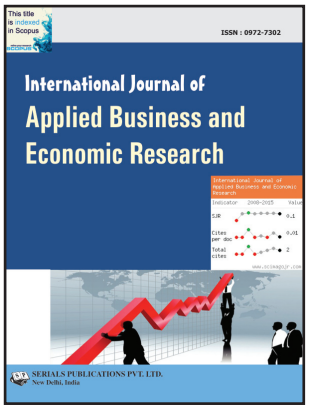

International Journal of Applied Business and Economic Research

ISSN : 0972-7302

available at http: www.serialsjournal.com

Volume 15 • Number 16 • 2017

Indonesia's Capital Structure: Pecking Order Theory or Trade-Off Theory

Ni Luh Putu Wiagustini[1], I Wayan Ramantha[2], Ida Bagus Panji Sedana[3] and Henny Rahyuda[4]

[1]*Corresponding author, Department of Management, Faculty of Economic and Business, Udayana University, Indonesia. Email: wiagustini@yahoo.com*

[2]*Department of Accounting, Faculty of Economic and Business,* Udayana University, Indonesia

[3,4]*Department of Management, Faculty of Economic and Business, Udayana University, Indonesia*

ABSTRACT

This research on capital structure aims to find out the optimum capital structure composition that can increase firm's value. Optimum capital structure can be explained theoretically through two theories, namely the pecking order theory and the trade-off theory. Hypothesis testing was conducted to know better explanatory variables of these two theories. The sample was a purposive sampling from non financial companies. The data were analyzed using linear regression for pecking order theory and partial adjustment model for trade-off theory. The results show that non financial companies in Indonesia follow the pattern in the trade-off theory rather than pecking order theory.

Keywords: Firm value, capital structure, trade-off theory, pecking order theory.

1. INTRODUCTION

Failure in determining the composition of capital structure could potentially bring the companies into financial difficulties; as a result, it may lead to bankruptcy. The composition balance between debt and optimum capital turns into a very complex and important discussion of financial management. The success of capital structure composition is reflected by high value of the firm and low weighted capital cost. Firm's capital structure has an effect on the value of the firm; for example, the price of securities on the stock exchange reflects the capital structure (Manurung, 2012). Investors or decision makers in the capital market often pay attention to the firm's capital structure prior to making an investment (Tirsono, 2008).

Optimum funding composition in practice is not the same from one company to another but the funding pattern can be explained theoretically. Theory of capital structure was initiated in 1958 by Modigliani and Miller that was better known as the theory of MM without tax. It stated that the value of the firm is not affected by the capital structure (irrelevant capital structure). The theory can be interpreted that the composition of internal and external funding sources will not affect the firm's value at all so that levered and unlevered companies contain the same value. The theory of MM suggests the condition could be real with fairly stringent assumptions, namely, efficient capital market, no transaction fees, no taxes, and no asymmetry of information (Modigliani & Miller, 1958).

In 1963, MM revised their theory by eliminating one assumption, namely tax hereinafter referred to as MM with taxes. MM added taxes so that the capital structure has an impact on the company. This idea is based on the existence of debt tax shield, that is, debt interest can reduce taxes (tax deductible) that must be paid out by the company to the Government. In this condition, the company dominated by debt gains advantages in the form of cash-flow savings as a result of the debt interest (Modigliani & Miller, 1963). As the implication, the optimum capital structure is entirely formed from the debt but the assumption of the financial distress is ignored. Testing on theories of capital structure continues to be the basis of decision-making and additional empirical evidence to achieve a consensus on the optimum capital structure. MM without tax (1958) and with tax (1963) have encouraged the development of theory of capital structure; furthermore, assumptions of financial distress, asymmetry of information, agency cost and taxes have widened views on the concept of capital structure that give birth to the two theories i.e. pecking order theory and the trade-off theory.

The development of the of capital structure theory that is often used to describe firm's behavior is the pecking order theory. The theory of stages of funding was popularized by Myers and Majluf (1984) within formation asymmetry approach between investors and management. Pecking order theory emphasizes that optimum funding decision does not settar get on optimum leverage. This theory explains that firm's behavior in funding is based on the fund cost hierarchy, with internal funding source or retained earnings as the top priority. If there is deficit, then we give priority to the use of more corporate debt rather than issuing new shares. The pecking order theory exists due to information asymmetry received between shareholders and management (Myers, 1984).

The trade-off theory was as criticism toward the theory proposed by Modigliani & Miller (1963). MM with tax requires that optimum capital structure is entirely made up of debt, but ignores financial distress assumption. In practice, there's no composition of firm's capital structure that consists only of debt because it is closer to the risk of bankruptcy. At a certain point, the value of the firm will decrease because of the possibility of higher bankruptcy costs compared with the profit gained from the tax savings by the firm (Myers, 2001). Balance between profit and risk acquired through debt is a framework of trade-off theory. The trade-off theory is unlike the pecking order theory because it declares a target of optimum debt levels that can maximize the firm's value. When the debt reaches the optimum level, the value of the firm also attains the highest point, while wacc is at the lowest point (Moyo et. al., 1995). Conceptually, the targeted optimum leverage is set when the profit gained by the firm through debt tax shield is higher than the financial distress (Myers, 2001).

The motivation to conduct this research is divided into two parts, namely diversity of research results and diversity of the testing methods that lead to different conclusions. First, the diversity of research results

regarding the explanation of the funding behavior in a country causes further testing needs to be done. The testing of pecking order theory and trade off theory in one new equation has been carried out several times. Research on capital structure in Indonesia are dominated by finding determinant factors (Tirsono, 2008; Wardianto, 2012; Sari, 2014; Waskito, 2008) and the testing on the pecking order theory (Christianti, 2008; Ruslim, 2009). This study tests the pecking order theory and trade off theory partially and also do the testing of both theories in one equation. This is necessary to do to describe the behavior of funding in Indonesia. Second, diversity of the testing methods makes different ways of drawing conclusions. The testing on pecking order theory and the trade-off theory can employ the relationship between determinant variables in capital structure (Sawitri & Darmayanti, 2014; Mahardhika, 2012; Wardianto, 2012; Yuliati, 2011; Bundala, 2012; Collins, *et. al.* 2013; Vanacker & Manigart, 2008; Moyo, *et. al.* 2013)and approaches by Shyam-sunder & Myers (1999) and Flannery & Rangan (2006). The testing on pecking order theory employs studies on linkage between variables, but it has disadvantages because by looking only as the influence of determinant variables on capital structure could not be considered that the pecking order exists; furthermore, when there is inconsistency of influence between variables, drawing conclusion is difficult to realize (Vasiliou, Eriotis, & Daskalakis, 2009). Shyam-sunder & Myers (1999)'sapproach underlies the the model on corporate funding deficit. If the firm is experiencing internal funding deficit, the firm will make a debt. Funding deficit comes from lack of internal sources to fund investment and less commitment to share dividends. Flannery &Rangan (2006) applied the trade-off theory testing by using adjustment model to find out how fast the firm being tested adjusts the level of its debt. This test utilized approach from Flannery & Rangan (2006) and Shyam-sunder &Myers (1999) in order to draw conclusions for a better theory in explaining the behavior of funding in the firms listed on IDX.

This research aims to examine: (1) the pattern of the pecking order theory on manufacturing companies listed on the Indonesia's Stock Exchange; (2) the pattern of the trade-off theory on manufacturing companies listed on the Indonesia's Stock Exchange.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

The background of the trade-off theory and the pecking order theory was derived from MM (1957 & 1963) by engaging assumptions, namely agency theory and information asymmetry. The trade-off theory is based on agency theory, while the pecking order theory is according to the information asymmetry. Both theories offer different points of view in explaining the behavior of corporate funding.

The act of maximizing profits or the firm's value is reflected in the behavior of some or all individuals within the firm, including the managerial level. As a result, their behaviour will be contained in the agreement/contract between the manager with the company which then result in the presence of Agency cost in conjunction with the Agency Theory. Agency costs are all costs that arise from the separation of ownership and control between owners and management. The firm which bears too high agency cost will cause decrease their value; this is in fact contrary to the main purpose of the theory of capital structure. This condition needs to be given much attention to suppress the agency costs and thus the company can achieve a maximum value as desired by the shareholders. Agency costs can be minimized through the mechanism of bonding and monitoring (Jensen & Meckling, 1976). Bonding can be done through policy on dividends, ownership structure and debt structure. Removing potential agency conflicts between shareholders and managers cannot only be through contract; it is much more effective to include debt as the funding source

(Harris & Raviv, 1991). Trade off theory applies the debt structure approach to suppress the possibility of agency conflicts. More intense use of debt will lead to higher level of scrutiny from the creditors to the company. Creditor has expectation that the fund channeled to the firm can be paid out along with the interest that has been mutually agreed. To achieve the goal, the creditor performs supervision on the managers and evaluation in a certain period to ensure that the funds disbursed are utilized efficiently. The high level of scrutiny carried out by a third party can lessen the freedom of management in formulating policies which do not meet the purpose of shareholders.

Information asymmetry is when there is an information gap between management and shareholders. Such situation occurs as the impact of prolonged agency conflicts. In the firm's perspective, management always has more complete information than the shareholders due to the separation of control. Pecking order theory bases the funding on information asymmetry. Management attempts to meet the operational and investment needs from funding source with the least amount of information disclosed, in this case, the internal source. Management tries to cover up information regarding the actual condition of the company in order to set appropriate policies based on their own interests. If the company requires external funding source, they choose debt as the top priority as it is considered a positive signal to investors with less information. The information gap between management-shareholder is utilized by management to convince them that the company's share price is undervalued. The undervalued shares provide a positive signal; the movement of a stock price will be towards intrinsic price that has the potential to benefit from capital gains. Conversely, if the company fulfils the need of their funding through advanced issuance of new shares, the market will react negatively because the market perceives stock price as overvalued. The management controlling the company's information certainly knows the company better than the prospective investors who can only estimate whether the stocks are undervalued or over valued (Frank & Goyal, 2004).

The balance of funding composition can maximize the relative firm's value between the firm and the industry. The maximum firm's value according to the pecking order theory is not based on debt and balance of capital but on a pattern of behavior in choosing the funding. Each funding source has priority scale in constructing the capital structure of the company. The order of priority scale is categorized into two, namely the capital costs and information asymmetry (Myers & Majluf, 1984). Erita (2009) points out that the firm's funding behavior on the construction sector, property and real estate registered in IDX suggests the pattern of pecking order. Companies with high profit and total assets have rich internal funding sources to meet the needs of the companies in the upcoming period. If the companies do require, funding, they tend to choose long-term debt to cover the deficit in the internal condition. Sawitri & Darmayanti (2014) found there is a significant negative relationship between dividend payout ratio and investments. Manufacturing companies in Indonesia try to choose whether to have dividend payout ratio or investment. Research shows the pecking order theory is also demonstrated by Butt, *et. al.* (2013); Santosuosso (2013); Sheikh, *et. al.* (2012); Vidal & Ugedo 2005; Degryse, *et. al.* (2010); Collins, *et. al.* (2013). Based on the aforementioned descriptions, the first hypothesis presented in this study is:

H1: There is abehavioural pattern of pecking order theory in non financial companies in Indonesia.

The trade-off theory focuses on debt sources. Debt in the trade-off theory holds the leading role in constructing the capital structure in order to maximize the value of the firm. The faster movement of the leverage to reach optimum point might imply that the company implements trade-off approaches in their funding. The adjustment of leverage is restricted by the financial distress, so that the company's

management should balance the use of debt (Myers, 2001). The use of debt as a primary funding source is supported by the fact that the cost from debt can be as payable tax reduction and can suppress agency conflits between management and shareholders. Research on trade-off theory performed by Hardiyanto (2014) in Indonesia's Stock Exchange concludes there is adjustment in leverage towards the desired target. Companies in Indonesia will take approximately 2 years 3 months to adjust the debt to equity ratio. The long period of adjustment is because the companies already use long-term debt in their investment. Companies that follow the patterns of trade-off theory have huge total asset measured from the size of the companies. A large number of asset management makes it easy to provide an assurance of obtaining loans from a third party (Darminto & Manurung, 2008). Other research supports the trade-off theory, including Moyo, *et. al.* (2013) and Eldomiaty & Ismail (2008). Hence, the second hypothesis presented in this study is:

H2: There is a behavioural pattern of the trade-off theory in the non financial companies in Indonesia.

Pecking order theory and the trade-off theory are two most frequently debated theories to explain the phenomena in building the capital structure. Pecking order theory explains that the optimum capital composition is based on asymmetry of information, whereas the trade-off theory is based on agency theory. In a different perspective, pecking order theory pays attention to the fulfillment of funding needs through an order, while the trade-off theory concerns adjustment of leverage to the optimum level with consideration on financial distress. Empirical testing continues to do to find out the most dominant theory in explaining the capital structure. The conclusion drawn from the debates is that the two theories are not mutually exclusive, but there must be one predominant theory in describing the capital structure (Matemilola & Banny, 2011; Mazen, 2012; Dedes & Cornelius, 2010; Cai & Ghosh, 2003; Sheikh & Wang, 2011; Darminto & Manurung, 2008). Based on the description, the third hypothesis presented in this study is:

H3: Pecking order theory has explanatory variables better than the trade-off theory in the non financial companies in Indonesia.

3. RESEARCH METHOD

Population and Samples

This research was conducted by involving population of public companies listed on the Indonesia's Stock Exchange (IDX) during the years 2010-2013. The base year of 2010 was decided based on the fact that the IDX has been through the period of crisis that occurred in 2008. Indonesia was hit by the domino effect of the crisis in the US and experiencing a recovery until 2009. The year 2013 became the last year considering novelty and update on data and empirical research on capital structure in Indonesia. The number of samples used as a total of 324 enterprises.

The sampling technique utilized was purposive sampling, and the criteria used to select the sample were:

(a) Public, nonfinancial companies listed in IDX during the period of research.

(b) The companies had never been delisted during the research period and had financial statements and reports to financial statements which were publised from 2010-2013. The second purposive sampling aimed at fulfiling the data needed for research. If the companies were delisted and the necessary data were not published, the companies were excluded from the sample to continue the stages in the research.

Research Data

The data in this study were secondary data namely the amount of internal funding deficit involving multiple components of financial statements such as the payment of dividends, investments, changes in the companies' working capital, and net cash flows received after interest and taxes. In addition to internal deficits, variables used were the tangible assets, size of the company, company growth, ROA, and the past debts as the determinant factors of the debt. Secondary data obtained from the financial reports were published and available on the official website of the Indonesia's Stock Exchange.

Research Variables

The proxy of Pecking order theory utilized approaches by Shyam-sunder & Myers (1999) that were revised by Chirinko, et. al. (2006) by inserting two control variables of deficits and surpluses. This research tried to distinguish the influence between surplus and deficit against changes to the use of debt. Meanwhile, the proxy of trade-off theory employed the target debt ratio with the dynamic approach proposed by Flannery & Rangan (2006). The target debt ratio estimation by offering dynamic approach used a proxy based on regression of determinant factors by Harris & Raviv, (1991); Darminto & Manurung, (2008); Dedes & Cornelius, (2010).Those variables were tangible asset, size, non debt tax shields, company growth, the past debt and ROA. Technical measurement of proxies of the pecking order theory and trade-off theory are described in brief through the Table 1 as follows:

Table 1
Brief Definition of Operational Variables

No.	*Variable*	*Definition*	*Measurement*
1.	DEF	Funding Deficits	(Dividend + Investment + Δ*working Capital*) – *Cash Flow*
2.	ΔD	Changes in Total Debt	$D_t - D_{t-1}$
3.	TA	Tangible Asset	*Property Plant Equipment*/*Total Asset*
4.	Size	Company size	*Logaritm of Natural Total Asset* at year *t*
5.	NDTS	Non Debt Tax Shield	Depreciation/*Total Asset*year *t*
6.	GRW	Company Growth	*Price*/*Book Ratio*year *t*
7.	ROA	Return On Asset	EAT/Average Asset year *t*
8.	PD	Past Debt	D_{t-1}

Analytical Methods

Analytical methods used were multiple regression and Partial Adjusment Model (PAM).

(a) **Pecking Order Theory:** Testing on pecking order theory by multiple regression method used dummy variables. Multiple regression is a method of regression analysis to find out the influence of dependent variables against independent variables. The independent variable of the equation was funding deficit and the dummy variable of surplus-deficit became the control variable, whereas the dependent variable was the change in the total leverage. Pecking order theory equation is shown as follows:

$$\Delta D = \alpha + \beta_{PO}\ DEF + \beta_1 d + e_t$$

Notation:

ΔD : Changes of the leverage

DEF : Funding deficit

d : Dummy surplus-deficit

α : Constant

β : Coefficient

(b) **Trade-off Theory:** Testing on the trade-off theory was divided into two parts, namely using multiple regression to estimate the desired leverage by the companies and Partial Adjustment Model to estimate variables which in the equation accommodate actual differences ofkala/lag developed by Mark Nerlove (Gujarati, 2003). In this model, the actual dependent variable denoted as Y* was an expected optimum value. The linear equations for this model can be written as follows:

$$Y_t^* = \beta_0 + \beta_1 X_t + e_t$$

Y_t^* : Expected dependent variable

X_t : Independent variable predicted to influence Y_t^*

e_t : *error*

Because the expected Y value of could not be observed directly, Nerlove proposed a hypothesis known as partial adjustment (partial adjustment) as follows:

$$\Delta D = \alpha + \delta_{TO}(D_{it}^* - D_{it-1}) + e_{it}$$

Notation:

ΔD : Actual changes of debt value

$D_{it}^* - D_{it-1}$: Expected changes of debt value

δ : Coefficient of adjustment ($0 < \delta \leq 1$)

If the value of $\delta = 1$, it means the actual debt is equal to the expected debt. If the value of $\delta = 0$, this implies at the time of observation, the actual debt is similar to the previous year debt (no change). ΔD is estimated to have a value ranging between 0 to 1 because the expected debt difficult is to achieve due to determinant factors affecting the actual events. Estimation of the expected leverage uses a dynamic approach, with the regression-based proxy. Analysis of expected debt levels in this study has been done by the partial adjustment model with the equation:

$$D_{it}^* = \alpha + \beta_{TA} + \beta_{NDTS} + \beta_{SIZE} + \beta_{GRW} + \beta_{ROA} + \beta_{PD} + e_t$$

Notation:

D_{it}^* : Expected leverage

TA : Tangible asset

SIZE : Company size

GRW : Company growth

ROA : Return On Asset

PD : Previous debt

e_t : *error*

(c) **Pecking Order Theory & Trade-off Theory:** The testing on pecking order theory and the trade-off theory was conducted in an equation using multiple regression as follows:

$$\Delta D = \alpha + \beta_{PO} + \beta_{TO} + e_t$$

ΔD : Short term debt

β_{PO} : Coefficient of pecking order

β_{TO} : Coefficient of trade-off

e_t : *error*

Based on the development of hypothesis and literature review as for the research model shown by Figure 1 as follows:

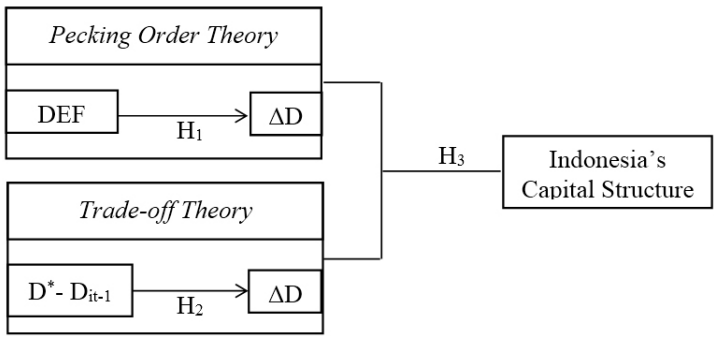

Figure 1: Research Model

4. ANALYSIS RESULTS

Hypothesis Testing

Hypothesis testing using multiple regression is to identify the influence among variables. In addition to test the hypothesis, the influence between variables is used as a basis in identifying the results of research.

Results of Testing on Hypothesis 1: Influence of internal funding of deficits to changes in leverage can be explained through the equation:

$$\Delta D = 0{,}01168 - 0{,}10566DEF^{**}$$

Description: ** = significant at $\alpha = 0.05$

The data processing results suggest that internal funding deficit had a negative influence on changes in leverage and that the hypotheses formulated were rejected. The results indicate that the higher internal funding deficit will minimize changes in the leverage, meaning that the companies cover the internal funding deficits by using other funding sources. The companies are indicated to use capital as a funding source to

Variable	*Coefficient*	*Std. Error*	*t-statistics*	*p-value*
Constant	116.8835	132.6272	0.881294	0.3793
Internal Funding Deficit	–0.105662	0.049724	–2.124964	0.0349
R-squared	0.022861			
F-statistic	4.515472			
p-value (F-statistics)	0.034862			

cover internal deficit and investment. The results of this research are supported by the study of Fama & French (2005) and Leary & Roberts (2005 & 2010) who also found a negative and significant influence of internal funding deficit coefficient. Companies trying to meet their funding through internal sources can minimize risk and have lower possibility of information asymmetry.

Fama & French (2005) reveal that in a critical condition, there are some other funding sources than debt and issuing share to new investors in the capital market. Fama & French (2005) divide the funding sources into 4 types, namely 3 alternative SEO and 1 merger with stock. SEO in question is issuing shares to employees (ESOP), right issues and direct purchase while the alternatives outside the SEO is merger with the stock. This actually is not applicable in Indonesia, but the rights issue is the only most relevant thing. Right issue is one of the corporate actions often done by a total of 82 companies during the research period 2010-2013. Right issue is preferred because it provides an opportunity for owners of previous stock to improve the level of ownership in the company. Companies would get a low risk funding source and also suppress information asymmetry. Capital becomes part of the company's funding sources and but not the only alternative. The results in this study show that the companies did not follow the pattern of the pecking order theory because they did not follow the hierarchy of funding as required.

Results of Testing on Hypothesis 2: The influence of changes in the expected leverage to changes in the actual leverage can be explained through the equation below:

$$\Delta D = -0{,}00193 + 1.14201(D^{*}_{it} - D_{it-1})^{**}$$

Description: ** = significant at $\alpha = 0{,}05$

Variable	*Coeficient*	*Std. Error*	*t-statistics*	*p-value*
Constant	–0.00193	118.0674	–0.163489	0.8703
Changes in expected leverage	1.14201	0.158744	7.194041	0.0000
R-squared	0.211454			
F-statistic	51.75423			
p-value (F-statistics)	0.000000			

The results of the data processing above suggest the changes in the expected leverage showed a significantly positive effect to changes in the actual leverage. This is in accordance with the hypothesis that companies are following the pattern of the trade-off theory. The companies were trying to adjust their leverage from year to year to gain an advantage obtained through tax benefits. The coefficient of the trade-off theory showed the value of 1.142 or of 114,2%. The adjustment done by the companies each year was by increasing the level of debt amounting to 14.2% from the previous year. The result of this research was supported by findings of the previous research by Darminto & Manurung (2008); Fama & French (2002); Flannery & Rangan (2006); Hardiyanto (2014). Fama & French (2002) in their study conclude the

level of adjustment between 7-10% for companies that pay dividends in the US, and between 15-18% for companies that do not pay dividends. Moreover, Darminto & Manurung (2008) found 11.6% rate of adjustment annually in BEI. Flannery & Rangan (2006) investigating firms in the US also stated that the period of adjustment is influenced by the applicable Econometrics technique.

Result of Testing on Hypothesis 3: The influence of internal funding deficit to changes in the actual leverage can be explained through the equation below:

Variable	*Coefficient*	*Std. Error*	*t-statistics*	*p-value*
Constant	–35.24739	117.4719	–0.300049	0.7645
Pecking order theory	–0.085815	0.043512	–1.972204	0.0500
Trade-off theory	1.135094	0.157608	7.202014	0.0000
R-squared	0.227111			
F-statistic	28.20934			
p-value (F-statistics)	0.000000			

The trade-off theory had better explanatory variables than the pecking order theory. This result is not in accordance with the third hypothesis. This research was supported by Cai & Ghosh (2003) and Sheikh & Wang (2011) who conclude that both hypotheses are not mutually mutually exclusive but have one theory which has better explanatory variables. Cai & Ghosh (2003) tested the pecking order theory and the trade-off theory by considering the industry average. Industry is following the pattern of trade-off theory only when the company leverage is below the average industry leverage. The company leverage in Indonesia is still below the average industry leverage so that it still opens for opportunity for applying for **laons** in the coming period. The average industry leverage is the benchmark of companies so as not to attract the attention of the Government that can lead to inspection over the fairness of leverage. The Government in Indonesia has the right to determine the fairness of leverage regulated in Law No. 36 year 2008 Article 18, that causes companies to their leverage target with the average industry leverage as the upper limit.

5. CONCLUSIONS, LIMITATIONS AND SUGGESTIONS

The study found that there is no pattern of the pecking order theory in Indonesia after testing the level of internal funding deficit against the changes of leverage. The changes in expected leverage have a positive affect on the changes in actual leverage; this means that companies in Indonesia tend to follow the pattern of the trade-off theory. The findings are supported with the testing of the third hypothesis which suggests that the pattern of trade-off theory has explanatory variables better than the pattern of pecking order theory.

This study has limitations that could be recommendations for further research. The study only focuses on two theories i.e. the pecking order theory and the trade-off theory. Further research is expected to consider the use of equity market timing pointed out by Baker & Wurgler, 2002 so as to expand understanding on the formation of the capital structure. Further research are expected to focus not only on financial reports but rather on the underlying reasons why companies prefer to adjust their target by using a qualitative approach. The rationale is that the pecking order theory is a hypothesis based on behavior pattern in choosing funding; hence, it will have a broad understanding of how financial managers of companies attempt to meet their funding.

References

B.T, M., & A.N, B.-A. (2011). Pecking Order Theory of Capital Structure: Empirical Evidence from Dynamic Panel Data. *International Journal Of GSTF Business Review*, *1*(1), 185–190.

Baker, M., & Wurgler, J. (2002). Market Timing and Capital Structure. *The Journal Of Finance*, *LVII*(1), 1–32.

Bundala, N. N. (2012). Do Tanzanian Companies Practice Pecking Order Theory, Agency Cost Theory or Trade-Off Theory? An Empirical Study in Tanzanian Listed. *International Journal of Economics and Financial Issues*, *2*(4), 401–422.

Butt, S., Khan, Z. A., & Nafees, B. (2013). Static Trade-off theory or Pecking order theory which one suits best to the financial sector. Evidence from Pakistan. *European Journal of Business and Management*, *5*(23), 131–141.

Cai, F., & Ghosh, A. (2003). Tests of Capital Ctructure Theory : A Binomial Approach. *The Journal of Business and Economic Studies*, *9*(2), 1–20.

Chirinko, R. S., Singha, A. R., & Ñq, S. (2006). Testing Static Tradeoff Against Pecking Order Models Of Capital Structure: A Critical Comment. *Journal of Financial Economics*, *58*(2000), 417–425.

Christianti, A. (2008). Pengujian Pecking Order Theory (POT) : Pengaruh Leverage Terhadap Pendanaan Surplus dan Defisit Pada Industri Manufaktur di Bursa Efek Indonesia. *The 2nd National Conference Surabaya, 6 September 2008*, (September), 1–21.

Collins, S. O., Clement, A. A., & Funke, A. R. (2013). Profitability and Debt Capital Decision: A Reconsideration of the Pecking Order Model. *International Journal of Business and Management*, *8*(13), 24–34. doi:10.5539/ijbm.v8n13p24

Darminto, & Manurung, A. H. (2008). Pengujian Teori Trade-Off dan Pecking Order. *Jurnal Manajemen Bisnis*, *1*(1), 1–10.

Dedes, V., & Cornelius, B. (2010). Reconciling capital structure theories : How pecking order and Trade-off Theories Can Be Equated. *Bachelor Tesis*, 1–47.

Degryse, H., de Goeij, P., & Kappert, P. (2010). The Impact of Firm and Industry Characteristics on Small Firms' Capital Structure. *Small Business Economics*, *38*(4), 431–447. doi:10.1007/s11187-010-9281-8

Eldomiaty, T. I., & Ismail, M. a. (2008). Modeling Capital Structure Decisions in a Transition Market: Empirical Analysis of Firms in Egypt. *Review of Quantitative Finance and Accounting*, *32*(3), 211–233. doi:10.1007/s11156-008-0091-x

Fama, E. F., & French, K. R. (2002). Testing Trade-Off and Pecking Order Predictions About Dividends and Debt. *The Review of Financial Studies*, *15*(1), 1–33.

Fama, E. F., & French, K. R. (2005). Financing decisions: who issues stock? *Journal of Financial Economics*, *76*, 549–582. doi:10.1016/j.jfineco.2004.10.003

Flannery, M. J., & Rangan, K. P. (2006). Partial Adjustment Toward Target Capital Structures. *Journal of Financial Economics*, *79*, 469–506. doi:10.1016/j.jfineco.2005.03.004

Frank, M. Z., & Goyal, V. K. (2004). The Effect of Market Conditions on Capital Structure Adjustment. *Finance Research Letters*, *1*(1), 47–55. doi:10.1016/S1544-6123(03)00005-9

Hardiyanto, A. T. (2014). Testing Trade-Off Theory of Capital Structure: Empirical Evidence from Indonesian Listed Companies. *Economics and Finance Review*, *3*(06), 13–20.

Harris, M., & Raviv, A. (1991). The Theory of Capital Structure. *The Journal of Finance*, *46*(1), 297–355.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the Firm : Managerial Behavior, Agency Costs and Ownership Structure Theory of the Firm : Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*, *3*(4), 305–360.

Leary, M. T., & Roberts, M. R. (2005). Do Firms Rebalance Their Capital Structures ? *The Journal of Finance*, *LX*(6).

Leary, M. T., & Roberts, M. R. (2010). The pecking order, debt capacity, and information asymmetry. *Journal of Financial Economics*, *95*, 332–355. doi:10.1016/j.jfineco.2009.10.009

Mahardhika, B. P. (2012). Pengujian Pecking Order Theory Dan Trade Off Theory Pada Struktur Modal Perusahaan (Studi Pada Perusahaan Consumer Goods Di Bursa Efek Indonesia). *Jurnal Ilmiah Mahasiswa FEB UB*, *2*(2), 1–11.

Mazen, G. (2012). French Firm's Financing Choices: Towards a Reconciliation of the Static Trade-Off Theory and the Pecking Order Theory? *International Journal of Financial Research*, *3*(1). doi:10.5430/ijfr.v3n1p57

Modigliani, F., & Miller, M. H. (1958). The Cost of Capital, Corporation Finance and the Theory of Investment. *The American Economic Review*, *48*(3), 261–297.

Modigliani, F., & Miller, M. H. (1963). Dividend Policy and Market Valuation: A Reply. *The Journal of Business*, *36*(1), 116–119.

Moyo, V., Africa, S., Wolmarans, H., Africa, S., & Africa, S. (2013). Trade-Off Or Pecking Order: Evidence From South African Manufaturing, Mining, And Retail Firms. *International Business & Economics Research Journal*, *12*(8), 927–945.

Myers, S. C. (1984). The Capital Structure Puzzle. *The Journal of Finance*, *39*(3), 575–592.

Myers, S. C. (2001). Capital Structures. *The Journal of Economic PErspective*, *15*(2), 81–102.

Myers, S. C., & Majluf, N. S. (1984). Corporate Financing And Investment Decisions When Firms Have Information That Investors Do Not Have. *Journal of Financial Economics*, *13*, 187–221.

Ruslim, H. (2009). Pengujian Struktur Modal (Teori Pecking Order): Analisis Empiris Terhadap Saham di LQ-45. *Jurnal Bisnis Dan Akuntansi*, *11*(3), 209–221.

Santosuosso, P. (2013). Preference Order of Responses to Economic Distress in Italian Listed Firms. *International Business Research*, *6*(8), 1–13. doi:10.5539/ibr.v6n8p1

Sari, N. P. A. P. (2014). Faktor – Faktor Yang Memengaruhi Struktur Modal Pada Perusahaan Non Keuangan Yang Terdaftar Di Bursa Efek Indonesia Tahun 2008-2012. *E-Jurnal Akuntansi Universitas Udayana ISSN: 2302-8556*, *7*(1), 33–47.

Sawitri, I. G. A., & Darmayanti, N. P. A. (2014). Studi Keterkaitan Antara Dividend Payout Ratio, Financial Leverage Dan Investasi Dalam Pengujian Hipotesis Pecking Order Theory Pada Perusahaan Non Keuangan Di Bursa Efek Indonesia. *E-Jurnal Akuntansi Universitas Udayana*, *3*(11), 3456–3471.

Sheikh, J., Shakeel Ahmed, W., Iqbal, W., & Tahir Masood, M. (2012). Pecking at Pecking Order Theory: Evidence from Pakistan's Non-financial Sector. *Journal of Competitiveness*, *4*(4), 86–95. doi:10.7441/joc.2012.04.06

Sheikh, N. A., & Wang, Z. (2011). Determinants of Capital Structure: An Empirical Study of Firms in Manufacturing Industry of Pakistan. *Managerial Finance*, *37*(2), 117–133. doi:10.1108/03074351111103668

Shyam-sunder, L., & Myers, S. C. (1999). Testing Static Trade-off Against Pecking Order Models of Capital Structure. *Journal of Financial Economics*, *51*, 219–244.

Tirsono. (2008). *Analisis Faktor Pajak Dan Faktor-Faktor Lain Yang Berpengaruh Terhadap Tingkat Utang Pada Perusahaan-Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Jakarta. Tesis Universitas Diponegoro*. Universitas Diponegoro.

Vanacker, T. R., & Manigart, S. (2008). Pecking order and debt capacity considerations for high-growth companies seeking financing. *Small Business Economics*, *35*(1), 53–69. doi:10.1007/s11187-008-9150-x

Vasiliou, D., Eriotis, N., & Daskalakis, N. (2009). Testing The Pecking Order Theory: The Importance of Methodology. *Qualitative Research in Financial Markets*, *1*(2), 85–96. doi:10.1108/17554170910975900

Vidal, J. S., & Ugedo, J. F. M. (2005). Financing Preferences of Spanish Firms: Evidence on the Pecking Order Theory. *Review of Quantitative Finance and Accounting*, *25*(1984), 341–355.

Wardianto, B. (2012). Pengujian Teori Struktur Modal pada Perusahaan-Perusahaan 50 Biggest Market Capitalization di Bursa Efek Indonesia. *Seminar Hasil-Hasil Penelitian Dan Pengabdian Kepada Masyarakat- Dies Natalis FISIP Unila Tahun*, 227–246.

Waskito, D. (2008). *Analisis Faktor – Faktor Yang Mempengaruhi Pertumbuhan Modal Sendiri Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Jakarta. Tesis Universitas Sumatera Utara.* Universitas Sumatera Utara.

Yuliati, S. (2011). Pengujian Pecking Order Theory: Analisis Faktor- Faktor Yang Mempengaruhi Struktur Modal Industri Manufaktur Di Bei Periode Setelah Krisis Moneter. *Politeknosains*, *X*(1), 56–69.