

# Model Stock Price Valuation Approach Based Company Intrinsic Value In the National Logistics System Development (Sislognas )

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## Abstract

Valuation is the process of determining what a reasonable price for a stock value approach used is one of determining the intrinsic value of securities, the value of the securities should be based on facts. The output of this research is Products in the form of design models stock price valuation approach based on intrinsic value. Explanatory research which explains the causal relationship and correlation between variables through hypothesis testing. Explanatory research aims to clarify the relationship between the variables through hypothesis testing based on field data. Sampling with the specified criteria, namely: the company has a market capitalization

**Key word:** Stock Price, Intrinsic Value

## 1. INTRODUCTION

Stock prices in a country strongly influenced by macroeconomic conditions of the country. Indonesia, for example, are still experiencing instability indicator of the economy due to the prolonged economic crisis shows the composite stock price index (CSPI), which is also unstable. Recorded at the beginning of the financial crisis stock index fell to the lowest value which is about 200 dimana before the financial crisis at the highest rate ever recorded around 800. These relationships have been interesting to be empirically proven.

Jones (1997) explains that, investors are discounting the future earnings, as well as in the analysis of valuation, the stock is the value

terbersar, a company listed on the LQ-45 August 2013 - January 2014, the company paid dividends in 2013 and the company does not undertake stock split The documentation can be done by collecting data by retrieving data from the record, and the corresponding report to the problems examined, which is where the work was related to the object that the stock price valuation. The stage of collecting data in the field by Moleong (2000: 85-103), can be divided into three, namely; pre-court stage, the stage of field work and data analysis stage.

of all future cash flows discounted at the current value. When there is new information signal appears buyers and sellers will absorb quickly the information through the activities of sales / purchases so that quickly happened ekulibirium new price. The above statement is shown

In the picture above indicates that the increased movement of almost all sectors, especially the property sector and real estate, consumer goods industry, infrastructure, basic chemical industry and finance. These five sectors increased movement after the announcement of the government's information policy of the National Logistics System Development (Sislognas).

This research on the valuation of stock prices in companies associated with

government policy on the Development of the National Logistics System (Sislognas). Presidential Decree No. 26/2012 on the Blueprint of Development of the National Logistics System (Sislognas) a reference in the improvement and development of logistics systems. Facts implementation until now faces many obstacles. On the other hand, the very important role of the logistics sector in supporting economic growth, improving people's welfare, and increasing the competitiveness of Indonesian products. Increasing competitiveness is increasingly important for Indonesia in entering the ASEAN Economic Community (AEC) in 2015.

## II. LITERATUR

### 2.1 Capital Aset Pricing Model (CAPM)

The CAPM allows investors to quantify the expected return on investment given the investment risk, risk-free rate of return, expected market return and beta of an asset or portfolio. The risk-free rate of return that is used is typically the federal funds rate or the 10-year government bond yield.

### 2.2 Arbitrage Pricing Asset (APT)

The APT serves as an alternative to the CAPM, and it uses fewer assumptions and may be harder to implement than the CAPM. Ross developed the APT on a basis that the prices of securities are driven by multiple factors, which could be grouped into macroeconomic or company-specific factors. Unlike the CAPM, the APT does not indicate the identity or even the number of risk factors. Instead, for any multifactor model assumed to generate returns, which follows a return-generating process, the theory gives the associated expression for the asset's expected return. While the CAPM formula requires the input of the expected market return, the APT formula uses an asset's expected rate of return and the risk premium of multiple macroeconomic factors.

### 2.3 Signaling

Signalling theory is a body of theoretical work examining communication

between individuals, both within species and across species. The central question is when organisms with conflicting interests, such as in sexual selection, should be expected to provide honest signals (no presumption being made of conscious intention) rather than cheating. Mathematical models in which organisms advertise their condition to other individuals as part of an evolutionarily stable strategy are important for research in this field.

Signals are given in contexts such as mate selection by females, which subjects the males' signals to selective pressure. Signals thus evolve because they modify the behaviour of the receiver to benefit the signaller. Signals may be honest, conveying information which usefully increases the fitness of the receiver, or dishonest. An individual can cheat by giving a dishonest signal, which might briefly benefit that signaller, at the risk of undermining the signalling system for the whole population.

### 2.4 Stock Prices

Stocks allow you to own a portion of a public corporation. Initially, they are sold by the original owners of a company to gain additional funds to help the company grow. This is called the Initial Public Offering. The owners sell control of the company to the stockholders. After the IPO, the shares are resold on the stock market.

Stock prices are driven by expectations of corporate earnings, or profits. If traders think the company's earnings are high, or will rise further, they bid up the price of the stock. One way that stockholders make a return on their investment is when they buy a stock low, and sell it high. Conversely, if the company does poorly, then the shares decrease in value, and the stockholders lose part or sometimes even all of their investment when they sell.

A second way that stockholders profit is if the company pays a dividend. These are usually quarterly payments distributed to stockholders on a per share basis. The company's board of directors pays dividends out of earnings. It is a way to reward stockholders, who are the actual owners of the company, for their investment. It's especially

important for companies that are profitable,

but may not be growing quickly.

### III. Research Method

#### 3.1 Method

Cooper & Schinder (2005) menyatakan that explanatory research is research that explains the causal relationship and correlation between variables through hypothesis testing. The method digunakan in this study with explanatory research is in penbertujuan to explain the relationship between the variables through hypothesis testing based on field data, namely: the turnover rate and the level of risk on the performance of mutual fund shares. To compile financial information system used Control Information System. The main stages of the life cycle financial information system will be developed consisting of 6 (six) phases as follows: 1). Planning Systems , 2). Analysis System, 3). System Design, 5). System Design, 6). Implementation and Maintenance System.

#### 3.2 Analisis Method

Sample method used by the researchers is purposive sampling. Purposive sampling. Sampling with the specified criteria, namely: the company has a market capitalization terbesar, a company listed on the LQ-45

August 2013 - January 2014, the company paid dividends in 2013 and the company did not conduct a stock split.

The analytical approach used in calculating the fair price of the stock is Relative Dividend Approach and Approach as follows:

he second analysis methods in the search for a reasonable price or value stocks relative intrinsiksaham approach is the approach, which is derived as follows

$$1. BV = \frac{\text{Total Modal} * (\text{Aset} - \text{Hutang})}{\text{Jumlah Saham Beredar}} \times 1 Rp$$

Book value used to assess the price of a stock from the point of accounting

$$2. PBV = \frac{BV}{\text{Harga Saham}}$$

Price Book Value used to determine whether the current stock price is cheap or expensive. The lower the PBV means the stock could be considered a bargain

$$NI = \frac{\text{rata-rata PBV industri}}{\text{PBV perusahaan}} * \text{Harga Saham NI}$$

Value (intrinsic value) which is then compared with stock market prices

flow provided to investors, discounted at a rate of return which is determined in accordance with the amount of risk attached to them. In estimating the fair price of the company stock twelfth researchers used two approaches:

1). *Dividend Discounted Model* (DDM)

The data needed to measure the Intrinsic Value (NI) using DDM approach is as follows

### IV. RESEARCH RESULT

#### 4.1 Analysis Results

##### A. Calculating Stock Prices Fair

Ratings (valuation) is the process of determining the process of determining what a reasonable price for a stock value approach used is one of determining the intrinsic value of securities, the value of the securities should be based on facts. This value is the present value of cash

Tabel 4.1 Data Calculation of Fair Shares using DDM approach twelfth company.

Ket.	EPS	Deviden	ROE	PERH	NI (Rp.)
AALI	1,143.93	160	18.53%		1,821

INCO	47.73	23	2.25%	100
SMGR	905.37	407	24.56%	3,620
KLBF	37.8	19	23.18%	153
BSDE	153.82	15	21.66%	313
WIKA	92.82	27.82	19.35%	230
PGAS	435.56	210	32.78%	2,697
JSMR	196.52	79	11.39%	603
TLKM	140.92	436	26.21%	547
BBCA	578.13	45	22.29%	1,095
MNCN	119.95	25	23.37%	419
UNTR	1,295.85	175	13.46%	1,340

#### 4.2 Analys model

##### A. Assessing the price or the fair value of stock

##### 1. Dividend Discounted Model (DDM)

The data needed to measure the Intrinsic Value (NI) using DDM approach is as

follows: Annual EPS first quarter of 2014, dividends of 2012, ROE in 2013, inflation in December 2013, the BI rate in December 2013 and 2013. The country risk data have obtained is then calculated to obtain the intrinsic value of each and are listed in table 1 below:

Tabel 4.2. Data Price, Stocks or intrinsic value

Ket.	NI (Rp.)	Closing Price (Rp.)	Keputusan
AALI	1,821	26.000	<i>overvalued</i>
INCO	100	2.820	<i>overvalued</i>
SMGR	3,619	15.800	<i>overvalued</i>
KBLF	157	1.465	<i>overvalued</i>
BSDE	313	1.635	<i>overvalued</i>
WIKA	230	2.390	<i>overvalued</i>
PGAS	2,702	5.125	<i>overvalued</i>
JSMR	603	6.000	<i>overvalued</i>
TLKM	548	2.215	<i>overvalued</i>
BBCA	1,096	10.600	<i>overvalued</i>
MNCN	419	2.630	<i>overvalued</i>
UNTR	597	20.750	<i>overvalued</i>

Table 4.2 above state comparison of the results of calculations of intrinsic value on which to base decisions with the price of shares in the market in the capture based on the last closing price in December 2013. Seen that market prices are far above the fair price. Twelfth overvalued stock company stated that this stock is said to be expensive and investors are advised not to buy shares of these companies.

##### 1. Relative Valuation Techniques

Assess the stock price or the fair value of the twelve companies will use the method of Price to Book Value. To compare PBV a stock, you should use the PBV stocks of similar companies in the same industry. Data taken from the PBV in the 1st quarter 2014 report.

PBV similar companies listed on the same sub-sector then averaged and then divided by PBV company. Comparison PBV maing individual companies sought to determine the intrinsic value of the twelve shares of the

company by way of comparison result was multiplied by the closing price of Quarter1 2014. The calculation was then didapatkanlah intrinsic value of twelve shares of the company are listed in Table 2 as follows:

Tabel 4.3. Data Price, stocks or intrinsic value.

Keterangan	NI (Rp.)	Closing Price (Rp.)	Keputusan
AALI	14.313	26.000	<i>overvalued</i>
INCO	3.247	2.820	<i>undervalued</i>
SMGR	14.894	15.800	<i>overvalued</i>
KBLF	756	1.465	<i>overvalued</i>
BSDE	1.592	1.635	<i>overvalued</i>
WIKA	1.761	2.390	<i>overvalued</i>
PGAS	3.440	5.125	<i>overvalued</i>
JSMR	5.576	6.000	<i>undervalued</i>
TLKM	1.587	2.215	<i>overvalued</i>
BBCA	4.871	10.600	<i>overvalued</i>
MNCN	1.182	2.630	<i>overvalued</i>
UNTR	18.423	20.750	<i>overvalued</i>

Based on the results of the calculation of the fair price of shares or the intrinsic value of the stock twelfth approach Relative Approach, in which the market price of the stock tenth greater than its intrinsic value. From the comparison between the results of the fair share price calculated using the Relative Approach approach then obtained a conclusion that is the eleventh such shares declared overvalued. Shares of PT. Jasa Marga Tbk and PT. Vale Indonesia Tbk different with ten other stock that the company's stock in undervalued.

Stock price valuation is done so that investors can consider between return and risk that accompany divulging investas. This is corroborated by the statement Arifin (2005) that the buyer and seller of shares will basically consider the return and risk in assessing a stock. Then Parahita (2008) says that assessment (valuation) is the process of determining what a reasonable price for a stock. Value approach used is one of determining the intrinsic value of securities, the value of the securities based on the facts.

The values of the securities based on the facts referred to are the values that represent the company's performance as Earning per Share (EPS), Return on Equity (ROE), Book Value (BV) and Beta coefficient. The fourth value is considered important to be known by an investor in the stock price valuation. Because according to the Wira (2011) EPS is used to measure the profitability of a company, where the greater EPS, the company is said to be healthy. ROE reflects how large companies use their own capital in the operations, where the greater value of ROE stated that the performance is good for most uses its own capital. BV reflects the value of money to be received by investors, in addition to the net assets (Net Assets) owned by shareholders by owning one share, the greater the BV, the greater the assets owned by investors from its ownership of the shares.

Beta coefficient is used to measure the extent to which the company is engaged when the economy is up or down. From the measurement of beta coefficient was found that Astra Agro Lestari (AALI), Vale Indonesia (INCO), Kalbe Farma (KLBF),

Bumi Serpong Damai (BSDE) and Jasa Marga (JSMR) has a Beta ( $\beta$ ) > 1 classified in keompok Cyclical Industry where the group is moving in the direction of the economy, in other words when the economy fell this group can drop drastically. While the Indonesian Cement (SMGR), Wijaya Karya (WIKA), Perusahaan Gas Negara (PGN), Telekomunikasi Indonesia (TLKM), Bank Cetrul Asia (BBCA), Media Nusantara Citra (MNCN) and United Tractor (UNTR) has Beta  $0 < \beta < 1$ , so that these companies are grouped into groups of Defensive Industry wherein when the company's stock market plummeted going down but the decline tend to be small.

Basically, there are two benefits for investors to buy or hold shares, ie dividends and capital gains. Capital gains can be measured by an investor from the sale and purchase of shares. The data used to measure the capital gain from the share purchase is obtained from the level of country risk [www.pages.stern.nyu.edu](http://www.pages.stern.nyu.edu) sites that may be invoked for investors to make decisions, for example: in table 4.2 Indonesia says that the country risk amounted 8:37 %, so it is worth investing the smallest return 8.37%. Then the market price is also used as a benchmark in the stock price valuation, where price is what truly represents the price of his publishing company, since the transactions in the secondary market, so small investors price negotiations occurred with the publishing company. The market price is announced every weekday published either in newspapers or other media.

The approach in the assessment of the share price used by analysts is quite a lot. Stock price valuation results in a value called the Intrinsic Value (NI). NI is the reference price for investors in making purchasing decisions or selling a particular stock. Then NI compared with the market value so as to produce a decision.

**B.** The approach to the comparison of NI and the closing price

This study used two approaches to the comparison of NI and the closing price taken from Quarter3 report (September 2013) as follows:

#### 1.) Dividend Discounted Model (DDM)

As already described in Chapter II that the Discounted Dividend Model (DDM) included in the calculation using the Discounted Cash-Flow Techniques are techniques of assessing Cash Flow received the future becomes the present value of the interest rate expected by investors. Data required by the calculation of earnings per share is the first quarter of 2014, the 2012 dividend distributed in 2013, net income, and the total capital raised on the financial statements of the year 2013 the company respectively. Data needed selanjunya is inflation data, risk free data and country risk in 2013.

Results of the assessment reasonably priced stock or Intrinsic Value (NI) using DDM approach is AALI, INCO, SMGR, KLBF, BSDE, WIKA, PGN, JSMR, TLKM, BBCA, MNCN and UNTR respectively Rp. 1,821; Rp. 100; Rp. 3,619; Rp. 157; Rp. 313; Rp. 230; Rp. 2. 702; Rp. 603; Rp. 548; Rp. 1,096; Rp. 419 and Rp. 597. Then NI of each company was compared to the closing price of each stock. From the comparison of the twelve studied stocks, these stocks have a condition overvalued. This condition can be concluded that the first investors to invest.

#### 2). *Price Book Value (PBV)*

Rate reasonably priced stock using techniques PBV included into the Relative Valuation Techniques approach. Where according Zainul (2008) Relative Valuation Techniques is an approach that is frequently used by securities practitioners. Relative Valuation Technique or PBV more frequently used both by investors and securities practitioners because of the way the assessment is easy to understand. Ratings by PBV require only average PBV of similar companies listed in the sub-sector, Book Value (BV) company and the closing price of each company listed in Quarter3 report issued by the Indonesia Stock Exchange (BEI).

PBV each company obtained from the comparison between the value of the market price of the BV with its closing price respectively. From the comparison between companies with PBV average of similar companies closing price multiplied by its respective didapatlah Intrinsic Value (NI) for each company. NI is then compared again with the closing price of shares of each company.

Results of the assessment reasonably priced stock or Intrinsic Value (NI) using PBV approach is AALI Rp. 14 313; SMGR Rp. 14 894; KBLF Rp. 756; BSDE Rp. 1,592; WIKA Rp. 1,761; PGAS Rp. 3.440; TLKM Rp. 1587; BBCA Rp. 4,871; MNCN Rp. UNTR 1,182 and Rp. 18 423. Then NI of each company was compared to the closing price of each stock.

From the comparison of the twelve stocks studied, that of the eleven are experiencing conditions of overvalued shares. This condition can be concluded that the shares of these companies can be said to be "expensive". Meanwhile, shares of JSMR and INCO experience or it can be said undervalued stocks of JSMR "cheap".

For stocks that have the condition overvalued or "expensive" is best for potential investors who want to invest in the shares of these companies not to buy shares of these companies. Yet another case with the investors who already own shares of these companies. Rate this stock can be done to measure the level of normal share price and can sell the shares of these companies when the stock price is above the NI or the fair price. So from the sale of shares investors can make a profit is the main goal of an investor to invest.

But otherwise the investor can buy shares JSMR because the price is "cheap". And may sell the company's stock when the market price of this stock is above its fair price.

## V. CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Conclusions

- 1) The calculation is performed by using the approach of the Discounted Dividend Model (DDM) reasonable price of each

share is AALI Rp. 1,821; INCO Rp. 100; SMGR Rp. 3,620; ASII Rp. 991; KLBF Rp. 153; BSDE Rp. 313; WIKA Rp. 230; PGAS Rp. 2697; JSMR Rp. 603; TLKM Rp. 547; BBCA Rp. 1,095; MNCN Rp. 419; UNTR Rp. 1,340.

- 2) The calculation of intrinsic value using the approach Price Book Value (PBV) for each share is AALI Rp. 9.100; INCO Rp. 100; SMGR Rp. 11 653; ASII Rp. 4,175; KLBF Rp. ; BSDE Rp. 1,249; WIKA Rp. 1,520; PGAS Rp. 3,402; JSMR Rp. 5,817; TLKM Rp. 1,326; BBCA Rp. 4,134; MNCN Rp. 1,074; UNTR Rp. 718.
- 3) Intrinsic Value (NI) obtained from the calculation using DDM approach over the top compared with the closing price of the company's shares respectively at Quarter3 2013. From the results of the comparison showed that the company witnessed a twelfth shares overvalued condition. Companies whose shares are in the overvalued condition can be expressed costly. Therefore, investors should not buy shares until the twelfth of this company stock price of twelve company under or close to the fair price (NI). Instead investors who already have twelfth shares of this company and will sell shares of twelve shares of the company can be dilakukan when the company's stock is experiencing conditions overvalued so investors get capital gains or benefits expected.
- 4) Intrinsic Value (NI) obtained from the calculation uses a PBV at the top compared to the closing price of the company's shares respectively at Quarter3 2013. From the results of the comparison showed that the eleven shares of the company have the condition overvalued, while shares JSMR experienced undervalued.

## 5.2 Recommendations

1) Companies whose shares are in the overvalued condition can be declared "expensive". Therefore, investors should not buy shares until the twelfth of this company stock price of twelve company under or close to the fair price (NI). Instead investors who already have twelfth shares of this company and will sell shares of twelve shares of the company can be

dilakukan when the company's stock is experiencing conditions overvalued so investors get capital gains or benefits expected.

2) It is suggested to investors who want to perform transactions in the capital markets should they have to carry out an assessment of the fair price of the stock prior to being a cornerstone in making decisions. This is done so those who want to invest to get capital gains or profits from buying and selling process.

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