1 INTRODUCTION

Research Background

Every economic activity requires capital for its business activities. This capital is needed for the financing of assets, operational activities and for company’s expansion. Capital needed for every business stage underlies the importance of understanding and implementation of the capital structure. The studies on capital structure aim to explain the proportion of debt and equity used by the companies to finance real investment (Myers, 2001). The theory of capital structure by Modigliani and Miller (1958) (MM Theory), formed the basis of modern thinking on capital structure. MM Theory is widely known as Capital Structure Irrelevance Theory, which stated that the value of the company is independent of its capital structure. In earlier studies, MM Theory showed that in tough competition and frictionless world, the value of a company is independent of its capital structure. It means that once the capital structure is determined, the change of the composition of equity and debt will not change the value of the company. Baker and Martin (2011) stated that the business risk determined the cost of capital and hence the decisions related to financing and capital structure are deemed to be irrelevant. Furthermore, Baker and Martin (2011) also stated that type of industry and company’s characteristics has important implications to the capital structure. For example, the companies with competitive landscape and concentrated companies tend to adopt different capital structures than companies with no competitive landscape and concentrated. Factors such as market concentration, product market competition and industry characteristics may influence the financial decisions of the company.

The expansion of MM Theory led to the introduction of other capital structure theories, which includes among other Trade-Off Theory, Pecking Order Theory, and Market Timing Theory. Trade-Off Theory (TOT) stated that the company can increase its debt level in its effort to achieve an optimal capital structure, as long as the tax benefit is greater than the cost of bankruptcy (Kraus and Litzenberg, 1973). Myers (1984) argued that the company that follows TOT has a target debt to value ratio and will gradually move to its target debt to value ratio. This target is set based on the consideration on tax benefit and cost of bankruptcy (Frank and Goyal, 2003). The companies are said to follow Pecking Order Theory (POT) when the companies prefer internal financing than external financing and when the external financing is chosen, companies will prefer to issue external debt than equity. Furthermore, for the companies to achieve an optimal capital structure, the companies would follow POT (Myers and Majluf, 1984). One of the reasons is the presence of adverse selection. Adverse selection theory asserts that owners and managers have better information regarding the fair value of the company’s assets and growth opportunities (information asymmetry), while investors can only guess the value of the company’s assets and growth opportunities. Generally, the manager of a company with equity value greater than its book value (overvalued) will prefer stocks instrument, while for company with equity value lower than its book value (undervalued) will prefer bonds instrument. Brigham and Houston (2010) assert that optimal capital structure is the structure
that maximizes the share price of the company. Therefore, in determining the capital structure, management’s decision will be adjusted based on the company’s condition at the moment (Ferdiansya and Isnurhadi, 2013). While TOT assumed the existence of optimal leverage based on the market imperfections such as taxes, bankruptcy costs and agency cost into the model, POT is based on asymmetric information between insiders and outsiders (Myers and Majluf, 1984). Felicia and Saragih (2015) asserted that the companies’ value shall be maximized when the companies are able to determine the right time for investment, known as market timing strategy. The market timing theory (MTT) asserted that the companies issue shares when the share price is high and repurchase the shares when the share price is low. This theory stated that ability to time the equity market affects the capital structure of the company and the securities issuance decision depends on its relative costs. One of the market timing practices commonly used is the use of mispricing of the companies’ shares in the market to obtain financing with relatively low cost of capital (Saad and Siagian, 2011).

The agency model theory (AMT) emphasized the importance of the way the managers in managing their company. A company with higher profitability needs to be closely monitored to ensure that the managers act on the behalf of the shareholders, in this case to maximize the shareholder’s wealth. The AMT puts the role of debt differently than TOT and POT, where the role of debt is to control the managers in behaving for the interest of the shareholders (Djoohanputro, 2015). Under the TOT, debt plays a role in balancing the capital structure to achieve the optimal capital structure, while under POT, debt becomes the alternative source of financing after the internal financing is used. The use of these models by practitioners generate varying result across region and time (Rafiq et al. 2008). As an implication, the studies on capital structure continues to be the center of discussion among academics and practitioners.

The capital structure is generally measured debt-to-equity ratio (DER), calculated by total interest bearing debt divided by the company’s equity. Companies in the same industry generally will have the same leverage ratio, while the companies in different industry will vary (Harris and Raviv, 1991). The companies’ leverage is influenced by the growth opportunities and sustainable growth rate. Companies in mature industries shall anticipate low growth rate, therefore the companies tend to use long-term debt instrument for financing. On the other hand, companies in growing stage industry tend to use stocks instruments due to strategy of cash flow and growth opportunities. The DER is generally used in the capital structure measurement, however if the capital structure measurement adopt net debt-to-equity ratio, it may generate a sharper analysis as it considers the cash and cash equivalent in the calculation of the capital structure. The comparative study between a number of companies that has debts would be more relevant if one considers the cash position of the companies being compared. Company with large debts are not necessarily in a position of liquidity or solvency worse than the company with smaller debt. Damodaran (2006) asserted that in the calculation of debt, many analysts in Europe and Latin America prefer to subtract the cash from the gross debt to arrive at a net debt figure. Lambrecht and Pawlina (2013) asserted that cash can be used to pay off the debt, which may explain the reasons for the substraction of the cash in the company’s balance sheet from the value of outstanding debt in order to
determine the company’s leverage. Based on the aforementioned argument, this study adopted net debt-to-equity ratio, calculated by total interest bearing debts less cash and cash equivalent divided by book value of equity (Net DER) to measure the capital structure of non-financial companies listed on the IDX.

In the case of Indonesia, the research on Indonesia Stock Exchange is important considering the attractiveness of Indonesian stocks including among others the IDX performance relative to its regional exchanges and improving business fundamentals. In 2015, despite the lower market capitalization of IDX, IDX still performed better than its regional exchanges. In addition to IDX performance, the business fundamentals in Indonesia also continuously improved following the 1998 financial crisis (Shim, 2014). Shim (2014) further asserted that as of December 2014, JCI listed companies recorded an average ROE of 21.1%, higher than the global and emerging market average ROE of 11.9% and 12.6%, respectively.

The non-conducive macro economic overview both nationally and internationally in 2015 has brought business uncertainty to global economy. The unrecover economic conditions from crisis in several of European regions, devaluation of Yuan and the falling price of crude oil, palm oil, and coal has result in the revision of the projection of various financial institutions to the national and international economic growth. In Indonesia, Bank of Indonesia revised its economic growth projection from 5.4%-5.1% at the beginning of the year to 4.7%-5.1% by mid year. The uncertain economic condition also resulted in depreciated Rupiah against USD as compared to the end of 2014, by 10% to IDR 13,875. Despite the uncertainty, on April 2015, IDX still able to record a new record of 5,523 allowing the market capitalization to record a new nominal value record of IDR 5,548 trillion. However, this record could not be maintained for long as the uncertainty economic condition in the global economy put pressure on the IDX. By the end of 2015, the IDX closed at 4,593, which was 12.39% lower than the beginning of the year and 20.25% lower than the new record of 5,523 in 2015 (IDX Factbook, 2016). IDX also experienced a 7.29% down of market capitalization from IDR 5,228 trillion in 2014 to IDR 4,872.70 trillion in 2015. Despite the lower market capitalization, IDX still performed better than the regional exchanges e.g. Singapore Strait Times Index and Thailand SET Index recorded 14.47% and 13.1%, respectively, down of market capitalization.

IDX sector group comprises of nine sector indexes. The nine sector indexes are 1) agriculture, 2) mining, 3) basic industry and chemicals, 4) miscellaneous industry, 5) consumer goods industry, 6) property, real estate and building construction, 7) infrastructure, utilities and transportation, 8) finance and 9) trade, services and investment. The nine sector indexes are shown in the Table 1.
Table 1 Sector index growth

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>JCI</td>
<td>2,746</td>
<td>1,355</td>
<td>2,534</td>
<td>3,704</td>
<td>3,822</td>
<td>4,317</td>
<td>4,274</td>
<td>5,227</td>
<td>4,593</td>
</tr>
<tr>
<td>2</td>
<td>Agriculture</td>
<td>2,755</td>
<td>919</td>
<td>1,753</td>
<td>2,284</td>
<td>2,146</td>
<td>2,063</td>
<td>2,140</td>
<td>2,351</td>
<td>1,719</td>
</tr>
<tr>
<td>3</td>
<td>Mining</td>
<td>3,270</td>
<td>878</td>
<td>2,203</td>
<td>3,274</td>
<td>2,532</td>
<td>1,864</td>
<td>1,429</td>
<td>1,369</td>
<td>811</td>
</tr>
<tr>
<td>4</td>
<td>Basic industry</td>
<td>238</td>
<td>135</td>
<td>274</td>
<td>387</td>
<td>408</td>
<td>527</td>
<td>481</td>
<td>544</td>
<td>408</td>
</tr>
<tr>
<td>5</td>
<td>Miscellaneous</td>
<td>477</td>
<td>215</td>
<td>601</td>
<td>967</td>
<td>1,311</td>
<td>1,337</td>
<td>1,205</td>
<td>1,307</td>
<td>1,057</td>
</tr>
<tr>
<td>6</td>
<td>Consumer</td>
<td>436</td>
<td>327</td>
<td>647</td>
<td>1,095</td>
<td>1,316</td>
<td>1,566</td>
<td>1,782</td>
<td>2,178</td>
<td>2,065</td>
</tr>
<tr>
<td>7</td>
<td>Property</td>
<td>252</td>
<td>103</td>
<td>147</td>
<td>203</td>
<td>229</td>
<td>327</td>
<td>337</td>
<td>525</td>
<td>491</td>
</tr>
<tr>
<td>8</td>
<td>Infrastructure</td>
<td>874</td>
<td>490</td>
<td>729</td>
<td>819</td>
<td>699</td>
<td>908</td>
<td>930</td>
<td>1,100</td>
<td>981</td>
</tr>
<tr>
<td>9</td>
<td>Finance</td>
<td>261</td>
<td>176</td>
<td>301</td>
<td>467</td>
<td>492</td>
<td>550</td>
<td>540</td>
<td>732</td>
<td>678</td>
</tr>
<tr>
<td>10</td>
<td>Trade</td>
<td>392</td>
<td>148</td>
<td>276</td>
<td>474</td>
<td>582</td>
<td>741</td>
<td>777</td>
<td>879</td>
<td>850</td>
</tr>
</tbody>
</table>

* data per November 2008

Source: Otoritas Jasa Keuangan, Capital Market Statistic (Data Processed)

Table 1 shows that Jakarta Composite Index (JCI) recorded a 6.64% increase of Compounded Annual Growth Rate (CAGR) from 2007 until 2015. The increase of JCI CAGR was contributed mainly by the increase of consumer goods industry sector of 21.46% CAGR and finance sector of 12.88% CAGR. Table 1 also shows that all sectors except agriculture sector and mining sector recorded a positive CAGR from 2007 until 2015. It is shown that the increase of JCI CAGR did not translate to a positive CAGR for individual industry. Considering every industry has its own specific operational and risk profile, the performance of each industry may differ from the JCI performance. As of December 2015, there were 21 companies in agriculture industry, 43 companies in mining industry, 65 companies in basic industry and chemicals, 43 companies in miscellaneous industry, 39 companies in consumer goods industry, 58 companies in property, real estate and building construction, 53 companies in infrastructure industry, 86 companies in finance industry, and 113 companies in trade, services and investment industry with a total of 521 companies (IDX Factbook, 2016).

The contribution of each index to the total IDX market capitalization is led by finance industry with market capitalization of IDR 1,231 trillion, equivalent of 25.54% of IDX market capitalization although the number of companies is only 16.51% from the total companies listed. The second largest IDX market capitalization contributor is the consumer industry with IDR 1,129 trillion market capitalization (23.44% of IDX). (IDX Factbook, 2016). Following the finance and consumer industry, the succession of the industry contribution to IDX market capitalization are infrastructure industry with IDR 637 trillion market capitalization; trade, services and investment industry with IDR 581 trillion...
market capitalization; property, real estate and building construction industry with IDR 371 trillion market capitalization; miscellaneous industry with IDR 303 trillion market capitalization; basic industry and chemicals industry with IDR 287 trillion market capitalization; mining industry with IDR 161 trillion market capitalization; and last is the agriculture industry with IDR 118 trillion market capitalization.

Problem Statement

Capital structure strategy is important as it is relating to the composition of debt and equity, which will deliver the highest profitability to the companies. The selected type of financing will generate different risks and returns for the companies. Debt financing has its advantages, e.g. one of the advantages is that the companies will benefit from the tax shield (Modigliani and Miller, 1963) and disadvantages. The larger the debt value, the larger is the tax shield value to the company. However, the excessive debt would result in financial distress, which would lead to financial difficulties. Therefore, in decision making, the companies must decide the composition of debt and equity that will deliver the highest profitability to the companies. In addition, market timing also plays a significant role in corporate finance decision making.

In corporate finance decision making, there are two major decisions that a manager has to make; the proportion of the companies' capital (debt and equity) and timing to achieve such capital structure. In addition to this, a corporate finance manager also has to understand the nature of the industry where the company operates. As mentioned by Harris and Raviv (1991), companies in the same industry generally will have the same leverage ratio, while the companies in different industry will vary. Numerous studies found that different industries can sustain different level of profitability and it can be explained partly by its industry characteristics. Every industry has its own characteristic and operational as well as financial metrics. Companies operating in infrastructure industry (i.e. toll road) generally use project financing scheme, to finance its project due to long payback period while companies operating in consumer goods industry generally use debt finance for their working capital.

Following the above discussion, this paper studied several aspects on capital structure. The first essay studied the existence of optimal capital structure using two approaches, WACC approach and FS approach. The second essay is divided into two parts; discussion on the determinants of capital structure and the speed of adjustment. The third essay studied the influences of state ownership to the capital structure. The fourth essay studied the variables affecting the equity issuance. Last but not the least, the fifth essay studied the capital structure changes prior and post IPO. The conceptual framework of the study is shown in the Figure 1.
This study aimed to analyze the problems statement through empirical study based on the model developed:

1. To analyze the existence of optimal capital structure using two approaches for non-financial companies listed on the IDX.
2. To analyze the determinants of capital structure and the speed of adjustment for non-financial companies listed on the IDX.
3. To analyze the influence of state ownership towards the capital structure for non-financial companies listed on the IDX.
4. To analyze the variables affecting the equity issuance for non-financial companies listed on the IDX.
5. To analyze the capital structure changes for non-financial companies listed on the IDX.

**Significance of Study**

This study aimed at providing a thorough analysis and wider perspectives for the managers and company’s stakeholders, investors and academicians. The results of the study shall be used by the management and companies’ stakeholders in corporate finance planning and decision making; by the investors in making
investment decision; and by the academician as a reference for future researches, particularly in capital structure.

Limitation of the Study

This study was limited to the capital structure aspect for non-financial listed companies on the IDX. The sample of the study did not include the finance industry (banks, financial institutions, securities houses, insurance and others) as the business activities and the balance sheet structure of these companies are generally different from companies in other industries. The capital structure is measured by Net DER, calculated by the total interest bearing debts less cash and cash equivalent divided by the book value of equity. The total interest bearing debts are the total of short-term and long-term interest bearing debts.

The period of this study is from 2001 until 2015, with the exclusion of 2008. In 2008, JCI fell 48.4% from 2,627.3 at the beginning of the year to 1,355.4 by December 2008. This steep drop is caused by the external factors in relation to the subprime mortgage crisis in the United States. The magnitude of the steep drop is not directly related to the fundamental of the Indonesian capital market or to the individual companies performance. Due to this anomaly in 2008, it is excluded from the study period.

The study period of this study is aimed to capture the market performance before and after the crisis. The seven years of study prior and post crisis is chosen because by the time the data was collected, the 2016 financial statements for the companies studied were not available. In addition, considering the study period and due to the unavailability of the data, Table 1 only

Novelty

This study is different with previous studies on capital structure as it included several novelties to the study. The novelties are as follow:

1. Based on the information gathered and research on the capital structure in Indonesia, the analysis on equity market timing, which included the variables reflecting equity market condition and debt market condition has never been done in Indonesia. One of the plausible explanations is the use of equity market variables alone is enough in explaining the market timing behavior.

2. The adoption of Net DER as a capital structure measurement for non-financial companies listed on the IDX has never been done in Indonesia. One of the plausible explanations is because the cash requirement required by the regulations for specific industry.

The main reasons for the adoption of Net DER are:

a. The comparative studies between companies that have debts would be more relevant if one considers the use of cash position of the companies compared. Companies with a large debt may not necessarily be in a position of liquidity or solvency worse than companies with smaller debt.
b. From valuation perspective in merger and acquisition transaction, Net DER is more relevant because the investor does not buy the companies’ cash.

This study believes that these new contributions shall add new perspectives in corporate finance decision making. These new contributions shall also assist the managers of the companies in taking two major decisions in corporate finance; the proportion of companies’ capital (debt and equity) and the timing to achieve such capital structure. Furthermore, as highlighted by the findings of this study, further studies shall adopt Net DER as a measurement of capital structure.

2 LITERATURE STUDY

The discussion on the relationship between capital structure and the company’s value continues to be one of the center attentions for academician and investors. Capital structure was first initiated by Modigliani and Miller (1958) where it stated that capital structure has no influence to the equity value of the company (MM Theory). One of the assumptions used was the absence of taxes and privately owned companies. Along with the development of the MM Theory, the theory of capital structure evolved with the introduction of taxes and broader funding sources. This funding source is divided into internal financing (obtained from retained earnings) and external financing (obtained from external debt and equity). In an attempt to obtain external financing, the companies enter to capital market by issuing bonds; debt instrument or stocks; equity instrument. Investors who buy bonds are lending money to the company and in return will receive interest payment, in most cases quarterly basis. When the bonds mature, the company issuing bonds has a legal commitment to return the principal. Once the bonds are issued, it can be traded in secondary market on the IDX. For stocks investors, two of the primary benefits of investing in stock are capital gain and dividend income. Furthermore, the managers’ ability to time the equity issuance were also found to affect the companies’ capital structure.

Source of Financing

The company’s financing comes from two sources; internal and external. Internal financing is obtained internally from retained earnings. Retained earnings are earnings not paid out as dividends, but retained by the company to be reinvested to the business or to pay debt. External financing is derived from external debt and equity. Debt is used by companies to finance its operational activities, and business growth. Myers (1984) stated that based on POT, in external financing, companies would prefer the issuance of debt than the issuance of stocks. This is true considering cost of debt is lower than cost of equity. Debt can be classified into:

a. Short-term debt that is debt incurred that is due within a year.
Untuk Selengkapnya Tersedia di Perpustakaan SB-IPB