



**FAMILY FIRM MANAGEMENT AND FINANCING
DECISIONS OF IPO FIRMS: EVIDENCE FROM
THAILAND, MALAYSIA, AND SINGAPORE**

BY

MISS AREERAT SOPONPONGPIPAT

**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF SCIENCE
PROGRAM IN FINANCE (INTERNATIONAL PROGRAM)
FACULTY OF COMMERCE AND ACCOUNTANCY
THAMMASAT UNIVERSITY
ACADEMIC YEAR 2016
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ENTITLED

FAMILY FIRM MANAGEMENT AND FINANCING DECISIONS OF IPO FIRMS:
EVIDENCE FROM THAILAND, MALAYSIA, AND SINGAPORE

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ABSTRACT

The purpose of the current research endeavor is to investigate the effect of family firm management on financial decisions of the firms. The study adopts the dataset of IPO firms from three ASEAN members, including Thailand, Malaysia, and Singapore during the period 2007 – 2015. The study obtains empirical evidence to conclude that the use of debt capital or equity capital is not obvious for family firms. Moreover, family firms rely more on short-term debt maturity. These findings are in contrast to most literature of developed markets which report that family firms are more likely to use long-term debt. Hence, these findings support the hypothesis that family firms in emerging markets have more probability to misappropriate the resources so the firms are likely to use short-term debt to alleviate agency problems. Additionally, this study compares companies from three countries and the results reveal that there is a significant impact of family firm management on debt maturity structure for Malaysian companies whereas it proves otherwise in other countries.

Keywords: family firms, family management, financing decisions, capital structure, debt maturity structure, emerging markets

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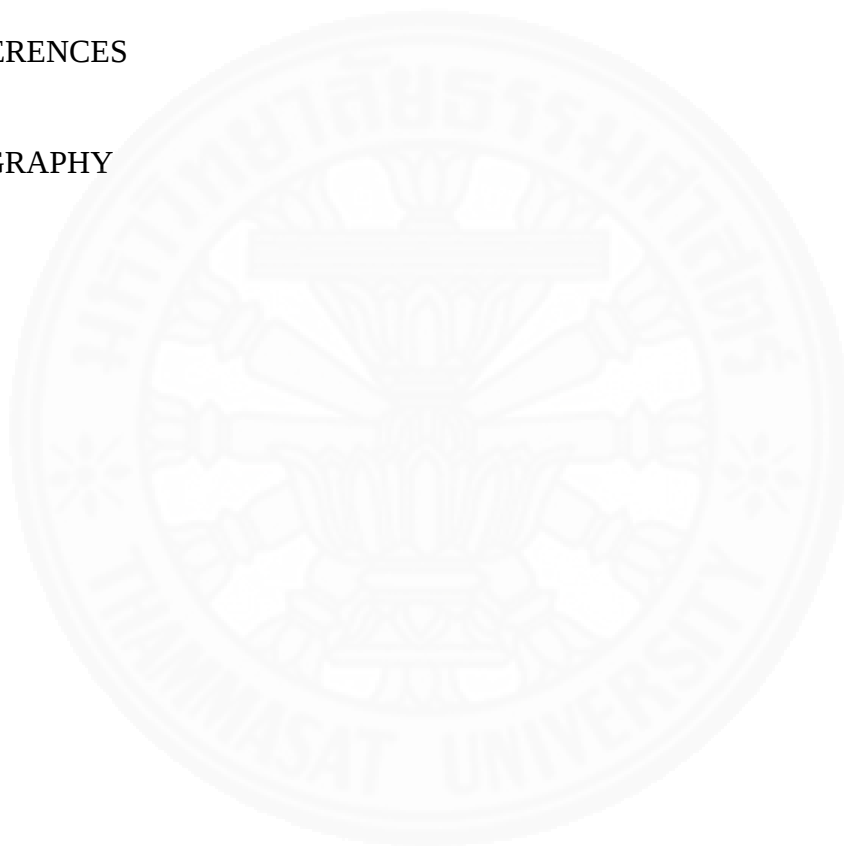
Finally, my most profound gratitude goes to my family who have always supported and motivated me to overcome all the difficulties. Thank you for your love and all of the sacrifices that you have made throughout my life.

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CHAPTER 1

INTRODUCTION

Throughout several years, raising fund through the Initial Public Offerings (IPO) is very popular since IPO has several advantages such as raising capital for business expansion and growth opportunities. Capital can be used to pay off existing debt or invest in potential projects that will create value for the firms. Consequently, IPO may lead to the enlargement in market share for the firm. Despite the financing benefits of going public, some research finds that half of IPO firms do not raise capital in 2 to 5 years after IPO so it raises the question as to what the factors that affect the financing decisions are.

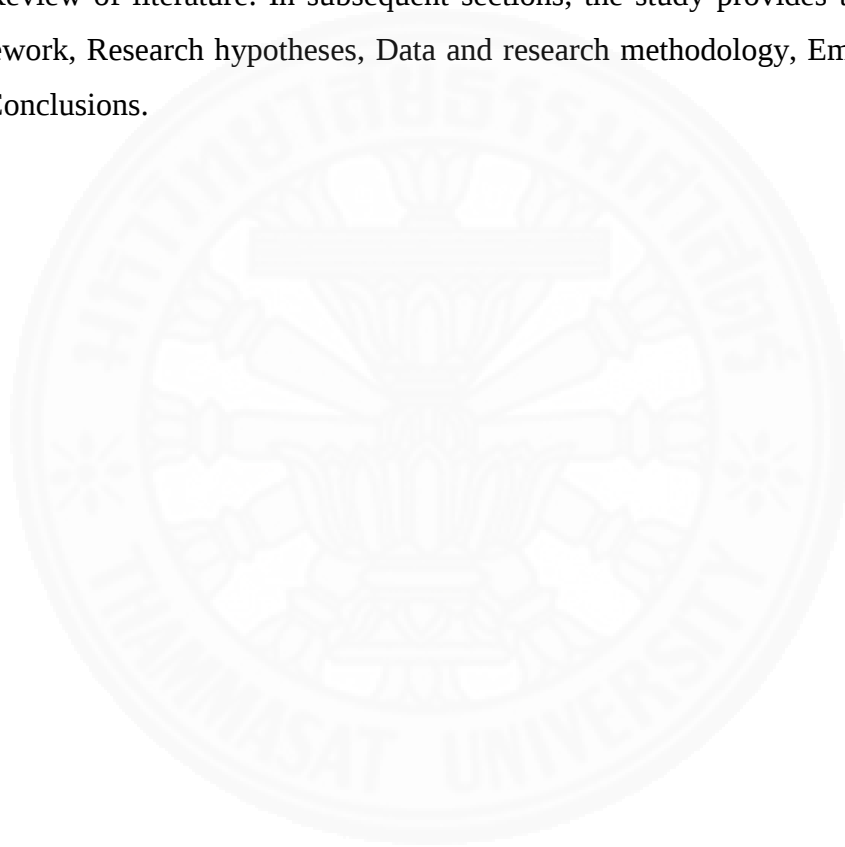
Many research studies probe into the potential factors that affect the financing decisions of the firms such as size, growth, risk and another factor that researchers pay attention to is the type of the firm. As we know that the most favorite kinds of corporations around the world are the family businesses. These types of corporations are the key economic driver as evident in the recently published The Family Business Model (Credit Issue, 2015). Focusing on Asia-Pacific, as noted in that report, 85% of businesses are family firms, which take about 34% of GDP contribution. There are pieces of financial literature exploring the relationship between family firms and debt maturity such as Croci et al. (2011) who examined the large European firms and found that creditors willing to provide long-term debt to family firms since they have the view that family firm's investment decisions are less risky. Jain and Shao (2015) investigated US newly listed firms and reported that the family firms have more levered and long-term debt maturity. Furthermore, another factor that researchers believe to affect the financing decisions is asymmetry of information of the firms. Connelly et al. (2012) and Kim, H. (2015) reported that information asymmetry in emerging countries is larger than that in developed countries. Therefore, the practicality of each country is expected to be different.

However, there is no empirical evidence for IPO firms in ASEAN so the purpose of this paper is to link types of firms, management and financing decisions and to provide empirical evidence of the effects of family firm management on

financing decisions for a sample of newly listed firms for the period 2007–2015 in ASEAN Exchanges.

Combining three crucial areas of the finance literature, i.e. corporate finance, IPO and emerging markets, the research will contribute to the literature in emerging markets and offer empirical evidence about the impact of family firm management on financing decisions in ASEAN markets.

The rest of the research contents are organized as follows. In the next section lies Review of literature. In subsequent sections, the study provides the Theoretical framework, Research hypotheses, Data and research methodology, Empirical results, and Conclusions.



CHAPTER 2

REVIEW OF LITERATURE

2.1 Financing Choices

Frank and Goyal (2003) conducted the research to test pecking order theory of listed US firms and found that small firms do not follow the pecking order theory and have more information asymmetry that makes investors unwilling to lend the money. This report is consistent with the findings of Pindado et al. (2015) who examined the relation between family control and financing decisions of the European firms and found that information asymmetry is less severe in family firms which render them easier access to external financing. Their research underlines that it is difficult for firms to raise capital if the risk of asymmetric information problems is high.

Anderson and Reeb (2003) found that there is no relationship between family firms in the S&P 500 Index and debt financing (leverage). Wu et al. (2007) evaluated the effects of family involvement on equity financing of Canadian SMEs and reported that the involvement of family firms have no direct influence on equity financing while having indirect effects via agency variables such as board meeting frequency or when family management are responsible for financial or accounting reports. Croci et al. (2011) examined the effects of family control on financing decisions of the large European firms and revealed that family firms prefer debt financing (non-diluting securities) because they are concerned more about losing their control. Although Jain and Shao (2015) who investigated the US newly listed firms found that the proportion of external financing through equity of family firms does not differ from non-family firms.

2.2 Debt maturity structures

Datta et al. (2005) conducted the research by using US firms to study the relationship between the managerial ownership and the debt maturity structure and they further explained that the managers who have high level of ownership and obtain the good incentive make a decision to choose a large proportion of short-term debt maturity and there is a negative correlation between the managerial ownership and the

debt maturity. Croci et al. (2011) examined the large European firms and discovered that creditors are willing to provide long-term debt to family firms since they hold the belief that family firm's investment decisions are less risky. Some paper uses IPO firms as the sample, Chen et al. (2014) delved into companies that were listed in the S&P 1500 Index and found that family firms have more tendency to misappropriate resources so the firms will rely more on short-term debt. Jain and Shao (2015) examined the effects of the family ownership on the debt maturity structure and financing choice of US newly listed firms and reported that the family firms will sustain high leverage and long-term debt maturity and if the family members serve as CEO, it can create more ability to extend the debt maturity structure. Moreover, Díaz-Díaz et al. (2016) investigated the effects of ownership structure on the debt maturity structure of private firms in Spain and claimed that family firms have longer debt maturity structures than non-family ones and if the family members serve as controller shareholders, they can increase the reliability of the firms and alleviate conflicts with debtholders.

CHAPTER 3

THEORETICAL FRAMEWORK

3.1 Information asymmetry

Information asymmetry refers to the study of different of decisions when one party has better information than others and then creates the possibility that some parties will take advantage of the imbalance of information. Some research papers evaluate the impacts of firm ownership structures on financing behavior and find that investors are unwilling to lend the money or supply fund if the risk of information asymmetric is high (Frank and Goyal, 2003) and other research papers find that the family firms do not want to provide more detail disclosures (Chen et al., 2014) so this type of risk is higher in family firms. However, when firms go public, they have to disclose the information complied with the regulations then this can reduce the risk of information asymmetry.

3.2 Trade-off theory

The trade-off theory of capital structure is the concept of how much debt financing and equity financing the firms use by balancing the advantage of debt (tax shield or tool for discipline the manager) and disadvantage of debt (agency costs or bankruptcy costs) (Jensen and Meckling, 1976).

3.3 Pecking order theory

There are three sources of financing: retained earnings, debt, and equity. Retained earnings are the first preference for funding projects. If there is an inadequate amount of internal finance, debt financing is the second source and if the firms have no longer capacity to issue more debt, equity acts as the last resort for the firms (Myers and Majluf, 1984).

3.4 Agency theory and Debt maturity theory

The agency theory studies the relationship between principals and agents. However, in practice, there is a distinction of principals and agents. Each party has the intention to do for its own benefits, which potentially leads to conflicts of interests.

The agents tend to act or make decisions to maximize their utility without concerning principal's wealth maximization (Jensen and Meckling, 1976). Considering financing decisions, for example, the managers probably prefer long-term debt because of its flexibility (Datta et al., 2005).

Furthermore, debt maturity theory focuses on the function of short-term debt for reducing the agency problem between shareholders and managers (Myers, 1977). On one hand, short-term debt is efficient in terms of transferring control rights. On the other hand, long-term debt is less effective in monitoring managers.

In case of IPO firms, they want to go public because of the intention to change capital structure from short-term debt which is received from financial institutions to long-term corporate debt (Jain and Shao, 2015). Extending the debt maturity structure has an advantage in respect of reducing liquidity and refinancing risk. Furthermore, some research papers report that the lenders are willing to extend debt maturity for family firms relative to non-family firms since they believe that the family firms will not invest in risky projects (Crocì et al., 2011).

CHAPTER 4

RESEARCH HYPOTHESES

The study will link the theoretical framework to the IPO firms in emerging markets. A number of studies (Anderson and Reeb, 2003; Croci et al., 2011; Chen et al., 2014; Jain and Shao, 2015; Díaz-Díaz et al., 2016) use well-established, publicly listed companies, newly listed firms or private companies in developed markets such as US or European as the sample to examine the financing decisions. This study also focuses on IPO firms in emerging markets, which are members of ASEAN. There are specific reasons to consider about that kind of corporates.

First, focusing on IPO firms, this type of firms is in the position that will be transformed from private firms to public firms. In general, Brau and Fawcett (2006) reported that private firms do not want to go public because they are concerned about ownership dilution and do not want to encounter with bad market situations. Díaz-Díaz et al., (2016) suggested that private firms have large levels of information asymmetry. However, IPO firms have some features that might alleviate information asymmetry such as disclosure of the information and compliance with the regulations listed on stock exchanges. But IPO firms also lack sufficient track records present to the public so the investors may not be able to evaluate the long-term probability of success of that firms (Chaddad and Reuer, 2009). It can be implied that the level of information asymmetry of IPO firms is between the privately held firms and well-established, publicly listed ones.

Second, according to the study of developed markets and emerging markets, there are differences about information asymmetry between these markets. Researchers (Connelly et al., 2012; Kim, H., 2015) reported that information asymmetry is more severe in emerging markets and create agency problem. When the problem is large, controlling shareholders have opportunity to exploit minority shareholders for their own benefits.

Third, the study uses some countries in ASEAN because ASEAN have greater economic integration that can improve capital market cross-border and increase the incentives for allocating assets across the region (Guidi and Gupta, 2013). Moreover,

the reason why Thailand Malaysia and Singapore are chosen as the sample is that these three countries have approximately 66%¹ market capitalization of listed companies, which is sufficient to provide an overview of the ASEAN exchanges. Moreover, these three countries are the first three countries jointly implementing the “ASEAN Disclosure Standards” scheme on 1 April 2013 and the scheme is developed for ASEAN issuers to offer cross-border securities and also facilitate rapid access for issuers to tap capital across ASEAN. Additionally, three countries signed the Memorandum of Understanding (MoU) for establishing the “ASEAN Common Prospectus” framework on 3 March 2015². This cooperation can indicate the readiness of capital market of these countries.

Drawing from the theoretical framework (information asymmetry, trade-off theory, pecking order theory and agency theory) and background of the sample used in this analysis, the study proposes the following hypotheses.

- Hypothesis 1: Family firms are more likely to use debt financing and less likely to use equity financing.
- Hypothesis 2: Family firms are more likely to use short-term debt and less likely to use long-term debt.

¹ The calculation of market capitalization is based on the data from the World Bank, April 2017

² The ASEAN Capital Markets Forum

CHAPTER 5

DATA AND RESEARCH METHODOLOGY

5.1 Sample selection

The data identified is all IPO firms issued during the period 2006 to 2010 from the main market of ASEAN Exchanges, which includes Thailand, Malaysia, and Singapore as shown in Table 5.1. The data of all corporations listed in these countries is taken from the Thomson Reuters Eikon, Datastream, and national stock exchanges. The initial sample year is 2007 and the period ends is 2015 as this research tracks each IPO firm for a 5-year period after going public in order to investigate financing decisions subsequent to IPO. Therefore, firms in the financial industry are excluded from the sample since they have different structures from other firms. The firms that lack data during testing period are also excluded. The above criteria result in a panel of 140 firms with 700 observations.

Table 5.1 Main market of Thailand, Malaysia, and Singapore exchanges

No.	Country	Exchange Name
1	Thailand	Stock Exchange Of Thailand
2	Malaysia	Bursa Malaysia
3	Singapore	Singapore Exchange

5.2 Identification of the family firms

This research classifies share ownership into 2 groups: family firms and non-family firms by using available data provided by Thomson Reuters Eikon, national stock exchanges, the prospectus or other sources.

Many papers have provided several explanations about the definition of the family firms. Anderson et al. (2003) defined it as the proportion ownership of the family and/or family members taking a role of the board of directors or management as a criterion. Maury (2006) set out that the family controls hold at least 10 percent shares of the voting right. Furthermore, Connelly et al. (2012) used the same surname including relatives, children, and more to summarize shareholders and classify the level of family ownership into 2 levels: “High Family Ownership” and “Low Family

Ownership”. If the family ownership exceeds median ownership of all firms, it will be classified as “High Family Ownership” and vice versa for “Low Family Ownership”. Claessens et al. (2000) who investigated the separation of ownership and control of nine East Asian countries suggested that controlling shareholders are defined at the 20% of voting rights.

Drawing from many pieces of literature, this research classifies share ownership as the family firms by using the following criteria. First, the family members have the same surname including relatives, children and the family members must hold at least 20% of all shares. Second, family members are CEO or serve as board.

5.3 Model specifications

5.3.1 Post-IPO financing choices

This study performs the following regression model in order to investigate the relation between the family dummies and financing choices after going public:

$$\text{Leverage}_{it} = \beta_0 + \beta_1(\text{Family Dummies})_i + \beta_2(\text{Size})_{it} + \beta_3(\text{Age})_{it} + \beta_4(\text{Fixed Assets Ratio})_{it} + \beta_5(\text{Cash Holding})_{it} + \beta_6(\text{Profitability})_{it} + \beta_7(\text{Sales Growth})_{it} + \beta_8(\text{Muslim})_i + \beta_9(\text{Industry Dummies})_{it} + \beta_{10}(\text{Year Dummies})_{it} + \varepsilon_{it}$$

$$\text{Equity}_{it} = \beta_0 + \beta_1(\text{Family Dummies})_i + \beta_2(\text{Size})_{it} + \beta_3(\text{Age})_{it} + \beta_4(\text{Fixed Assets Ratio})_{it} + \beta_5(\text{Cash Holding})_{it} + \beta_6(\text{Profitability})_{it} + \beta_7(\text{Sales Growth})_{it} + \beta_8(\text{Muslim})_i + \beta_9(\text{Industry Dummies})_{it} + \beta_{10}(\text{Year Dummies})_{it} + \varepsilon_{it}$$

5.3.2 Post-IPO debt maturity structure

This study constructs the model to analyze the effect of family dummies on debt maturity structure by estimating the regression models as follow:

$$\text{Short Term Debt}_{it} = \beta_0 + \beta_1(\text{Family Dummies})_i + \beta_2(\text{Size})_{it} + \beta_3(\text{Age})_{it} + \beta_4(\text{Fixed Assets Ratio})_{it} + \beta_5(\text{Cash Holding})_{it} + \beta_6(\text{Profitability})_{it} + \beta_7(\text{Sales Growth})_{it} + \beta_8(\text{Muslim})_i + \beta_9(\text{Industry Dummies})_{it} + \beta_{10}(\text{Year Dummies})_{it} + \varepsilon_{it}$$

$$\text{Long Term Debt}_{it} = \beta_0 + \beta_1(\text{Family Dummies})_i + \beta_2(\text{Size})_{it} + \beta_3(\text{Age})_{it} + \beta_4(\text{Fixed Assets Ratio})_{it} + \beta_5(\text{Cash Holding})_{it} + \beta_6(\text{Profitability})_{it} + \beta_7(\text{Sales Growth})_{it} + \beta_8(\text{Muslim})_i + \beta_9(\text{Industry Dummies})_{it} + \beta_{10}(\text{Year Dummies})_{it} + \varepsilon_{it}$$

5.4 Variables

Dependent variables

This study employs 4 proxies for the different respects of financing decisions subsequent to the IPO as the dependent variables which are leverage, equity ratio, short-term debt and long-term debt following Wu et al. (2007), Croci et al. (2011), Jain and Shao (2015), and Díaz-Díaz et al. (2016). The regression variables are now described.

Leverage

Leverage, proxy for debt financing, accounts for financial risk. Leverage is measured by the total debt to total assets ratio (Croci et al., 2011; Jain and Shao, 2015; Kim, H., 2015; and Díaz-Díaz et al., 2016).

$$\text{Leverage} = \text{Total Debt} / \text{Total Assets}$$

Equity Ratio

Equity ratio is measured the use of equity financing that computed as total equity scaled by total assets following Wu et al. (2007).

$$\text{Equity} = \text{Total Equity} / \text{Total Assets}$$

Short-term Debt

Consistent with Croci et al. (2011), Short-term debt is the percentage of short-term debt and current portion of long-term debt to total debt.

$$\text{Short-term Debt} = \text{Short-term Debt} / \text{Total Debt}$$

Long-term Debt

The measurement of Long-term debt is defined as the ratio of long-term debt to total debt following Croci et al. (2011) and Díaz-Díaz et al. (2016).

$$\text{Long-term Debt} = \text{Long-term Debt} / \text{Total Debt}$$

Independent variables

The independent variables are family dummies. This study adopts various alternative measurements for family dummies: (i) family firms versus non-family firms and (ii) family management. Family firms take the value 1 if the firms have at least 20% total family ownerships of all shares. Additionally, Family Management takes the value 1 if the family members are the CEO or serves as chair of the board. For financing choices, family dummies should present positive correlation relative to leverage since they are concerned about control dilution (Crocì et al., 2011; Chen et al., 2014; and Jain and Shao, 2015). For debt maturity structure, some literature finds that family firms are in the better position to extend debt maturity and rely more on long-term debt (Crocì et al., 2011; and Díaz-Díaz et al., 2016) while some papers suggested that family firms are more likely to use short-term debt (Chen et al., 2014). Applying theories and background of the sample, the positive (negative) relationship with short-term debt (long-term debt) is expected because family firms have more probability to misuse the resources so they will rely more on short-term debt in order to alleviate this problem.

Control variables

This research also employs other firm characteristics that have been found to affect financing decisions of the firm by prior research (Anderson and Reeb, 2003, Crocì et al., 2011, Chen et al., 2014, Jain and Shao, 2015, Kim, H., 2015 and Díaz-Díaz et al., 2016). For instance, this research includes firm size, firm age, fixed assets ratio, cash holding, profitability, sales growth, and religion for controlling variables. The regression variables are now described.

Size

Size is measured by the logarithm of the total assets. Large firms have less information asymmetry, good reputations in debt market and have lower costs of borrowing (Frank and Goyal, 2003; Jain and Shao, 2015). This study expects firm's size to be positively related to leverage and long-term debt.

$$\text{Size} = \text{Log}(\text{Total Assets})$$

Age

Age is calculated as log of one plus firm's age in years where firm's age is measured as the difference between the sample year and founding year. Previous studies found that age is negatively related to long-term debt (Crocì et al., 2011; Díaz-Díaz et al., 2016). This is based on the argument that young firms have less ability to generate cash flows and roll over short-term debt.

$$\text{Age} = \text{Log of } (1 + (\text{Sample year} - \text{Founding year}))$$

Fixed Assets Ratio

The ratio of net property, plant, and equipment to total assets is fixed assets ratio. The positive correlation with long-term debt is anticipated because firms can use fixed assets as collateral to increase debt capacity and make firms extend debt maturity more conveniently.

$$\text{Fixed Asset Ratio} = \text{Net Property, Plant, and Equipment} / \text{Total Assets}$$

Cash Holding

This research measures cash holding as cash and equivalents divided by total assets. A number of studies report a negative relationship between cash holding and debt level (Anderson and Reeb, 2003; Crocì et al., 2011). This study expects cash holding to be negatively related to Leverage. The study expects the firms with high cash reserves to be able to use their cash to service their debt then they have less leverage.

$$\text{Cash Holding} = \text{Cash and Equivalents} / \text{Total Assets}$$

Profitability

The firm's profitability is measured by return on assets (ROA) that is computed as the ratio of earnings before interest, taxes and depreciation (EBITDA) divided by total assets. Crocì et al. (2011) claimed that profitable companies have lower need for external financing. Hence, the coefficient level of profitability relative to leverage should be negative since firms with high profitability could use their earning to repay the debt and have less leverage.

$$\text{Profitability} = \text{EBITDA} / \text{Total Assets}$$

Sales Growth

In line with Díaz-Díaz et al. (2016), the study uses sales growth to proxy for a firm's growth opportunities that defined as the growth rate in total sales from the previous year. The study expects sales growth to be positively related to leverage because firms with high growth opportunities are more likely to draw debt market.

$$\text{Sales Growth} = (\text{Sales}_1 - \text{Sales}_0) / \text{Sales}_0$$

Muslim

There are some pieces of literature using national cultures to explain financial environment. Stulz and Williamson (2003) used language and religion to proxy national culture to examine investor protection across countries. This study measures the culture of the sample by using Muslim dummy that takes the value 1 if the firms hold Muslim religion. The primary religion of each country is presented in Table 5.2. Stulz and Williamson (2003) found that Muslim countries protect creditors' rights while Buddhist countries do not. Then, this study expects Muslim dummy to be positively related to long-term debt since this type of religion is in the position that has more credibility and makes firm access to long-term debt maturity more easily.

Table 5.2 Country religion

The table shows the primary religion for each country in the sample. The primary religion of a country is the religion practiced by the largest fraction of the population. The data on religion is obtained from the World Factbook of Central Intelligence Agency.

No.	Country	Primary Religion
1	Thailand	Buddhist
2	Malaysia	Muslim
3	Singapore	Buddhist

CHAPTER 6

EMPIRICAL RESULTS

6.1 Descriptive statistics

Table 6.3 and Table 6.4 present the descriptive statistics for the 140 firms in the analysis. The whole sample consists of 700 Observations, of which 77.14% are considered as family firms and the 22.86% are non-family firms. The sample consists of 160 Thai, 285 Malaysian, and 255 Singaporean observations.

Table 6.3 reports the difference-in-mean tests between family and non-family firms of their financial characteristics. Table 6.4 reports the means, standard deviations, minimums and maximums of the variables used in the study as well as the correlation coefficients between them. The measurements of variables are now described. Family ownership is the percentage of outstanding shares held by the family and affiliated members. Family management takes the value 1 if the family or affiliated members are the CEO or serves as chair of the board. Leverage is the ratio of total debt to total assets. Equity is total equity scaled by total assets. Short-term debt is defined as the ratio of short-term debt to total debt. Long-term debt is defined as the ratio of long-term debt to total debt. Size is the logarithm of total assets. Age is the logarithm of one plus the different between the sample year and the founding year. Fixed assets ratio is measured by the ratio of net property, plant, and equipment to total assets. Cash holding is the ratio of cash and equivalents to total assets. Profitability is the ratio of EBITDA divided by total assets. Sales growth is the growth rate in total sales from the previous year. Muslim takes the value 1 if the firms are Muslim religion.

According to the t-statistics for difference-in-mean tests shown in Table 6.3, when comparing family firms to non-family firms, the descriptive statistics presents some significant differences. The average of short-term debt over total debt is 57.94% for the entire sample. Family firms have a mean short-term debt percentage of 61.38% whereas the mean percentage is 46.35% for non-family firms. The difference is statistically significant ($t = -5.2228$). In addition, the average of long-term debt over total debt is 40.19%. Family firms have a mean long-term debt percentage of 37.50%

relative to 49.27% in non-family firms. The difference is also statistically significant ($t = 4.1242$). The financing choices of family firms do not appear to be significantly different from non-family firms although they have lower average of leverage and higher equity ratio than non-family firms. Consistent with Anderson and Reeb (2003) and Croci et al. (2011), this study shows the statistical significance where family firms are smaller (mean logarithm of total assets 13.07 versus 14.11), and younger than non-family counterparts. Another different result is that family firms have less fixed assets ratio (32.025%) compared to non-family firms (38.25%). Finally, there are additional differences with regards to other control variables. The study reports that family firms hold more cash, have lower profitability, but have higher sales growth. Table 6.3 also presents that the results of each country consistent to the tests of all samples especially for the debt maturity structure (short-term debt and long-term debt) and some controlling variables such as size, age, and fixed assets ratio.

In addition, Table 6.4 Panel A and B show the summary statistics of variables and the correlations between them respectively. As presented in the Panel A, the average of family ownership is 41.60% of outstanding shares and 70% of the firms in this study have a family management. The firms in this study have an average of 57.95% and 40.20% for short-term debt and long-term debt, respectively. The firms employ more equity in their capital structure (54.30%) relative to debt level, measured by leverage, (22.91%). Regarding control variables, the samples have an average size, logarithm of total assets, of 13.30 and an age of 2.24 years. The fixed assets ratio average is 33.48%. The average cash holding is 15.82%. The average profitability and sales growth appear 10.53% and 17.45% respectively. Table 6.4 Panel B presents correlation coefficients of all variables in the analysis. The correlation indicates that family firms are significantly positively (negatively) related to short-term debt (long-term debt), which implies that family firms do not prefer long-term debt. Moreover, there is a negative correlation between family ownership and leverage. In contrast, equity presents positive correlations but the results do not present the statistical significance. With respect to some controlling variables, size, age, fixed assets ratio and sales growth are significant positively related to leverage. Cash holding and profitability exhibit positive relations to equity ratio and long-term debt while presenting negative correlation with leverage and short-term debt.

Table 6.3 Descriptive statistics of sample firms: mean values for variable measures

	Leverage	Equity	Short-term Debt	Long-term Debt	Size	Age	Fixed Asset Ratio	Cash Holding	Profitability	Sales Growth	Muslim
All Samples											
All Firms	0.2291	0.5430	0.5794	0.4019	13.3059	2.2350	0.3347	0.1582	0.1052	0.1744	0.4071
Family	0.2273	0.5466	0.6138	0.3750	13.0678	2.1803	0.3205	0.1584	0.1045	0.1912	0.3888
Non-Family	0.2351	0.5308	0.4635	0.4927	14.1094	2.4198	0.3825	0.1572	0.1076	0.1178	0.4687
t-statistic	0.4921	-0.9012	-5.2228***	4.1242***	5.0089***	3.6769***	3.1190***	-0.1028	0.3204	-1.6576*	1.8075*
Thailand											
All Firms	0.3046	0.4412	0.6648	0.3226	15.5245	2.8493	0.3323	0.0774	0.1083	0.1631	-
Family	0.3052	0.4595	0.7014	0.2985	15.2212	2.8139	0.3197	0.0727	0.1142	0.1911	-
Non-Family	0.3034	0.4011	0.5843	0.3756	16.1919	2.9271	0.3598	0.0878	0.0954	0.1015	-
t-statistic	-0.0574	-2.0748**	-2.3102**	1.5444	4.6278***	1.4900	0.9731	0.8433	-1.1219	-1.4542	-
Malaysia											
All Firms	0.1913	0.6105	0.5566	0.4222	12.0635	2.0317	0.3356	0.1674	0.1123	0.1811	-
Family	0.1910	0.6133	0.6281	0.3669	11.9000	2.0138	0.3173	0.1585	0.1079	0.2104	-
Non-Family	0.1922	0.6028	0.3562	0.5770	12.5212	2.0820	0.3871	0.1922	0.1247	0.0991	-
t-statistic	0.0526	-0.4212	-7.0850***	5.3772***	3.2795***	0.8074	2.5987***	1.9988**	1.2923	-1.5070	-
Singapore											
All Firms	0.2239	0.5314	0.5514	0.4290	13.3023	2.0769	0.3352	0.1985	0.0954	0.1740	-
Family	0.2230	0.5265	0.5562	0.4211	13.1058	2.0224	0.3241	0.2013	0.0965	0.1729	-
Non-Family	0.2295	0.5621	0.5208	0.4791	14.5377	2.4191	0.4053	0.1812	0.0885	0.1810	-
t-statistic	0.2112	1.0280	-0.5558	0.9214	3.0210***	2.8725***	1.9319*	-0.7476	-0.3608	0.0891	-

*, **, *** Significant at the 10%, 5% and 1% level, respectively.

Table 6.4 Descriptive statistics of sample firms: summary statistics and correlation coefficients

Panel A. Summary Statistics													
	Family Ownership	Family Management	Leverage	Equity	Short- term Debt	Long-term Debt	Size	Age	Fixed Asset Ratio	Cash Holding	Profitability	Sales Growth	Muslim
All Samples													
mean	41.5996	0.7000	0.2291	0.5430	0.5795	0.4020	13.3059	2.2351	0.3348	0.1582	0.1053	0.1745	0.4071
sd	24.5224	0.4586	0.1753	0.1943	0.3256	0.3204	2.3498	0.7302	0.2222	0.1378	0.1070	0.4928	0.4917
min	0.0000	0.0000	0.0000	0.1128	0.0000	0.0000	9.2539	0.6931	0.0005	0.0005	-1.1759	-0.7841	0.0000
max	84.3000	1.0000	0.8969	0.9801	1.0000	1.0000	23.6433	3.8918	0.9317	0.779	0.4256	5.1318	1.0000
Thailand													
mean	42.2253	0.5938	0.3047	0.4413	0.6648	0.3227	15.5246	2.8493	0.3323	0.0775	0.1084	0.1631	0.0000
sd	26.1739	0.4927	0.1878	0.1668	0.3013	0.2940	1.3064	0.4469	0.2413	0.1050	0.0987	0.3624	0.0000
min	0.0000	0.0000	0.0000	0.1128	0.0000	0.0000	13.7134	1.3863	0.0050	0.0005	-0.5669	-0.6182	0.0000
max	72.8200	1.0000	0.7478	0.8745	1.0000	1.0000	19.0853	3.8918	0.8948	0.5391	0.3179	1.9066	0.0000
Malaysia													
mean	34.7612	0.6842	0.1914	0.6106	0.5566	0.4223	12.0635	2.0318	0.3357	0.1674	0.1124	0.1812	1.0000
sd	23.5399	0.4656	0.1611	0.1855	0.3090	0.3044	1.4321	0.6281	0.2018	0.1260	0.0969	0.5502	0.0000
min	0.0000	0.0000	0.0000	0.1247	0.0000	0.0000	9.8080	0.6931	0.0173	0.0040	-0.3893	-0.7434	1.0000
max	69.0500	1.0000	0.7711	0.9801	1.0000	1.0000	17.2314	3.7842	0.8261	0.7193	0.4256	5.1318	1.0000
Singapore													
mean	48.8497	0.7843	0.2239	0.5314	0.5514	0.4291	13.3024	2.0769	0.3353	0.1986	0.0954	0.1741	0.0000
sd	22.3826	0.4121	0.1679	0.1904	0.3495	0.3460	2.6460	0.7696	0.2321	0.1475	0.1214	0.4973	0.0000
min	0.0000	0.0000	0.0000	0.1309	0.0000	0.0000	9.2539	0.6931	0.0005	0.0144	-1.1759	-0.7841	0.0000
max	84.3000	1.0000	0.8969	0.8993	1.0000	1.0000	23.6433	3.8712	0.9317	0.7790	0.3959	4.6918	0.0000

Table 6.4 Descriptive statistics of sample firms: summary statistics and correlation coefficients (continued)

Panel B. Correlation coefficient of all samples													
	Family Ownership	Family Management	Leverage	Equity	Short-term Debt	Long-term Debt	Size	Age	Fixed Asset Ratio	Cash Holding	Profitability	Sales Growth	Muslim
Family Ownership	1.0000												
Family Management	0.8315***	1.0000											
Leverage	-0.0186	0.013	1.0000										
Equity	0.0341	0.0393	-0.7187***	1.0000									
Short-term Debt	0.1939***	0.1223***	-0.0106	-0.0453	1.0000								
Long-term Debt	-0.1542***	-0.0843**	0.0867**	-0.0173	-0.9126***	1.0000							
Size	-0.1863***	-0.1707***	0.3032***	-0.3668***	-0.1234***	0.1610***	1.0000						
Age	-0.1378***	-0.1777***	0.1829***	-0.1631***	0.177***	-0.1687***	0.2179***	1.0000					
Fixed Asset Ratio	-0.1172***	-0.0801**	0.0893**	0.0959**	-0.2649***	0.2702***	0.2204***	-0.0704*	1.0000				
Cash Holding	0.0039	0.0238	-0.4359***	0.3634***	-0.0966**	0.0064	-0.2998***	-0.1096***	-0.3122***	1.0000			
Profitability	-0.0121	-0.0468	-0.2431***	0.3064***	-0.1298***	0.1017***	0.09**	-0.0429	0.0934**	0.1268***	1.0000		
Sales Growth	0.0626*	0.0528	0.0863**	-0.1004***	-0.0304	0.0181	0.0309	-0.01	-0.0748**	-0.0613	0.1668***	1.0000	
Muslim	-0.0683*	-0.0286	-0.1787***	0.2881***	-0.0582	0.0525	-0.4385***	-0.2309***	0.0034	0.0555	0.0549	0.0113	1.0000

*, **, *** Significant at the 10%, 5% and 1% level, respectively.

6.2 Empirical testing results

6.2.1 Financing choices and family firm management

This study examines whether family firms are more or less likely to use debt financing than non-family firms. If family firms are concerned about control dilution, the results will provide positive coefficient level between family dummies and debt financing measured by Leverage and negative relation to Equity. The study employs the following equations presented in Table 6.5 to test the hypothesis.

Table 6.5 The specification for testing financing choices

Column	Equation
(1)	$\text{Leverage}_{it} = \beta_0 + \beta_1(\text{Family Firms Dummies})_i + \beta_2(\text{Size})_{it} + \beta_3(\text{Age})_{it} + \beta_4(\text{Fixed Assets Ratio})_{it} + \beta_5(\text{Cash Holding})_{it} + \beta_6(\text{Profitability})_{it} + \beta_7(\text{Sales Growth})_{it} + \beta_8(\text{Muslim})_i + \beta_9(\text{Industry Dummies})_{it} + \beta_{10}(\text{Year Dummies})_{it} + \varepsilon_{it}$
(2)	$\text{Leverage}_{it} = \beta_0 + \beta_1(\text{Family Management Dummies})_i + \beta_2(\text{Size})_{it} + \beta_3(\text{Age})_{it} + \beta_4(\text{Fixed Assets Ratio})_{it} + \beta_5(\text{Cash Holding})_{it} + \beta_6(\text{Profitability})_{it} + \beta_7(\text{Sales Growth})_{it} + \beta_8(\text{Muslim})_i + \beta_9(\text{Industry Dummies})_{it} + \beta_{10}(\text{Year Dummies})_{it} + \varepsilon_{it}$
(3)	$\text{Equity}_{it} = \beta_0 + \beta_1(\text{Family Firms Dummies})_i + \beta_2(\text{Size})_{it} + \beta_3(\text{Age})_{it} + \beta_4(\text{Fixed Assets Ratio})_{it} + \beta_5(\text{Cash Holding})_{it} + \beta_6(\text{Profitability})_{it} + \beta_7(\text{Sales Growth})_{it} + \beta_8(\text{Muslim})_i + \beta_9(\text{Industry Dummies})_{it} + \beta_{10}(\text{Year Dummies})_{it} + \varepsilon_{it}$
(4)	$\text{Equity}_{it} = \beta_0 + \beta_1(\text{Family Management Dummies})_i + \beta_2(\text{Size})_{it} + \beta_3(\text{Age})_{it} + \beta_4(\text{Fixed Assets Ratio})_{it} + \beta_5(\text{Cash Holding})_{it} + \beta_6(\text{Profitability})_{it} + \beta_7(\text{Sales Growth})_{it} + \beta_8(\text{Muslim})_i + \beta_9(\text{Industry Dummies})_{it} + \beta_{10}(\text{Year Dummies})_{it} + \varepsilon_{it}$

The first two models examine the relationship between family dummies and leverage, measured as the ratio of total debt to total assets, while the last two models use equity ratio as the dependent variable. The study uses various alternative models to analyze (i) family versus non-family firms and (ii) family management.

The results shown in columns (1) and (2) of Table 6.6 Panel A illustrate that all family firms and family management have positive relations to leverage but the coefficient estimates on all family variables are not statistically significant. This finding consistent with Anderson and Reeb (2003) that family firms do not appear to use debt levels different from non-family firms. Turning to equity financing, the results in columns (3) and (4) of Table 6.6 Panel A report that the coefficients for family firms are negative while the coefficients for family management are positive. However, the coefficient estimates on all family variables are not statistically significant. Additionally, when the study tests the sub-period of the sample in order to observe the behavior between year 1-3 and year 4-5 after going public, the results shown in Table 6.6 Panel B suggest that there is no relationship between family firms and financing choices although family firms tend to use equity financing rather than debt financing in year 4-5 after going public.

In terms of control variables, the coefficient of size is positive and significant for all leverage regressions while presenting negative correlation with equity at 99% confidence level, indicating that large firms have less information asymmetry and good reputations in debt market so they tend to use debt financing. The negative and significant coefficient level of cash holding relations to leverage is consistent with Anderson and Reeb (2003) and Croci et al. (2011), who found that firms which hold more cash are less likely to adopt levered structure. The coefficient level on profitability, measured as the ratio of EBITDA to total assets, is significantly negative with leverage, suggesting that highly profitable firms use their earning to repay the debt so they have less leverage. The positive and significant coefficient levels of sales growth with leverage indicate that firms with high growth opportunities have more creditworthiness and make firms get lower costs so the firms tend to have more leverage. More, age does not have significant relationship with financing choices. The fixed assets ratio coefficient is insignificantly positive for equity regressions while negative for leverage ones. The dummy variable used to indicate the difference between Muslim religion and non-Muslim presents insignificance so it can be concluded that there is no relationship between Muslim religion and financing choices.

To conclude, the analysis of the relation between financing choices and family firm management indicates that the use of debt or equity is not explicit for family firms.

Table 6.6 Regression results of financing choices and family firm management

Panel A.				
	Leverage		Equity	
	(1)	(2)	(3)	(4)
Family Firms	0.0318 (0.0294)		-0.0019 (0.0315)	
Family Management		0.0302 (0.0263)		0.0073 (0.0282)
Size	0.0266*** (0.0055)	0.0264*** (0.0054)	-0.0360*** (0.0057)	-0.0356*** (0.0057)
Age	0.0109 (0.0149)	0.0115 (0.0149)	0.0142 (0.0154)	0.0150 (0.0155)
Fixed Assets Ratio	-0.0089 (0.0364)	-0.0095 (0.0364)	0.0634 (0.0364)	0.0638 (0.0364)
Cash Holding	-0.2510*** (0.0460)	-0.2530*** (0.0459)	0.2300*** (0.0452)	0.2310*** (0.0451)
Profitability	-0.3030*** (0.0390)	-0.3020*** (0.0390)	0.3260*** (0.0378)	0.3260*** (0.0378)
Sales Growth	0.0141** (0.0065)	0.0141** (0.0066)	-0.0348*** (0.0064)	-0.0349*** (0.0064)
Muslim	0.0218 (0.0275)	0.0216 (0.0272)	0.0146 (0.0294)	0.0156 (0.0291)
Intercept	-0.1340 (0.1070)	-0.1280 (0.1030)	0.9690*** (0.1120)	0.9550*** (0.1090)
Industry dummies	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes
Overall R-square	0.2918	0.2932	0.3499	0.3509
Wald chi2	188.57	188.82	262.72	262.86
P(chi2)	0.0000	0.0000	0.0000	0.0000
Observations	700	700	700	700

*, **, *** Significant at the 10%, 5% and 1% level, respectively.

Industry and year dummies are included in all regression.

Standard errors are shown in brackets.

Table 6.6 Regression results of financing choices and family firm management (continued)

Panel B.								
	Leverage				Equity			
	Year 1-3 after IPO		Year 4-5 after IPO		Year 1-3 after IPO		Year 4-5 after IPO	
	(1)	(2)	(1)	(2)	(3)	(4)	(3)	(4)
Family Firms	0.0465 (0.0298)		-0.0048 (0.0333)		-0.0306 (0.0351)		0.0269 (0.0345)	
Family Management		0.0435 (0.0266)		0.0016 (0.0298)		-0.0126 (0.0314)		0.0223 (0.0310)
Size	0.0231*** (0.0059)	0.0227*** (0.0059)	0.0157** (0.0066)	0.0160** (0.0065)	-0.0377*** (0.0068)	-0.0369*** (0.0067)	-0.0364*** (0.0066)	-0.0366*** (0.0066)
Age	0.0162 (0.0135)	0.0169 (0.0135)	0.0159 (0.0217)	0.0166 (0.0219)	-0.0087 (0.0144)	-0.0082 (0.0145)	0.0132 (0.0212)	0.0134 (0.0213)
Fixed Assets Ratio	0.0343 (0.0463)	0.0324 (0.0462)	-0.0902 (0.0581)	-0.0893 (0.0581)	0.0032 (0.0479)	0.0044 (0.0479)	0.2370*** (0.0544)	0.2360*** (0.0544)
Cash Holding	-0.2770*** (0.0574)	-0.2800*** (0.0573)	-0.4170*** (0.0784)	-0.4160*** (0.0782)	0.2290*** (0.0564)	0.2310*** (0.0563)	0.4140*** (0.0628)	0.4120*** (0.0627)
Profitability	-0.2960*** (0.0552)	-0.2940*** (0.0552)	-0.2550*** (0.0500)	-0.2540*** (0.0551)	0.3340*** (0.0515)	0.3330*** (0.0515)	0.2750*** (0.0362)	0.2750*** (0.0362)
Sales Growth	0.01880** (0.0077)	0.0188** (0.0077)	0.0013 (0.0106)	0.0013 (0.0106)	-0.0356*** (0.0071)	-0.0356*** (0.0071)	-0.0138* (0.0075)	-0.0137* (0.0075)
Muslim	0.0323 (0.0279)	0.0294 (0.0276)	-0.0217 (0.0314)	-0.0208 (0.0311)	-0.0130 (0.0327)	-0.0098 (0.0324)	0.0331 (0.0324)	0.0312 (0.0322)
Intercept	-0.1170 (0.1120)	-0.1050 (0.1080)	0.1090 (0.1350)	0.0979 (0.1310)	1.0860*** (0.1270)	1.0560*** (0.1230)	0.8170*** (0.1340)	0.8280*** (0.1310)
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Overall R-square	0.3242	0.3264	0.3064	0.3062	0.2950	0.2949	0.4476	0.4465
Wald chi2	127.34	127.71	91.40	91.37	160.02	159.18	192.91	192.72
P(chi2)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Observations	420	420	280	280	420	420	280	280

*, **, *** Significant at the 10%, 5% and 1% level, respectively.

Industry dummies are included in all regression.

Standard errors are shown in brackets.

6.2.2 Debt maturity structure and family firm management

In this section, the study relates family ownership, family management to the debt maturity structure. Croci et al. (2011), Jain and Shao (2015), and Díaz Díaz et al. (2016) demonstrated that family firms are more likely to use long-term debt due to fewer agency costs of debt than non-family firms, while Chen et al. (2014) reported that family firms have more capability to misappropriate resources so they will rely more on short-term debt. According to prior pieces of literature and the background of the sample used in the analysis, this study anticipates a positive relation between family variables and Short-term Debt while presenting negative relation with Long-term Debt. The study uses the following equations presented in Table 6.7 to test the hypothesis.

Table 6.7 The specification for testing debt maturity structure

Column	Equation
(1)	$\text{Short Term Debt}_{it} = \beta_0 + \beta_1(\text{Family Firms Dummies})_i + \beta_2(\text{Size})_{it} + \beta_3(\text{Age})_{it} + \beta_4(\text{Fixed Assets Ratio})_{it} + \beta_5(\text{Cash Holding})_{it} + \beta_6(\text{Profitability})_{it} + \beta_7(\text{Sales Growth})_{it} + \beta_8(\text{Muslim})_i + \beta_9(\text{Industry Dummies})_{it} + \beta_{10}(\text{Year Dummies})_{it} + \varepsilon_{it}$
(2)	$\text{Short Term Debt}_{it} = \beta_0 + \beta_1(\text{Family Management Dummies})_i + \beta_2(\text{Size})_{it} + \beta_3(\text{Age})_{it} + \beta_4(\text{Fixed Assets Ratio})_{it} + \beta_5(\text{Cash Holding})_{it} + \beta_6(\text{Profitability})_{it} + \beta_7(\text{Sales Growth})_{it} + \beta_8(\text{Muslim})_i + \beta_9(\text{Industry Dummies})_{it} + \beta_{10}(\text{Year Dummies})_{it} + \varepsilon_{it}$
(3)	$\text{Long Term Debt}_{it} = \beta_0 + \beta_1(\text{Family Firms Dummies})_i + \beta_2(\text{Size})_{it} + \beta_3(\text{Age})_{it} + \beta_4(\text{Fixed Assets Ratio})_{it} + \beta_5(\text{Cash Holding})_{it} + \beta_6(\text{Profitability})_{it} + \beta_7(\text{Sales Growth})_{it} + \beta_8(\text{Muslim})_i + \beta_9(\text{Industry Dummies})_{it} + \beta_{10}(\text{Year Dummies})_{it} + \varepsilon_{it}$
(4)	$\text{Long Term Debt}_{it} = \beta_0 + \beta_1(\text{Family Management Dummies})_i + \beta_2(\text{Size})_{it} + \beta_3(\text{Age})_{it} + \beta_4(\text{Fixed Assets Ratio})_{it} + \beta_5(\text{Cash Holding})_{it} + \beta_6(\text{Profitability})_{it} + \beta_7(\text{Sales Growth})_{it} + \beta_8(\text{Muslim})_i + \beta_9(\text{Industry Dummies})_{it} + \beta_{10}(\text{Year Dummies})_{it} + \varepsilon_{it}$

The first two models examine the relationship between family dummies and Short-term debt while the last two models use Long-term debt as the dependent variable. The study also uses the alternative measurements of family similar to the prior sections for analyzing (i) family versus non-family firms and (ii) family management.

The results of the regressions presented in Table 6.8 suggest that there is a positive (negative) relation between family variables and short-term debt (long-term debt) as expected. For short-term debt regressions, the coefficients of all family variables are statistically significant at 99% confidence level. Turning to long-term debt regressions, the coefficients are significant at 95% confidence level for family firms and only 90% confidence level for family management, indicating that the family management does not significantly affect the use of long-term debt in the firms.

With regards to the control variables, the coefficient of size is negative (positive) and significant for short-term debt (long-term debt), indicating that large firms are less severe in agency problems between shareholders and debtholders (lower level of information asymmetry) so the firms do not need to use short-term debt to mitigate that problem. The positive (negative) and highly significant coefficient of age related to short-term debt (long-term debt) suggests that older firms should be more stable and have more ability to generate cash flows and roll over short-term debt. This result is in line with the research of Díaz Díaz et al. (2016). The fixed assets ratio coefficient is negative (positive) and significant for short-term debt (long-term debt), indicating that firms can use fixed assets as collateral to increase debt capacity and make firms easier to extend debt maturity. There is a negative relation between profitability and short-term debt and significant at 90% confidence level for family firms while the relationship with long-term debt turns out to be insignificant for all family variables. Firms with low profitability have more expenses so they are more likely to use short-term debt. Sales growth does not have significant relationship with debt maturity structure. Unlike the results of financing choices, the dummy variable used to indicate the difference between Muslim and non-Muslim becomes significant for the debt maturity structure. Muslim ones tend to use long-term debt, implying that

the firms that hold Muslim religion have more credibility to extend their debt maturity.

In summary, the analysis of the relation between debt maturity structure and family firm management indicates that family firms are more likely to resort to short-term debt.

Table 6.8 Regression results of debt maturity structure and family firm management

	Short Term Debt		Long Term Debt	
	(1)	(2)	(3)	(4)
Family Firms	0.1657*** (0.0463)		-0.1265** (0.0494)	
Family Management		0.1128*** (0.0422)		-0.0784* (0.0447)
Size	-0.0203** (0.0093)	-0.0229** (0.0094)	0.0266*** (0.0098)	0.0289*** (0.0098)
Age	0.0998*** (0.0260)	0.0977*** (0.0267)	-0.1020*** (0.0274)	-0.0997*** (0.0278)
Fixed Assets Ratio	-0.3387*** (0.0774)	-0.3451*** (0.0783)	0.3057*** (0.0785)	0.3111*** (0.0790)
Cash Holding	-0.3717*** (0.1090)	-0.3879*** (0.1097)	0.1328 (0.1078)	0.1448 (0.1080)
Profitability	-0.1766* (0.1047)	-0.1649 (0.1050)	0.1503 (0.1000)	0.1435 (0.1001)
Sales Growth	-0.0042 (0.0185)	-0.0032 (0.0185)	-0.0059 (0.0174)	-0.0065 (0.0174)
Muslim	-0.0876** (0.0435)	-0.102** (0.044)	0.0996** (0.0464)	0.1113** (0.0466)
Intercept	0.6987*** (0.1806)	0.8029*** (0.1782)	0.1999 (0.1902)	0.1082 (0.1863)
Industry dummies	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes
Overall R-square	0.2688	0.2534	0.2342	0.2225
Wald chi2	92.32	83.37	73.34	68.31
P(chi2)	0.0000	0.0000	0.0000	0.0000
Observations	700	700	700	700

*, **, *** Significant at the 10%, 5% and 1% level, respectively

Industry and year dummies are included in all regression.

Standard errors are shown in brackets.

6.3 Additional testing results

The additional testing is provided to compare the results of three countries from ASEAN exchanges; namely Thailand, Malaysia, and Singapore. The specifications are the same as the main empirical testing. The regression results are now described.

For the financing choices between debt financing and equity financing, the results of leverage regressions presented in Table 6.9 Panel A for each country are

quite consistent with the specifications of all countries. The coefficients of family dummies of Thailand, Malaysia and Singapore are positive but have insignificant relation to leverage except for Family management in Malaysia that presents negative relationship. In terms of control variables, the results are all consistent with the specifications of all samples. Turning to the regressions of equity financing reported in Table 6.9 Panel B, it is surprising that only family variables in Singapore are less likely to use equity while the firms in Thailand and Malaysia tend to use equity financing. The results are contrast to testing with all samples. However, the results are insignificant.

To conclude, the analysis of the relation between financing choices and family firm management indicates that the behavior of family firms in each country about their use of debt or equity is not obvious.

Table 6.9 Regression results of financing choices and family firm management for each country

Panel A.						
	Leverage Thailand		Leverage Malaysia		Leverage Singapore	
	(1)	(2)	(1)	(2)	(1)	(2)
Family Firms	0.0633 (0.0656)		0.0156 (0.0404)		0.0475 (0.0628)	
Family Management		0.0457 (0.0607)		-0.0022 (0.0385)		0.0539 (0.0493)
Size	0.0462** (0.0198)	0.0439** (0.0195)	0.0217* (0.0112)	0.0210* (0.0114)	0.0294*** (0.0084)	0.0291*** (0.0082)
Age	0.0082 (0.0643)	0.0027 (0.0637)	0.0135 (0.0247)	0.0131 (0.0248)	0.0339 (0.0246)	0.0339 (0.0240)
Fixed Assets Ratio	0.0357 (0.0866)	0.0339 (0.0869)	0.0202 (0.0562)	0.0191 (0.0562)	-0.0762 (0.0597)	-0.0733 (0.0597)
Cash Holding	-0.5290*** (0.1347)	-0.5357*** (0.1344)	-0.1750*** (0.0655)	-0.1772*** (0.0654)	-0.2353*** (0.0703)	-0.2373*** (0.0701)
Profitability	-0.1450 (0.1067)	-0.1443 (0.1069)	-0.2557*** (0.0646)	-0.2556*** (0.0646)	-0.3614*** (0.0540)	-0.3598*** (0.0539)
Sales Growth	0.0340 (0.0217)	0.0345 (0.0217)	0.0128 (0.0084)	0.0129 (0.0085)	0.0069 (0.0108)	0.0069 (0.0107)
Intercept	-0.5817 (0.4295)	-0.4665 (0.3970)	0.0402 (0.1553)	0.0583 (0.1597)	-0.0781 (0.1508)	-0.0755 (0.1318)
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Overall R-square	0.3924	0.3906	0.3288	0.3274	0.2749	0.2834
Wald chi2	65.55	65.02	42.45	42.27	101.73	102.60
P(chi2)	0.0000	0.0000	0.0006	0.0006	0.0000	0.0000
Observations	160	160	285	285	255	255

*, **, *** Significant at the 10%, 5% and 1% level, respectively.

Industry and year dummies are included in all regression.

Standard errors are shown in brackets.

Table 6.9 Regression results of financing choices and family firm management for each country (continued)

Panel B.						
	Equity Thailand		Equity Malaysia		Equity Singapore	
	(3)	(4)	(3)	(4)	(3)	(4)
Family Firms	0.0579 (0.0486)		0.0062 (0.0413)		-0.1122 (0.0772)	
Family Management		0.0369 (0.0462)		0.0129 (0.0392)		-0.0743 (0.0613)
Size	-0.0261* (0.0157)	-0.0290* (0.0158)	-0.0522*** (0.0113)	-0.0516*** (0.0114)	-0.0420*** (0.0098)	-0.0400*** (0.0096)
Age	-0.0170 (0.0490)	-0.0227 (0.0499)	-0.0190 (0.0249)	-0.0185 (0.025)	-0.0048 (0.0277)	-0.0010 (0.0274)
Fixed Assets Ratio	-0.0147 (0.0735)	-0.0233 (0.0748)	0.1548*** (0.0559)	0.155** (0.0559)	0.0645 (0.0606)	0.0631 (0.0608)
Cash Holding	0.1959 (0.1262)	0.1849 (0.1258)	0.3349*** (0.0649)	0.336*** (0.0648)	0.1839*** (0.0699)	0.1877*** (0.0699)
Profitability	0.3482*** (0.1013)	0.3473*** (0.1012)	0.3216*** (0.0638)	0.322*** (0.0638)	0.3242*** (0.0518)	0.3216*** (0.0518)
Sales Growth	-0.0612*** (0.0208)	-0.0604*** (0.0207)	-0.0346*** (0.00833)	-0.0346*** (0.00833)	-0.0243** (0.0102)	-0.0243** (0.0102)
Intercept	0.9335*** (0.3364)	1.0561*** (0.3181)	1.019*** (0.1571)	1.008*** (0.161)	1.0436*** (0.1755)	0.9729*** (0.1548)
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Overall R-square	0.5106	0.4971	0.4619	0.4625	0.2007	0.2038
Wald chi2	93.73	91.39	114.52	114.74	92.51	91.63
P(chi2)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Observations	160	160	285	285	255	255

*, **, *** Significant at the 10%, 5% and 1% level, respectively.

Industry and year dummies are included in all regression.

Standard errors are shown in brackets.

For debt maturity structure, the results shown in Table 6.10 present that most coefficients of family dummies are positive (negative) relate to short-term debt (long-term debt). Focusing on each country, family firms in Thailand present the statistical significance with debt maturity structure when family members are CEO or serve as the boards in the firms while the results of Malaysia report that for family firms and family managements, the coefficients are all statistically significant. Additionally, the results of Singapore are in line with those of other countries except when family members are CEO or serves as the boards. If there is family management, the firms in Singapore are more likely to use long-term debt indicating that agency problem is less severe in those types of firms. Even though the sign of coefficients is presented in the opposite direction; it is not statistically significant at conventional levels. Implying that the ownership or management of family members do not affect to the debt maturity structure, the creditors or lenders do not need to use short-term loan to

monitor the behavior of the firms. It can denote that Singaporean firms are more creditability than other countries. This finding is supported by the suggestion of Deesomsak et al. (2004) who examined the influences of capital structure of firms in the Asia Pacific that Singapore has higher score of ‘the rule of law’³ than Thailand and Malaysia and when the rule of law is strong, the level of opportunity to exploit minority shareholders is likely to be low, implying less agency problem.

In conclusion, family firm managements in Malaysia and Thailand are more likely to use short-term debt whereas family firm managements in Singapore employ similar debt maturity structure to non-family ones.

Table 6.10 Regression results of debt maturity structure and family firm management for each country

Panel A						
	Short Term Debt Thailand		Short Term Debt Malaysia		Short Term Debt Singapore	
	(1)	(2)	(1)	(2)	(1)	(2)
Family Firms	0.1068 (0.0993)		0.2354*** (0.0622)		0.0273 (0.1008)	
Family Management		0.2076** (0.0817)		0.1787*** (0.0633)		-0.1109 (0.0772)
Size	-0.0909*** (0.0328)	-0.0825*** (0.0293)	-0.0058 (0.0199)	0.0001 (0.0215)	-0.0347** (0.0146)	-0.0399*** (0.0137)
Age	0.1691* (0.1010)	0.1822** (0.0904)	0.1300*** (0.0442)	0.1378*** (0.0467)	0.0509 (0.0443)	0.0349 (0.0423)
Fixed Assets Ratio	-0.0501 (0.1563)	-0.1001 (0.1466)	-0.4948*** (0.1251)	-0.5076*** (0.1295)	-0.3392** (0.1396)	-0.3697*** (0.1382)
Cash Holding	-0.3742 (0.2803)	-0.3627 (0.2742)	-0.5775*** (0.1640)	-0.5913*** (0.1672)	-0.0435 (0.1804)	-0.0385 (0.1783)
Profitability	-0.4167* (0.2265)	-0.4554** (0.2246)	0.1295 (0.1770)	0.1273 (0.1786)	-0.1823 (0.1680)	-0.1798 (0.1672)
Sales Growth	0.0074 (0.0467)	0.0051 (0.0466)	0.0135 (0.0241)	0.0159 (0.0242)	-0.0498 (0.0354)	-0.0492 (0.0353)
Intercept	1.2925* (0.6985)	1.2536** (0.5853)	0.4435 (0.2705)	0.3938 (0.2954)	0.9951*** (0.2632)	1.2056*** (0.2251)
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Overall R-square	0.3084	0.3869	0.4023	0.3615	0.2817	0.2979
Wald chi2	25.89	35.06	76.73	65.65	41.66	45.48
P(chi2)	0.0765	0.0061	0.0000	0.0000	0.0003	0.0001
Observations	160	160	285	285	255	255

*, **, *** Significant at the 10%, 5% and 1% level, respectively.

Industry and year dummies are included in all regression.

Standard errors are shown in brackets.

³ The three definitions of ‘the rule of law’ are Efficiency of judicial system, Rule of law, and Law and order.

Table 6.10 Regression results of debt maturity structure and family firm management for each country (continued)

Panel B						
	Long Term Debt Thailand		Long Term Debt Malaysia		Long Term Debt Singapore	
	(3)	(4)	(3)	(4)	(3)	(4)
Family Firms	-0.0613 (0.1036)		-0.179*** (0.0682)		-0.0219 (0.1061)	
Family Management		-0.1739** (0.0876)		-0.1231* (0.0676)		0.1328 (0.0807)
Size	0.1067*** (0.0332)	0.0957*** (0.0305)	0.0176 (0.0215)	0.0145 (0.0226)	0.0478*** (0.0152)	0.0536*** (0.0142)
Age	-0.1964* (0.1041)	-0.2127** (0.0955)	-0.1103** (0.0476)	-0.1158** (0.0492)	-0.0507 (0.0461)	-0.0332 (0.0438)
Fixed Assets Ratio	0.0203 (0.1532)	0.0602 (0.1469)	0.4699*** (0.1303)	0.4811*** (0.1327)	0.2637* (0.1397)	0.2946** (0.1378)
Cash Holding	-0.1138 (0.2580)	-0.1400 (0.2548)	0.2912* (0.1667)	0.3075* (0.1683)	-0.1080 (0.1772)	-0.1114 (0.1748)
Profitability	0.5003** (0.2066)	0.5290** (0.2060)	-0.1789 (0.1761)	-0.1733 (0.1770)	0.1458 (0.1577)	0.1449 (0.1569)
Sales Growth	-0.0414 (0.0422)	-0.0386 (0.0423)	-0.0139 (0.0237)	-0.0152 (0.0238)	0.0361 (0.0327)	0.0354 (0.0327)
Intercept	-0.3530 (0.7117)	-0.2118 (0.6116)	0.4202 (0.2918)	0.4308 (0.3110)	-0.1154 (0.2743)	-0.3482 (0.2331)
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Overall R-square	0.2808	0.3526	0.3376	0.3063	0.3013	0.3243
Wald chi2	27.12	32.93	56.88	51.22	40.91	45.82
P(chi2)	0.0564	0.0115	0.0000	0.0000	0.0003	0.0001
Observations	160	160	285	285	255	255

*, **, *** Significant at the 10%, 5% and 1% level, respectively.

Industry and year dummies are included in all regression.

Standard errors are shown in brackets.

CHAPTER 7

CONCLUSIONS

The financial literature has established that there are many mechanisms of financing decisions used to mitigate agency problems in the corporation such as debt or equity financing or debt maturity structure. It has been recognized that debt can alleviate the abuse of resources. Furthermore, short-term debt can be used to frequently monitor management by external parties. Many research endeavors have focused on established publicly companies whereas this research provides new findings about financing choices of family IPO firms.

This study uses the datasets of IPO firms from some ASEAN; namely Thailand, Malaysia, and Singapore to investigate the financing decisions between family firms and non-family counterparts during the period 2007 – 2015. Among this sample, family firms are presented in three-fourths of the firms, indicating that family business is the favorite kind of corporations in ASEAN.

The result illustrates that the use of debt capital or equity capital is not apparent for family firms. The management of family members does not change the results. On average, family firms tend to hold the debt levels and equity levels as non-family ones. The finding suggests that family IPO firms seem to be anxious about bankruptcy and financial distress costs from debt financing. In the meantime, they are concerned about losing their controls from equity financing. Therefore, hypothesis 1 is not supported. However, the results are both consistent and inconsistent with the empirical literature of developed markets since some papers establish that family firms are significant and positively related to debt financing, measured by leverage, and less likely to issue equity financing compared to non-family ones. However, some papers present that there is no relation between leverage and family firms.

Additionally, paying attention to debt usage, this study finds that debt maturity structure of family firms differs from that of non-family firms. Family firms are more likely to use short-term debt than long-term debt. The result does not change for the use of short-term debt when the study examines alternative specifications of family firms such as the management of family members while the long-term debt usage is

strongly negatively correlates with the ownership of family members while family management does not affect Long-term Debt much. The finding supports the hypothesis that family firms have more probability to misappropriate resources so they are likely to use short-term debt to alleviate agency problems between shareholders and debtholders. To reduce agency costs of debt, creditors want to frequently review loan via short-term debt. This is the monitoring device used by creditors to reduce moral hazard problem made by family firms (or borrowers). Comparing the results with the literatures of developed markets, family firms in those markets are more likely to present long-term debt whereas some papers report that family firms rely more on short-term debt. As such, consistent with hypothesis 2, the results support that family IPO firms in emerging markets use significantly short-term debt since these kinds of markets have more severe agency problems.

Furthermore, the study documents that the family firm managements in three countries from ASEAN exchanges, including Thailand, Malaysia, and Singapore do not explicitly present the behavior of debt usage or equity usage. Turning to the analysis of debt maturity structure for each country, the study finds that only family firms in Malaysia present positive (negative) significance to short-term debt (long-term debt) while family firms in Thailand rely more on short-term debt when family members are CEO or serves as boards. Contrast to other countries, the ownership or management of family members in Singapore do not affect to the debt maturity structure. The creditors or lenders do not need to use short-term loan to monitor the behavior of the firms. It can denote that Singaporean firms are less severe in agency problem and have more creditability than other countries.

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