AN EMPIRICAL INVESTIGATION OF THE SECURITIZATION ACTIVITIES IN THE MALAYSIAN BANKING INDUSTRY

BY

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ABSTRACT

In the past few decades, the Malaysian banking industry has witnessed drastic changes in its operation due to innovation witnessed in the financial system mainly dominated by securitization activities. Prior to the 2007 financial crisis, securitization has been highly promoted and recommended as an important tool for risk management. However, this financial innovation attracted the attention of the researchers following the events leading to the 2007 credit crisis due to the key roles played by securitization activities. The purpose of this study is to empirically investigate securitization activities of the banks in Malaysia based on the following motives identified in the literature: (1) capital arbitrage motive (2) risk transfer motive and (3) liquidity motive. In addition to that, this study also seeks investigate the effect of this financial innovation on the stability of the banks and banks' lending. Secondary data spanning from 2004-2011 for 39 Malaysian banks whose data is available on bankscope database is employed in this study. In order to realize the objectives of this study, the Arrelano and Bover (1995) system GMM estimator was employed. Considering the small number of panel in our study, and potential endogeneity, system GMM is deemed suitable for this study. The finding of this study suggested that liquidity and credit risk management constitute the main motive for securitization activities among the Malaysian banks. In addition, in relation to the effect of securitization activities on banks stability, it is revealed that securitization activities pose a potential threat to banks instability. Finally, the study found a significant contribution of securitization to banks' lending ability.

خلاصة البحث

خلال العقود القليلة الماضية، شهد القطاع المصرفي تغيرات جذرية في الممارسات المصرفية و ظهور ابتكارات مالية أساسها التوريق (Securitization). ما قبل الأزمة المالية عام 2007، أنتشرت ظاهرة التوريق (Securitization) بصورة كبيرة جداً حتى أصبحت أحد أهم أدوات إدارة المخاطر في البنوك . مع ذلك ، فإن هذا الابتكار المالي لفت انتباه الباحثين بصورة كبيرة حول أسباب أزمة الائتمان عام 2007 والدور الرئيسي للتوريق (Securitization) في هذه الأزمة الائتمان . تهدف هذه الدراسة في أختبار ممارسات التوريق في البنوك الماليزية على أساس المحددات التالية : (1) محددات مراجحة رأس المال (capital arbitrage)، (2) محددات نقل المخاطر (risk transfer)، (3) محدد السيولة (liquidity). بالإضافة إلى ذلك، تهدف هذه الدراسة إلى دراسة مدى تأثير هذا الابتكار المالي في استقرار البنوك والإقراض. البيانات الثانوية لـ 39 بنك في ماليزيا خلال الفترة من 2004 إلى عام 2011 والمتوفرة في قاعدة البيانات (BankScope). من أجل تحقيق الأهداف السابقة الذكر، قامت هذه الدراسة بتطبيق (Arrelano and Bover,1995) نظامGMM estimator . بإعتبار أن العدد الصغير للعينة الزمنية في هذه الدراسة، فإن نظام GMM يعتبر مناسب لهذه الدراسة. تظهر نتائج هذه الدراسة أن محددات إدارة السيولة والمخاطر الائتمان تشكل الدافع الرئيسي لأنشطة التوريق (Securitization) بين البنوك الماليزية. بالإضافة إلى ذلك، تشير النتائج الدارسة أن أنشطة التوريق تشكل خطرا محتملا على أستقرار البنوك الماليزية. أخيرا، نتائج الدارسة أشارة إلى الدور المهم الذي تلعبة عملية التوريق (Securitization) في الاسهام في القدرة الإقراضية للبنوك الماليزية.

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 degrees at IIUM or other institutions.

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This thesis is dedicated to almighty Allah who has been merciful and generous to me throughout my PhD journey

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LIST OF ABBREVIATION

AAOFI	Accounting & Auditing Organization for Islamic Financial Institution
ABS	Bank Negara Malaysia
AAOFI	Accounting & Auditing Organization for Islamic Financial Istitution
ABCP	Asset Backed Commercial Paper
BNM	Bank Negara Malaysia
CIR	Cost-to-Income ratio
CAR	Capital-to-Assets ratio
CRT	Credit Risk Transfer
CDS	Credit Default Swap
CDO	Collateralized Debt Obligation
CLO	Collateralized Loan Obligation
DIFC	Dubai International Financial Center
FDIC	Federal Deposit Insurance Corporation
FFS	Faisal Finance Switzerland
GDP	Gross Domestic Products
MBS	Mortgage Backed Securitization
MEFC	Middle East Financial Center
NINJA	No Income, No Job or Assets
NPL	Non-Performing Loans
OBS	Off-Balance Sheet
QFC	Qatar Financial Center
ROA	Return-on-Assets
ROE	Return-on-Equity
ROAA	Return-on-Average Assets
ROAE	Return-on-Average Equity
SLC	Standby Letter of Crdit
2SLS	Two Stages Least Square
SC	Security Commision

Chapter One

INTRODUCTION

1.1 INTRODUCTION

This chapter discusses the overview of this study. It consists of six sections whereby the first section explains the background of the study. The second section is about the problem statement while the objectives and research questions of the study are discussed in the third and the fourth section. Finally, the justification of the study and significance of the study is discussed in sections five and six respectively.

1.2 RESEARCH BACKGROUND

During the past few decades, the banking industry all over the world has been witnessing tremendous developments due to among other factors globalization, technological advancement and deregulation. Forces such as globalization, declining profitability of the traditional banking model, and technological advancement significantly influenced the traditional role of banks in financial intermediation (Edwards and Mishkin 1995).

The shrinkage in the profitability of the traditional intermediation model of the banks coupled with increasing competition necessitated the need for the banks to source for other means that will help in augmenting their revenue generation. Banks, therefore, needed to extend their activities to off-balance sheet activities in order to earn more income. This mass exodus from the traditional banking model potentially threatened the stability of the financial system (Edwards and Mishkin, 1995). It therefore requires soundness of the banking industry while restructuring the banking system to achieve long term stability.

As noted by Mullineux and Murinde (2003), the internationalization of the financial institutions in the 1970s paved the way for the globalization of the financial institutions. This however, became more manifest in the 1990s. Consequently, the landscape of the financial industry has witnessed phenomenal changes especially in terms of primary activities. The importance of deposits as a source of funding has increasingly diminished and banks no longer depend on the short term sources of funding to finance their long term liability. For instance, the banks no longer hold the loan they originate till maturity. Rather, they pool the assets on their balance sheet together, sell it to investors, and thus transfer the inherent risk of the assets. Quite apparently, this may be a sign that the competitive environment of the banking system is getting tougher by the day. This perhaps, has led to a situation, whereby commercial banks jostle for market share among themselves.

One of the strategies to enhance profitability in such a volatile business environment is for the banks to diversify their operational activities. That is, by not only engaging in the traditional intermediation model characterized by the reliance on deposit mobilization and loan offering, but also focusing on off balance sheet activities that is mostly dominated by securitization transactions[1].

Based on the definition of Basel II, securitization is defined as "the process of funding receivables such as mortgage loans, leased or credit card receivables by means of freely tradable securities backed by these assets". Banks normally securitize by pooling homogenous assets, mostly receivables (e.g. mortgage loans) that produce return and sell these loans to the Special Purpose Vehicle (SPV) which is a company specially established for the buying of these assets. The SPV in turn issues securities

[1] Off Balance sheet activities became popular among the commercial banks in the 1980s as a result of the innovation in the financial system coupled with the financial deepening which led to a market-oriented structure that made firm to increasingly rely on financial market as a source of investment funding (Calmes and Theoret, 2010).

in the form of bond or commercial paper against these assets to pay the originator for the purchase price of the assets. The revenue generated from this investment is distributed to the investors by the SPV.

Securitization, especially Asset Backed Securitization (ABS) and Mortgage Backed Securitization (MBS) have been widely adopted and quite popular among the developed and emerging markets in the 1980s. These variants of securitization have been used as a means to support and mitigate risk associated with the traditional banking methods. These types of securitization were later widely promoted in East Asia after the 1997/98 crisis as a means of improving the secondary activities in the capital market (Lejot et al., 2008).

Securitization activities are broad and are not however restricted to assets backed securities and Collateralized Loans Obligation (C.L.O) as widely applied in many studies. According to Zakaria and Ghafar, (2009), securitization activities encompass a broad range of disintermediation and off-balance sheet activities of banks including issuing standby letter of credit, extending loans commitments, selling loans with and without recourse and manipulating derivatives instruments. Previous study such as Greenbaum and Thakor (1987); Benveniste and Berger (1987) and Berger and Udell (1993) have similar explanation of securitization activities.

As indicated in the literature, three main motives drive banks to engage in securitization activities (Cardone-Riportella et al., 2010). These three motives are: liquidity motive, risk transfer motive and capital arbitrage motive. Each of these three motives poses different risk level on the condition of banking system.

Securitization activities have tremendous impact on the operation of the financial institutions. Particularly, such activity has minimized the over-dependence of the commercial banks on traditional banking methods and altered banks' attitude towards risk taking. Prior to the financial crisis of 2007/2008, securitization has been highly favored and considered as an important tool in mitigating credit risk and resolving the mismatch problems associated with the process of deposit taken and loans offering. This has been one of the main reasons for its recommendation during the 1997/98 Asian crisis. Most banks were exposed to assets mismatch during the financial crisis. This is due to the fact that, short term debts were used for long term financing.

Just like the case in developed and most emerging markets, banks in Malaysia are increasingly involved in off-balance sheet activities that are considered as securitization (Abd Karim & Gee, 2007). As indicated in the Bank Negara Malaysia (BNM) financial stability report (2011), the total value of the commercial and contingencies transaction of the commercial banks increased by about 20 percent from RM1.447 billion in 2007 to RM1.747 billion in 2011. During the same period, the total value of commitment and contingencies related transaction for the investment banks witnessed a decline from RM63.039 million to RM23.74 million in 2010. This apparently suggests that commercial banks are fast diversifying from the traditional intermediation banking system to non-interest and other off-balance sheet activities. This may equally suggest that, commercial banks are fast becoming more active in activities previously considered as investment bank specialization. It is quite obvious from table1 below that, securitization activities are changing the financial landscape and operation of the banks in Malaysia.

Table 1.1 detail of the commercial bank commitment and contingencies transaction for the period 2007-2011

	2007	**2008**	**2009**	**2010**	**2011**
Assets sold with recourse & commitment with drawdown	19,574.6	127,442.2	5871.4	6247.1	6509
Credit extension commitment	303,862.7	348,118.2	376,604.0	379,644.9	409,956.4
Direct credit substitute	19,424.7	21,179.7	19,922.4	19,293.0	21,302.3
Foreign exchange related contract	368,769.5	364,511.3	341,651.1	407,639	493,371.0
Interest rate related Contract	642,812.1	752,070.1	648,232.1	643,923.3	695,982.4
Trade related contingency	17,756.9	13,608.4	12,553.5	12,154.7	11,721.6
Underwriting obligation	2,282.7	1,383.5	1,532.2	1,187.7	789.6
Others	44,026.3	52,838.9	54,334.2	61,185.2	65,938.4
Total	1,447,540.5	1,600,490.5	1,496,574.0	1,566,312.2	1,747,258.0

Source: Financial Stability & Payment System Report (2011) http://www.bnm.gov.my/files/publication/fsps/en/2011/annex.pdf

In view of the momentum generated by securitization activities, the attention of the monetary authorities has also been aroused. For instance, Bank Negara Malaysia (BNM) came up with the Financial Sector Master plan to chart a future direction for the financial sector in Malaysia. These off-balance sheet activities of the banks received policy makers' support. As indicated by the Bank Negara Malaysia (BNM) Governor Dr. Zeti Akhtar Aziz in her keynote address at the international conference on "Asian market integration & financial innovation" held in Tokyo in 2012, it is stated that, financial innovation is essential for financial institutions to contribute meaningfully, and to effectively withstand both the current and future challenges of the financial transformation based on strong governance and risk management practice.

The issues of securitization have also attracted some attention from the researchers, policy makers and the practitioners at large. This is particularly so, following the outbreak of the 2007/08 financial crisis that originated from United State of America (USA) subprime market and which later took a dramatic toll on global financial system. Countries were affected differently based on their level of participation in the securitization activities (Jikling, 2009). Elicited by premonitions or subsequent implications of the financial crisis, numerous studies sought to examine securitization especially in terms of the motives for its application (Bannier and Hansel, 2008; Martin–Oliver, (2007), Olaniyi et al., 2013; Ambrose et al., 2005). Other studies examined its implication on financial stability especially in the specific cases of developed countries (Loutskina and Strahan, 2008; Sarkisyan, 2005). Apparently, majority of the extant literatures focus on the Western countries.

Securitization activities are not limited to conventional banks only. Rather, it is also widely employed under Islamic financial system. In fact, according to Manjoo (2005), securitization is one of the essences of Islamic banking and finance. Though securitization under Islamic financial system is similar in structure with the conventional securitization, nonetheless, the former is different in terms of the underlying assets. Securitization under Islamic finance must adhere to certain principles in order to be Sharia compliant. Securitization based on Islamic financial principle is done through the transfer of assets from the borrowers to the lenders. Based on the fact that lending in Islamic financial system is done using asset backed model, it should, therefore, be very easy to structure shariah compliant assets backed securitization.

The relative dearth of empirical studies in developing countries present some challenges. For instance, the generalization of the empirical study on securitization done in other countries especially the United State of America to other context and market has been challenged due to certain limitation. Arguments are that, most of the studies on securitization especially for the case of United State of America are mainly applied on the sub-prime mortgage loans which constitute less than ten percent of the total securitized mortgage (Albertazzi et al., 2011).

Despite the increasing securitization activities by banks globally, empirical studies on this financial innovation especially for the case of emerging countries like Asia Pacific is scarce. Considering the critical role of financial institutions in the economic development and the financial stability of a country, changes in the traditional role performed by banks brought about by securitization call for research (Edwards and Mishkin, 1995). For instance, as rightly noted by Zakaria and Ismail (2009), there is need to examine the effects of these financial innovative activities on banks' stability and related activities. Based on the fact that, securitization activities have been widely adopted in many developing countries, the focus by researchers should also be extended to emerging economy like Malaysia. This could help in providing useful information regarding the motive for banks engagement in securitization activities and its effect on the financial system soundness (Panetta, 2010.

Sequel to the foregoing arguments, the thesis sponsored in this study is that a plethora of reasons inform the growing trend of securitization in a financial system. Obviously, there are benefits as there are consequences as may be gleaned from the recent financial crisis. With the increasing trend witnessed in Malaysia, and the apparent regulatory support securitization is receiving, what implications does it hold for Malaysia? Only time would tell.

1.3 RESEARCH PROBLEM

Before the outbreak of the global financial crisis in 2007, securitization activities have been highly favoured by regulators across the globe. This may be due to two factors. First, the perceived benefit and potentials it offers in terms of credit growth enhancement (Carbo-Valverde, et al., 2011). Second, it is also viewed as a partial strategy to achieve economic growth through the creation of more liquidity in the system.

Accordingly, the market for the securitization globally surged with a record increase of about 272 percent from $316 billion in 1996 to $1.103 trillion in 2005 (Ismail et al., 2008). But this peak period of securitization also either by happenstance or design marked the beginning of the manifestation of the bubble that eventually burst few years later. Indeed two of the largest investment bank in the USA including some others banks in the UK collapsed due to this crisis and about $14 trillion in losses has been reported in the USA alone (Atkinson et al., 2013). Could it be that increasing securitization activities portends financial turmoil?

In the case of Malaysia, the release of the regulatory framework in 2001 by Bank Negara Malaysia (BNM) marks the beginning of securitization activities by financial institution in Malaysia. The market for the assets securitization has since gained wide acceptance by the investors with an impressive growth from RM2.37 billion in 2003 to RM9.327 billion in 2005 (Ismail et al., 2008).

In view of its contribution to the debt market, securitization activities were widely promoted through the provision of the necessary infrastructures that enhance its development. This is in accordance with the objective of the Malaysia government to boost home ownership, infrastructure finance and development of the capital market as achieved in some developed economies (Giddy, 2000; Jobst, 2006).

Without being prejudicial to its perceived benefits, lessons may also be taken from the fact that the global financial crisis in 2007 was widely attributed to the securitization activities (Jikling, 2009). This is due to the fact that, securitization as applied by the majority of financial institutions in various countries involved the taking of high risk and use for capital arbitrage. More so, majority of the assets securitized are receivables rather than real assets. This resulted in the creation of money out of nothing in the system, which runs contrary to its use as a tool to support the conservative traditional intermediary system that promotes risk mitigation, funding and investment (Lejot et all, 2008).

Den Butter (2010) argued that improper usage of securitization apparently led to the global recession in 2007. Such inappropriate usage is manifested in activities like lack of transparency and other opaque financial transaction. Consequently, a serious global re-assessment by the international community is aroused. This thus calls for a regulatory reform and sustainable financial architecture that will bring long lasting stability to the system.

Securitization activities have seen a rapid increase not only among financial institutions in the developed world but also in emerging countries like Malaysia. Though extant studies exist for the case of developed countries especially the United

State of America (USA) and some European countries, however, these findings cannot be generalized due to the differences in context especially in Malaysia which operate a dual banking model. Obviously, an empirical investigation of securitization activities could assist in shedding more light on the motives for its application and its potential effects in terms of financial stability. This may potentially aid the regulators and financial institutions in their activities. Since Malaysia operates a dual banking system, the current study could provide information on the effect of securitization activities of both Islamic and conventional banks on banks stability. As such, a pooled effect as well as isolated effects along the divides of the conventional and Islamic banking systems can be made discernible.

1.4 RESEARCH QUESTIONS

Sequel to the discussion in the problem statement, the following research questions will be answered in this study.

1. What are the driving factors of securitization activities in Malaysia
2. To what extent does banks' securitization activities affect bank stability in Malaysia
3. To what extent does banks' securitization activities affect banks' lending in Malaysia
4. To what extent is Islamic securitization different from the conventional securitization in term of their impact on banks stability