

Firm nominal value and the role of some accounting information: an investigation of Indonesian listed firms

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Abstract: This study introduces the firm's nominal value rather than using market value only in the stock market, which should be considered by investors and firm management when they make decisions. This research work examines the accounting information's effect, which comprises the earnings, sales, book value per share, and operating profit of firm's nominal value of the stock. This study uses regression analysis with 184 non-financial Indonesian listed sample firms from thirteen industries for the period 2007–2016. The result is that the firm's accounting information, namely the earnings, sales, book value per share and operating profit has a significant influence on the firm's nominal worth. In order to make a better decision in stock markets, it is suggested that investors and firm management should use the firm's nominal value and certain accounting parameter, which include the earnings worth per share, book value, sales and operating profit to predict the stock market price.

Keywords: firm nominal value; earnings per share; book value; sales; operating profit.

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1 Introduction

The price of a particular asset can be divided into the nominal price, book price and market price. The nominal price or par value is the initial price of an asset when the asset is held, the book price is the asset value according to accounting at a certain time, while the market price is the asset price formed by the equilibrium of the demand and offer

(supply) on the asset at certain time (Ibbotson et al., 1984). In bonds, for example, the nominal price or par value of a bond is very important because this is the value that will be paid to the bondholders at the maturity of the bond (Focardi and Fabozzi, 2004). But in stocks, this nominal price has often been forgotten by shareholders because investors and firm management focus primarily on the market price in their decision making (Focardi and Fabozzi, 2004). Investors and firm management cannot know whether a stock is already too expensive in terms of its par value in the event that the stock has experienced many stock splits so that the stock market price has increased multiple-fold since the shares were first issued.

During the last two decades, the worth value related to accounting information has progressed as one of the hottest research focuses in empirical studies, in developing as well as developed countries (King and Langli, 1998; Ali and Hwang, 2000; Arce and Mora, 2002). Black and White (2003), Gjerde et al. (2010), Glezakos et al. (2012), Tsalavoutas et al. (2012) and Ahmadi and Bouri (2018) illustrate that an accounting information is assumed as the most important factor in measuring firms' net-worth and it substantially affect a firm's stock price. Those research outcomes demonstrate that accounting information from bookkeeping is a value-relevant. Information provided by financial accounting can be considered as value-relevant if accounting is interrelated with the firm's market value, which suggests an essential aims of the financial reporting system are to be achieved. On other hand, if the disclosed accounting information and the firm's market value are not correlated, this means that value-relevance and the accounting information are not associated. The information from accounting can be treated as relevant information when such information on existing conditions based on accounting data is visible, understandable, and accessible for use by all market participants in their decisions (Paglietti, 2009; Robinson et al., 2017; Antonakakisa et al., 2017; Anagnostopoulou and Tsekrekos, 2017; Ahmadi et al., 2018).

Several previous research works concerning value-relevance accounting have been directed in recent years to compare the different capital markets in many countries. More precisely, these studies consider that there are certain deviations within accounting information and value-relevance revealed by firms. For example, research works by Arce and Mora (2002), Black and White (2003), Pervana and Bartulović (2014), Joliet and Muller (2016), Wang (2017), Houcine (2017) and Wang (2018) argued that differences in the value-relevance accounting can be qualified to dissimilar institutional as well as legal contexts. Several other recent studies seek to explain the criteria that influence the market value of Indonesian Stock Exchange firms (Mulyani, 2010; Naimah, 2012; Utama and Utama, 2014; Hayati and Putra, 2015).

This study investigates the firm accounting and business information reflected in firms' financial statements from accounting measures to examine whether a firm's nominal value is the market value relative to the nominal value of the stock. This issue is important to enable investors and firm management to know whether stock prices are at a relatively high price in term of their firm's nominal value. Understanding this is also relevant to them when making decisions concerning stock prices in the Indonesian Stock Exchange and other stock markets. Most of the firm stocks in Bursa Efek Jakarta (the Indonesian Stock Exchange) have experienced stock splits on several occasions, so that the current nominal (par) value of certain stocks are 5 Indonesian Rupiah (2019 average, US\$1.00 = Rp14,000) compared to 500 Indonesian Rupiah when the firm first went public.

Other firms have implemented a reverse-stock split after they made stock splits on several occasions. For several firms whose stocks are to be split several times until reaching a minimum nominal value according to the Bursa Efek Indonesia regulations, the stock's market price continues to increase to a certain price even more than before the stock was split. Studying this phenomenon is interesting to inform stock market practitioners in the Bursa Efek Indonesia and advise of the importance of using the stock's nominal (par) value as a denominator of the firm's nominal value variable and what variables will affect this. This research work also provide to the finance and accounting literature with accounting information on the important parameters that distress a firm's nominal value so as to predict the firm's net-worth.

The importance of the topic is related to open issues related to the market values and financial criteria of corporate governance practices of firms in Indonesia, which is one of the world's leading emerging economies. Sub-optimal practices could have adverse consequences on the firm sector and the financial criteria of Indonesian listed firms. Investors in the Indonesian listed market could get by the study several arguments of attention to support their investment and financial decisions.

Investors need to forecast the stock market rate when they make the decision to buy, hold, or trade certain stocks to a stock market. The firm's management also needs to measure the management performance to optimise the firm's value. The study usages an econometric model of the firm's nominal value and incomes per share, sales book value, and operating profit to investigate the relationships among these variables.

2 Literature review and hypothesis

Since 1968 several research works including a widespread study by Ball and Brown, have been conducted accounting information using the concern of value-relevance material, and more specifically researches haven been done on shares, net-stock, book value, revenues, incomes and cash flows. Indeed, a good number of research works demonstrate a significant statistical or econometric role to recognise the information content in firms' stock value estimation (Feltham and Ohlson, 1995; Ohlson, 1995; Easton, 1999). More recent studies show that, compared to cash flows, the earnings and book value to accrual basic accounting have more value-relevance than cash for basic accounting in forecasting payments and current cash receipts. Francis and Schipper (1999), Healy and Palepu (2001), Wang et al. (2006), Lamp (2008), Oswald (2008), Moumen et al. (2017), Maigoshi et al. (2017) and Baboukardos and Rimmel (2016) show that the book-value has increased in terms of value-relevance compared with firm earnings over the sample period of the study.

Gupta and Jayadev (2016) lead a research concerning the value-relevance based on quarterly accounting information on return and risk with banking section by a total of 39 samples in 2008–2015. This study indicated that the prices of the equity negatively impacts in Banks followed by NPAs, but positively impacts the accounting returns with net worth. Furthermore, this study shows that both public and private sector banks works differently in the stock exchange reaction to the disclosed accounting information. In spite of the better returns accounting published by private banks; the market allocates additional essential evidence related to risk-related information which causes a low equity price. Marquardt and Wiedman (2004) and Habib (2004) show the evidences that impacts of earnings management based on value-relevance to avoid loss in accounting

discuss how reduced earnings management may lead a worsening condition of accounting of a firm's incomes.

Hadi (2004) examines the accounting information of Banks based on value-relevance aspect for firms' financial reporting in the Stock Exchange in Kuwait. He employs regression analysis with six financial ratios of financial reporting in his research to resolve the hypothesis of his study. The result shows that the accounting information is very useful for decision making by investors in Kuwaiti banks, and that most of the ratios are substantial excluding the ratio of losses. Additionally, Trabelsi and Trabelsi (2014) investigate the accounting information based on value-relevance for financial market in Dubai and demonstrate the firms' market value effects. Vijitha and Imalathasan (2014) investigate the accounting information based on value-relevance for financial market in Colombo Stock Exchange and show that net asset and worth, earnings per share, revenue, and equity returns have significant effects. The results are similar those are found by the studies such as by Wang et al. (2006), Inchausti et al. (2007), Oswald and Zarowin (2007), Oswald (2008), Chiesa and Frattini (2009), Cormier et al. (2009), Devalle and Magarini (2012) and Ciftci and Darrough (2015).

Glezakos et al. (2012) study the correlation between book values and earnings per share on the share prices in the Stock Exchange firms of Athens. Their result shows that the descriptive power of return for shares and market value ratio in share prices improved over time. Moreover, their result provides that in the last few years the earnings have contributed a gradually diminishing role in the stock price in relation to market value ratio. According O'Hanlon and Pope (1999), Dhaliwal et al. (1999), Kallapur and Kwan (2004), Cormier et al. (2009), Agostino et al. (2010), Jones and Smith (2011), Inchausti and Pérez (2011), Devalle and Magarini (2012), Black (2016), Vo (2017), Sikalidis and Leventis (2017), Robinson et al. (2017) and Flower and Ebbers (2018) the market value ratio has a positive outcome to stock-price assessment.

Regarding the accounting theories, Dechow (1994) examines the market response to the accounting variables. This study provides theorists with guidelines to predict a business event by evaluating the information content of the accounting values and choosing a better criterion. Therefore, the study of accounting behaviour shows that the accounting values can be used as a criterion to evaluate the usefulness and the quality of the accounting information. This result can explain why shares are acceptable for individuals. This is because any shareholder receives a share equal to his own share sheet from the firm and expects the price rate to increase for their own shares as the firm's equities value increases (Khodadadi et al., 2014). Therefore, those shareholders with an increasing nominal shares' return receive benefits that are more than the return which they get from the inflation rate, but the shareholders of shares with a growth of the nominal shares' return lower than the inflation rate will suffer (Khodadadi et al., 2014).

A recent study conducted by Deitiana and Habibuw (2015) argued that interested parties – which are a wide range of stakeholders, such as shareholders, bondholders, bankers, lenders, suppliers, employees and stakeholders who need to control the business for their interests – can be served by providing the firm's financial information. The interested parties can use the financial ratios derived from the firm's financial reporting to analyse their business interests as the basis for predicting their business prospects in future periods (Gitman, 2012). Accordingly, to monitor the business condition of the firm, the financial ratios could be used as a basis for comparison over time and to establish the relationships among other relevant variables.

H1 A firm's earnings per share affect positively the firm's nominal value.

H2 A firm's book value affects positively the firm's nominal value.

H3 A firm's sales affect positively the firm's nominal value.

H4 A firm's operating profit affects positively the firm's nominal value.

Figure 1 Expected relationship between earnings per-share, book-value, sales, operating profit and nominal value (see online version for colours)

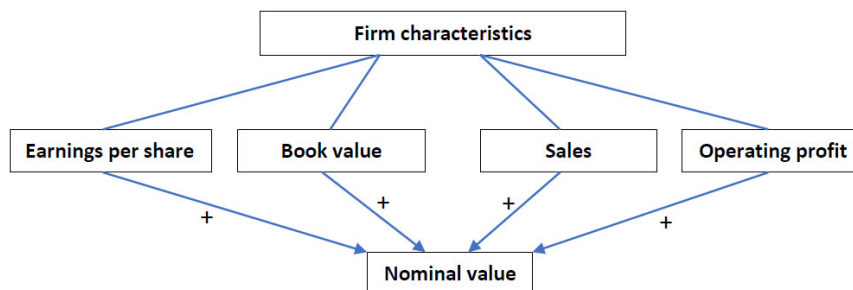


Figure 1 shows the accounting information, i.e., earnings per share, book value, sales, operating profit related financial declarations, and the firm's value. This study uses the firm's nominal net-worth, which is known as stock market price relative to its nominal (par) value, rather than the stock market value (stock price). The use of the nominal (par) value is to provide investors and firm management with an understanding that the use of stock market prices can be misleading because of the occurrence of stock splits and reverse stock splits of a particular stock during earlier periods. The result of the study will provide investors and firm management with an understanding that predicting the stock market price will be more accurate when they use the firm's nominal value and relevant accounting variables.

3 Research design

3.1 Selection of sample

This research work usages of 218 sample firms listed in the Indonesian stock market. Like prior studies, this study excludes firms like financial and insurance institutions due to their nature of specific business and regulations by the government. After excluding financial and insurance firms, this study selects a final sample of 184 firms whose stocks are listed in the Bursa Efek Indonesia (Indonesian Stock Exchange) for the period 2007–2016. This stock market is considered as one the utmost significant developing capital markets around the world. In order to examine the correlation between the earnings per share, sales, book value, operating profit and the firm's nominal value, this study basically uses a generalised model of equity valuation. Firm data are collected from

firm's official websites and finishing sample contains 1,840 observations (10 per firm per year) with the variables data of the firms' nominal value, book value, earnings per share, sales and operating profit.

3.2 Research method

According to Zhu and Niu (2016) a firm's financial reporting can be anticipated as appropriate if it verifies an association with the firm's stock value. Several previous research works showed to examine the association between the net-worth, variations and earnings, and value of stock returns. This study uses regression analyses to quantify the significance of accounting information considering nominal value. Here, a high coefficient number reveals a high relevance to the nominal value for the unveiled accounting information, while a low coefficient number reveals a low relevance to the nominal value for the unveiled accounting information.

This study considers nominal value as the main dependent variable, which is determined by using the stock price divided by the current stock nominal value, which is described in the firm's notes to the financial statement. The current stock nominal value is the stock nominal (par) value after firm stock splits by the initial public offering until the current year. The stock price is the average of the closing price of the stock at the end of January, February, and March in the following year. This is to guarantee information of accounting subject-matter engaged by shareholders to speculate the decision (Tsalavoutas et al., 2012). The information of stock prices are gathered from Yahoo Finance data.

Ohlson (1995) tried to estimate the value-relevance accounting information for book value and earnings per share. This model states the market price per share (P) market price as a function of book value per share (BV), earnings per share (EPS), sales (SL) and operating profit (OP). Referring to the model by Ohlson, this study uses as dependent variables these same EPS, BV, SL and OP, and investigates the relationship between these four variables of accounting information and the firm's nominal value. The results presented above show that there are strong relationships between the four variables and the firm's nominal value, which is the market value relative to the nominal value of the stock. Earnings per share are the net earnings calculates from the firm's stocks with tax deduction. The book value in the firms is estimated per share which is determined by the firm's total equities (with net assets liabilities) allocated by the quantity of stocks issued by firms. Sales are the total firm sales or main revenues during the year. Operating profit is the net total firm sales or total revenues with the total operating expenses or total cost of goods sold.

In this area, this study contributes to the accounting and financial market reviews on earnings per share, net worth, and value-relevance accounting information in explaining the variation of the stock price. This study examines hypothesis for the value-relevance accounting information, book value and earnings per share, and evaluates the firm's market price with the equity assessment:

$$NV_{it} = \alpha_0 + \alpha_1 EPS_{it} + \alpha_2 BV_{it} + \alpha_3 SL_{it} + \alpha_4 OP + e_{it}$$

where

NV_{it}	equal to the average of the stock's closing price at the end of the first three months of the year $t + 1$ divided by the stock's nominal (par) value of year t
EPS_{it}	earnings per share in year t
BV_{it}	book value per share at the end of year t
SL_{it}	calculated using sales or revenue during the year t
OP_{it}	operating profit at the end of year t
e_{it}	error term for firm i in year t .

4 Empirical results

This study uses regression analyses to examine the cause-effect relationship model of the data panel from the 1,840 observations from the selected sample (184 firms listed in Bursa Efek Indonesia during 2007–2016; 10 observations per firm per year), with NV as used as dependent variable and EPS , BV , SL , OP as the independent variables. Table 1 shows the descriptive figures for the study sample for a 10 year period from 2007–2016. Specifically, Table 1 provides indicators for the dependent variable nominal value (NV), and the independent variables which are the earnings per share (EPS), book value (BV), sales (SL) and operating profit (OP). NV is the stock price of the year t which is divided by the nominal price of the same year of stocks. The NV figures are gathered from a three-month statistics within the same fiscal year in order to confirm that aimed the accounting information is obtainable and captured by investors. This is because information about firms' financial reporting is known to the public during the period of January–March of the next year. EPS is earnings per share by investors, which is considered as the latest rate (annual), and it also reflects previous financial year's reporting or it can be obtained from an accumulation of the period of earnings from quarterly financial reporting. The book value per share (BV) is the equity per share and it signifies the proportional mutual equity divided by the firm's due (outstanding) fiscal year end shares. Sales are the total sales or revenue during the year, and OP is the operating profit that is earnings at the end of the same financial year's reporting.

The descriptive statistics for independent and dependent variables are shown in panel A of Table 2. Table 2 shows that the mean of level of the nominal value in our sample companies is 31.68403, with a high dispersion between the range of 0.1 and 4,120. The earnings per share's mean value varied between a minimum of $-2,970$ and a maximum of 222.304 with a mean of 435.6415, which reflects the high level of per share's earnings. The mean book value is 1,602.465, the mean yearly sales are 161.574, and the mean operating profit is 124.742.

Table 2 (panel B) shows the correlation matrix of the independent and dependent variables which indicates that the nominal value is positively associated with all independent variables used in our study (EPS , BV , SL , and OP). Therefore, it is obvious that nominal value of a firm is positively related to earnings per share, net-worth, revenue, book value, operating profit and sales. It means that the higher the EPS , BV , SL , and OP of the firm, the higher is the nominal value.

Table 1 Summary statistics

<i>Panel A – descriptive statistics</i>					
<i>Variables</i>	<i>Observation</i>	<i>Mean</i>	<i>Std. dev.</i>	<i>Min</i>	<i>Max</i>
NV	1,840	31.68403	200.8556	0.1	4,120
EPS	1,840	435.6415	5,379.699	-2,970	222,304
BV	1,840	1,602.465	3,897.874	3,751	47,740
Sales	1,840	161.574	323.3268	213	8,802
OP	1,840	124.742	227.7954	-874	3,082
<i>Panel B – correlation matrix</i>					
	<i>NV</i>	<i>EPS</i>	<i>BV</i>	<i>SALES</i>	<i>OP</i>
NV	1.0000				
EPS	0.6373	1.0000			
BV	0.7913	0.4845	1.0000		
SALES	0.4907	0.1693	0.4023	1.0000	
OP	0.5430	0.2393	0.5986	0.3166	1.0000

Table 2 Estimation results: $P_{it} = \alpha_0 + \alpha_1 EPS_{it} + \alpha_2 BV_{it} + \alpha_3 SL_{it} + \alpha_4 OP_{it} + \epsilon_{it}$

<i>Variables</i>	<i>Predict sign</i>	<i>Coef.</i>	<i>Std. err.</i>	<i>t</i>	<i>P > t</i>
EPS	+	0.0129174	0.0004924	26.24	0.000*
BV	+	0.0244395	0.0085351	2.86	0.091***
Sales	+	0.1280432	0.0378492	3.38	0.072***
OP	+	0.0979272	0.0127598	7.67	0.000*
R ²	0.7572				
Adjusted R ²	0.7567				
F	1,430.90				
Prob. > F	0.0100**				

Notes: NV refers to the nominal value of firms. EPS equal to earnings per share in year. BV is the book-value of equity. Sales equal to the total of sales or revenue during the year. OP is the operating profit at the end of year. Result of OLS regression where *, ** and *** indicate significance at the 0.01, 0.05 and 0.10 levels, respectively.

The technique used in this study is assessed to measure whether the earnings per share and book value should answer the research queries in determining the nominal value in the Indonesian listed stock exchange. This study uses $\alpha = 1\%$ and $\alpha = 5\%$, but for this study the significance threshold is also increased to 0.10 or $\alpha = 10\%$ for the limited sample used in this study.

Table 2 illustrates the outcome of the regression model of the nominal value (NV) as the independent variable and the dependent variables EPS, BV, Sales, and OP. The regression model shows $R^2 = 0.7572$, which means that 75.72% of the dependent variables EPS, BV, sales, and OP can predict the dependent variable NV, and the remaining 24.28% is explained by other variables outside of the study model. This result is also confirmed by the F value = 1,430.90 at the significance level of 0.01, which is <0.05 . This study can confirm and explore the deviation between the independent

variables, and findings are established duly by the statistical value of the Fisher statistic, which supports the importance of the revenue, book value, net-worth, earnings per share, sales and operating profit in estimating Indonesian nominal share price in the stock listed firms.

Referring to the relationship between the nominal value (NV) and earnings per share (EPS), the finding shows that the statistical significance in this study is $p = 0.000$ ($p\text{-value} < 0.01$). This result reflects the importance of including the earnings per share to clarify the importance of nominal value, with a prediction having a positive sign (+). Hypothesis 1 that a firm's earnings affect positively the nominal value is supported.

Referring to the relationship between the nominal value (NV) and book value (BV), the study shows the positive (+) prediction sign and p value at $p = 0.091$, which is statistically significant ($p\text{-value} < 0.1$). These results mirror the position of including the book value in the justification of the stock's nominal value. Hypothesis 2 that the firm's book value affects positively the nominal value is supported.

For the relationship between firm sales (sales) and nominal value (NV), the study shows the positive (+) prediction sign and p value at $p = 0.0000$, which is statistically significant ($p\text{-value} < 0.01$). These results mirror the standing of including firm sales in the description of the stock's nominal value. Hypothesis 3 that the firm's sales affect positively the nominal value is supported.

For the relationship between operating profit (OP) and nominal value (NV), the study shows the positive (+) prediction sign and p value at $p = 0.072$, which is statistically significant ($p\text{-value} < 0.1$). These outcomes reproduce the standing of including the operating profit in the enlightenment of the stock's nominal value. Hypothesis 4 that the firm's operating profit affects positively the nominal value is supported.

A firm's nominal value is the market value relative to the nominal value of the stock, which is assessed by dividing the value of stock market by the stock's nominal value or stock par value. The higher the firm's nominal value of a stock is, the more expensive the stock market price is relative to the stock's nominal value. The lower the firm's nominal value of a stock is, the cheaper the stock market price is relative to its stock's nominal value.

5 Discussion and implications

All of the independent variables used in this study affect positively the firm's nominal value. Incomes from shares have a significant relationship with the firm's nominal value, which means that the more the incomes per share are, the more the firm's nominal value. Book value has a positive relationship to the firm's nominal value, which indicates that the more the book value is, the higher the firm's nominal value. The firm's sales have a positive correlation to the firm's nominal value, which means that the higher firm sales are, the higher the firm's nominal net-worth. A firm's operating profit has a positive correlation with nominal value of a firm, which means that the higher the firm's operating profit is, the higher the firm's nominal value. The current nominal value of the stock may be the stock's nominal price (that is, the stock par value when the firm first goes public), which has been subject earlier to a reverse stock-split or stock-split. To predict the stock market price, investors and firm management should obtain the data of the nominal value of the stock.

The study was motivated by the need of investors and firm management to predict the stock market price when they make a decision about the firm's stock. The result of the study indicates that investors should predict stock market prices by using the firm's nominal value when they make a trading decision in the stock market rather than using the stock market value. From the firm management perspective, this study also provides the understanding that financial related accounting information is a significant element that affects the firm's stock market price. When the firm's incomes per share, sales, book value, revenue and operational profit increase, it can be predicted that the firm's nominal value will also increase. When the firm's nominal value increases, the stock market value will increase because the stock's nominal value is fixed. Conversely, when the firm's nominal value decreases, the stock market value will decrease also.

Investors and firm management should understand the following:

- a The firm's earnings affect positively the firm's nominal value; that is, the more the incomes per share, the more the firm's nominal value. This means that the larger the incomes per share, the more expensive is the stock market price for investors, but this is the best performance for firm management to optimise the firm's value.
- b The firm's book value affects positively the firm's nominal value; that is, the higher the book value is, the higher the firm's nominal value. This means that the more the value of book is, the more expensive is the stock market price for investors, but this is the best performance for firm management to optimise the firm's value.
- c The firm's sales affect positively the firm's nominal value; that is, the higher the firm sales are, the higher the firm's nominal value. This means that the higher the firm sales are, the more expensive is the stock market price for investors, but this is the best performance for firm management to optimise the firm's value.
- d The firm's operating profit affects positively the firm's nominal value; that is, the higher the firm's operational turnover is, the higher the firm's nominal value. This means that the higher the firm's operational revenue, the more expensive is the stock market price for investors, but this is the best performance for firm management to optimise the firm's value.

These suggestions can provide investors and firm management with the most relevant variable to consider in their decision making, rather than directly using the stock market value regarding transactions in Bursa Efek Indonesia (Indonesian Stock Exchange), on which most of the listed firms have implemented stock-splits and reverse stock-splits during the last decade. The use of the stock's nominal (par) value as a denominator for the stock market value to correlate with the accounting variables will provide a more accurate prediction of the firm's value. Further studies using the firm's nominal value and accounting information need to be conducted in other developing countries' stock markets to strengthen the results of this study.

6 Conclusions

This study investigates the firm's nominal net-worth with related accounting parameters, which are earnings per share, sales, book value, and operating profit. The result shows that earnings per share, book value, sales, and operating profit all positively affect the

firm's nominal value. The outcomes provide strong evidence that certain accounting information for firm's financial declaration has an effect on the firm's nominal value, which is the market value relative to the nominal value of the stock. This provides a new approach to predicting the stock market price using the stock's nominal (par) value as a denominator of the stock market price and relevant accounting variables. For a better outcome of the decision making by investors and firm management, they are recommended to use the stock's nominal (par) value as a denominator for the stock market price as the firm's nominal value even though the stock market price may have increased multi-fold from its par value. This recommendation is important for investors when making decisions concerning stock transactions in the stock market and for firm management to decide how to maximise the firm's value in the stock markets. Therefore, for better decision making in the stock markets, investors and firm management should have a basic knowledge concerning the firm's financial accounting which can provide suggestion of a firm's business and surrounding economic information that are reflected in the firm's financial statement.

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