

The Impact of Equity Market Timing to Capital Structure (Case Study in Indonesia Capital Market)

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Abstract

Hot and Cold market is indicator of Equity market Timing that may effect to Capital structure. The objective of this research is to analyze the impact of Hot and Cold Market, Market to Book ratio, Tangibility, Profitability and Size to Capital Market partially and simultaneously. The sample of this research is 77 company listed in Indonesia capital Market. This research is using Multiple Regression method. The result shows that (1) Partially, Hot year and Size has a significant effect to equity issuance, otherwise, Hot month, Market to Book Ratio, Tangibility, Profitability has no significant effect. Simultaneously, all variables has significant effect in level of 10% to equity issuance. (2). Partially, tangibility has a significant effect to Leverage Change, otherwise, Hot year, Hot month, Market to Book Ratio, Profitability and size has no significant effect. Simultaneously, all variables has significant effect to leverage change. Thus, The equity market timing does happened but not effecting the Capital Structure.

Keywords

Hot Market, Cold Market, Market to Book Ratio, Tangibility, Profitability, Size

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1. Introduction

Capital structure is one of important decision that has may affect the value of the firm. There are theories in financing decision in a company such as Trade off Theory and Pecking Order Theory. According to Trade off theory, the company will balance the cost and benefit to find out an optimal capital structure. The Pecking order theory following a certain order to finance the company starting from internal capital such as retained earning following by debt and the last is stock. There is another theory beside pecking order theory and trade off theory called Equity Market Timing (EMT). The study of EMT has already done by [1]. According to BW, the capital structure is affecting by market value that is market to book ratio. Market to Book Ratio as market timing indicator that has a significant influence to net equity. So, it

can be conclude that there is equity market timing in the company and it influencing the capital structure. This result is supported by another research such as Huang and Ritter, Chitchi and Bougatef, Susilawati and Hunafa and Nugroho and Ma and Rath [2-6]. Different from Baker and Wurgler, The result from Taurisina and Mahajan and Tartaroglu find that equity market timing didn't effect to the capital structure [6, 7]. The use of Market to Book Ratio as indicator of EMT is still a debate.

Chazi and Alti using different indicator to analyze EMT [9, 10]. Chazi is using Insider Trading as a proxy of EMT, the result shows that insider trading has a positive and significant impact to the leverage change and the impact is persistent to the leverage. Alti using Hot and Cold Market as indicator of EMT. Hot Market is the time when the average Market to Book Ratio is above the moving average of monthly Market

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to Book Ratio, so Hot Market is the time when many companies do Initial Public Offering (IPO). Conversely, Cold market is when the average Market to Book Ratio is below the moving average of monthly Market to Book Ratio. The

result show that Hot and Cold Market is affecting the equity issuance and leverage in the short term, furthermore, the impact of Hot and Cold Market is not persistent to capital structure.

Table 1. IPOs in Indonesia Stock Exchange Year 2005-2010.

INDUSTRY GROUP	2005	2006	2007	2008	2009	2010	Total
Trade, services and investments	2	2	3	4	2	8	21
Finance	4	2	2	1	2	2	13
Infrastructure, utilities and transportations	1	1	2	2	1	3	10
Basic Industry and Chemicals		2		2	2	2	8
Property, real Estate and Building Construction		2	8	2	2	2	16
Agriculture			2	1	1		4
Mining			4	1	2	4	11
Miscellaneous Industry			1				1
Consumer Goods Industry						2	2
TOTAL	7	9	22	13	12	23	86

Source: Data Processed from www.idx.co.id (2018)

Table 1 shows that during the period of 2005-2010, the IPOs in Indonesia were mostly offered by firms from two Industry Groups; Finance and Trade, Service and Investment. The IPOs from these two Industry Groups count for more than 51.1% (44 of 86 IPOs) of the total IPOs during the period. The least number of IPOs comes from the Miscellaneous Industry Group, which are 1 of 86 IPOs.

It also can be seen in Table 1 that the highest IPOs is in 2010 that is 27% (23 of 86 IPOs), followed in 2007 that is 26% (22 of 86 IPOs). The smallest IPO is in 2005 that is only 7 of 86 IPOs. In Average, there is 14 company doing IPOs in 1 year during sample period. In this research, 2007 and 2010 will be describes as HOT Market and the other year as COLD market.

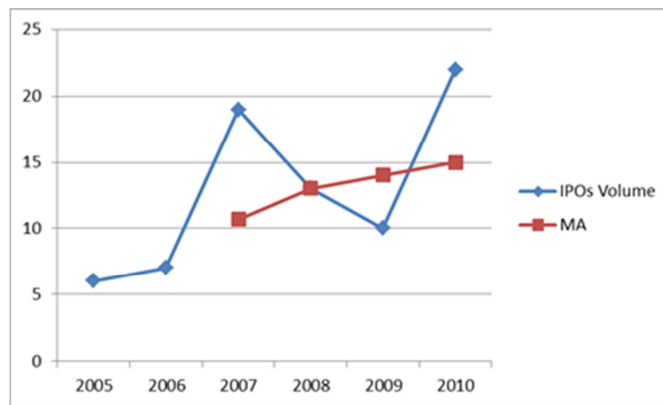


Figure 1. The Number of IPOs and 3 year Moving Average of IPOs.

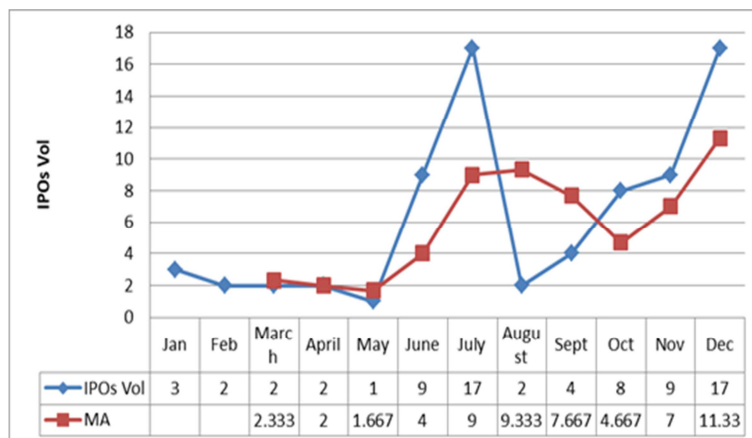


Figure 2. The Number of IPOs and 3 month Moving Average of IPOs.

Source: Data Processed (2018)

From Figure 1, the highest IPOs is in 2005 and 2010. From Figure 2, the highest IPOs is in June, July (2nd Quarter) October, November and December (4th Quarter) The number of IPOs is larger than the other months. From the explanation above, it can be conclude that EMT could be happened in the company at Indonesia because in that time, many companies doing IPO.

This research will use Hot and Cold Market as the indicator of EMT and using another variables that could affect the equity issuance and leverage such as Asset tangibility, profitability and company size. The hypotheses of this research is:

1. There is significant effect of Hot Year, Hot Month, Asset tangibility, Profitability and Company Size to Stock Issuance (Y_{tA} ; $\text{Proceeds}/TA$), partially and simultaneously (H_1).
2. There is significant effect of Hot Year, Hot Month, Asset tangibility, Profitability and Company Size to Stock Issuance (Y_{tB} ; $\text{Proceeds}/TA_{t-1}$), partially and simultaneously (H_2).
3. There is significant effect of Hot Year, Hot Month, Asset tangibility, Profitability and Company Size to Leverage, partially and simultaneously (H_3).

2. Literature Review

Equity Market Timing

Baker and Wurgler in their research find that a company will issuing stock when the market value is high and will

$$Y_{ta} = c_0 + c_1 \text{HOTYEAR} + c_2 \text{HOTMONTH} + c_3 \text{M/B}_t + c_4 \text{FIX}/A_{t-1} + c_5 \text{EBIT}/A_{t-1} + c_6 \text{SIZE}_{t-1} + c_7 \text{D}/A_{t-1} + \epsilon_t \quad (1)$$

Y_{tA} = Proceeds/TA (Equity Issuance)

Y_{tB} = Proceeds/ TA_{t-1} (Equity Issuance)

Y_{tC} = Change in Book Leverage ($D/A_t - D/A_{\text{PRE-IPO}}$)

HOTYEAR = Companies that conduct an IPO when Hot Market Year ("1")

HOTMONTH= Companies that conduct an IPO when Hot Market's Month ("1")

MB = Market to Book Ratio

FIX/A = Asset Tangibility (Fixed Asset/Total Asset)

SIZE = Company Size (Ln Size)

EBIT/ A_t = Profitability (EBIT/Total Asset)

D/A = Leverage (Long Term Debt/Total Asset).

There are control variables such as Market to Book Ratio,

repurchasing stock when the market value is low. Baker and Wurgler use Market to Book ratio as an indicator of equity market timing. The result showed that there is an impact of equity market timing to leverage in company. Therefore, the impact is persistent in the long time [1, 10].

Alti analyze the short term impact of Market Timing to an issuance activity and Capital Structure [10]. Furthermore Alti analyze the persistent of market timing to capital structure using Hot and Cold Market as market timing variable. Hot Market is a condition where the average Market to Book Ratio is above the moving average of Market to Book Ratio, so Hot Market is the time when many companies do Initial Public Offering (IPO). If the firm considers that the Hot Market is a time when the issue of shares has a low cost of equity, then the company will react by issuing more shares than at the time of Cold Market [10].

The result of the research shows that market timing has a positive and significant effect on the stock issuance, the company is issuing more shares during Hot Market so that at the time of IPO there is a decrease of leverage. However, as soon as the company does an IPO, leverage rates are increasing by issuing more debt and fewer shares. According to Alti, Market timing is an important determinant in financing activities in the short term, but limited to long-term periods. Similar results are shown by Felicia and Ferdinand [11] using the same proxy. Both of these results are not in line with Baker and Wurgler due to the persistent effect of Equity Market Timing in only a short period of time.

The research models is as follows:

Tangibility, Size, Profitability and Debt ratio. Control variables based on Baker and Wurgler, Titman and Wessel, Rajan and Zingales [1, 12, 13].

According to Baker and Wurgler, Market to Book ratio is the ratio between market value and book value [1]. Higher Market to Book Ratio, a company will issuing more stock because the cost of equity is lower. Munawir said that Asset tangibility is a wealth owned by a company that is physically visible [14] and it can be a guarantee to borrowing fund from other institution. So, higher Tangibility will decreasing the equity issuance and increasing the leverage. Profitability is a company's ability to generate profits (profit) at the level of sales, assets, and capital stock [15]. Higher profitability will lower the equity issuance because usually the company will using the profitability rather than issuing stock as company's source of fund.

3. Methodology

This research is using Multiple Regression model. The population is 86 company in Indonesia Capital market that conducts IPO in 2005 – 2010. The sample is 77 companies that has a complete research data. The dependent variables in this study are equity issuance and change of leverage. Meanwhile, the independent variable in this study is the Hot and Cold Market, Tangibility, Profitability and Size.

Hot Market is the time when the average Market to Book Ratio is above the moving average of monthly Market to Book Ratio, so Hot Market is the time when many companies do Initial Public Offering (IPO). Cold market is when the average Market to Book Ratio is below the moving average of monthly Market to Book Ratio. The company that issuing stock in Hot market Year and Hot Market Month given code "1" and the other is "0".

4. Result and Discussion

Data Panel Regression Model

Table 2. The Regression Result of Hypotheses 1.

Model	B	t	Sig
(Constant)	2.422	2.980	.004
HOTYEAR	.274	2.282	.026
HOTMONTH	.013	.089	.930
MB	-.059	-.809	.421
TANG	-.089	-.531	.597
PROFIT	.852	1.056	.295
SIZE	-.083	-2.778	.007
LTBLEVt_1	-.112	-.562	.576

Dependent Variable: YTA

From Table 2, shows that Hot year and Size has a positive and significant result of result of hypothesis at $\alpha = 0.05$ so H_0 is rejected. Otherwise, Market to Book Ratio, Asset tangibility, Profitability and Profit has no significant result of hypothesis at $\alpha = 0.05$ so H_0 is accepted. From these results it can be concluded that there is positive and significant influence of Hot year and size partially on equity issuance YtA. It can be conclude that company issue more equity in Hot Market. This result support Alti [10] and Felicia and Ferdinand [11]. Model Prob (F-Statistic) is 0.096. It can be conclude that all variables simultaneously has significant effect in level of 10% to equity issuance (YtA) with 15.6% of R^2 . It means that all independent variables affecting 15.6% on the fluctuation of leverage level and the rest is affected by another variables.

The Equation of regression model is as follows:

$$Y_{tA} = c_0 + 0.0274 \text{ HOTYEAR} + 0.013 \text{ HOTMONTH} - 0.59 \text{ M/Bt} - 0.089 \text{ FIX}/A_{t-1} + 0.0852 \text{ EBIT}/A_{t-1} - 0.083 \text{ SIZE}_{t-1} - 0.112 \text{ D}/A_{t-1} + \epsilon t.$$

Table 3. The Regression Result of Hypotheses 2.

Model	B	t	Sig
(Constant)	4.199	3.284	.002
HOTYEAR	.560	2.963	.004
HOTMONTH	-4.494E-5	.000	1.000
MB	-.077	-.677	.501
TANG	-.158	-.596	.553
PROFIT	.993	.782	.437
SIZE	-.141	-2.995	.004
LTBLEVt_1	-.471	-1.495	.139

Dependent Variable: YTB

From Table 3 shows that Hot year and Size has a positive and significant result of result of hypothesis at $\alpha = 0.05$ so H_0 is rejected. Otherwise, Market to Book Ratio, Asset tangibility, Profitability and Profit has no significant result of hypothesis at $\alpha = 0.05$ so H_0 is accepted. From these results it can be concluded that there is positive and significant influence of Hot year and size partially on equity issuance (Ytb). The result showed that Prob (F-Statistic) is 0.017. It can be conclude that all variables simultaneously has significant effect in level of 5% to equity issuance (YtB) with 21.8% of R^2 . It means that all independent variables affecting 21.8% on the fluctuation of equity issuance and the rest is affected by another variables.

The Equation of regression model is as follows:

$$Y_{tB} = c_0 + 0.560 \text{ HOTYEAR} - 4.49 \text{ HOTMONTH} - 0.07 \text{ M/Bt} - 0.158 \text{ FIX}/A_{t-1} + 0.993 \text{ EBIT}/A_{t-1} - 0.141 \text{ SIZE}_{t-1} - 0.471 \text{ D}/A_{t-1} + \epsilon t.$$

Table 4. The Regression Result of Hypotheses 3.

Model	B	t	Sig
(Constant)	.046	.193	.847
HOTYEAR	.013	.358	.722
HOTMONTH	-.013	-.302	.764
MB	-.009	-.417	.678
TANG	-.153	-3.094	.003
PROFIT	-.214	-.905	.369
SIZE	.003	.289	.773
LTBLEVt_1	-.251	-4.285	.000

Dependent Variable: YTC

From Table 4 shows that Hot year, Hot month, Market to Book Ratio, Asset tangibility, Profitability, Profit and Size has no significant result of hypothesis at $\alpha = 0.05$ so H_0 is accepted. From these results it can be concluded that there is significant influence of Asset tangibility and no significant influence of Hot year, Hot month, Market to Book Ratio, Profit and Size partially on leverage change (Ytc). The result conclude that equity market timing has no significant effect to leverage. The effect of tangibility support Susilawati [4], but conterary with Baker and Wurgler, Chitchi and Bougategf, Rajan and Zingales, and Miswanto [4, 1, 3, 12, 16]. Model

Prob (F-Statistic) is 0.000. It can be conclude that all variables simultaneously has significant effect in level of 5% to equity issuance (YtB) with 32.2% of R². It means that all independent variables affecting 32.2% on the fluctuation of leverage level and the rest is affected by another variables.

The Equation of regression model is as follows:

$$Y_{tC} = c_0 + 0.013 \text{ HOTYEAR} - 0.13 \text{ HOTMONTH} - 0.009 \text{ M/Bt} - 0.153 \text{ FIX/A}_{t-1} - 0.214 \text{ EBIT/A}_{t-1} + 0.003 \text{ SIZE}_{t-1} - 0.251 \text{ D/A}_{t-1} + \epsilon_t.$$

5. Conclusions

1. Partially, Hot year and size has a significant effect to equity issuance. Hot Month, Market to Book Ratio, Asset tangibility, Profitability and Size has no significant effect to equity issuance. Simultaneously, all variable has a significant effect to equity issuance. It can be conclude that equity market timing does happened. The company issuing more stock when Hot Market.
2. Partially Tangibility has a significant effect to leverage change. Hot year, Hot month, Market to Book Ratio, Profitability and Size has no significant effect to leverage level. Simultaneously, all variable has a significant effect to Leverage Change.

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