UNIVERSITI TEKNOLOGI MARA

DETERMINANTS OF PRIMARY MARKET SPREAD IN DEVELOPING SECURITIZATION IN MALAYSIA: A PANEL STUDY

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Thesis submitted in fulfillment of the requirements for the degree of Doctor of Philosophy

Faculty of Business Management

January 2015
CONFIRMATION BY PANEL OF EXAMINERS

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ABSTRACT

Securitization is the process of transforming illiquid assets into rated long-term marketable securities that measures the relationship between securitized assets and market spread. The previous researches provided some evidences on the relationship between the nature of the assets and the primary market spread. Their models provide predictions on how other pricing characteristics affect US and Euro markets. However, emerging markets, notably Malaysia, remain to be testified, and hence these pending results have motivated this study to testify other tests with reference to the Vink Model to fill the literature gap. Further research found that although credit ratings are the most important variables to determine loan spread at issue date, investors appear not to rely exclusively on these ratings, as well as liquidity and leverage beyond the assigned credit rating. The first objective statement to provide empirical contribution variable such as Liquidity and Leverage as determinant of the primary market spread based on Vink regression model of 2008 and 2012. The result shows that liquidity and leverage are significant determinant in the regression model. The next objective is to test the model of determinant of the primary market spread, the goodness fit model shows that all F-statistics are significant from models 1 to 6. Finally, the objective is to examine both internal (firm specific) and external (macroeconomic market condition) determinants of the primary market spread. It is interesting to note that the coefficients of the variable lose its explanatory power when other macroeconomic and financial indicators are controlled for. These results are testified as the study employs recently developed Panel Data approach and Least Method Regression analysis for the study periods of 2004-2012, eleven hypotheses support that their determinants have relationship with primary market spread. The results also verify that marketability characteristics represent the most important group in explaining loan spread variability in internal determinant. Likewise, the transaction size is the most important variables to determine loan spread at issue date. However, for macroeconomic market condition factor of determinants, capital structure characteristic plays main roles where interest and inflation are the main determinants for the primary market spread. As such, the study concludes that the selected determinants are helpful to issuers of bonds to offer alternative cheaper financing cost to their respective originators and better investment return to portfolio managers, and hence could stimulate the strong growth of the Malaysian securitization market in particular and capital market in general.
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<td>AAOIFI</td>
<td>Accounting and Auditing Organization for Islamic Financial Institutions</td>
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<td>ABS</td>
<td>Asset Backed Securities</td>
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<td>ANGKASA</td>
<td>Angkatan Koperasi Kebangsaan Malaysia Berhad</td>
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<td>AREB</td>
<td>ABS Real Estate Berhad</td>
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<td>BP-LM</td>
<td>Breusch Pagan Lagrangian Multiplier</td>
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<td>CBO</td>
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SIV Special Investment Vehicles
SPV Special Purpose Vehicle
SST Sales and Service Tax
TALF Term Asset-Backed Securities Loan Facility
TFSD Thomson Financial Securities Data
CHAPTER ONE
INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Asset-Backed Securities (ABS) was commenced by the USA administration for lodging loan funding plan back in the 1970’s and pursued by many securities including mortgage and credit card. After 1980, it was converted into a financing tool and subsequently, it has been extensively extended to all parts of the globe. In the USA, Europe and Asia-Pacific, ABS is growing tremendously and has attracted many fixed income investors to explore in this market for a variety of asset allocation. Even though its techniques are more of a complex and complicated financial instrument, Giddy (2000) foresees that ABS has an ability to transfer risk with little loss of revenue by a separation of good financial asset for a company. Securitization by finding procedure is the course where uniform but illiquid asset's pooling and packaging process is performed with security interest based on incoming cash flows and sold to third party investors (Lumpkin, 1999). Since October 2012, ABS has represented alternative long-term funding of auto loans, lease, credit card receivables and commercial mortgages.

In the case of Malaysia, the Malaysian Market Cagamas, was formed in 1986 based on Fannie Mae and Freddie Mac of USA (Gangwani, 1998). Therefore, Cagamas utilities as a Special Purpose Vehicle (SPV) between investor of long term funds and house mortgage lenders, is the major imperative matter of securities tools in Malaysia by far. Securitization market in Malaysia was only estimated at RM45.5 billion at the end of 1996 and this is due to the fact that the other parts of asset, instead of Cagamas, have not been very strong. The Securities Commission (SC) in 2001 provided obligatory rules securitization of asset and released its rules on the Offering of ABS. On the 10th of April 2001, regarding its possible important involvement to the debt market of Malaysia, it had provided a contribution for insuring Collateralized Bond Obligation (CBO) with the help of Prisma Assets.
Berhad (2001) which was supported through Ringgit-denominated bonds’ pool. An additional CBO deal was supported by Collateralized Loan Obligation (CLO) and by corporate bonds supported by recovering business loans pursuit in the same year. Till December 2012, an anticipated 101 planned dealings have been accepted underneath the Securities Commissions (SC) rules on private debt securities, ABS and supplementary planned merchandises, all of which encompassed an array of asset classes. In a related development in Malaysia, sukuk grew to over US148bil (RM473.7billion) as at June 2013 from US1.5 billion (RM4.8billion) in 2001. The Malaysian sukuk comprises 60.4% from outstanding sukuk in other parts of the world (Fong, 2013).

Since the 1970s, an extensive literature has been published on the factors that impact the pricing of corporate bond issues. In contrast, little empirical evidence has been published on the factors that impact the pricing of residential mortgage-backed securities (RMBS), a major sector of the bond market in most developed countries. The purpose of this research is to present empirical evidence on the factors that impact new issue pricing of Malaysia securitization, securitization sector that does not have subprime mortgage effect that will be as benchmark among developing country.

Vink and Fabozzi (2012) find that credit rating is the dominant determinate of the primary market spread. What is noteworthy is that investors do consider credit factors already considered by rating agencies in assigning ratings, suggesting that investors look beyond the credit rating in pricing ABS tranches that propose to include Capital Structure issues such as Liquidity and Leverage. Firm”’s capital structure are typically quite complex and priority rules are often violated. The value of the firm is independent of the capital structure of the firm. This is the standard assumption that the Modigliani-Miller Theorem holds. This assumption also implies that changes in capital structure, such as payments of coupons and principal, have no effect on valuation or pricing of the asset. This is easily satisfied, for example, if coupons and principal payments are financed by issuing new debt or using liquidity to pay interest and principal payments.

Regarding the expansive growths that happened in the Malaysian financial markets from the asset securitization commencement in 1986, it distinguishes the
significance of expanding an inclusive capital structure for asset securitization compromising both the synthetic and traditional forms of securitization. However, there is no research, as discussed before, conducted for primary market spread determinants in Malaysia to expand its inclusive securitization market. With these significant developments of securitization literatures supported with the related theories and models, the researcher is motivated to study the primary market spread of securitization in Malaysia by using the panel data to fill the research gaps.

1.2 PROBLEM STATEMENT

In view of the fact that from 1970s, there are numerous broad studies associated to issues that influence the corporate bond pricing, few experiential proofs on the issues affect the residential mortgage-backed securities (RMBS) price in nearly developed countries counting Malaysia. Malaysia is recognized as a main division of the bond market (Fabozzi and Vink, 2012). In the UK, RMBS is established to be the major securitization division and a large amount of experiential proofs on the issues that influence pricing subject of RMBS has been reported. Despite the fact that Cagamas is the major factor for Residential and Commercial Mortgage-Backed Securities (CMBS), there are few studies on primary market spread determinants including Tranches, Credit Rating, Enhancement, Lead Manager, Rating Agencies, Transaction Size, Loan Size, Maturity, Loan to Value, Retained, Year of Issue, Type of Interest Rate, Currency and Currency Risk (Vink, 2008). Consequently, this research aims to fill the research gap of primary market spread securitization in Malaysia with reference to Liquidity and Leverage.

In forecasting CMBS loan performance, Seagraves (2012) has suggested supplementary data regarding the loan originators including firm type, that is the degree that originators keep an equity stake in aiming CMBS. The discovery of his study contributes that a shareholder must not depend merely on a certain issue, including credit rating and should consider additional issues including leverage and liquidity as suggested by Fabozzi and Vink (2012). This entails that shareholders emerge not to depend completely on these ratings despite the fact that credit ratings contribute as chief position in establishing spreads since a lot of additional issues compromising enhancement, loan to value, nature of asset, time of issue and number of trenches.
The discussions conducted by Fabozzi (1998), Riddiough (1997), Black and Scholes (1973) and Ingersol (1987) propose the worth of an extracted security including Collateralized Mortgage Obligation (CMO) can be traced to a particular set of fundamental factors including discount rates and cash flow to conclude an arbitrage-free price. They propose that security prices can diverge from basic worth. Gordon (1959), Summers (1986) and Schiller (1989) discuss that the primary values are dissimilar since shareholders price the securities in a different way. However, the continuation of an extraction from essentials can point out that the market for those securities is not working proficiently, despite the fact that it is considered that this extraction will make an arbitrage occasion.

As discussed, previous securitization in the US, European and worldwide capital markets are increasing extremely. Recently, securitization has achieved secured position in business financing and investment group, since it supplies originators an inexpensive basis of sponsorship and better investment return (Giddy, 2003). He predicts that securitization transforms illiquid assets that contribute into tradable securities. This is aligned with managers that make over the risk using proper separation of financial assets from a corporation or financial institution with tiny revenue loss (Giddy, 2000). The assets, whenever alienated as of the originator, are used as support for high-quality securities planned to request to investors, counting residential market (Ripain, 2006).

The risk of default affects virtually every financial contract. Therefore the pricing of default risk has received much attention both from traders who have a strong interest in pricing transaction accurately and from financial economist who have much to learn from the way such risks are priced in markets. The standard theoretical paradigm for modeling credit risk is the contingent claims approach by Black and Scholes. Much of the literature follows Merton (1974) by explicitly linking the risk of a firm default to the variability in the firm of asset value. Although this line of research has proven very useful in addressing qualitatively important aspect of credit risks, it has been less successful in practical application based on Jones, Mason and Rosenfeld (1984) who finds that even for firms with a very simple capital structures, a Merton model is unable to price investment grade corporate bond better than naïve model that assume no risk of default. The lack of success owes to difficulty
of modeling realistic boundaries condition. These boundaries include both condition under which default occurs and the event of default the division of the value of the firm among claimants. In response to these difficulties an alternative modeling approach has been pursue in a number of articles such as Madan and Unal (1994), Duffie and Singleton (1995,1997), Duffie (1999). This study not only complements the academic literature on the pricing of asset securitization issues, but also adds to the vast empirical and theoretical literature that seeks to explain the bond spread over Treasury yields (see Duffie, Pedersen, and Singleton (2000), and Collin-Dufresne, Goldstein and Martin (2001), Vink (2008) and Fabozzi and Vink (2012))

1.3 SCOPE OF THE STUDY

The investigator here is desired to examine the determinants of the primary market spread of Asset-Backed Securities due to its ability to transform illiquid assets into highly graded long term marketable securities as proposed by Giddy (2000, 2003). The researcher would only focus on RMBS, CMBS and ABS for nine years of issuances with 346 observations and 90 tranches, that the researcher believes is deemed to be optimal. Despite the importance of determinants primary market spread, there are limitations of the study. Due to confidentiality and availability of data in other neighboring countries, the researcher only focuses on the Malaysian companies. Likewise, this study examines on the determinants of primary market spread and not on secondary market spread due to the absence of its trading in Malaysia (RAM, 2012).

1.4 SIGNIFICANCE OF THE STUDY

As documented in numerous securitization researches, spreads are regularly connected with credit rating, loan to value and transaction size in developed countries. There are few studies which have focused on other factors beyond credit rating especially in non US Asset (Fabozzi and Vink, 2009). According to them, issue of spread towards primary market is frequently unnoticed, mutually in previous study. In practice, with significant unsatisfactory regard to the fact that determinant has vital significance when searching to sketch the concluding assessment of issuing securitization, it has become an underlying research issue of this study.
For most corporations, as the loan originators, the decision to securitize the asset as the alternative cheaper source of fund (Giddy, 2003) and securities with corporate bond reduce the cost of bankruptcy by setting up a Special Purpose Vehicle. Likewise, portfolio managers on long term investors have the ability to invest in highly rated securities with better return (Giddy, 2001). As such, they have the ability to monetize non liquid assets, the transfer of credit risk and simultaneously to cater for their specific needs.

Preceding researches in Western debt markets have characteristically investigated merely three aspects of determinants of primary market on recovery and default danger specifications, by examining the various factors which are credit enhancement, loan to value, credit rating maturity; seven marketability specifications including transaction size, lead managers quantity, tranche size, tranches quantity, credit rating agencies quantity, whether the subject is hold or not and lastly category of interest rate and one general risk feature which is money risk (Vink and Thibeault, 2008). Regarding previous studies and based on the best of our knowledge, there is presently no research which analyzes the primary market spread determinants of the Malaysian securitization market.

The significance of the study is sufficiently noted on the three types of securitization, ABS, RMBS and CMBS which is yet to be investigated empirically. In addition, there is no experiential research analyzing the connection among primary market spread and leverage and liquidity as determinants of primary market spread in Malaysia. Prominently, a few is recognized regarding the places of both determinants in developing securitization framework in Malaysia on how these factors relate with spread which requires further study. In addition, the study extends further on the underlying theories and the models in terms of explaining those determinants of primary market spread studies. Particularly, this study aims to address the subsequent research questions:
1.4.1 Based on regression model by Vink (2008), what are the determinants of primary market spread which are suitable in order to develop an Asset Backed Securitization model in Malaysia?

1.4.2 Among those selected, what are the main determinants of primary market spread?

1.4.3 Has the framework or model been tested to validate determinant of primary market spread in Malaysia?

1.5 OBJECTIVES OF THE STUDY

This research aims to investigate the antecedents of primary market spread in developing securitization framework in Malaysia and how these factors incorporate in one model. Therefore, the study attempts to achieve the following research objectives:

1.5.1 To measure the variable of Leverage and Liquidity as determinants of the primary market spread
1.5.2 To test the significance of the final model of determinant of primary market spread in Malaysia.
1.5.3 To examine the effect on internal determinants (firm specific) when inflation and interest rate (external) are present.

By attaining the stated objectives, it is predictable that this research will assist to contribute to novel acquaintance connecting to causal issue to determinants of primary market spread. Consequently, it is planned that the results of this research will thus present useful information to companies issuing securitization. It is aligned with originator with precious data on issues in the shape of a model that can indicate a forecast of determinants of primary market spread in Malaysia.