

Indicators of Company Performance, Investors' Expectation and Investment Risk in Predicting Stock Return at Indonesia Stock Exchange

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Abstract

The objective of this research is to identify the indicators that empirically are better to measure company performance, investors' expectation and investment risk in predicting the individual stock return, especially capital gain. There are many indicators available, but not all indicator are relevant to stock market empirically. In predicting stock return based on company performance, investors' expectation and investment risk, the three factors are latent variable that value measured by their each indicators. Company performance indicators are Earnig per Share, Price-Earning Ratio, Book Value, Price-Book Value Ratio, Debt-Equity Ratio, Return on Assets, Return on Equity and Net Profit Margin (EPS, PER, BV, PBV, DER, ROA, ROE, NPM and OPM). Investors' expectation indicators are Price Trend, Latest Return, Average Return, Return Trend, Latest Return Percentage, Average Return Percentage, and Return Trend Percentage (PT, LR, AR, RT, LR%, AR% and RT%). Investment risk indicators are Standard Deviation of return, Coefficient of Variation, and Coefficient Beta of stock (SD, CV and Beta). From all indicators only the good ones that used to predict future return. Therefore, it is necessary to select the proper indicators before use them. The type of this research are quantitative, ex post facto, associative, and positivistic by analyzing the relevancy of the indicators with measured variables. Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA) and Goodness of Fit Test analysis are used in this study. The conclusion of this study is to confirm that: Firstly, good indicators of company performance are ROA, ROE and NPM. Secondly, good indicators of investors' expectation are PT and AR or LR and RT. Thirdly, good indicators of investment risk are SD and Beta.

Keywords : Company performance, investor's expectations, investment risk, EPS, PER, BV, PBV, DER, ROA, ROE, NPM, OPM, PT, LR, AR, RT, LR%, AR%, RT%, SD, CV and Beta

1. Introduction

1.1 Research Background 1

Expectations of investors in making investment is to acquire investment return commensurate with the specific risks that have been taken into account. Stock return consist of capital gains and dividends. Capital gain is obtained from the increase in market price or price index of the stock, while the dividend is obtained from the company's earnings distributed to shareholders. Component of the stock return in the form of capital gain generally get more investor attention than the dividend (Susanto and Sabardi (2002). The reasons are:

1. Capital gain can be obtained at any time from price fluctuations, while dividend can be obtained at least each semester and is not always there.
2. Most investors buy shares to be owned and traded for short-term to obtain capital gain.

Because of investors goal in the stock investment is to get return, then the investor or prospective investor needs to select the stock to be bought by considering the risk and return factor. To estimate the potential return, the investors make fundamental stock analysis and technical stock analysis. To estimate the potential risk investors make risk analysis.

According to the fundamental stock analysis potential Stock Return (SR), especially Capital Gain (CG), can be estimated from the company's financial performance. According to the technical analysis potential return can be predicted from the pattern of stock Market Price (MP) or SR fluctuations in some considerable period of observation. Stock of a company that has a good performance and has a great expected return is believed to be stock having high potential return in the future. According to the "Risk-Return Trade-off" axiom risk is an important consideration in choosing stock to be purchased by investors to be compared with the potential return. Shares with the commensurate risk-return is an attractive one so that the price will go up. In other words, the Company Performance (CP), Investors' Expectations (IE) on the price and return, as well as the Investment Risk (IR) are considered to be factors that influence future SR, especially CG.

There are interesting empirical phenomena in the stock market to be observed in relation to CP, IE, IR and SR, i.e.:

1. Investors predict the future SR based on CP, IE and IR partially using fundamental analysis or technical analysis or risk analysis.
2. Analysis of the effect of CP in fundamental analysis is generally done using multiple regression models

- with CP indicators (financial ratio) as independent variable and SR as dependent variable.
3. Analysis of the effect of IE in technical analysis is generally done by predicting future SR from the pattern of SR and MP fluctuations over the period of observation.
4. Analysis of the effect of IR is generally done using multiple regression model with risk indicators as independent variables and SR as dependent variable.
5. In stock analysis investors and analysts generally use several available indicators judgmentally without selecting first what indicators relevant is in the market. The selection of indicators is not done because they use indicators of CP, IE and IR as CP, IE and IR itself and positionate as independent variables rather than as indicators of latent variables.
6. Stock return, especially capital gain is measured by the increase of its Individual Stock Price Index (ISPI)

The above phenomena indicate the existence of some empirical gaps follows:

1. From the multiple regression model analysis it can be seen the influence of financial ratios or return trend considered or risk indicators considered as CP or IR or SR, but it is not the influence of CP, IE or IR.
2. From the partial analysis using multiple regression model can only be known direct effect of each factor of CP, IE or IR on SR, even though investors actually need to know the direct and indirect influence of the three factors.
3. An integrated analysis model is needed that can determine the effect of the three factors simultaneously that can be used to predict SR.

The direct effect occurs when the factor affect return without a mediator, while the indirect effect occurs when the factor affect return through mediators such stock Market Prices (MP) and Transaction Volume (TV).

The necessity of an analysis model that can be used to determine the direct and indirect influence of the three factors (not the influence of the indicators) simultaneously on SR can be satisfied with the integrated model analysis of the relationship among variables such as Structural Equation Modeling integrated (SEM). In this analysis model CP, IE and IR are categorized as latent variables. Latent variable is a variable that can not be measured directly and need indicators to measure (Hair et al, 1995). There are many indicators that theoretically expressed as indicators of CP, IE and IR, but it is empirically not necessarily all of these indicators are relevant in the market. Therefore, it is needed to selection of relevant indicators to be included in the model. Thus the question arises: How do choose the indicators? What indicators appropriate to measure/reflect CP, IE and IR in predicting SR (especially CG) ?

1.2 Research Problems and Objectives

The research problem is formulated as follows: How to determine the proper indicators used in the analysis of SEM ? What indicators that are empirically feasible to measure CP, IE and IR in the stock market in the SEM analysis ?

To be more focused and directed, the problem is restricted on selection of appropriate indicators for CP, IE and IR in the SEM analysis. Thus, the study was limited to three factors as exogenous latent variables were examined and their indicators. The period of observation of the factors and indicators are restricted for 34 months (September 2009 - June 2012) to obtain the values of the indicators in 32 months (October 2009 - May 2012) and the capital gain on June 2012.

The objective of the study was to identify, select and determine the proper indicators to measure CP, IE and IR factors in the SEM analysis, which can then be used to predict future capital gain. Knowledge and understanding of this issue can then be communicated to the interesting parties of company stock, especially the company managers, emiten, stock analysts, fund managers, stock traders and investors or potential investors. Based on this information the stock market participants can use to determine the effect of CP, IE and IR on SR and predict it in the integrated analysis model.

1.3 Methodology

This study is designed as ex post facto, associative, cross-sectional, quantitative research to explain the relationship between variables CP, IE and IR with its each indicators respectively in SEM models. The data used are secondary data indicators value of CP, IE and IR on one time, the end of May 2012.

This study aimed to obtain adequate indicators for CP, IE and IR that will be used to predict SR with SEM. Therefore, the scope of the analysis is limited to Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA), not followed up with the SEM analysis.

The population in this study are all shares listed on the Stock Exchange in June 2012, i.e. 425 companies of 9 industries. The sample size was determined by Slovin formula in Sevilla 2007 (Analisa-statistika.blogspot. com., March 4, 2014). With a population (N) 425 companies, this study take a sample of 110

shares of the company because according Sugiyono (2010) a sample size of 100 is sufficient. In order to obtain a proportional sample share of each industry it is used stratified random sampling.

2. Literatures Study

2.1 Stock Return, Market Price and ISPI

Return of investment is the financial performance measure of an investment (Brigham and Ernhardt, 2005 and Besley and Brigham, 2007). Return of stock investment is gain associated with ownership of stock investment that consist of the annual cash dividends received and the market price increases or capital gains realization at the end of the period (Van Horne & Wachoviz, 2001). Thus, stock investment produces two return components that can be obtained by investors, namely the dividends and capital gains. In fact almost all investors prefer capital gains than dividends (Susanto and Sabardi, 2010).

Capital gain as an component of return derived from the increase in stock market price (MP). It can also be derived from increase of Individual Stock Price Index (Jogiyanto, 2003). In the market the high-low of MP of a stock is represented by it's Individual Stock Price Index (ISPI), and the the high-low of MP of the overall stock is represented by the Jakarta Composite Index. Stock price index is the market price of a stock that expressed in index form (fayku.files.wordpress.com). ISPI is the stock price index of each company listed on a stock exchange (www.idx.co.id). Therefore, the individual return can be calculated from the increase of ISPI.

2.2 Company Performance (CP)

In the company fundamental theory it is argued that stock MP of a company is affected by the prospect of a stock ability to give return, and the prospect is reflected in the condition/ performance of the issuer, in particular financial performance/condition (Tandelillin, 2010). Financial performance is one of the basic financial condition assessment performed by an analysis of the company's financial ratios (Munawir, 2010). Financial ratios are useful to predict the prospects and financial difficulties, results of operations, financial condition, current and future, as well as guidance to investors about the performance of past and future (Horigan in Tuasikal, 2001). CP actually consists of four perspectives, namely financial perspective, customer perspective, internal business processes, and learning and growth (Kaplan and Atkinson, 1998). Nevertheless CP in the financial perspective has been the most widely used and will continue to do so to measure CP (Kaplan and Atkinson, 1998).

Palepu and Bernard say that there are two principal tools for financial analysis, namely the ratio analysis and cash flow analysis. Ratio analysis over current CP and past provides a basis for predicting future performance of the company. According Yuwono et al. (2003), financial ratios can be determined whether or not a company has good financial performance. Financial ratios are the figures obtained from the comparison of the financial statement accounts with other accounts that have relevant and significant relationship (Harahap, 2009). Financial ratios can be used by investors to gain an overview of CP and publicly available information includes the Earning per Share, Price-Earning Ratio, Book Value, Price-Book Value Ratio, Debt-Equity Ratio, Return on Assets, Return on Equity, and Net profit Margin (EPS, PER, BV, PBV, DER, ROA, ROE, NPM, and OPM). Prihadi (2008) suggests that any researcher is entitled to determine the ratio used, and there is no regulation on the use of certain ratios.

2.3 Investors' Expectations (IE)

In stock investment the investors have expectations about future price and future return of their owned stock. Suad Husnan (2005) says that the expected return is a gain to be received by investors from their investments in the future and the gain magnitude is very influenced by the prospect of the company in the future. Stock prices and return must be estimated in a certain way (Brown and Warner, 1985). Expected price and return height (investors' expectations) are based on estimates calculated through technical analysis.

According to Bodie et al (2008), technical analysis is essential searching of the pattern of predictable MP and SR. Technical Analysis of MP and SR try to predict the future MP and SR based on the movement patterns of its fluctuation during the observation period. Forecasting results of MP and SR become investors' expectation (IE). The company stock to be attractive to investors if it has high value of MP or SR, then investors are willing to buy at higher prices than other stocks. The higher price, the higher return. In other words, the magnitude of the IE affect on SR. The magnitude of the estimated value that become indikartors of IE is the Price Trend, Latest Return, Average Return, Return Trend, Latest Return Percentage, Average Return Percentage and Trend Percentage Return (LP, AP, PT, LR, AR, LR%, AR%, and RT%).

2.4 Investment Risk (IR)

One stage in security analysis is establishing expected returns and risks of individual securities (Palepu et al., 2006). Expectations of returns and risks of individual securities in investors' perception is equivalence between the expected return and faced risk of an investment securities. Attractive stocks are stocks that have expected

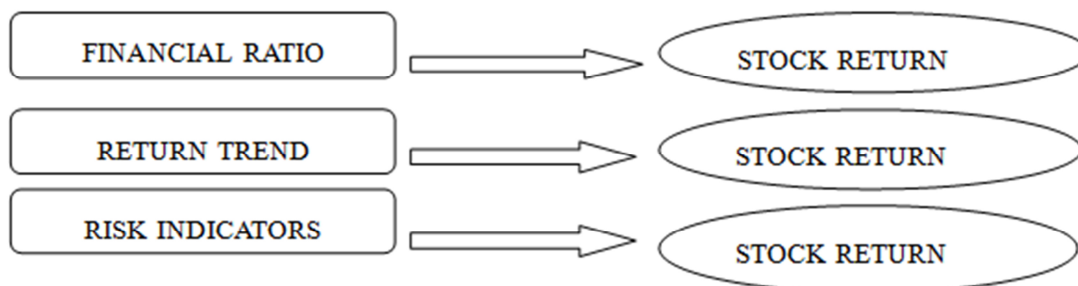
return commensurate with its potential risk. Therefore it can be stated that IR affect on SR.

From the definition put forward by the experts (Weston et al., Reilly and Brown, Sharpe, and Jones et al.) it can be concluded that the IR is the possibility of obtaining the actual returns of the investment that is not equal with the expected return. Risk is measured by the magnitude of the variability in return. The difference between the actual return and the expected return of a security is the Total Risk. Standard measure of the total risk is Variance (Weston et al, 2006) and Standard Deviation (Bodie et al 2008) of the return. Risks arising from macroeconomic factors called Systematic Risk, while the risk arising from specific company factors called Specific Risk. Systematic risk is measured by evaluating the movement of the return trend of a company stock to follow the movement of the stock market return, and its size is the Beta coefficient (β) of stock (Weston et al, 2006). Specific risks have received less attention because this risk can be minimized by diversifying investment (it is also called Diversified Risk) and choose the stocks of companies that are performing well.

2.5 Previous Research

In general, the results of previous studies describe the presence or absence of a relationship between CP, IE, IR, market price (MP), trading/transaction volume (TV), and individual stock price index (ISPI). Research related to these factors generally examines these factors alone partially, not integrated. Effect of CP factor being studied alone and analyzed in company fundamental analysis using indicators CP, effect of IE is investigated and analyzed in technical analysis, the influence of IR is researched and analyzed in risk analysis. The study examines the effect of both three factors together/ simultaneously/integrated is undiscovered yet.

Partial analysis models research, generally use multiple regression which only involves the independent and dependent variables, it just examine the direct effect only (no indirect effect). For example, in research on the effects of CP on SR, financial ratios which really are indicators of CP are used as independent variables and SR as dependent variable. The result obtained from the analysis actually is the effect of financial ratio on the SR, it is not the effect of CP. Similarly, in research on the effects of IE or IR on SR. The three partial models can be explained below.



3. This Research Model

This study aims to determine the feasible indicators of CP, IE and IR used in SEM analysis model. In the model CP, IE and IR are positioned as latent exogenous variables, while the SR is approximated with ISPI increase and positioned as endogenous variable. To determine the direct and indirect influence MP and TV are added as two moderator variables.

Latent variable is a variable that can not be measured directly and need indicators to measure it (Hair et al, 1995). CP is measured by indicators EPS, PER, BV, PBV, DER, ROA, ROE, NPM and OPM. IE is measured by indicators LP, AP, PT, LR, AR, RT, LR%, AR% and RT%. RI is measured by indicators SD, KV and Beta. The model of this study can be draw as Figure 1 below.

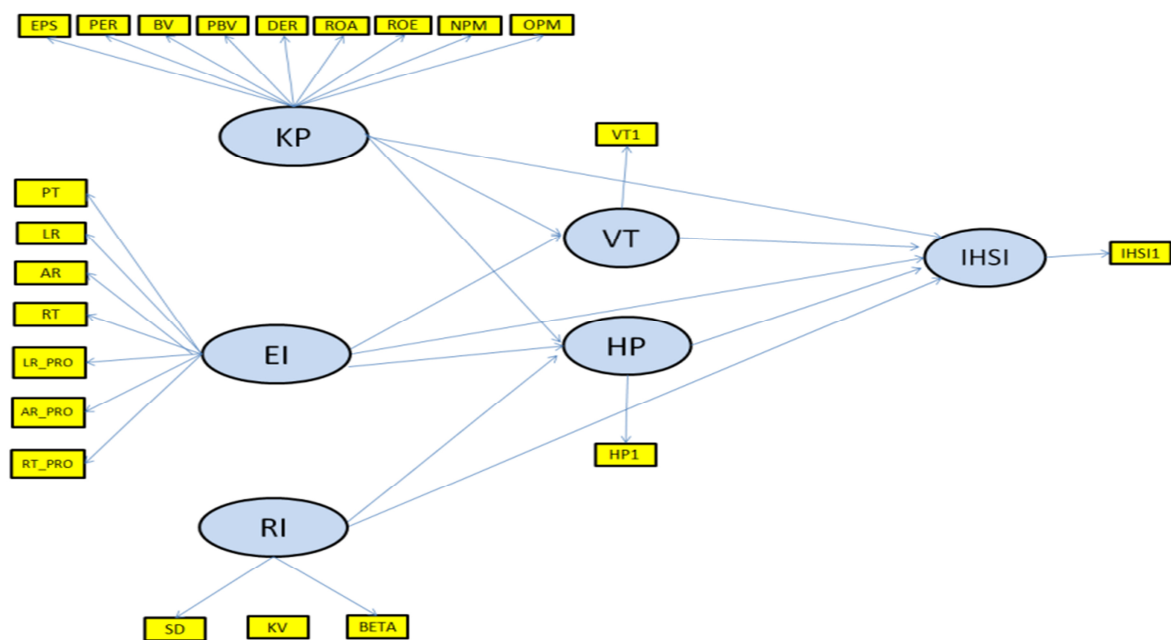


Figure 1. Research Model

Explanation :

Indonesia	English
KP (Kinerja Perusahaan)	CP (Company Performance)
EI (Ekspektasi Investor)	IE (Investors' Expectation)
RI (Risiko Investasi)	IR (Investment Risk)
VT (Volume Transaksi)	TV (Transaction Volume)
HP (Harga Pasar)	MP (Market Price)
IHSI (Indek Harga Saham Individual)	ISPI (increase of Individual Stock Price Index) as an approximation of Stock Return

4. Operationalization of Variables

The variables used in this study consists of indicators of latent independent/exogenous variables, while mediator variables and dependent/endogenous variable are not latent. The independent variable is the stimulus or variables that affect the dependent variable either positively or negatively (Sekaran, 2009). The dependent variable is the main variable as a factor whose value depends on and is influenced by the independent variables (Creswell, 2009). Present between exogenous and endogenous variables are mediators (intervening) variables. According to Baron and Kenny (1986) in Wijanto (2008) a variable called mediators (intervening) if these variables influence the relationship between predictor variables (independent) and the criterion variable (dependent).

Exogenous latent variables and its indicators in this study can be listed as follows:

1. CP with indicators EPS, PER, BV, PBV, DER, ROA, ROE, NPM and OPM.
2. IE with indicators PT, LR, AR, RT, LR%, AR% and RT%.
3. IR with indicators SD, KV and BETA.

5. Data and Analysis

5.1 Stock Market Overview

Stock market/exchange in Indonesia is a part of the Indonesia Stock Exchange (IDX). Products circulating on the stock exchange include shares, bonds, derivatives, mutual funds, sharia and services. At May 2012 there are 425 companies have been listed. Population companies are grouped into nine industry. The trade and services sector have the most number of his company (91 companies = 21.41%), and the agricultural sector have the least (16 companies = 3.76%). At the end of May 2012 JCI was 2825.33 points and the stock market return is -0, 20%. ISPI, individual stock return, JCI and market stock return fluctuates from time to time.

5.2 Analysis of Data Outliers and Multicollinearity

The value of EPS, PER, BV, PBV, DER, ROA, ROE, NPM and OPM can be obtained in the final form, while the value PT, LR, AR, RT, LR%, AR%, LR%, SD, KV and BETA is the result of the processing. The analysis

begins with an examination of multivariate outliers and multicollinearity. This checking is necessary to obtain a precise estimate results when the indicators used in the model SEM. Indicator is called an outlier if it has a value of Mahalanobis Distance (D^2) > 48.268 (Tabachnick and Fidell, 2005). The results of the data processing shown in the table 2 below.

Tabel 2. Mahalanobis Distance value of Data Outlier ($D^2 > 48,268$)

No.	Number of Company	D^2	No.	Number of Company	D^2
1	106	106,225	6	70	58,617
2	7	86,477	7	19	57,175
3	38	82,332	8	28	53,561
4	47	62,575	9	78	48,930
5	31	61,916	10	101	48,399

Source : Analysis result

Out of 110 company stock as sample, 10 companies data classified as multivariate outliers that need to be eliminated, and the subsequent analysis of data indicators involving 100 companies.

According to Weston and Gore (2006) multicollinearity occurs when the correlation between the latent variables > 0.85. Table 3 below shows the absence of multicollinearity between CP, IE and IR, because there is no correlation between latent variables values greater than 0.85.

Tabel 3. Correlation Among Latent Variable

Variable	CP	IE	IR
CP	1		
IE	0.646	1	
IR	-0.654	-.490	1

Source : Analysis result

5.3 Exploratory Factor Analysis (EFA)

This analysis was conducted to find indicators combination or composition that can be incorporated into the model to be created. Table component matrix shows the value of a standard loading factor (SLF) or the magnitude of the correlation between each indicator of the latent variables, while Table KMO (Keyser, Meyer & Olkin) and Bartlett's Test show the feasibility adequacy indicators. Adequacy Standards KMO is ≥ 0.5 , while the standard Bartlett's is the p-value ≤ 0.05 sign (Hair et al, 2010).

CP variables measured by 9 indicators of EPS, PER, BV, PBV, DER, ROA, ROE, NPM and OPM. From the initial stage of the value of factor analysis, DER and PER partial correlation with other indicators in measuring CP are very low. This resulted in a low value of Adequacy (.488) of KMO, although the results of testing the adequacy of Barlett's correlation showed a satisfactory result (0.000). After unplugging DER and PER then either table 4 (Component Matrix) and table 5 (KMO and Barlett's Test) show the values that meet the standards, the KMO = 0.648 and Bartlett's p-value = 0.000.

Tabel 4. Component Matrix – CP

Indicators	Component	
	1	2
EPS	.663	.613
BV	.164	.879
PBV	.600	-.218
ROA	.885	-.230
ROE	.883	-.183
NPM	.631	-.052
OPM	.032	-.684

Sources : Analysis result

Tabel 5. KMO and Bartlett's Test - CP

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.648
Bartlett's Test of Sphericity	Approximated Chi-Square df	285.103 21
	Significant	.000

Sources : Analysis result

IE is measured by seven indicators namely PT, LR, AR, RT, LR%, AR% and RT%. Table 6 and 7 below show the component matrix and the KMO and Barlett's Test standards, namely KMO = 0.518 and Bartlett's p-value = 0.000.

Of the value of SLF is more than 0.50, there are two groups of indicators that are formed as indicators to measure the IE. Indicators PT, AR and AR% are in group one and LR, RT and LR% are in groups of two.

Tabel 6. Component Matrix – IE

Indicators	Component	
	1	2
PT	.923	-.122
LR	-.085	.837
AR	.919	-.045
RT	-.139	.753
LR%	.343	.647
AR%	.697	.331
RT%	-.455	.360

Sources : Analysis result

Tabel 7. KMO and Bartlett's Test - IE

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.518
Bartlett's Test of Sphericity	Approximated Chi-Square df	395.802 21
	Significant	.000

Sources : Analysis result

IR is measured by three indicators, namely SD, CV and Beta stocks. The result shows that SLF of SD and BETA more than 0.50 and are strongly correlated, whereas SLF for the indicator is the 0298 CV < 0.50. This resulted in a low value of Adequacy KMO (0.484), although the results of testing the adequacy of Barlett's correlation showed a satisfactory result (0.000). After unplugging CV the component matrix (Table 8) and KMO & Bartlett (Table 9) showed values that meet the standards, the KMO = 0.50 and p-value = 0.000 Bartlett's.

Tabel 8. Component Matrix – IR

Indicators	Component
SD	.850
BETA	.850

Sources : Analysis result

Tabel 9. KMO and Bartlett's Test - IR

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.500
Bartlett's Test of Sphericity	Approximated Chi-Square df	21.377 1
	Significant	.000

Sources : Analysis result

Based on the results of the EFA obtained indicators composition that can be incorporated into the model as presented in the Table 10 below.

Tabel 10. EFA Result : Indicators Composition

Variable	Indicators	Variable	Indicators
Company Performance (CP)	<i>EPS</i>	Investors' Expectations (IE)	<i>PT</i>
	<i>PBV</i>		<i>AR</i>
	<i>ROA</i>		<i>AR%</i>
	<i>ROE</i>	Investment Risk (IR)	<i>SD</i>
	<i>NPM</i>		<i>BETA</i>

Sources : Analysis result

5.4 Confirmatory Factor Analysis (CFA)

5.4.1 Validity Checking of Indicators

Initial phase of validity analysis of the indicator shows the following results:

Table 11. *SLF* and *t Statistic*

Variable	Indicator	<i>SLF</i>	<i>t Statistic</i>	Keterangan
Company Performance (CP)	<i>EPS</i>	0,48	4,83	<i>Invalid</i>
	<i>PBV</i>	0,52	5,28	Valid
	<i>ROA</i>	0,91	11,10	Valid
	<i>ROE</i>	0,91	11,13	Valid
	<i>NPM</i>	0,50	5,14	Valid
Investors' Expectations (IE)	<i>PT</i>	0,95	12,71	Valid
	<i>AR</i>	1,00	14,00	Valid
	<i>AR%</i>	0,47	4,93	<i>Invalid</i>
Investment Risk (IR)	<i>SD</i>	0,87	10,66	Valid
	<i>BETA</i>	0,52	4,91	Valid

Sources : Analysis result

Shown in the table 11 above that the EPS indicator and AR% are invalid (SLF value < 0.50). Furthermore, both indicators are omitted from the model, then respesification is performed again and validity is measured. Results of respesification in the Table 12 below show that all the rest indicators are valid and significant in measuring the latent variables. Based on the results the proper indicators used to measure CP for subsequent analysis (Confirmatory Factor Analysis, CFA) are PBV, ROA, ROE and NPM, the proper indicators

to IE are PT and AR, and the proper indicators to IR are SD and Beta.

Table 12. *SLF* and *t* statistic after Respesification

Variable	Indicators	<i>SLF</i>	<i>t</i> Statistic	Explanation
Company Performance (CP)	<i>PBV</i>	0,51	5,25	Valid
	<i>ROA</i>	0,92	11,01	Valid
	<i>ROE</i>	0,91	10,95	Valid
	<i>NPM</i>	0,50	5,08	Valid
Investors' Expectations (IE)	<i>PT</i>	0,95	12,71	Valid
	<i>AR</i>	1,00	14,00	Valid
Investment Risk (IR)	<i>SD</i>	0,87	10,66	Valid
	<i>BETA</i>	0,52	4,90	Valid

Sources : Analysis result

5.4.2 Examination of Indicators Reliability

Examination of the reliability of the indicators is done by calculating the value of Construct Reliability (CR) and Average Variance Extracted (AVE). According to Bagozzi and Yi (1988) CR values > 0.60 and AVE > 0.50 is acceptable (reliable). Tabel 13-15 below show the results of the analysis of CR and AVE of each latent variable.

Table 13. *CR* and *AVE* of CP

Indicator	<i>SLF</i>	Error	ΣSLF	$(\Sigma SLF)^2$	$\Sigma error$	<i>CR</i>	SLF^2	ΣSLF^2	$\Sigma error$	<i>AVE</i>
<i>ROA</i>	0,89	0,21	2,350	5,523	1,036	0,842	0,792	1,964	1,036	0,655
<i>ROE</i>	0,96	0,08					0,922			
<i>NPM</i>	0,50	0,75					0,250			

Sources : Analysis result

Table 14. *CR* and *AVE* of IE

Indicator	<i>SLF</i>	Error	ΣSLF	$(\Sigma SLF)^2$	$\Sigma error$	<i>CR</i>	SLF^2	ΣSLF^2	$\Sigma error$	<i>AVE</i>
<i>PT</i>	0,51	0,74	1,380	1,904	0,983	0,660	0,260	1,017	0,983	0,509
<i>AR</i>	0,87	0,24					0,757			

Sources : Analysis result

Table 15. *CR* and *AVE* of IR

Indicator	<i>SLF</i>	error	ΣSLF	$(\Sigma SLF)^2$	$\Sigma error$	<i>CR</i>	SLF^2	ΣSLF^2	$\Sigma error$	<i>AVE</i>
<i>SD</i>	0,87	0,24	1,390	1,932	0,973	0,665	0,757	1,027	0,973	0,514
<i>BETA</i>	0,52	0,73					0,270			

Sources : Analysis result

CR value > 0.60 is acceptable, and the value of AVE $\geq$ 0.50 show an acceptable level of diversity. Having obtained the indicators composition of exogenous variables (CP, IE and IR) are valid and reliable, then the next indicators of mediator variables and endogenous variables included in the overall composition of the indicator as shown in the Table 16 below.

Table 16. Final Composition of All Indicators

VARIABLE	INDICATORS	VARIABLE	INDICATOR
CP (Exogenous Variable I, X_1)	<i>ROA</i>	MP (Mediator Variable I, Y_1)	<i>HP</i>
	<i>ROE</i>		
	<i>NPM</i>		
IE (Exogenous Variable II, X_2)	<i>PT</i>	TV (Mediator Variable II, Y_2)	<i>VT</i>
	<i>AR</i>		
IR (Exogenous Variable III, X_3)	<i>SD</i>	ISPI (Endogenous Variable, Z)	<i>IHSI</i>
	<i>BETA</i>		

Source : Analysis Result

By all indicators then SEM analysis performed (not presented in this article). The results of SEM analysis is to obtain a strucional model as illustrated at Figure 2 below.

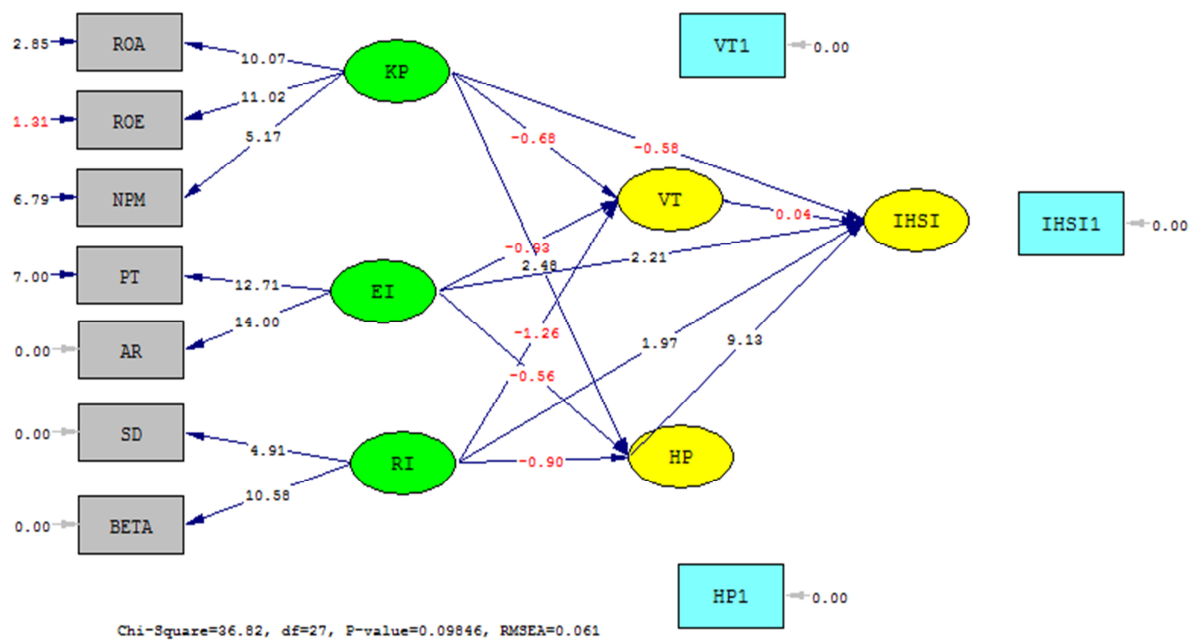


Figure 2. Structural Model

5.4.3 Examination of Model Suitability

This examination is performed to determine the level of model fit (goodness of fit) based on the existing criteria. Examination results in Table 17 below shows that the model obtained with all indicators are "good" (9 criteria stated "good fit" and 4 criteria stated "marginal fit").

6. Conclusion and Discussion

6.1 Conclusions

From the analysis and discussion that has been described in the previous section can be delivered the following conclusion:

1. To measure Companies Performance (CP) of the companies listed in IDX 9 indicators are available, namely EPS, PER, BV, PBV, DER, ROA, ROE, NPM and OPM. Three of the indicators are empirically good enough to use, i.e. ROA, ROE, and NPM.
2. To measure Investors' Expectations (IE) of the price and stock return 7 indicators are available, namely PT, LR, AR, RT, LR%, AR% and RT%. Two of the indicators are empirically good enough to be used, i.e. PT and AR.
3. To measure the Investment Risk (IR) of company stocks there are three indicators, namely SD, KV and Beta stocks. Two of the indicators are empirically good enough to use, i.e. SD of return and Beta coefficient.

Table 17. Goodness of Fit of Structural Model

GoFCriteria	GoF Value	Explanation
Normal Theory Weighted Least Squares Chi-Square = 36,27 ($P = 0,087$)	$P\text{-value } 0,087 > 0,05$	Good Fit
Root Mean Square Error of Approximation (RMSEA) = 0,063	$0,063 < 0,08$	Good Fit
Expected Cross-Validation Index (ECVI) = 0,96	$ECVI \approx 0,96$	Good Fit
ECVI for Saturated Model = 1,12	ECVI for Saturated Model $\approx 1,12$	
ECVI for Independence Model = 3,62	ECVI for Independence Model $\approx 3,62$	
Independence AIC = 354,93	Independence AIC $\approx 354,93$	Good Fit
Model AIC = 94,27	Model AIC $\approx 94,27$	
Saturated AIC = 109,00	Saturated AIC $\approx 109,00$	
Independence CAIC = 390,89	Independence CAIC $\approx 390,89$	Good Fit
Model CAIC = 198,53	Model CAIC $\approx 198,53$	
Saturated CAIC = 307,73	Saturated CAIC $\approx 307,73$	
Normed Fit Index (NFI) = 0,88	$0,80 - 0,90$	Marginal Fit
Non-Normed Fit Index (NNFI) = 0,92	$\geq 0,90$	Good Fit
Comparative Fit Index (CFI) = 0,95	$\geq 0,90$	Good Fit
Incremental Fit Index (IFI) = 0,96	$\geq 0,90$	Good Fit
Relative Fit Index (RFI) = 0,79	$< 0,80$	Marginal Fit
Standardized RMR = 0,053	$0,05 - 0,10$	Marginal Fit
Goodness of Fit Index (GFI) = 0,93	$\geq 0,90$	Good Fit
Adjusted Goodness of Fit Index (AGFI) = 0,85	$0,80 - 0,90$	Marginal Fit

Source : Analysis Result

6.2 Seggestions for Academic Interests

For those who are interested in doing research on stocks, the results of this study would be further developed, for example in the following way:

- Adding variables, indicators or stock sample.
- Use research design and different analysis methods.
- Comparing indicators among industries.

6.3 Suggestions for Stock Market Participants

For investors, managers, consultants and share analysts in the analysis need to take attention on the indicators of company performance, investors' expectations of the stock price and return as well as the investment risk indicators, namely ROA, ROE, NPM, PT, AR, SD and Beta of stock.

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