PROFITABILITY, SOLVABILITY, PRICE EARNINGS RATIO AND PRICE TO BOOK RATIO
AN EVIDENCE FROM INDONESIAN MANUFACTURING COMPANIES

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Abstract

This study aims atexamining the correlation of profitability ratio and solvability ratio, collectively and partially, on price earnings ratio and price to book ratio of manufacturing companies listed on the Indonesian stock Exchange. The data were obtained from the annual financial statement of the companied with the period of study wasbetween 2011 and 2013.A multiple regression analysis has been performed to analysesamples of 57 manufacturing companies that have been selected based on the purposive sampling. The results showed that the profitability has a positive and significant correlation on the price earnings ratio and price to book ratio of the companiesstudied. Meanwhile, the solvabilityhas a negative and significant effect on the price earnings ratio and price to book ratio. This study has also documented that theprofitability and solvability of the companies are better in explaining change of the Price to Book Ratio (PBR) than the Price Earnings Ratio (PER).

Keywords: *profitability ratio, solvability ratio, price earnings ratio, price to book ratio, Indonesia, Manufacturing Companies*

INTRODUCTION

Nowadays, the volatility of the stock market is high and many companies appear and disappear from the stock market. There are a number of reasons why the business entities disappear from the marketplace. They may be acquired by another company, liquidated, or affected by the global financial crisis (Franklin et al., 2007). For example, the global financial crisis has caused the downfall and casualties of some well-known and trusted financial institutions, such as Lehman's Brothers and Union Bank of Switzerland in the Western World.

The stakeholders, such as employees, bank creditors, stockholders, community and the government, are likely to suffer from their investment no matter what events triggered the company bankruptcy. Given that business failure can cause significant trauma (e.g., high costs and heavy losses) to the stakeholders, the prediction of the business failure is imperative and highly beneficial (Fitzpatrick, 1931 as cited on Bentum, 2012).Therefore, good and trusted financial indicators are required by the stakeholders in order toenable them to assess the financial performance of companies comprehensively and validly. Besides, the stakeholders need to know the predictors or factors that potentially affect the indicators, i.e., ratios, as they should know as early as possible about the financial ability of the company.

In this regard, price earnings ratio and price to book ratio have gained enormous popularity for evaluating individual stocks, sectors, and stock markets to predict not only potential investments, but also financial distress (Molodovsky, 1953). Ang (1997) believed that PER (Price Earnings Ratio) can be used

to assess how the market rewards the company performance, as reflected by EPS (Earnings Per Share). On the other hand, Tandelilin (2001:323) considers that the relationship between the market price and PBR (Price to Book Ratio) may also be used as an alternative approach.

However, little research has been done to examine factors determine PER and PBR in the Indonesia context. Thus, this study tested the effect of the solvability ratio (debt to equity ratio) and profitability ratio (return on equity) to the price earnings ratio and price to book ratio on the manufacturing companies listed on the Indonesian Stock Exchange. The object of research in this study was manufacturing companies listed atthe stock exchangein Indonesia from 2011 until 2013 because manufacturing companies can reflect the general condition of firms that listed on the Indonesian Stock Exchange.

The next sessions discuss previous research on the topic that has been conducted mainly in western countries. Following that, the research method is described clearly. Results and discussion provide a clear summary of research findings and it discussion. Lastly, concluding session that consists of important findings in this study and suggested recommendation for furtherinvestigations can be found in the last part of this paper.

LITERATURE REVIEW

Jones (1991) states that PER (Price Earnings Ratio) is an important approach in fundamental analysis. According to Ang (1997), it can be used to understand how the market react to the company performance of a as reflected by EPS (Earnings Per Share). Companies with high growth possibilities usually have a high PER, while companies with low growth usually have a low PER. According to Weston and Copeland (1992), PER is the most comprehensive measurement of achievement of a company because the ratio reflects a combination of the risk ratio effects (liquidity and solvability ratio) and the ratio of returns (activity and profitability ratio). Stocks that have a high PER

(overvalued) is considered as having high price, that is, beyond its intrinsic value and vice versa.

In addition to PER, Price to Book Ratio (PBR) has been widely used to evaluate the performance of the stock market value to book value (Ang, 1997). It is a ratio that has been widely used in a variety of world security analyses. PBR ratio is defined as the ratio of the market value of a share divided by the value of its own company so that we can measure whether the level of stock prices are overvalued or undervalued. A good company generally has a PBR ratio above one, which indicates that the stock market value is greater than the book value of the company. Thus, a stock is considered too expensive if the PBR is already above average of historical PBR, and vice versa.

A small stock value will lead to undervalued PBR, which is very good for long-term investment decision. Low PBR is due to the decline in stock prices; thus the stock prices arebelow its book value or actual value. However, the low PBR may also indicate declining quality and company's performance.

The book value can be assessed on the basis of the entire company or eachindividual share. This ratio compares the market value with the company's value based on financial statements. It means that higher PBR indicates excessive market perception of a company's value, incontrast to the low PBR, which is then interpreted as a signal of good investment opportunity in the long term.

According to Damodaran (2001), the application of PBR ratio to measure market react to company performance has several advantages:

1. The value of the book is a relatively stable and intuitive measure that can be compared to the market price. Investors who are less confident with the discounted cash flow method can choose the PBR as a comparison.

2. The book provides a consistent accounting standard for all companies. PBR can be compared

between the same companies as an indicator of under or over-valued.
3. Firms with negative earnings that cannot be assessed by using the price earnings ratio (PER) can be evaluated using the pricetobook value (PBR).

Return on equity (ROE) is one of profitability ratios, which is used to rate the return on owner's equity of the company. Gibson (1997) stated that ROE is a ratio of net income of a business during a year to its stockholders' equity during that year. It is a measure of profitability of stockholders' investments. It shows net income as a percentage of shareholder's equity. ROE explicitly takes into account the company's ability to generate returns for common shareholders after taking into account interest (cost payable) and the cost of preferred stock. As known, the shareholders have a residual claim on corporate profits that will be used to pay interest on the debt, then the preferred shares to common shareholders later (Helfert, 2003:142).

ROE is the ratio which is very important for the owner of the company (the common stockholders) because this ratio indicates the level of return generated by the management of capital and provided by the owner of the company. In other words, ROE shows the benefits to be enjoyed by shareholders. ROE shows the growth prospects of the company; better ROE means there is a potential for increased corporate profits. This is captured by investors as a positive signal of the company that will increase investor confidence and will facilitate the management of the company to attract capital in the form of shares.

Furthermore, the debt to equity ratio (DER) is a ratio that reflects the relative proportions of all lenders' claims to ownership claims, and it is used as a measure of debt exposure (Helfert, 2003:155). A high identified DER indicates that a company used more venture capital than debt. Therefore, it will reduce the level of company's solvability. DER reflects the company's ability to meet all obligations indicated by the capital itself, which is used as a debt payment. It may provide an overview of the structure of capital owned by the company, so it can be a risk of uncollectible debts.

Ang (1997) argued that DER can affect the performance of the company (Ang, 1997). A low value of debt to equity ratio isfavourable because it indicates smaller risk. Higher debt to equity ratio is unfavourable because it means that the business relies more on external lenders, thus it is at a higher risk, especially at higher interest rates.

Several previous studies have been conducted to assess the correlation between profitability and the solvability ratio on PER and PBR. Winarno (1998) conducted research to examine factors that potentially affect PER. This study found that PER was determined by current Ratio, Debt Ratio, Debt to Equity Ratio, Earnings after Tax to Sale and Retained Earnings to Total Assets. Meanwhile, Kholid (2006) documented that growth sale, ROE, Dividend Payout Ratio, bank interest rate, Debt to Equity Ratio and ROI have a significant effect on PER.

Furthermore, Sidharta and Santoso (1998) identified that ROE and DER have a positive and significant effect on PBR, while EPS, DPR, and beta stocks have a significant and negative effect on PBR. In addition, Mas'ud (2003) analysed the factors affecting capital structure and its relationship with the company. The objects of the research are manufacturing companies listed on the Stock Exchange from 2001 to 2005. The results of this study showed empirical evidence that debt to equity ratio has a positive effect on the price to book ratio.

The above previous studies documented a different result of the correlation of profitability and solvability ratio on PER and PBR. Thus, this study attempt to re-examine it in Indonesian context. Thus, the hypotheses of this study can be formulated as follows:

Ha_1: Profitability ratio (Return on Equity) does correlation price earnings ratio on the manufacturing companies listed on Indonesia Stock Exchange.

Ha$_2$: Solvability ratio (Debt to Equity Ratio) does correlation price earnings ratio on the manufacturing companies listed on the Indonesia Stock Exchange.

Ha$_3$: Profitability ratio (Return on Equity) and solvability ratio (Debt to Equity Ratio) collectively do correlation price earnings ratio on manufacturing company listed on the Indonesia Stock Exchange.

Ha$_4$: Profitability ratio (Return on Equity) does correlation price to book ratio on the manufacturing companies listed on Indonesia Stock Exchange.

Ha$_5$: Solvability ratio (Debt to Equity Ratio) does correlation price to book ratio on the manufacturing companies listed on the Indonesia Stock Exchange.

Ha$_6$: Profitability ratio (Return on Equity) and solvability ratio (Debt to Equity Ratio) collectively do correlation price to book ratio on manufacturing company listed on the Indonesia Stock Exchange.

RESEARCH METHODS

The data used in this research were secondary data of all companies listed on the Indonesia Stock Exchange for the period of 2011 to 2013. The total

population of this study was 130 manufacturing companies listed on the Indonesia Stock Exchange for the period of 2011 to 2013.

Moreover, the manufacturing companies have been selected as they have a high growth potential in line with the Indonesian government, which sets export-based manufacturing or starts minimizing its export of raw materials that leads to improvement of stock performance in these sectors(Ministry of Energy and Mineral Resources, 2014). Moreover, it has several sub-industries that provide an opportunity to capture different characteristics of companies.

This would make the investors interested to invest in manufacturing companies as they have the largest number and the highest industry average of PER in IDX (Indonesia Stock Exchange) (Indonesia Stock Exchange, 2012). Approximately 29.7% of total companies in the Indonesia Stock Exchange are manufacturing companies, which are grouped into 19 sub-categories of the industry. Therefore, the results of this study are expected to represent the existence of the companies listed on IDX.

The sampling technique used in this research ispurposive sampling method. The studied companies have been selectedbased on the availability if required data and consistently yield profit from 2011 to 2013 as it is needed to calculate PER (Price Earnings Ratio).

Table 1.Variable Operationalization

Variable	Explanation	Formula	
Price earnings ratio (PER)	Predict the company's ability to generate profits in the future of a company	PER =	$\dfrac{\text{Market value per share}}{\text{Earnings per share (EPS)}}$
Price to book ratio (PBR)	A ratio that measures the value given to the management of financial markets and corporate organizations as a company that continues to grow	PBR =	$\dfrac{\text{Market value per share}}{\text{Book value per share (BVS)}}$

Variable	Explanation	Formula
Return on equity (ROE)	Measure the profitability of the investments made by the owners of equity or shareholders	$ROE = \dfrac{\text{Earnings after tax}}{\text{Total equity}}$
Debt to equity (DER)	Reflects the company's ability to meet all obligations as indicated by some sections of equity used to pay debts.	$DER = \dfrac{\text{Total liabilities}}{\text{Total equity}}$

RESULTS AND DISCUSSIONS

The results of the descriptive statistics of the manufacturing companies for price earnings ratio is 12.007 with 6.387 standard deviation, the minimum is 0.31, the maximum is 28.45 and for price to book ratio is 1.916 with 1.552 standard deviation, the minimum is 0.03 and the maximum is 6.24. Meanwhile, the mean of manufacturing company's return on equity was 17,157 with 11.055 standard deviation. The minimum is 0.00 and the maximum is 69.72. Moreover, the mean of manufacturing company's debt to equity is 1.002 with standard deviation of 0.830. The minimum is 0.04 and the maximum is 4.69.

The normalitytest showed a normal distribution pattern. The data spread around the diagonal line and follows the direction of the diagonal line or histogram graph; this shows the pattern of normal distribution and based on Kolmogorov-Smirnov test with significance level of 5%, statistically all data are also normally distributed; all data have a significance level above 0.05.

The multicollinearity test is conducted by looking at the variance inflation factor (VIF) and tolerance. The limit of VIF is 10 and the value of tolerance is 0.1. If the value of VIF is greater than 10 and the tolerance value is less than 0.1, there is multicollinearity. The tolerance value of all variables in this study is above 0.1 and VIF value is below 10. It can be concluded that there is no multicollinearity in the multiple regression equation.

In addition, the heteroscedasticity test is conducted by using Scatterplot. The basis for decision making in the heteroscedasticity test is by looking at the graph plot; if there is a specific pattern, such as dots which do not have particular pattern (wavy, widened and narrowed), it indicates that there is heteroscedasticity. If there is no particular pattern, and points spread above and below 0 on the Y axis, there is no heteroscedasticity. The result of scatterplot is no particular pattern. The points spread above and below 0 on the Y axis. It can be concluded that there is no heteroscedasticity issue in the data.

Lastly, the autocorrelation test results can be seen from Durbin-Watson value (Dw Test). DW is compared with the value of the table by using degrees of 5% confidence. If $dU < dw < (4-dU)$, the test results demonstrate the value of Dw Test autocorrelation with dependent PER is obtained at 1.859 among $dU = 1.749$ and $(4-dU) = 2.251$. Dependent PBR is obtained at 1,895 among $dU = 1.749$ and $(4-dU) = 2.251$, so it can be concluded that no autocorrelation exists.

Based on the above regression test, the multiple linear regression equation can be drawn as follows:

$PER_t = 11,253 + 0,168\ ROE_{t-1} - 2,119\ DER_{t-1}$

t-test (10,404) (3,555) (-3,373)
sig. (0,000) (0,001) (0,001)
R square= 0.137
adjusted R square = 0.124

$PBR_t = 0,829 + 0,089\ ROE_{t-1} - 0,440\ DER_{t-1}$

t-test (3,828) (9,426) (-3,496)
sig. (0,000) (0,000) (0,001)
R square= 0.415
adjusted R square = 0.406

Based on the statistics results, it can be seen that all independent variables studied have significant correlation with the dependent variable. The results of statistical

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testing by t-test show that the profitability ratio (ROE) has significantcorrelation to PER. This is consistent with research conducted by Winarno (1998), who also found that ROE has a significant effect on the price earnings ratio. Variable regression coefficient profitability of PER is positive and the value is 0,168, while to the Price to Book Ratio also has a positive correlation and the value is 0,089 which is in line with research conducted by Sidhartha and Santoso (1998).

This means that every increase of 1 unit on the ROE would lead to a rise by 0,168 of PER, and so do PBR; every increase of 1 unit on the ROE will cause PBR to increase by 0,089, so when a company have an increasing ROE at t-1 year, then the market will reward company with a high stock price and it will lead to a rising of PER and PBR. The result of statistical test (t test) is consistent with the theory proposed previously, that the higher the ROE, the greater the PER and PBR.

The results of statistical testing by t-test show that the solvability ratio (DER) significantly affects the PER. This result is consistent with research conducted by Kholid (2006), who also found that DER has a significant effect on the Price Earnings Ratio.

The regression coefficient of solvability to PER is negative and the value is -2.119. Meanwhile, the PBR also has a negative correlation and the value is -0.440, which means the investors is aware of the risk that come from the debate so a company with high debt to equity ratio will lead to decreasing of PER and PBR. This result is in line with research conducted by Rosjje and Astuti (2003).

This means that every increase of 1 unit on DER will lead to a fall down of 2,119 of PER; also, every increase of 1 unit on the DER will cause PBR to fall down by 0,440. The result of the statistical test (t-test) is consistent with the theory proposed earlier, that the higher the DER, the lower PER and PBR.

Moreover, the results of statistical testing by t-test show that the profitability ratio (ROE) significantly affects the PER. This is consistent with research conducted by Winarno (1998), who also found that ROE has a significant effect on the price earnings ratio. Variable regression coefficient profitability of PER is positive and the value is 0,168, while to the Price to Book Ratio also has a positive influence and the value is 0,089 which is in line with research conducted by Sidhartha and Santoso (1998).

This means that every increase of 1 unit on the ROE will lead to a rise by 0,168 of PER and so do PBR; every increase of 1 unit on the ROE will cause PBR to increase by 0,089, so when a company has an increasing ROE at t-1 year then the market will reward company with a high stock price and it will lead to a rising of PER and PBR. The result of statistical tests (t test) is consistent with the theory proposed previously, that the higher the ROE is, the greater the PER and PBR will be.

Furthermore, the results of statistical testing by t-test showed that the solvability ratio (DER) significantly affects the PER. This result is consistent with research conducted by Kholid (2006), who also found that DER has a significant effect on the Price Earnings Ratio. The regression coefficient of solvability to PER is negative and the value is -2.119 and to PBR also has a negative influence and the value is -0.440, which means the investors is aware of the risk that come from the debt so a company with high debt to equity ratio will lead to decreasing of PER and PBR. This result is in line with research conducted by Rosjje and Astuti (2003). This means that every increase of 1 unit on DER will lead to a fall down of 2.119 of PER; also, every increase of 1 unit on the DER will cause PBR to fall down by 0.440. The result of the statistical test (t-test) is consistent with the theory proposed earlier, that the higher the DER is, the lower PER and PBR will be.

CONCLUSIONS

The empirical results in the study lead to the validation of the hypothesis.Firstly, the study showed that all alternative hypotheses are accepted. The profitability ratio (Return on Equity) individually has a positive significant correlation on PER and PBR, while the

solvability ratio (Debt to Equity) individually has a negative significant correlation on PBR. Both profitability and solvability collectively have significant correlation on PER and PBR, so all the independent variables are real explanatory factors for the variation in the dependent variable (PER and PBR).

Secondly, the value of coefficient of determination (R-square) in multiple regression equation on the dependent variable PER is 13.7%, which means that 13.7% change in the price earnings ratio (PER) can be explained by the independent variables in the model (ROE & DER). Meanwhile, about 86.3% change can be explained by other variables that are not used in this model. Moreover, the value of the coefficient of determination (R-square) in the multiple regression equation on the dependent variable of PBR is 41.5%, which means that 41.5% change in price to book ratio (PBR) can be explained by the independent variables in the model (ROE and DER), while about 58.5% change can be explained by other variables that are not used in this model. Therefore, between the two dependent variables, PER and PBR, there are big differences of R-Square, which means PBR is better than PER in explaining the profitability and solvability ratio of a company.

The limitations of this study used only two independent variables/predictors, namely the PER (Price Earnings Ratio) and PBR (Price to Book Ratio). There are other factors that might need to be investigated, for instance, liquidity ratio, activity ratio, and ownership ratio. The objects used in this study are only manufacturing companies, so that the results of this study cannot be generalized for all industries. Additionally, the data used in this study are only data recorded within three years.

Thus, it can be suggested to further studies.Firstly, future research can be conducted by adding independent variables that exist, such as ownership ratios, liquidity ratios, and the activity ratios.Secondly, it can be suggested that the further research need to increase the number of companiesstudied and different industry sectors as in order to confirm the research findings. Thirdly, future research can be conducted by extending the periodof data used in the study, probably more than three years.

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REFERENCES

Agus, Sartono. 2001. *Manajemen Keuangan Teori dan Aplikasi*. Yogyakarta: BPEF.

Ahmed and Nanda. 2004. *Style*Investing : Incorporating PBV in Value Stocks. *The Journal of Portofolio Management*:47-59.

Ang, Robert. 1997. *Buku Pintar: Pasar Modal Indonesia*. Mediasoft Indonesia.

Ariff, M. and L.W. Johnson., 1990. *Securities Market and Stock Pricing : Evidence From A Developing Capital Market in Asia*. Singapura: Longman.

Butler, Jonathan. 1995. *Technical analysis: A primer*. NY:Worth.

Constand, Richard L., Freitas, L.P, & Sillivian, M.J. 1991. Factor Affecting Price Earning Ratio and Market Values of Japanese Firms, *Journal of Financial Management Association*, 20: 4. Winter

Damodaran, Aswath. 1996. *Investment Valuation*, Jhon Willey & Sons.

Elton, Edwin J. and Martin J. Gruber. 1991. *Modern Portofolio and Investment Analysis.* Fourth Edition. Singapore. Jhon Willey & Sons.

ESDM. 2014. Ekspor Bahan Mentah Mineral, Dilarang. (http://www1.esdm.go.id/berita/mineral/43-mineral/6614-mulai-12-januari-2014-ekspor-bahan-mentah-mineral-dilarang-.html). Accessed 16 february 2014.

Ferdinand, Augusty. 2006. *Metode Penelitian Manajemen: Pedoman Penelitian Untuk Penulisan Skripsi*, Tesis dan Disertasi Ilmu Manajemen.Semarang : Badan Penerbit Universitas Diponegoro.

_____. 2002. *Structural Equation Modelling dalam Penelitian Manajemen*. Semarang : BP UNDIP.

Fitzpatrick, P. 1931. *Symptoms of Industrial Failure*, Catholic University of America Press. USA.

Franklin, Allen and Douglas Gale. 2007. *Understanding Financial Crises*, Oxford University.

Ghozali, Imam. 2001. Aplikasi Analisis Multivariate dengan Program SPSS. Badan Penerbit Universitas Diponegoro. Semarang.

Gibson. 1997. The Impact of Acquisitions on Company Performance: Evidence from a Large Panel of UK Firms. *Oxford Economic Papers*. 49:344-361.

Gibson, Charles H. 1992. *Financial Statement Analysis*. 5th Ed. United States of America: South-Western Publishing Company.

Gujarati, Damodar N. 1995. *Basic Econometrics*. Third Edition. Mc. Graw-Hill International Edition.

Herfert, Erich A. 2003. *Techniques of Financial Analysis*. Jakarta: Salemba Empat.

Husnan, Suad. 1996. *Dasar-dasar Teori Portofolio dan Analisis Sekuritas.* edisi ketiga. cetakan pertama, Yogyakarta: UPP-YKPN.

Indonesia Capital Market Directory. 2013. *IDX Statistics book*. Jakarta:Institute for Economic and Financial Research

Indonesia Stock Exchange. 2012. *IDX Fact Book 2012*. Indonesia: Indonesia StockExchange.

Irwin, Raza. 2004. Analisis Faktor Penentu Price to Book Value Saham Dalam Keputusan Investasi Pada Perusahaan Go Publik di Bursa Efek Jakarta. *Jurnal EKUBANK*, 1:308-327.

John J. Hampton. 1989. *Financial Decision Making (Concept, Problem, and Case.* Fourth Edition. New Jersey:Printice Hall International Inc.

Jones, C. Parker. 1991. *Investment : Analysis and Management,* John Wiley & Sons, Inc.

Kholid, Abdul. 2006. *Analisis Faktor-Faktor yang Mempengaruhi Price Earning Ratio Saham-Saham Perusahaan yang Terdaftar di Bursa Efek Jakarta* . skripsi. Yogyakarta:UII.

Machfoed, Mas'ud. 1994. Financial Ratio Analysis and The Prediction of Earnings Changes in Indonesia*. Kelola*, 7: 114-134.

Masdar, Mas'ud. 2008. Analisis Faktor-Faktor Yang Mempengaruhi Struktur Modal Dan Hubungannya Terhadap Nilai Perusahaan, *ManajemenDan Bisnis*, 7:44-58

Molodovsky, N. 1953. A Theory of Price-Earnings Ratios. *Financial Analysts Journal (November)*: 65-80.

Mpataa, Kaziba A. and Agus Sartono. 1997. *Factor Determining Price Earning (P/E) Ratio,* Kelola, 7:133-150

Naccur, Sammy Ben, and Mohamed Goaied. 1999. The Value Creation Process in the Tunisian Stock Exchange, *Proceeding API/WPS 9903*, Universite de Tunis IH, Faculte des Sciences Economiques et de Gestion, Tunisia

Rossje V. Suryaputri and Christina Dwi Astuti. 2003. Pengaruh Faktor Leverage, Devidend Payout, Size, Earning Per Share And Country Risk Terhadap Price to Book Value. *Media RisetAkuntansi, Auditing dan Informasi*, 3:1-23

Santoso, Singgih. 2000. *Buku Latihan SPSS Statistik Parametrik*. PT Elex Media Komputindo. Gramedia. Jakarta.

Sawir, Agnes. 2001. *Analisis Kinerja Keuangan dan Perencanaan Keuangan Perusahaan*. Edisi pertama, Jakarta: PT Gramedia Pustaka Utama.

Sekaran, Uma. 2010. *Research Methods For Business : Skill-Building Approach,* 2nd Edition, John Wiley & Sons, Inc.

Sidharta, Utama and Anto Yulianto. 1998. Kaitan antara Price Book Value dan Imbal Hasil saham pada Bursa Efek Jakarta. *Jurnal Riset Akuntansi Indonesia*. 1:47-59.

Sparta. 2000. Analisis Pengaruh ROA, DER, dan DPR Terhadap PBV Pada Lembaga Keuangan Bank Di Bej Periode 1992-1996. *Jurnal AkuntansiFe Untar*, 4:17-37

Tandelilin, Eduardus. 2001. *Portofolio dan Investasi Teori dan Aplikasi*. Yogyakarta: Kanisius

Utama, S dan A.B. Santosa. 1998. Kaitan Antara Rasio Price/Book dan Imbal Hasil Saham Pada Bursa Efek Jakarta. *Jurnal Riset Akuntansi,* 1:127-140.

Weston, Fred J., and Thomas E. Copeland. 1992. *Managerial finance*. Japan:Tokyo CBS Publishing.

Winarno, Dwi. 1998. *Analisis Faktor-faktor yang Mempengaruhi Kinerja Perusahaan Dilihat dari aspek Price Earning Ratio (Studi pada Perusahaan Property yang Go Publik di Bursa Efek Jakarta)*. Tesis. Universitas Brawijaya.