UNIVERSITI PUTRA MALAYSIA

DETERMINANTS OF DEBT MATURITY STRUCTURE FOR PUBLIC AND PRIVATE DEBT SECURITIES IN MALAYSIA AND SINGAPORE

NOOR MAIMUN BINTI ABDUL WAHAB

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By

NOOR MAIMUN BINTI ABDUL WAHAB

Thesis Submitted to the Putra Business School in Fulfilment of the Requirements for the Degree of Doctor of Philosophy

January 2019

DEDICATION

This thesis is a dedication to my late father, Abdul Wahab bin Abdul Rahman, his never ending confidence in my academic ability and continuous support have been a great motivator to the completion and success of this thesis. Your prayer has strengthened this soul to make this thesis a success. Your passing truly means a loss, but your love will forever stay and cherished for you will always be in my prayer

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Doctor of Philosophy

DETERMINANTS OF DEBT MATURITY STRUCTURE FOR PUBLIC AND PRIVATE DEBT SECURITIES IN MALAYSIA AND SINGAPORE

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January 2019

Chair : Prof. Dr Annuar bin Md Nassir, PhD
Faculty : Putra Business School

This thesis attempts to meet four main objectives. Firstly, to examine the firm and country specific as determinants for debt maturity structure. Secondly, to examine worldwide governance indicators as new potential determinants for debt maturity structure. Thirdly, to examine factors that caused decision on debt maturity structure to be different across time and lastly, to examine determinants for adjustment of speed for debt maturity structure. All the aforesaid objectives are examined specifically on public and private debt securities in Malaysia and Singapore. The data for all the variables used in this study are collected from World Bank, Thomson Reuters Datastream, Bank Negara Malaysia, and Monetary Authority of Singapore over the period of 1996 to 2016. Altogether data of this study consist of 1,157 listed firms in Malaysia and Singapore. Two-step system generalized method of moment are employed in this study so that the four main objectives of this study are achieved.

This study shows that magnitude of determinants which are examined in this study pertaining to issue in debt maturity structure such as determinants for debt maturity structure, factors that influence decision for debt maturity structure to be different across time, and determinants for adjustment of speed are contingent across type of debt securities issued by firms and also country that issued type of debt securities. This study finds that credit ratings is better in explaining determinants for debt maturity structure of public and private debt securities in Singapore whilst worldwide governance indicators are more robust in explaining determinants for debt maturity structure of public and private debt securities in Malaysia as compared to Singapore. In addition, government debt maturity structure plays vital role in affecting decision for debt maturity structure of public and private debt in both countries to be different across time. The worldwide governance indicators, firm and country specific factors are better in affecting adjustment of speed for debt maturity structure of public debt in Malaysia.

In short, it is crucial for the firms to maintain a good quality of their firms and the government to ensure the development of debt market, increase the benefit of corporate taxation and maintain the effectiveness of the country governance so that it can assist firms in controlling and stimulating the demand for long-term public and private debt, planning in finding the right time to issue long-term public and private debt securities and quickly adjust their current public and private debt securities in achieving its optimal public and private debt maturity structure. Having long-term public and private debt securities as sources of financing create an opportunity for firms to expand their business worldwide, provide firms with conducive and healthy business environment and in due time contributes to realisation of good economic growth and steadiness in the firms' business cycle.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

FAKTOR PENENTUAN KEMATANGAN HUTANG PUBLIK DAN PERIBADI DI MALAYSIA DAN SINGAPURA

Oleh

NOOR MAIMUN BINTI ABDUL WAHAB
Januari 2019

Pengerusi : Prof. Dr Annuar bin Md Nassir, PhD
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Tesis ini cuba untuk memenuhi empat objektif utama. Pertama, meneliti faktor khusus seperti firma dan negara sebagai penentu struktur kematangan hutang. Kedua, meneliti penunjuk tadbir di seluruh dunia sebagai penentu potensi baru untuk struktur kematangan hutang. Ketiga, untuk mengkaji faktor-faktor yang menyebabkan keputusan tentang struktur kematangan hutang berbeza dari masa ke masa dan terakhir, untuk meneliti penentu untuk penyesuaian laju struktur kematangan hutang. Semua objektif yang disebutkan di atas dikaji secara khusus terhadap hutang publik dan peribadi di Malaysia dan Singapura. Data bagi semua pembolehubah yang digunakan dalam kajian ini diperolehi dari Bank Dunia, Thomson Reuters Datastream, Bank Negara Malaysia dan Pihak Berkuasa Monetari Singapura sepanjang tempoh 1996 hingga 2016. Secara keseluruhan data kajian ini terdiri daripada 1,157 firma yang disenaraikan di Malaysia dan Singapura. Kaedah momen umum sistem dua langkah digunakan dalam kajian ini supaya empat objektif utama kajian ini dapat dicapai.

Kajian ini mendapati bahawa magnitud penentu yang dikaji dalam kajian ini yang berkaitan dengan penerbitan dalam struktur kematangan hutang seperti penentu struktur kematangan hutang, faktor yang mempengaruhi keputusan untuk struktur kematangan hutang berbeza dari semasa ke semasa, dan penentu untuk kelajuan firma mencapai struktur kematangan hutang yang optimum adalah bergantung kepada jenis hutang yang dikeluarkan oleh firma dan juga negara yang mengeluarkan hutang tersebut. Kajian ini mendapati bahawa penarafan kredit adalah lebih baik dalam menjelaskan struktur kematangan hutang awam dan swasta di Singapura manakala penunjuk tadbir urus di seluruh dunia lebih teguh dalam menjelaskan penentu bagi struktur kematangan hutang awam dan swasta di Malaysia berbanding dengan Singapura. Di samping itu, struktur kematangan hutang kerajaan memainkan peranan penting dalam mempengaruhi keputusan untuk struktur kematangan hutang awam dan swasta di kedua-dua negara menjadi berbeza dari masa ke masa. Penunjuk tadbir urus

di seluruh dunia, faktor khusus bagi firma dan negara adalah lebih baik dalam mempengaruhi pelarasan kelajuan struktur hutang awam di Malaysia.

Singkatnya, adalah penting bagi firma untuk mengekalkan kualiti firma mereka dan bagi kerajaan untuk memastikan pembangunan pasaran hutang, meningkatkan faedah cukai korporat dan mengekalkan keberkesanan tadbir urus negara supaya dapat membantu firma mengendalikan dan merangsang permintaan hutang awam dan persendirian jangka panjang, merancang untuk mencari masa yang tepat untuk menerbitkan sekuriti hutang awam dan peribadi jangka panjang dan dengan cepat menyesuaikan sekuriti hutang awam dan peribadi semasa mereka dalam mencapai struktur kematangan hutang awam dan peribadi yang optimum. Mempunyai sekuriti hutang awam dan peribadi jangka panjang sebagai sumber pembiayaan dapat mewujudkan peluang bagi firma mengembangkan perniagaan mereka di seluruh dunia, menyediakan firma dengan persekitaran perniagaan yang kondusif dan sihat dan pada masa yang sama dapat menyumbang kepada merealisasikan pertumbuhan ekonomi yang baik dan kesinambungan dalam kitaran perniagaan firma.

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To my beloved mother, sisters and parents in laws thanks for the encouragement and support given along the process of completing this thesis. I am also grateful to my husband, Mohd Ariff bin Ab Rahman and my two lovely daughters, Dhia Damia Afrina and Dhia Ayra Marissa for supporting me spiritually and understanding about the time that I really need in completing this thesis and make my dream come true. May Allah bless you all. Wassaalam and Thank you

I certify that a Thesis Examination Committee has met on 3 January 2019 to conduct the final examination of Noor Maimun bt Abdul Wahab on her thesis entitled "Determinants of Debt Maturity Structure for Public and Private Debt Securities in Malaysia and Singapore" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the degree of Doctor of Philosophy.

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Declaration by graduate student

I hereby confirm that:

- this thesis is my original work;
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LIST OF ABBREVIATIONS

AI	Asymmetric information
S&L	Signalling and liquidity
T	Trade off
LDM	Lagged debt maturity
MT	Market timing
GF	Gap-filling theory
GMM	Generalized method of moment
DM	Debt maturity structure
WGI	Worldwide governance indicator
AR	Autocorrelation
ODP	Outstanding domestic public debt securities
ODPR	Outstanding domestic private debt securities
ZSc	Z-Score
ETR	Effective tax rate
TSIR	Term structure of interest rates
IRV	Interest rates volatility
COC	Control of corruption
GE	Government effectiveness
PSAV	Political stability and absence of violence
RQ	Regulatory quality
RL	Rule of law
VA	Voice and accountability
GDMS	Government debt maturity structure
EBR	Excess bond return
IR	Interest rates
INF	Inflation
PDS	Public debt securities
PRDS	Private debt securities
VIF	Variance inflation factors
GDP	Gross domestic product
OLS	Ordinary least square
GLS	Generalized least square

CHAPTER 1

INTRODUCTION

1.0 BACKGROUND OF THE ISSUE

Loan from the bank becomes one of the contributing factor that lead to the 1997 Asian financial crisis (Corsetti, Pesenti and Roubini, 1999). Before 1997 Asian financial crisis hit Asian countries like Malaysia, Singapore, Thailand, Indonesia, Hong Kong, Korea, China and Taiwan, most firms in these countries rely more on foreign debt issued by bank as their main source of financing (Shirai, 2001). Additionally, with the lower interest rate during that time make debt become cheaper. Hence, this favourable condition offers an opportunity for bank in Asian countries to borrow more externally and aggressively in giving out foreign debt as loan to the firms at a cheaper cost so that they can have extra fund to expand their businesses.

During the year 1995, when domestic currency of Asian countries depreciated, thus, banks in Asian countries that pegged their currencies to the US dollars need to spend more of their domestic currencies in order to pay their debt. Furthermore, a number of firms in Malaysia and Singapore where their cash flows were in Ringgit Malaysia and Singapore Dollars undergo bankruptcy due to the failure in paying back their loans (Zakaria, et. al, 2010). Since then, the government of both countries have taken aggressive action in promoting the development of bond market to provide an alternative source of financing for the firms (Shirai, 2001). Kuroda and Kawai (2004) confirms that development of local bond market to overcome two problems namely currency mismatches and maturity mismatches.

Most of previous empirical evidence pertaining to the issue on debt maturity structure such as determinant for debt maturity structure, factors affecting variation on decision for debt maturity structure across time and determinant for adjustment of speed in debt maturity structure focus mainly on one type of debt securities either public or private debt securities. Johnson (1997) affirms that most theoretical models pertaining to the type of debt structures assume that both public and private debt securities are identical. Moreover, the aforementioned author also asserts that most of the theoretical models do not allow firms to utilize both public and private debt as their source of financing. In addition, copious prior empirical studies on the choice of debt securities separate the model for public and private debt securities. Yet, finding by Johnson (1997) weaken the assumption of the previous researchers since the author found that 73 percent of the sample firms borrow both public and private debt securities. Additionally, according to Goodell and Goyal (2018) both public and private debt are the two main choice of financing available for nations globally. Types of debt securities issued by firms is one of the main factor that affect decision in corporate finance (Gomes and Phillips, 2012). The issue of debt maturity structure develops into one of the main concern amongst borrowers in Asian

countries as it affects the types of financing preferences for firms (Goswami and Sharma, 2011).

According to Goodell and Goyal (2018) both public and private debt are the two main choice of financing available for nations globally. This can be further seen from the total outstanding domestic private debt securities percentage of GDP in Malaysia and Singapore for the year 2015 are 134.1 percent and 120.4 percent respectively as compared to the year 2015 with 134.8 percent for Malaysia and 117.9 percent for Singapore. Meanwhile, total outstanding domestic public debt securities percentage of GDP in Malaysia and Singapore for the year 2015 are 45.72 percent and 25.48 percent respectively as compared to the year 2014 with 45.51 percent for Malaysia and 24.16 percent for Singapore.

In essence, determinants for debt maturity structure vary in accordance with the firm's specific characteristics, country's specific characteristics and industry's specific factors (Antoniou, Guney and Paudyal, 2006). Thus, examining the factors that affect debt maturity structure is imperative for each country since positive economic growth will preferably assist the country to attain higher standards of living, reduce government budget deficit and decrease unemployment level. Apart from that, in examine on the firm and country specific factor as determinant for debt maturity structure such as breadth of debt market previous researchers utilize two common measurement for instance size of the banking institutions and equity market and less focus is given on size of the bond market particularly in Asian. This is due to at the time when the researchers conduct their study, most of the firms in Asian countries relied heavily on the loan provided by bank and equity market and bond market in Asian countries is not well developed. Meanwhile, for credit ratings, Graham and Harvey (2001) assert that good credit rating is amongst the most important factor that influences the debt policy. Kisgen (2009) and Mittoo and Kisgen (2010) state that downgrade of credit rating affects the firm's capital structure specifically the debt since the companies tend to reduce amount of the debt utilize and the size of the debt. Diamond (1991) predicts the non-monotonic relationship between credit ratings and debt maturity structure. In which firms with high credit ratings demand to use short-term debt whilst firms with lower credit ratings demand to use more long-term debt. Furthermore, the inconsistent findings reported on the relationship between credit ratings and debt maturity structure by previous researchers motivates this study to further examine on the effect of credit ratings towards debt maturity structure. Apart from that, examine the impact of corporate taxation towards debt maturity structure also received great attention by prior researchers since Antoniou, Guney and Paudyal (2006) proxy that is normally use in examining the effect of corporate taxation on debt maturity structure such as effective tax rate is country dependent and term structure of interest rates is period dependent. This indicates that each country has a different corporate taxation system and the way term structure of interest rates affect debt maturity structure varies according to the sample period choose by the researchers. Furthermore, there are inconsistent findings amongst prior studies on the effect of corporate taxation towards debt maturity structure.

Besides, worldwide governance indicators as determining factor that affect debt maturity structure also become an interest of this study as Nguyen and Phan (2017) asserts that country with low institutional quality does not only give significant impact towards debt maturity structure but also other debt characteristics such as types of debt issuance, cost of debt, source of debt financing (internal or external debt) and number of restrictive debt covenants. in emphasizing on the abovementioned relationship, preceding empirical work, merely stress on developed countries, developing countries and multi-countries comparison. Moreover, in examine the relationship between worldwide governance indicators and debt maturity structure; previous researchers do not clearly specify types of debt securities that are utilized in their studies. Additionally, previous researchers combine both Malaysia and Singapore with other developed and developing countries and do a multi-country comparison. However, this study merely emphasizes on two countries namely Malaysia and Singapore since Fan, Wei and Xu (2011) suggests that in examine the influence of institutional quality towards variety of issues in corporate finance (for instance in this paper debt maturity structure); focused-country studies is superior as compared to multi-countries. This is because focused-country studies can be a better way for researchers to control the data on worldwide governance indicators while constantly holding other factors which cannot be executed using cross-country comparison studies. Besides, different countries are varied in terms of its legal systems and level of investor protection (Alves and Ferreira, 2011). Antoniou, Guney and Paudyal (2006); Kirch and Terra (2012) and Fan, Titman and Twite (2012) affirm that different investor protection caused firms of each country tend to have different debt maturity structure.

The nature of debt maturity structure is that it does not only varies across countries and firms but also throughout time (Agca, De Nicolo and Detragiache, 2015; Julio, Kim and Weisbach, 2007; Custodio, Ferreira and Laureano, 2013). Five domineering factors that affect trend in demand for short or long-term debt across time are interest rates, excess bond return, inflation, term spread and government debt maturity structure (Graham and Harvey, 2001; Kaya, 2013; Baker, Greenwood and Wugler, 2013; Greenwood Hanson and Stein, 2010; Ferreira and Laureano, 2013; Badoer and James, 2016; Fan, Titman and Twite, 2012). However, the results reported by previous researchers are contradicted with the market timing and gap-filling theory which support the relationship between factors that affect the variation on decision for debt maturity structure across time and debt maturity structure. Additionally, in examine on issue pertaining to factors affecting variation in decision for debt maturity structure across time most of the previous researchers emphasize on developed country such as US and Canada and developing country like Tunisia and France. Except for study by Fan, Titman and Twite (2012) researchers examine on the aforementioned issue by including Asian countries like Malaysia and Singapore as part of the sample country in their study. Instead of providing further justification on why they report such result for Malaysia and Singapore yet, the abovementioned researchers merely report the result for Malaysia, Singapore and other Asian countries. Furthermore, Witmer (2009) consequently suggested that further investigation was essential using other countries' denominated debt and other interest rates measurement to examine their impact towards debt maturity. Apart from that, prior researchers also merely emphasize on single type

of debt securities or do not clearly state type of debt securities use in their study in examine on factors affecting variation for debt maturity structure across time.

Currently, researchers have started to change their views from investigating the determinants for debt maturity structure to determinants of adjustment of speed in debt maturity. When firms deviate from their optimal debt maturity structure that is when speed of adjustment takes place (Lemma and Negash, 2012). The speed of adjustment exists in Asian countries like Malaysia and Singapore, and the rate at which Malaysian firms adjust towards achieving their optimal debt maturity structure are slower as compared to firms in developed country like Singapore (Deesomsak, Paudyal and Pescetto, 2009). However, less emphasize is given by previous researchers on the determinant for adjustment of speed in debt maturity structure particularly in Asian countries like Malaysia and Singapore since previous researchers mainly focus on developed and developing countries like Ukraine, Africa and Spain when they examine on this particular issue (Stephen, Talavera and Tsapin, 2011; Lemma and Negash, 2013; Lopez-Gracia and Maestra-Barbera, 2011). In addition, previous researchers also do not clearly state type of debt securities that are utilized when they examine on determinant for adjustment of speed in debt maturity structure.

Listed firms in Malaysia and Singapore are utilized as unit of analysis in this thesis. This thesis emphasizes on two countries in Asia namely Malaysia and Singapore since, both of this country share almost the same characteristics such as multiracial, multireligious, multicultural and objective of the monetarist authorities of these two countries are almost the same which is to ensure the equality of the economic activities amongst all the races. Moreover, debt market for these two countries are also small although Singapore is considered as one of the developed country and most firms in both of these two countries depend heavily on loan from banking institutions. Furthermore, development of bond market in Malaysia and Singapore start after 1997 Asian financial crisis. Since this study also focus on the effect of worldwide governance indicator towards debt maturity structure, hence, it also become one of the reason for this study to include both Malaysia and Singapore as the sample countries. Park (2017) asserts that Malaysia and Singapore are considered as countries with better and strong country governance level as compared to the other Asian countries like Korea, China and Thailand (Park, 2017).

Based on the discussion above, thus, this study fills the gap by including two Asian countries like Malaysia and Singapore using different variables in accomplishing its objectives. Accordingly, this study undertakes to examine and compare on the determinants of debt maturity structure, factors affecting decision in debt maturity structure to be varied across time and determinants for adjustment of speed in debt maturity structure for both public and private debt securities in Malaysia and Singapore.

This thesis is divided into several parts initially with the background of the issue and the latter followed by justification of choosing Malaysia and Singapore as

sample countries in this study, motivation of the study and problem definition, research objectives, research questions and contribution of the study to the body of knowledge.

1.1 JUSTIFICATION FOR CHOOSING MALAYSIA AND SINGAPORE

Prior to ensuing to another part of this thesis, it is crucial to justify the reasons for choosing Malaysia and Singapore as part of the sample of this study. Malaysia and Singapore are selected as sample in this study are due to several reasons.

Firstly, even though Singapore is considered as one of the developed country but in term of size of the debt market for both Malaysia and Singapore are still considered small as compared to other developed countries like US, UK and Japan (Arner et. al, 2006). This is further supported with the percentage of private sector bond to GDP in Malaysia and Singapore for the year 2016 are 123.91 percent and 132.91 percent respectively as compared to US and Japan with 161.71 percent and 192.17 percent [1]respectively. Apart from that, prior to the year 1997, the year when Asian economic crisis resulted, most of the firms in Malaysia and Singapore either large or small depend on loan from banks as their source of financing, be it for the purpose of working capital or investment related purpose (Goswami and Sharma, 2011). This is further demonstrated by the domestic credit to private sector by banks percentage of GDP in Malaysia and Singapore for the year 2016 report the highest value with 123.86 percent and 132.91 percent respectively as compared to Japan and US with 102.98 percent and 52.99 percent[2] respectively. This shows that private debt financing plays an important role for firms in Malaysia and Singapore.

Secondly, this thesis emphasizes on Malaysia and Singapore as the development of bond market in Malaysia and Singapore start after 1997 Asian financial crisis. During Asian economic crisis in the year 1997, World Bank (2017) reported that ratio for domestic credit to private sector (% of GDP) for Malaysia and Singapore was 149% and 96.4% respectively. Meanwhile, ratio for bank deposit to GDP at this time was 72.20% and 102.06% for Singapore and Malaysia respectively, causing the banking institutions in these two countries to experience shortage of fund in giving out more loans to corporations. As a solution, the Government of Malaysia and the Monetary Authority of Singapore (MAS) took effective action by promoting corporate bond market as an alternative source of financing for firms in both countries. Moreover, bond market in Malaysia and Singapore is progressing at the developing stage with the percentage of bond market to GDP for Malaysia and Singapore was 103.1% and

[1] https://data.worldbank.org/indicator/FS.AST.PRVT.GD.ZS

[2] Asian development bank

81.9%[3] respectively as compared to the other Asian bond market such as South Korea, Thailand, Hong Kong, China, Vietnam, India and China.

Thirdly, albeit Singapore was separated from Malaysia still both of these countries' economies are considered small yet in term of their economic growth both of these countries have high economic growth (Shimada and Yang, 2011). This is further proved in the year 2016 gross export per GDP for Malaysia and Singapore are 67.79 and 168.19[4] percent respectively. Additionally, both Malaysia and Singapore share the same common characteristics which are multiracial (Malay, Chinese and Indian) with speciality in term of their diversity in races, religions and culture. Monetarist authorities for both countries have the same objective in ensuring the equality of economic activities amongst all races by eradicating the dominance of economy by one race (Chee, 1974). This shows that both Malaysia and Singapore are a compatible sample size to be tested in this study.

Fourthly, this also emphasize on two east Asian countries namely Malaysia and Singapore since this study examine on the relationship amongst element in worldwide governance indicators or also known as country governance indicators and debt maturity structure. Both of these countries are considered as countries with better and strong country governance level as compared to the other Asian countries like Korea, China and Thailand (Park, 2017). Besides, previous researchers combine both Malaysia and Singapore with other developed and developing countries and do a multi-country comparison. However, this study merely emphasizes on two countries namely Malaysia and Singapore since Fan, Wei and Xu (2011) suggests that in examine the influence of institutional quality towards variety of issues in corporate finance (for instance in this paper debt maturity structure); focused-country studies is superior as compared to multi-countries. This is because focused-country studies can be a better way for researchers to control the data on worldwide governance indicators while constantly holding other factors which cannot be executed using cross-country comparison studies. Besides, different countries are varied in terms of its legal systems and level of investor protection (Alves and Ferreira, 2011). Antoniou, Guney and Paudyal (2006); Kirch and Terra (2012) and Fan, Titman and Twite (2012) affirm that different investor protection caused firms of each country tend to have different debt maturity structure.

Lastly, prior empirical studies on determinants for debt maturity structure merely examined the common factors by combining or grouping the data from Malaysia and Singapore with other developed countries, developing countries, Asia Pacific region and emerging economies countries (Fan, Titman, and Twite, 2012; Deesomsak, Paudyal and Pescetto, 2009; Zheng, et. al, 2012). Nevertheless,

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[3] https://asianbondsonline.adb.org/china/data/bondmarket.php?code=LCY_in_GDP_Local

[4] https://data.worldbank.org/indicator/ne.exp.gnfs.zs

previous researchers only report the result for Malaysia and Singapore without provide further justification on why they get such result.

1.2 Overview of the Malaysian and Singaporean financial market structures

Financial markets in Southeast Asian countries like Malaysia and Singapore are made up of three main components, they are banking institutions, bond and equity markets. Before 1997 Asian financial crisis happen most of the firms in Asian countries particularly in Malaysia and Singapore relied heavily on loan from banking institutions as their source of financing. This is further substantiated by Shirai (2001) that firms in Thailand, Malaysia, Singapore, Indonesia, Korea, China, Hong Kong and Taiwan depend on foreign debt issued by banking institutions as their main source of financing since the decline in interest rates during that time creates an opportunity for firms in these countries to lend at a cheaper cost. During the year 1995, when domestic currency of Asian countries depreciated, thus, banks in Asian countries that pegged their currencies to the US dollars need to spend more of their domestic currencies in order to pay their debt. Furthermore, a number of firms in Malaysia and Singapore where their cash flows were in Ringgit Malaysia and Singapore Dollars undergo bankruptcy due to the failure in paying back their loans (Zakaria, et. al, 2010). Since then, the government of both countries have taken aggressive action in promoting the development of bond market to provide an alternative source of financing for the firms (Shirai, 2001). However, according to Shimada and Yang (2011) in general development of bond market in Southeast Asian countries still consider slow as compared to the other developed countries such as United States. This is further proved by the total bond outstanding in US dollar (USD) for Malaysia and Singapore are 508.95 billion and 412.6 billion[5] respectively as compared to advanced country like US which is 8688.5 billion[6]. This section will discuss on the development of financial sector in both Malaysia and Singapore.

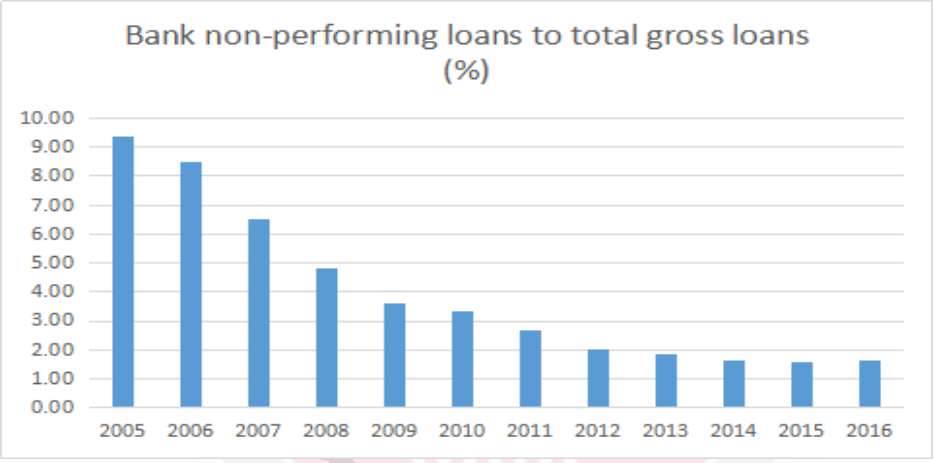
i. Malaysia

In Malaysia, bank plays an important role as it dominates almost half of the whole financial sector size which comprise of 50.6 percent. Currently, commercial banks are reduced to 8 from 22 banks (in the year 1986) whilst merchant banks, securities firms and the discontinued house are joined together as investment banks. Some of the policies such as issuance of new license to commercial banks and financial liberalization taken by the government of Malaysia in ensuring the development of banking institutions by encouraging the involvement of commercial banks in international trade activities and increasing their investment flows. Apart from that, government also maintain the development of financial institutions (DFIs) in ensuring transformation of the industry and providing fund for the development of SMEs, infrastructure projects, consumption credit and export industries. Additionally, both Kuala Lumpur Stock

[5] https://asianbondsonline.adb.org/data-portal/
[6] http://www.sifma.org/legal

Exchange (KLSE) and Security Commission (SC) tighten the rules and regulations pertaining to financial sector such as provides requirement and guidelines relating to disclosure-based regulation (DBR). Liberalization and deregulation, expansion of financial sector and capacity building of domestic institutions are the three key transformation strategy employed by the government in ensuring the development of financial sector in Malaysia. As a consequence, based on the report by IMF, liquidity and asset quality of the banking sector in Malaysia are improved. This is substantiated by the data provided by Bank Negara Malaysia percentage of non-performing loans for bank in Malaysia for period of 2005 until 2016 are reduced from 9.39 percent to 1.55 percent.

Figure 1.1: Percentage of bank non-performing loans to gross loans in Malaysia for the period of year 2005 to 2016



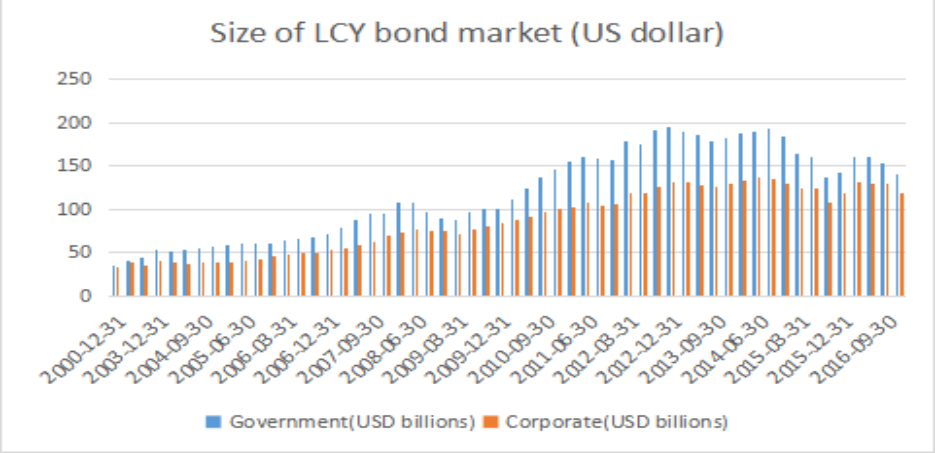
Source: World Bank

Meanwhile, bond market in Malaysia starts to developed after 1997 Asian financial crisis. Some of the initiatives implement by the government in ensuring the development of bond market in Malaysia for instance increase the issuance of bonds, notes and sukuk through introduction of disclosure-based guidelines.

Moreover, transparency of bond pricing, transparency of foreign exchange administration framework and improvement in rating process attract many issuers such as foreign multinational companies, government and agencies. Currently, Malaysian bond market become the third largest bond market in Asia in terms of its GDP percentage. This is further substantiated with total bond outstanding in US dollar for Malaysia for the year 2016 is US$ 1123.81 billion and percentage of size of local currency yield per GDP is 387.03 percent as displayed in figure 1.2 and 1.3 below. Generally, in Malaysia, bond market constitutes of Islamic and conventional bond. Financial institutions are the

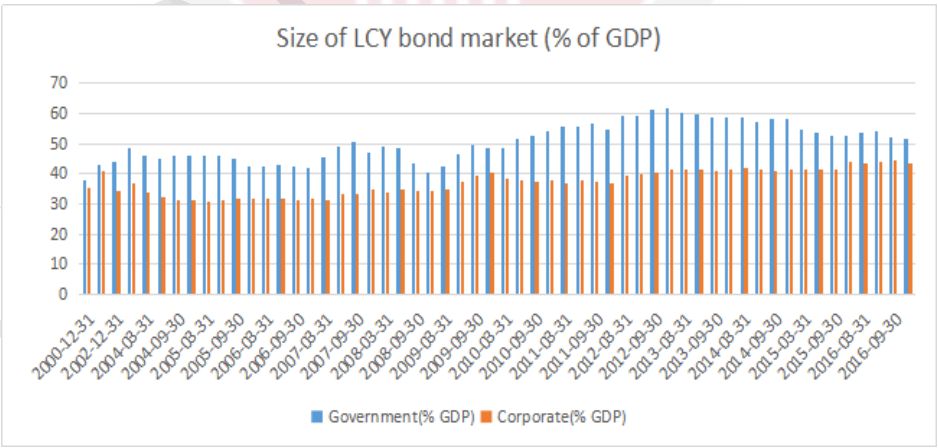
largest issuers in the bond market and bond is utilized by various business sectors in Malaysia as a source of financing in order to expand their business, maximize shareholders wealth and create healthy and conducive business environment.

Figure 1.2: Total bond outstanding in US dollar in Malaysia for the period of year 2000 until 2016



Source: Asian bond online

Figure 1.3: percentage of size of LCY bond market per GDP in Malaysia for the period of year 2000 to 2016

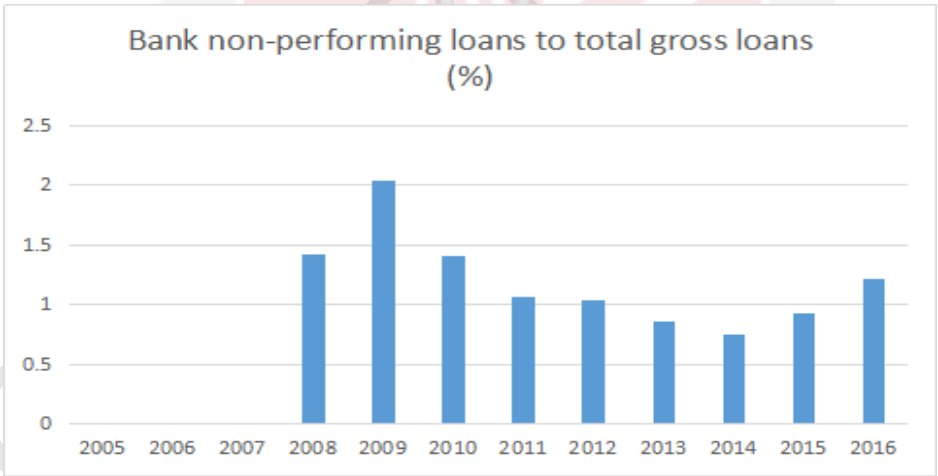


Source: Asian bond online

ii. Singapore

Financial markets in Singapore which constitutes of capital market and banking institutions known as regional financial centre as this is the place for depositors, borrowers and investors meet up in order to meet their objectives for instance to save money, borrow money in the form of bank loan, issuing bond or shares. Altogether, there are 580 local and foreign financial institutions in Singapore which offers variety of financial products and services. Product and services offered by banking institutions in Singapore is considered complete as compared to the other Asian countries. Since 1960s until present, financial liberalization and financial reforms are the two common activities perform by Singaporean government in order to ensure better development of financial market in Singapore. Currently, Singapore is known as one of the worlds leading financial centre by becoming as financial intermediaries within Southeast Asian region that not only assist for the better development of its own country economy and also economy in Southeast Asia. Banking institutions in Singapore still leads the other segment in financial sector such as equity and bond market in terms of its liquidity, soundness and high profitability as 85 percent of total financial sector assets belong to banking institutions. Furthermore, currently the non-performing loan of the banks in Singapore reduce from 1.43 percent in the year 2008 to 1.22 percent in the year 2016 (figure 1.4 below)

Figure 1.4: Percentage of bank non-performing loans to total gross loans in Singapore for the period of year 2005 to 2016



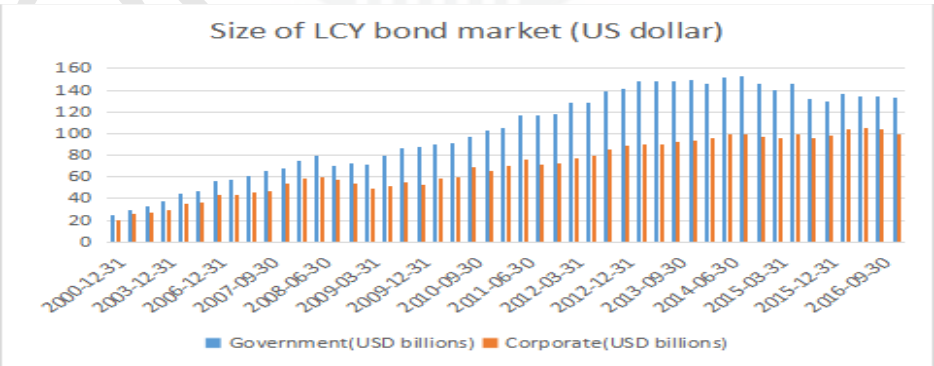
Source: World Bank

Although, Singapore experiences financial difficulties during Asian financial but it is still considered as the least affected country amongst the other Asian countries. Instead of asking for help from developed countries in solving the country financial difficulties like other Asian countries do in order to solve financial problem, Singaporean government take an initiative by accelerating

financial liberalization activity in the country so that Singapore can create a strong financial sector that are better than the financial sector in the developed country. Financial liberalization activity helps Singaporean government to attract more foreign investors involve in Singaporean financial sector and at the same time to strengthen banking institutions in Singapore. Improving in rules and regulations, financial liberalization and fiscal incentives attract more foreign financial institutions to open up their business in providing their facilities to the firms, individual and government that need their product and facility. Since, there is an increased number of foreign bank open up their business in Singapore, thus it has motivated local bank to always keep on updating their products and services so that they can compete with foreign bank in providing better services to the customer. Currently, Singapore has 123 commercial banks (117 foreign banks and 6 local banks).

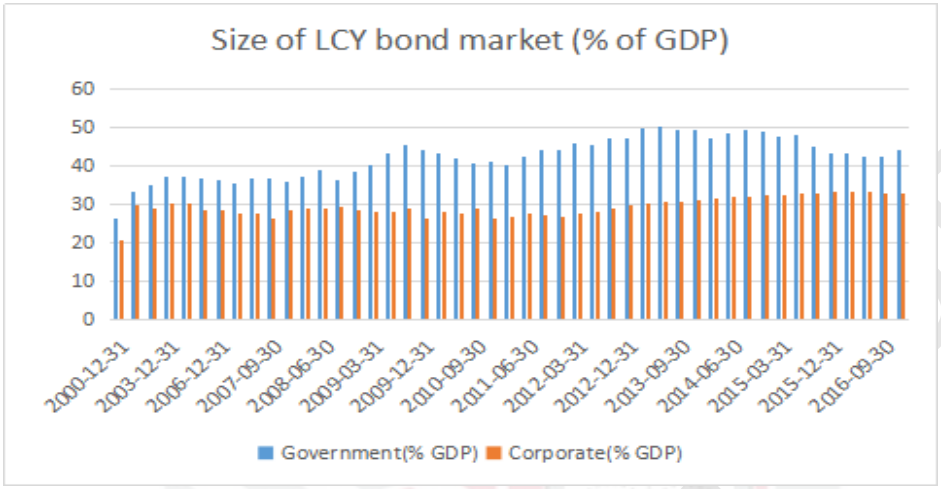
Same as Malaysia, development of bond market in Singapore starts after 1997 Asian financial crisis. Hew (2002) states that after the Asian financial crisis, Singaporean government take an effective action by developing the bond market in Singapore. Bond become as another alternative source of financing in order to reduce the reliance of firms mainly on loans from the banks in order to finance their long-term projects. Some of the action taken by Singaporean government in promoting the development of bond market in Singapore are to extend the maturity of government bond from 10-year government bond to 15-year government bond. Additionally, Increase the size of bond market from US$ 938.36 billion in the year 2015 to US$ 951.29 billion in the year 2016 to increase the liquidity of bond market (see figure 1.5 below). Further, provide financial flexibility to the non-resident to attract them to invest in long-term assets in Singapore. Apart from that, investors that issue bond are exempted from tax. Currently, bond market in Singapore is consider as the fourth largest debt market in Asia after Japan, South Korea and Malaysia with percentage of bond market over percentage of GDP in Dec 2016 is 94.89 percent (figure 1.6 below).

Figure 1.5: Size of LCY bond market in US dollar of Singapore for the period of year 2000 until 2016



Source: Asian bond online

Figure 1.6: Percentage of size of LCY bond market per GDP in Singapore for the period of year 2000 to 2016



Source: Asian bond online

1.3 MOTIVATION OF THE STUDY AND PROBLEM DEFINITION

Previous researchers had conducted series of empirical studies which investigated matters relevant to maturity structure of debt namely determinant for debt maturity structure, factors affecting variation on decision for debt maturity structure across time and determinant for adjustment of speed in debt maturity structure. In examine three important issues in debt maturity structure as mentioned above most of the previous researchers emphasized mainly on one type of debt either public or private debt securities (Agca, De Nicolo & Detragiache, 2015; Fan, Titman & Twite, 2012; Turk Ariss, 2016; Kirch & Terra, 2012; Martins, Schiehll & Terra, 2016; Orman & Koksal, 2017; Etudaiye-Muhtar, Ahmad & Matemilola, 2017; Baker, Greenwood & Wugler, 2013; Ferreira & Laureano, 2013; Badoer & James, 2016; Lopez-Gracia & Maestra-Barbera (2011). This is due to the reason that according to Johnson (1997) previous theoretical models pertaining to type of debt structures assume that both public and private debt securities are identical. Moreover, the aforementioned author also states that most of the theoretical models do not allow firms to utilize both public and private debt securities as their source of financing and previous researchers also either eliminate private debt securities or combine it together with the public debt. However, finding by Johnson (1997) and Nakamura (1993) weaken the above assumption, since the authors report that both public and private debt securities are distinct and firms utilize both type of debt securities as their source of financing.

There are three main issues in debt maturity structure become an interest of this study, they are determinant for debt maturity structure, factors affecting variation on decision for debt maturity structure across time and determinant for

adjustment of speed in debt maturity structure. This section intends to discuss them one by one.

In examine on the determinant for debt maturity structure most of the previous researchers emphasize on six specific common determinants they are firm specific level, country specific level, economic level, institutional specific level, corporate governance issues and industry specific level determinants. Several firm specific level determinants that have been investigated are asymmetric information, asset variance, leverage, firm profitability, firm age, firm size, growth opportunities, firm quality, collateral, firm ownership structure, ultimate ownership structure, need for external financing, syndicate structure, cash holdings, asset maturity, dividend payment, firm creditworthiness, access to bond market, asset saleability, earnings volatility, financial constraints, corporate tax rate, credit spread, firm location, debt covenants, financial distress, product characteristics, managerial ability, firm's cash flow, systematic risk, information sharing among creditors, firm rating, internal board monitoring, abnormal earnings and tangibility, agency conflict, accruals based earning management, tangible assets, crony capital, ultimate controlling shareholders, management overconfidence, types of ownership control, early refinancing activities and credit information quality (Kirch & Terra, 2012; Costa, Laureano & Laureano, 2014; Wang, Sun & Lv, 2010; Saona & Vallelado, 2014; Zhou, Wang & Ding, 2014; Chong, Hwang & Kim, 2015; Orman & Koksal, 2015; Lemma & Negash, 2012).

Subsequently, country specific characteristics that have been studied are government intervention, financial globalization, institution and banking structure, national culture, financial market development, borrowing cost, credit market deregulation, financial openness, breadth of financial market, accounting standards, labour protection, country's legal and tax system, protection of creditor's right, bank concentration, legal enforcement, investor protection law, availability of foreign direct investment, European integration, International Monetary Fund's interventions, protection of property rights and weight of bank in the economy (Zheng et. al, 2012; Kirch & Terra, 2012; Agca, De Nicolo, & Detragiache, 2015; Belkhir, Ben-Nasr & Boubaker, 2015; Antoniou et. al, 2003; Gonzalez-Fernandez & Gonzalez-Velasco, 2014).

In addition, economic and institutional specific level characteristics that have been investigated are economic development level, money supply, macroeconomic volatility, inefficient bureaucracy in foreign countries, inflation, interest rate liberalization, growth rate of gross domestic product (GDP), size of banking sector, creditor rights protection, shareholder rights protection, rule of law, corruption, country's legal system, preference of capital suppliers, accounting quality, role of sponsor, external management and macro tax burden (Costa, Laureano & Laureano, 2014; Lemma & Negash, 2013; Thottekat & Vij, 2013; Lemma & Negash, 2015). Lastly, some of the industry specific level determinants that have been investigated are type of industries, industry characteristic, industry concentration, industry peers and threat of entry (Chong, Hwang & Kim, 2015; Erhemjamts, Raman & Shahrur, 2010; Duong, Ngo & McGowan, 2015; Lemma & Negash, 2012).

Altogether, there have been seven main traditional theories applied in order to test the effect of six specific common determinants of the debt maturity structure. They are the trade-off theory, pecking order, tax minimization, information asymmetries, agency cost, signalling, and asset maturity. Currently, there are some authors who adopted other theories which are not commonly used in debt maturity structure such as reputation theory (Yang, Lu & Luo, 2014), rent-seeking theory (Yang, Lu & Luo, 2014), market timing theory (Rixtel, Romo & Yang, 2015), financial distress theory (Fung & Goodwin, 2013) and gap filling theory (Badoer & James, 2016). Albeit these new theories have been adopted in testing its implication on debt maturity structure, but the authors mentioned above tested these theories merely on a single type of debt which was the long-term debt except for financial distress theory which was tested on determinants for short-term debt in US. Furthermore, the usage of traditional theories (such as signalling, liquidity, asymmetric information, agency theory, maturity matching and trade off theory) in explaining factors influencing maturity structure for debt are subjected to certain limitations which caused the researchers' results to be inconsistent and received greater criticism by a number of previous authors.

Previous authors tested the determinants for debt maturity structure according to different types of country's setting, firm's setting, industry's setting and debt's setting. Example of country's setting included single country like United States (Custodio, Ferreira & Laureano, 2013; Julio, Kim & Weisbach, 2007); South Africa, China, Turkey and Japan as well as multi country comprised of more than two countries (Fan, Titman & Twite, 2012); developed countries (Fan, Titman & Twite, 2012); less developed countries and developing countries (Fan, Titman & Twite, 2012). Apart from that, previous studies also investigated on the effect of determinants of debt maturity structure according to industry setting such as entertainment, utilities, telecommunication and transportation, oil and gas, services, appliances, small medium enterprises industries and high technology industries (Custodio, Ferreira & Laureano, 2013; Ovtchinnikov, 2016; Erhemjamts, Raman & Shahrur, 2010; Iwaisako, 2012). Whilst the types of debt setting are divided into eight categories incorporating public debt securities (Ovtchinnikov, 2016), private debt securities, secured debt, unsecured debt, sovereign debt, bank debt (Hoffmann & González, 2005), short-term and long-term debt (Widawati, Sudarma & Rahayu, 2015). Meanwhile, there are several types of company setting namely public firms, private firms, regulated firms, deregulated firms, domestic firms, international firms, new listed firms, existing or old firms, family owned firms and non-family owned firms.

Based on the aforementioned explanation, even though firm and country specific factors for debt maturity structure such as breadth of the debt market, credit ratings and corporate taxation are examined extensively by previous researchers yet, it still become an interest of this study to further examine on these particular factors. This is due to the fact that, in examine the relationship between breadth of the debt market and debt maturity structure, most of the previous researchers utilize two common measurement for breadth of the debt market namely size of the banking institutions and size of equity market (Deesomsak, Paudyal and Pescetto, 2009; Awartani, et. al, 2015; Agca, De Nicolo and Detragiache, 2015). Less emphasize is given on the size of the bond market particularly in Asian

countries like Malaysia and Singapore (Deesomsak, Paudyal and Pescetto, 2009; Agca, De Nicolo and Detragiache, 2015). During the time when the researchers conduct their study, most firms in Asian countries like Malaysia and Singapore depend more on loan from banking institutions and equity market in getting source of financing and bond market is not well-developed (Chen, Ho and Yeo, 1999; Deesomsak, Paudyal and Pescetto, 2009). Moreover, although previous researchers do include Malaysia and Singapore as part of the sample countries in their study when they examine on the impact of breadth of the debt market towards debt maturity structure but previous researchers only display the result for these two countries without provide further justification on why they get such result. Additionally, there are inconsistent findings by prior researchers on how breadth of the debt market affects debt maturity structure. Apart from that, it still become an interest of this study to further examine on the relationship between credit ratings and debt maturity structure because according to economist magazine (2005) Moody's, Fitch and S&P's are amongst the most powerful voice in today's capital market. Moreover, Graham and Harvey (2001) asserts that good credit ratings is amongst the significant determinant that affect the debt policy and downgrade of credit ratings influence the firms' capital structure especially the debt as the companies tend to reduce amount and size of debt that the firm utilize (Kisgen, 2009 and Mittoo and Kisgen, 2010). There are also inconsistent findings by prior researchers on how credit ratings affect debt maturity structure. Corporate taxation is another particular factor that become an interest of this study to be examined. This is due to the reason that existence of corporate taxation caused long-term debt become one of the crucial element in capital structure as compared to equity since the usage of long-term debt affects the firms' value (Azura, 2014; Antwi, Mills and Zhao, 2012). In addition, common measurement used for corporate taxation such as effective tax rate is country dependent and term structure of interest rates is period dependent. In other words, each country is subject to different corporate taxation system and the way term structure of interest of interest rates affect debt maturity structure varies according to the sample period choose by the researchers. Furthermore, there are inconsistent findings amongst previous researchers on how corporate taxation affect debt maturity structure.

Another issue on determinant for debt maturity structure which receive great attention by previous researchers is the relationship amongst elements in worldwide governance indicators or also known as institutional quality with debt maturity structure. Quality of national institutions become one of the essential elements that plays an important role in affecting firm's financing decision and debt maturity structure (Kirch & Terra, 2012). Nguyen & Phan (2017) asserts that country with low institutional quality does not only give significant impact towards debt maturity structure but also other debt characteristics such as types of debt issuance, cost of debt, source of debt financing (internal or external debt) and number of restrictive debt covenants. Further, Florackis (2008) and Stulz (1990) affirm that debt maturity structure is one of the internal governance mechanisms which assist firms in reducing agency cost and information asymmetric problem between shareholders and managers. Worldwide governance indicators constitute of traditional regulations and enforcement mechanism as practice by the authorities of a country (Kaufmann, Kraay & Mastruzzi, 2011). Worldwide governance indicators or also known as institutional factors such as voice and

accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law and control of corruption significantly affect both capital structure and debt maturity structure of firm (Atudaiye-Muhtar, Ahmad & Matemilola, 2017; Awartani, et. al, 2016). However, in emphasizing on the abovementioned relationship, preceding empirical work, merely stress on developed countries, developing countries and multi-countries comparison.

Moreover, in examine the relationship between worldwide governance indicators and debt maturity structure; previous researchers do not clearly specify types of debt securities that are utilized in their studies. Additionally, previous researchers combine both Malaysia and Singapore with other developed and developing countries and do a multi-country comparison. However, this study merely emphasizes on two countries namely Malaysia and Singapore since Fan, Wei and Xu (2011) suggests that in examine the influence of institutional quality towards variety of issues in corporate finance (for instance in this study debt maturity structure); focused-country studies is superior as compared to multi-countries. This is because focused-country studies can be a better way for researchers to control the data on worldwide governance indicators while constantly holding other factors which cannot be executed using cross-country comparison studies. Besides, different countries are varied in terms of its legal systems and level of investor protection (Alves & Ferreira, 2011). Antoniou, Guney and Paudyal (2006); Kirch and Terra (2012) and Fan, Titman and Twite (2012) affirm that different investor protection caused firms of each country tend to have different debt maturity structure. Worldwide governance indicators also significantly influence type of debt securities (public and private debt) issued by firms (Gwatidzo & Ojah, 2014; Zhang, 2016).

According to Agca, De Nicolo and Detragiache (2015) and Custodio, Ferreira and Laureano (2013) decision on debt maturity structure is not only vary across firms and countries but also across time. Hence, second important issue in debt maturity structure which become an interest in this study is factors affecting variation on decision for debt maturity structure across time. Based on the prior empirical evidence, there are four common determinant or factors affecting variation on decision for debt maturity structure across time they are interest rates, term spread, inflation, excess bond return and government debt maturity structure (Graham & Harvey, 2001; Kaya, 2013; Baker, Greenwood & Wugler, 2013; Greenwood Hanson & Stein, 2010; Ferreira & Laureano, 2013; Badoer & James, 2016; Fan, Titman & Twite, 2012). However, in examine on this particular issue previous researchers emphasize mainly on developed countries like US and Canada and developing countries like Tunisia and France. However, Fan, Titman and Twite (2012) examine on the factors affecting variation on decision for debt maturity structure across time by incorporating Malaysia and Singapore as part of the sample country in the author study. The aforementioned author just reports the result on Malaysia and Singapore instead of providing further justification on the reported result. Furthermore, prior researchers also do not clearly state type of debt securities that are utilized in their study. In addition, there are also inconsistent findings amongst previous researchers on how factors affecting variation on decision for debt maturity structure across time.

The last issue in debt maturity structure which become an interest in this study is the determinant for adjustment of speed in debt maturity structure. Previous empirical evidence which examine on adjustment of speed in debt maturity structure merely focus on existence and rate for adjustment of speed in debt maturity structure (Deesomsak, Paudyal and Pescetto, 2009; Terra, 2011; Lopez-Gracia and Mestre-Barbera, 2011; Lemma and Negash, 2013; Stephen, Talavera and Tsapin, 2011; Shah and Khan, 2009; Antoniou, Guney and Paudyal, 2006; Domenichelli, 2015). Deesomsak, Paudyal and Pescetto (2009) examine on the existence and rate for adjustment of speed in debt maturity structure by incorporate Malaysia and Singapore as part of the sample country in their study, but the author only emphasizes on one type of debt securities namely private debt securities. Moreover, Antoniou, Guney and Paudyal (2006) asserts that rate at which the firm adjust their debt maturity structure to optimal debt maturity structure vary across countries and quality of the firm. Less focus is given on determinant for adjustment of speed in debt maturity structure particularly in two East Asian countries like Malaysia and Singapore. Since previous authors emphasizing on developed and developing countries like Ukrainian firms, African firms and SMEs in Spain (Stephen Talavera and Tsapin, 2011; Lemma and Negash, 2013 and Lopez-Gracia & Maestra-Barbera, 2011). Furthermore, these aforementioned authors do not clearly state type of debt securities when they examine on determinant for adjustment of speed in debt maturity structure.

1.4 RESEARCH OBJECTIVES

Based on the problem statement above, this study further delves into four objectives namely:

1) To examine on the firm and country specific (micro and macro-economic variables) as the determinants for debt maturity structure of public and private debt securities in Malaysia and Singapore
2) To examine worldwide governance indicator (WGI) as new potential determinants for debt maturity structure of public and private debt securities in Malaysia and Singapore
3) To examine factors that caused decision on debt maturity structure for public and private debt securities in Malaysia and Singapore to be different across time.
4) To examine determinants for adjustment of speed for debt maturity structure of both public and private debt security in Malaysia.

1.5 RESEARCH QUESTIONS

The study aims to provide answers to the research questions below:

1) How do firm and country specific factors (micro) and macro-economic variables affect maturity structure of public and private debt in Malaysia and Singapore?

2) Does worldwide governance indicators is a new potential determinant for debt maturity structure of public and private debt securities in Malaysia and Singapore?
3) What are the factors that caused decision on debt maturity structure for public and private debt securities in Malaysia and Singapore to be different across time?
4) What are the factors that caused the adjustment of speed for debt maturity structure of both public and private debt in Malaysia and Singapore?

1.6 CONTRIBUTION OF THE STUDY TO THE BODY OF KNOWLEDGE

This section will be discussing on the contribution of this study to the body of knowledge. This thesis enhances the empirical evidence on debt maturity structure in several ways. Firstly, although, this study examines on the impact of common country characteristic such as breadth of the debt market towards debt maturity structure, yet, this study utilizes different measurement for breadth of the debt market namely size of the bond market as compared to previous empirical evidence (Awartani, et. al, 2015; Deesomsak, Paudyal & pescetto, 2009; Agca, De Nicolo and Detragiache, 2015). Previous studies emphasize on two common measurements in examine the influence of breadth of the debt market on debt maturity structure namely size of the banking institutions and size of the equity market and less emphasize is given on the size of the bond market particularly in Asian countries like Malaysia and Singapore. Therefore, result of this relationship can assist manager for firms in Malaysia and Singapore in making decision for debt especially in deciding either to issue short or long-term debt so that it can fit both firms' financing needs.

Secondly, worldwide governance indicator become a new research scope in the determinants for debt maturity structure in Asian countries especially for Malaysia and Singapore. This is due to the reason that previous researchers merely focus on developed countries such as South America, Brazil and Chile when they examine on the six elements in the worldwide governance indicators (voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law and control of corruption) towards debt maturity structure. However, for Asian countries like Malaysia and Singapore previous empirical evidence only examine on the influence of one element in worldwide governance indicators (control of corruption) towards debt maturity structure and exclude the other five elements in worldwide governance indicators. Hence, result on the implication of worldwide governance indicators towards debt maturity structure assist the government to maintain the quality of the country governance encourage firms in Malaysia and Singapore to demand more for short-term debt. Having extra fund, promote conducive, healthy and competitive business environment. Apart from that, result of this study will be as a guide for the other researchers and academicians to further examine on the implication of WGI towards other debt characteristics for instance debt pricing, type of debt choice and optimal debt maturity choice.

Thirdly, result of this study also adds to the existing empirical evidence on debt maturity structure as issues pertaining to the debt maturity structure which are examined in this study namely determinants for debt maturity structure, factors affecting decision on debt maturity structure to be different across time and factors affecting adjustment of speed in debt maturity structure emphasized on both type of debt securities namely public and private debt securities. Most of the previous empirical evidence on debt maturity structure mostly stressed on one type of debt securities either public debt securities or private debt securities (Deesomsak, Paudyal & Pescetto (2009); Agca, De Nicolo & Detragiache (2015); Fan, Titman & Twite (2012); Turk Ariss, 2016). This is due to theoretical models pertaining to type of debt structures assume both public and private debt securities are the same (Johnson, 1997). Additionally, the aforementioned author also states that most of the theoretical models on debt maturity structure do not allow firms to utilize both public and private securities as their source of financing and previous studies also either eliminate private debt or combine it with public debt. However, Johnson (1997) found that 73 percent of the sample firms in the author's study utilize both public and private debt securities as their source of financing.

Fourthly, most previous studies on determinant for debt maturity structure stressed on firm specific, country specific, economic specific, institutional specific, and industry specific characteristic (Orman & Koksal, 2016; Awartani et. al, 2015; Agca, De nicolo & Detragiache, 2015; Domenichelli, 2015; Ben-Nasr, Boubaker & Rouatbi 2015; Terra, 2011; Kirch and Terra, 2012). Hence, framework for debt maturity structure in this study does not only incorporate determinants on debt maturity structure such as firms' characteristic, country characteristic and worldwide governance indicators but also determinant for variation on decision for debt maturity structure throughout time and determinant for speed of adjustment in debt maturity structure. Determinants for variation in debt maturity structure throughout time and speed of adjustment will become a new research scope for Asian countries especially for Malaysia and Singapore as previous researchers focused mainly on existence and rate of adjustment of speed for debt maturity structure and this issue receive great attention among previous researchers mainly on developed countries like US and Canada and developing countries such as Tunisia, Africa and France.

Fifthly, result from this study offers several policy contributions. Firm and country specific factors assist manager in Malaysian and Singaporean firms to understand their main role in making decision for maturity decision for debt so that conflict between managers and owner of the firms can be reduced. Besides, it also Assist manager for public and private firm in making decision for debt especially in deciding either to issue short or long-term debt so that it can fit both firms' financing needs. Meanwhile, result from determinants for variation in decision for debt maturity structure across time become as a guide for manager in finding the right time to issue short or long-term debt so that manager can plan in obtaining alternative source of financing by issuing equity, issuing external long-term debt/using internal fund (retained earnings). Apart from that, finding from the last research question of this study which is what are the factors that caused the adjustment of speed for debt maturity structure of both public and

private debt in Malaysia and Singapore? be as a guide for the manager in finding the optimal debt maturity structure as different company have different target debt maturity structure and quickly adjust firms' current debt maturity structure in achieving optimal debt maturity structure. This is turn help the firm plan to manage efficiently finding the proper time, cost & type of debt securities in replacing the current debt maturity structure.

1.7 OPERATIONAL DEFINITION

Below are some of the operational definition relating to some of the explanatory variables in this study:

Worldwide governance indicators (WGI): definition is taken from the World Bank (Kaufmann, Kraay and Mastruzzi (2004) comprises of opinion by citizen, respondent from industrial and developing countries and firms regarding the common practices which are exercised by the regulatory authority of a country. It constitutes of six main elements such as voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law and control of corruption. Based on the objective of this study data on WGI are limited to two countries namely Singapore and Malaysia and time period from year 1996 until 2016 in ensuring objective of this is attainable.

Voice and accountability (VA): Kaufmann, Kraay and Mastruzzi (2004) describe VA as the degree of freedom amongst country's citizen in selecting the government, freedom in expressing idea, free media and freedom of association.

Political stability and absence of violence (PSAV): describe on the opinion express by the citizens and firms regarding the destabilization of the government by illegal and unauthorised means; including terrorism and politically-motivated violence

Government effectiveness (GE): describe on the opinion express by the citizens and firms regarding the quality of public services, civil service, policy formulation and implementation, freedom from political pressure and the reliability of the government's ability in implementing such policies

Regulatory quality (RQ): describe on the government's capability to execute secure rules and regulations which ensure the expansion of the private sector.

Rule of law (RL): describe on the opinion of the citizen and firms on the degree of trust by agent in follow and practice rules of society, the quality of contract enforcement, the police, courts and violence and crime

Control of corruption (COC): describe on the opinion of the citizen and firms towards power which comprise of money (as a form of corruption) and exercised by the public in order to secure the benefit of the private sector.

1.8 Organization of this thesis

This thesis is made up of five chapters.

Chapter 1 introduce this study by presenting background of this study, motivation and problem definition, research objectives, research questions and contribution of this study

Chapter 2 reviews the underlying theories and literature pertaining to determinants for debt maturity structure, factors affecting debt maturity structure to be different across time and determinants for adjustment of speed

Chapter 3 describes and justifies on the measurement used for all variables related to this study, sample selection, hypotheses and step by step techniques which are utilized in order to achieve the four main objectives of this study.

Chapter 4 presents and discuss on the summary statistics, robustness test such as autocorrelation test (AR2), Hansen test and empirical findings pertaining to determinant for debt maturity structure, factors affecting variation in decision for debt maturity structure across time and determinant for adjustment of speed in debt maturity structure.

Chapter 5 concludes finding of this study, discuss on the policy implications, weakness of this study and recommendation for future research

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