The Indonesian Accounting Review Vol. 4, No. 2, July 2014, pages 149 – 156

The effect of market-to-book ratio, asset structure, and earning after tax on the level of leverage in non-financial companies listed in Indonesia Stock Exchange 2007-2012

Rezza Arlinda Sarwendhi[1], Agus Samekto[2]

[1, 2] *STIE Perbanas Surabaya, Nginden Semolo Street 34-36, Surabaya, 60118, East Java, Indonesia*

A R T I C L E I N F O

Article history:
Received 19 February 2014
Revised 17 June 2014
Accepted 4 July 2014

JEL Classification:
M41, G14

Key words:
Market-to-Book-Ratio,
Market Timing Theory,
Book Leverage,
Market Leverage.

DOI:
10.14414/tiar.14.040206

A B S T R A C T

The theory of capital structure has experienced remarkable development. This development enables companies to have many options to consider the external factors in determining various compositions of the companies' debts and equities. In this study, the researcher uses theoretical basis of Market Timing Theory (MTT) introduced by Baker and Wurgler (2002). The result of this study indicates that market-to-book ratio has a negative effect on the level of company leverage. This is also proven on the factors of earning after tax and asset structure of the company. The implication of this study is that when the company obtains lower level of leverage, there will be overvalue on the stock price, and it would be the right time for the company to release the shares.

A B S T R A K

Teori struktur modal telah mengalami perkembangan yang luar biasa. Perkembangan ini memungkinkan perusahaan untuk memiliki banyak pilihan dalam untuk mempertimbangkan faktor-faktor eksternal untuk menentukan berbagai komposisi utang dan ekuitas perusahaan. Dalam penelitian ini, peneliti menggunakan teori dasar Market Timing Theory (MTT) yang diperkenalkan oleh Baker dan Wurgler (2002). Hasil penelitian ini menyatakan bahwa rasio market-to-book memiliki efek negatif pada tingkat leverage perusahaan. Hal ini juga terbukti pada faktor-faktor produktif setelah struktur pajak dan aset perusahaan. Implikasi dari penelitian ini adalah bahwa ketika perusahaan memperoleh tingkat yang lebih rendah dari leverage, akan ada menilai terlalu tinggi pada harga saham, dan itu akan menjadi waktu yang tepat bagi perusahaan untuk melepaskan saham.

1. INTRODUCTION

One of the critical decisions that must be considered by companies when deciding to join Initial Public Offering (IPO) is the capital structure. This capital must be ensured in optimal condition. The situation will be more complex. For example, when is the capital structure said to be optimal, so that the risks faced by the company, as joining the IPO, is not so significant?. Capital structure (Bringham 2009) is a financial decision relating to the composition of debt, preferred stock and common stock to be used by the company. The decision is made by the management in determining any capital structure used in the company.

Capital structure decisions directly affect the amount of risk borne by shareholders, the magnitude of return rate, and the expected rate of profit. The capital structure decisions taken by a manager does not only affect the profitability of the company, but also the risks faced by the company. Capital structure is the financing options between debt and equity. Some theories that explain the capital structure are trade-off theory, pecking order theory, and others. Trade-off theory states that there are things that make the company unable to use the debt as much as possible.

One of the most critical thing that must be considered is that the higher the debt, the higher the

** Corresponding author, email address: [1] rezzaarlinda@gmail.com, [2] a.samekto@gmail.com*

possibility of bankruptcy. Bankruptcy costs can be quite significant. These costs consist of 2 (two) things, ie direct costs and indirect costs. Direct costs are the costs incurred to pay for administrative costs, or other similar costs, while indirect costs are the costs incurred due to the condition of bankruptcy, in which other companies or other parties do not want to deal with the company normally.

For example, the supplier will not supply goods for fear of not getting paid. Pecking order theory has implications that the manager will think in terms of trade-off between tax savings and bankruptcy costs in determining the capital structure. In this study, the researcher adds the theory that is rarely used in the previous studies, i.e. Market Timing Theory. This theory explains clearly when the management determines the right timing for the company to release its shares in an Initial Public Offering (IPO).

Leverage is the level of the company's debt that affects the capital structure of the company. There are two proxy leverages; book leverage and market leverage. Book leverage is measured by the ratio of debts and total assets, while market leverage is measured by quotient of total debts minus total equity multiplied by market capitalization value and total assets. Both of them are very important for investors to understand the situation as a reference in making decisions and policies to invest and also help estimate whether the investments made in the company will produce satisfactory return or just the opposite. In addition to considering the leverage, an investor should also consider other influential factors when the company is doing IPO, such as Market-to-book ratio, Asset structure and Earning after Tax. Market-to-book ratio is the quotient of market capitalization value plus total debt and total assets. The asset structure is a balance or ratio, either absolute or relative, between current assets and fixed assets" (Bambang 2008: 22).

By knowing the asset structure owned by the company, investors are expected to obtain clear information about the situation or the property owned by the company to be used as a land investment. In addition to the asset structure there are other variables that must be considered by investor before finally deciding to invest, i.e. earning after tax. After-tax earnings are the net income earned by the company after being deducted by current year corporate tax defined.

It is also important for the investor to consider because through Earning after tax, the investor can recognize how the performance of the company. Such information is available in the company's financial statement. The independent variables used in this study are market-to-book ratio, asset structure, and earnings after tax. While the dependent variable used is the level of company leverage

2. THEORETICAL FRAMEWORK AND HYPOTHESIS

Market Timing Theory

The theory expressed by Baker and Wurgler (2002) in the Journal "Empirical Effects of Market Timing Theory of Capital Structure on the JSE" suggested that "companies will issue the equity when the market value is high and will buy back the equity when the market value is low". This practice is then referred to as the equity market timing. The purpose of doing market timing is to exploit temporary fluctuations that occur in the cost of equity to the cost of other forms of capital.

According to Baker and Wurgler (2002) in the Journal "Empirical Effects of Market Timing Theory of Capital Structure on the JSE", capital structure is the cumulative result of doing equity market timing in the past. Baker and Wurgler found that the companies with low debt levels are companies that issue the equity when the market value is high, while the companies with high debt levels are companies that issue the equity when the market value is low. Baker and Wurgler used the market-to-book ratio, which is commonly used as a proxy for measuring investment opportunities. But in theory, market-to-book ratio is also used to see if the value of equity is overvalued or undervalued. Baker and Wurgler built a variable model called external finance weighted-average market-to-book ratio. This variable is the weighted average of the market-to-book ratio of a company in the past. This variable is used by Baker and Wurgler to see the business of a company in doing equity market timing.

There are two versions of equity market timing that follow the result of the research conducted by Baker and Wurgler. The first is dynamic version from Myers and Majluf (1984) on the asymmetric information that assumes rational managers and investors. The second version of the equity market timing involves investors or managers who are not rational and the perception of mispricing. The managers will issue equity when they believe that the cost of equity is low and repurchase the equity when the cost of equity is high. Market-to-book has been known in general to have negative correlation with future equity returns, and the extreme value of market-to-book is associated with extreme expectations of the investors. In accordance with the study of Frankel and Lee (1998), when managers

try to exploit too far (extreme) of the expectations of investors, the net equity issues will be positively correlated with market-to-book. If there is no optimal capital structure, managers do not need to replace the funding decisions at the time the company has been assessed correctly and the cost of equity looks normal. It is waiting for temporary fluctuations that occur in the market-to-book that has permanent effect on leverage.

Definition of Leverage

Leverage is associated with the company's policies to meet its funding needs. Leverage is the ratio of total debt compared to total assets. Leverage ratio indicates the risk faced by the company. The greater the risk, the higher the uncertainty faced by the company to generate future earnings (Tarjo 2008). Leverage is usually used as a proxy for the company's debts.

Some definitions of leverage expressed by some experts include:

> "Leverage is the ability of a company to use the fixed cost assets or funds to increase the level of return for the owner of the company" (Lukman 2001: 89).
>
> "Leverage is a policy made by a company in terms of investing funds or obtaining financial resources coupled with fixed costs that must be borne by the company" (Susan 2006).
>
> "Leverage is the use of assets or funds, where on the use of the assets or funds, the company must bear the fixed burden in the form of depreciation or interest" (Abdul 2007).
>
> "Leverage is the use of fixed costs in an attempt to improve profitability" (Van 2005)

Definition of Market to Book Ratio

Halim (2004: 9) in the journal "Empirical Effects of Market Timing Theory of Capital Structure on the JSE", defines that Market-to-book ratio is a ratio that shows the comparison between the value/ price of the stock market and the company book value which is derived from the difference between the value of assets owned and the value of the liability. This ratio illustrates how much the market appreciates the company share book value. The higher the market-to-book ratio, the higher the market's trust to the company's prospects.

$$\text{MarketToBookRatio} = \frac{\text{MarketPricePerShare}}{\text{BookValueofAssets} - \text{Liability}} \quad (1)$$

Asset Structure

Assets are all resources and wealth possessed by a company to be used in its operations. A company generally has two elements of assets, namely current assets and fixed assets. Both elements of these assets form asset structure. Asset structure of a company will appear in the left side of the balance sheet. Asset structure is also called wealth structure. Asset structure or wealth structure is "a balance or comparison, either absolute or relative, between current assets and fixed assets" (Bambang 2008: 22). The term of absolute means a comparison in the form of nominal, while the term of relative means a comparison in the form of percentage.

It is important for the company to determine how much allocation for each asset and the forms of asset that must be owned, because it concerns with how much the funding needed which is directly related to the company's long-term goals. Lukman (2007: 9) explained that the allocation for each asset component has the sense of "how many rupiahs" that must be allocated for each asset component both in the current assets and fixed assets. After determining the allocation for both assets, generally a manager must determine the optimal allocation for each component of current assets. In addition, a financial manager must also determine the allocation for each component of the fixed assets as well as the age of each of these components, when they must be repaired, replaced, and so on.

Definition and Measurement of Earning After Tax

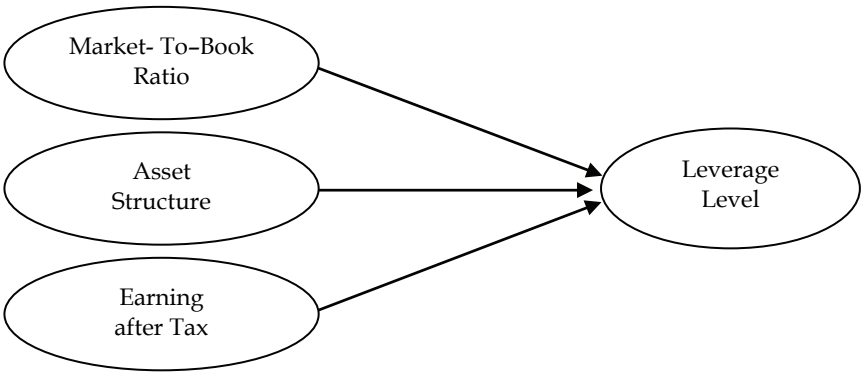
Earning after tax is net income deducted by interest expense and current year tax. The net income generated from the sale is deducted by the concerned expenses during production process until the goods are sold. After the amount of the company's net income is found, and then deducted by corporate tax of 25%.

The Relationship between Market-to-Book Ratio and Leverage Level

Market Timing Theory (MTT) explains the interesting thing about the stock release activity that will affect the capital structure. This brings out the MTT of Baker and Wurgler version (2002) in the Journal "Empirical Effects of Market Timing Theory of Capital Structure on the JSE". If the stock release activity is more prospective, there should be negative effect between the ratio of market to book ratio and leverage.

The study of Baker and Wurgler (2002) gives recommendations on how the company sets the leverage optimally related to the ratio of market-to-book ratio. So if the market-to-book ratio is low, the company which has high leverage may release the shares. The reverse will occur when the market-to-

Figure 1
Research Framework



book ratio is high.
Hypothesis 1: Market to book ratio has negative effect on the level of leverage that brings impact on the timing decision of the go public company.

The Relationship between Asset Structure and Leverage Level

The relationship between asset structure and leverage level has significant negative value. This means that if the proportion of the asset structure is higher, it will be easier to assess its assets so that the problem of asymmetry information becomes lower and it makes equity less costly so that there is a negative relationship between asset structure and leverage. The reverse will occur when the asset structure begins to decline.
Hypothesis 2: Asset structure has negative effect on the level of leverage that brings impact on the timing decision of the go public company.

The relationship between Earning after Tax and Leverage Level

Earning after tax is net income deducted by interest expenses and current year tax. From the viewpoint of Market Timing Theory, earning after tax has negative effect on leverage level, because when the company is launching its shares in the Initial Public Offering (IPO), the company will experience increase in earnings. Then the tax-shield effect due to the use of debt will begin to decrease.
Hypothesis 3: Earning after tax has negative effect on the level of leverage that brings impact on the timing decision of the go public company.

The underlying framework of this research is presented in Figure 1.

3. RESEARCH METHOD

Sample Classification

The population consists of manufacturing companies listed in Indonesia Stock Exchange. The data is obtained from the Indonesian Capital Market Directory (ICMD), financial statements, and annual report. The observation period is from 2007 to 2012. The method used for sampling technique is purposive sampling that is the sample selection technique by using the specified criteria. A six-year study period is chosen because it describes the relatively new condition in Indonesian capital market. By using the relatively new sample, it is expected that the result of this research will be more relevant to understand the actual conditions in Indonesia.

The companies that become the samples are companies chosen based on purposive sampling method in order to obtain representative samples in accordance with the specified criteria. The sample criteria that will be used are as follows:

1. Non-financial sector companies that published financial statements respectively during the period of 2007 – 2012.
2. Non-financial sector companies that did not experience loss during the period of 2007-2012
3. Non-financial sector companies that published financial statements in the currency of rupiah during the period of 2007-2012
4. Selecting the samples that were considered sufficient to represent the object of the research.

Research Data

Type of the data is secondary data, a data derived from the annual report for the period of 2007-2012. This study uses a quantitative approach by conducting hypothesis test. The sources of data are Indonesian Capital Market Directory (ICMD), financial statements and annual report obtained from the official website of Indonesia Stock Exchange www.idx.co.id. The data collection method is documentation technique. The data are collected, selected, and taken as the samples and processed in the study.

Research Variables

The dependent variable is the level of company's

Table 1
Descriptive Statistics of Market-to-book Ratio

Periods	N	Minimum	Maximum	Mean	Std. Deviation
2007	60	-23.81	-17.18	-20.3513	1.28722
2008	50	-25.32	-17.31	-21.2016	1.56005
2009	50	-24.13	-18.05	-20.6870	1.32515
2010	51	-24.92	-17.55	-20.6286	1.57140
2011	55	-25.20	-16.89	-20.5195	1.68258
2012	54	-25.77	-14.72	-20.5205	2.10492
2007-2012	319	-25.77	-14.72	-20.6386	1.61930

Source: SPSS output, processed data.

Table 2
Descriptive Statistics of Earning After Tax

Periods	N	Minimum	Maximum	Mean	Std. Deviation
2007	60	5.81	15.69	10.7683	2.36902
2008	50	4.37	16.03	11.0444	2.71307
2009	50	6.02	16.12	11.2538	2.36484
2010	51	6.98	16.12	11.9961	2.12214
2011	55	6.46	16.66	11.9880	2.11571
2012	54	6.65	16.88	12.2397	2.00449
2007-2012	320	4.37	16.88	11.54	2.33942

Source: SPSS output, processed data.

leverage and the independent variables are market-to-book ratio, asset structure, and earning after tax.

Operational Definition of the Variables

Operational definition of variable is needed to avoid obscurity of meaning as follows: Leverage is the level of company's debt that affects the capital structure of the company. Leverage is proxied into two; book leverage and market leverage. Book leverage is measured by the ratio of debt and total assets, while market leverage is measured by the quotient of total debt minus total equity multiplied by market capitalization value and total assets. Both of these are of course very important to be known by an investor as a reference in making decision and policies to invest and also help estimate whether the investments made in the company will produce a satisfactory return or the opposite.

1. Market-to-book ratio

Market-to-book ratio is a ratio which indicates the comparison between the value/price of stock market and the company's book value obtained from the difference between the values of assets owned by the liability. This ratio illustrates how much the market appreciates the stock of the company. When the market-to-book ratio is high, this means that the market increasingly believes in the prospect of the company. The formula for market-to-book ratio is used formula 1.

2. Asset Structure

Assets are all resources and wealth possessed by a company to be used in its operations. A company generally has two elements of assets, namely current assets and fixed assets. Both elements of this asset form asset structure. Asset structure of a company will appear in the left side of the balance sheet. Asset structure is also called wealth structure. Asset structure or wealth structure is "a balance or comparison, either absolute or relative, between current assets and fixed assets" (Bambang 2008: 22). The term of absolute means a comparison in the form of nominal, while the term of relative means a comparison in the form of percentage.

3. Earning after tax

Earning after tax is net income deducted by interest expense and current year tax. The net income generated from the sale is deducted by the concerned expenses during production process until the goods are sold. After the amount of the company's net income is found, and then deducted by corporate tax of 25%.

4. DATA ANALYSIS AND DISCUSSION

Descriptive Test

Market-To-Book Ratio

Market-to-book ratio is a ratio which indicates the comparison between the value/price of stock market and the company's book value obtained from

Table 3
Descriptive Statistics of Asset Structure

Periods	N	Minimum	Maximum	Mean	Std. Deviation
2007	60	.10	.99	.5461	.24322
2008	50	.06	1.00	.5883	.24793
2009	50	.00	1.00	.5495	.24363
2010	51	.00	1.00	.4940	.25234
2011	55	.00	1.00	.5525	.24495
2012	54	.07	1.00	.5616	.23396
2007-2012	320	.000	.999	.54864	.243900

Source: SPSS output, processed data.

Table 4
Results of Normality Test

One –Sample Kolmogorov–Smirnov Test

		Unstandardized Residual
N		319
Normal Parameters	Mean	.000
	Std. Deviation	.226
Most Extreme Differences	Absolute	.061
	Positive	.055
	Negative	-.061
Kolomogorov-Smirnov Z		1.088
Asymp. Sig. (2-tailed)		.187

Source: SPSS output, processed data.

the difference between the values of assets owned by the liability. This ratio illustrates how much the market appreciates the stock of the company. When the market-to-book ratio is high, this means that the market increasingly believes in the prospect of the company.

The results of descriptive statistics tests on the disclosure of market-to-book ratio are in Table 1. Based on Table 1, it can be concluded that during the observation period, the minimum value of market-to-book ratio of -25.77 is held by PT. Bakrieland Development Tbk, because the stock value of PT. Bakrie Development Tbk. is low while the value of the company's assets is high. The maximum value of -14.72 is held by PT. Malindo Feedmill Tbk because the stock value of PT. Malindo Feedmill Tbk during the study period is high while the value of the company's assets is low. The mean value of market-to-book ratio is -20.6368 percent with a standard deviation of 1.61930 percent. The standard deviation value is greater than the mean value, so it can be concluded that the mean value of the market-to-book ratio has a high level of deviation, which means that the greater the value, the greater the variation of the data and this becomes inaccurate.

Earning after Tax

Earning after tax is net income deducted by interest expense and the current year tax. The net income generated from the sale is deducted by the concerned expenses during production process until the goods are sold. After the amount of the company's net income is found, and then deducted by corporate tax of 25%.

Based on Table 2, it can be concluded that during the observation period of 2007-2012, the minimum value of 4.37 is held by PT Jembo Cable Company, while the maximum value of 16.88 is held by PT Astra International Tbk. The mean value of earning after tax is 11.54 percent with standard deviation of 2.33 percent. The standard deviation value is greater than the mean value, so it can be concluded that the mean value of earning after tax has a high level of deviation, which means that the greater the value, the greater the variation of the data and this becomes inaccurate.

Asset Structure

Assets are all resources and wealth possessed by a company to be used in its operations. A company generally has two elements of assets, namely current assets and fixed assets. Both elements of this asset form asset structure. Asset structure of a company will appear in the left side of the balance sheet. In this study, asset structure is also called wealth structure. Asset structure or wealth structure is a balance or comparison, either absolute or relative, between current assets and fixed assets.

Table 5
F Test

Model Summary

Model	R	R square	Adjusted R square	Std. Error of the Estimate
1	.298[a]	.089	.080	.227343743

a. Predictors: (Constant). SA, MTB, EAT

ANOVA[b]

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	1.592	3	.531	10.270	.00[a]
Residual	16.281	315	.052		
Total	17.873	318			

a. Predictors: (Constant), SA, MTB, EAT
b. Dependent Variable: LVRG

Table 6
The Result of T test Coefficient

Model		Unstd. Coefficients		Std. Coefficients	t	Sign.
		B	Std. Error	Beta		
1	(Constant)	1.064	.182		5.856	.000
	MTB	.010	.008	.066	1.187	.236
	EAT	-.029	.006	-.287	-5.078	.000
	SA	-.025	.055	-.024	-.425	.671

a. Dependent Variable: LVRG
Source: SPSS Output, processed data.

Table 3 is result of descriptive statistics of asset structure. Based on Table 3, it can be concluded that during the observation period of 2007-2012, the minimum value of asset structure is 0.00. This occurs because many companies do not have assets in the form of fixed assets so that the percentage of asset structure is zero. While the maximum value of 1.00 is heald by PT Akbar Indo Makmur Stimec Tbk.

The mean value of asset structure is 0.54864 percent, with standard deviation of 0.24390 percent. The value of standard deviation is greater than the mean value. So it can be concluded that the mean value of asset structure has a high level of deviation, which means that the greater the value, the greater the variation of the data, and this becomes inaccurate.

Normality Test

Normality test is used to see whether the regression models; dependent variable and independent variables, can be normally distributed or not. The test is carried out by using the Kolmogorov-Smirnov test. If the result of the Kolmogorov-Smirnov test has a significance value > 0.05, it can be said that the unstandardized residual is normal (Imam 2011).

Based on Table 4, the information that can be obtained is that the value of Kolmogorov-Smirnov Z is 1,088, with Asymp. Sig. (2-tailed) of 0.187. This value is greater than the significance value of 1.088> 0.05, which means that the data are normally distributed.

Analysis Results and Discussion

From the ANOVA or F test, it is obtained the value of F test of 10.270, with a probability of 0.000. Because the probability is much smaller than 0.05, the regression model may be used to predict the level of leverage, or it can be said that the market-to-book ratio, earnings after tax, and the asset structure simultaneously affects the level of leverage.

Based on Table 5, the results obtained are as follows:

1. There is no effect between market-to-book ratio and the level of company leverage. This hypothesis test indicates that the value of t count of SPSS output is 1.187, with the significance value of 0.236 > 0.05. This means that Ho is accepted while Ha is rejected, which means that *market-to-book ratio* has no effect on the company's leverage. Thus, the hypothesis which states that there is a negative effect between market-to-book ratio and the level of company leverage cannot be accepted.
2. There is an effect between earning after tax and the level of company leverage. This hypothesis test indicates that the value of t count of SPSS output is -5.078, with the significance value of 0.000 < 0.05. This means that Ho is rejected while Ha is accepted, which means that earning after tax has significantly negative effect on the level of company leverage. Thus, the hypothesis which states that there is negative effect be-

tween earning after tax and the level of company leverage can be accepted. .

3. There is no effect between asset structure and the level of company leverage. This hypothesis test indicates that the value of t count of SPSS output is -0,425, with the significance value of 0.671 > 0.05. This means that Ho is accepted while Ha is rejected which means that the asset structure has no effect on the level of company leverage. Thus, the hypothesis which states that there is negative effect between asset structure and the level of company leverage cannot be accepted.

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

It can be concluded as follows:

1. During the six years of observation (2007-2012) in the non-financial sector companies listed on the Indonesia Stock Exchange, market-to-book ratio does not have negative effect on the level of company leverage. This is due to the fluctuation in the economic condition in 2008 affecting on the assessment of the market price and the value of the book itself. This empirical study does not support market timing theory of market-to-book theory which states that the activities of stock release will affect on the capital structure.
2. During the six years of observation (2007-2012) in the non-financial sector companies listed on the Indonesia Stock Exchange indicates the similar result with the initial hypothesis, in which earning after tax partially has significant effect on the level of company leverage. The result of this study supports market timing theory and the previous research which state that earning after tax has negative effect on the level of company leverage.
3. During the six years of observation (2007-2012) in the non-financial sector companies listed on the Indonesia Stock Exchange indicates that asset structure does not have significantly negative effect on the level of company leverage. This is due to the asymmetry of information. The result of this study is inconsistent with previous studies that revealed that the relationship between asset structure and the level of company leverage had significant negative value.

The limitations during the study are as follows:

1. On the data which have been tabulated, there are some data that apparently still not in accordance with the criteria set in the previous chapter on sampling criteria, so that the data that will be tabulated must be sorted again.
2. There are many companies that suffered losses during the study period, thus reducing the number of samples used.

REFERENCES

Abdul Hakim, 2007, Analisis Laproan Keuangan, Yogyakarta: YKPN.

Bambang Riyanto, 2008, Dasar-dasar Pembelanjaan Perusahaan, Yogyakarta: Penerbit GPFE.

Baker, Malcolm and, Jeffrey Wurgler, 2002, 'Market Timing and Capital Structure', *The Journal Finance*, Volume 57.1-32.

Bringham, F Eugene and Houston, Joel F 2009, *Fundamentals of Financial Management*, 12th Edition, South Western Cengage Learning.

Frankel, Richard, and Charles MC Lee, 1998, Accounting valuation, market expectation, and cross sectional stock returns, *Journal of Accounting and Economics*, 25, 283-319.

Halim Dedi Perdana, 2004, 'Analisis Pengaruh Price Earning Ratio (P/E0 Dan Market to Book Ratio (P/B) terhadap Pertumbuhan Earnings (Growth) Perusahaan Manufaktur di Indonesia'.

Imam Ghozali, 2011, '*Aplikasi Analisis Multivariate dengan Program IBM APSS 19*', 5th Edition, Semarang : Badan Penerbit Undip.

Lukman Syamsudin, 2001, *Manajemen Keuangan Perusahaan*, Jakarta: Rajawali Pers.

Lukman Syamsudin, 2007, *Manajemen keuangan perusahaan*, Jakarta : Raja Grafindo Persada.

Myers, SC, and Majluf, NS, 1984, 'Corporate Financing and Investment, Decision When Firms Have Information That Investors Do Not Have', *Journal of Financial Economic*, vol. 5 : 187-221.

Susan Irawati, 2006, *Manajemen Keuangan*, Bandung: Pustaka.

Van Horne, James C, and John M, Wachowicz, 2005, *Fundamentals of Financial: Management Prinsip-Prinsip Manajemen Keuangan*, Translated: Dewi Fitriasari and Deny Arnos Kwary, Penerbit Salemba Empat: Jakarta.