators of NBFIs development and the economic growth in Malaysia, the impact of NBFIs on long run economic growth (positive/negative), the possible channelling mechanism (particularly investment) through which NBFIs can also affect growth, direction of causal relationship between NBFIs and economic growth. In addition, the study also extends it analysis to include the empirical issues concerning the dynamic relationship of NBFIs with other financial sector developments (banks and stock market) and the independent causal influence of NBFIs on economic growth after discounting the joint effect of other financial sector developments (banks and stock market development).

The results of this research suggest that the growth in NBFIs indicators exert beneficial impact on economic growth in Malaysia both directly (in the case of private credit) and indirectly through stimulating investment channel (in the case of NBFIs assets). Additionally, the results also provide evidence in favour of significant causal impact of NBFIs on other financial sector developments (banks and stock market capitalization) and independent causal impact on economic growth when jointly

[14] Most of the frequently cited finance-growth empirical works uses private credit extended by the financial sector to the private sector as the preferred financial development indicator to other indicators (e.g., King and Levine, 1993a, 1993b; Levine et al., 2000; Beck, Levine and Loayza, 2000; Rioja and Valev, 2004 etc). According to these studies, private credit has more direct link with the economic growth than other indicators.