The Value Relevance of Financial Metrics to Publicly Listed Firms: Evidence from Large-, Mid-, and Small-Cap Firms Listed in NYSE and NSDAQ

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Abstract

Financial metrics are used to evaluate the business’ activities and strategies. This study aims to determine the value relevance of financial metrics by using cross-sectional data. The sample of the study includes 300 publicly listed firms in both NYSE and NSDAQ. A correlation analysis reveals that the firm’s effectiveness is significantly related to liquidity, solvency, revenue growth, profitability and dividend metrics. The firm’s market value is significantly related to liquidity, solvency, profitability and dividends. The firm’s stock performance suggests mixed results wherein change in MPPS is influenced by liquidity, profitability, dividends and the firm’s effectiveness. A regression analysis of the firm’s effectiveness found that the financial metrics are relevant factors to the ROA however they are not relevant to the ROE. On the firm’s market value, the 12-month sales growth, 12-month EPS, and ROA are relevant to the P/S. In addition, the CR and DE are relevant to the P/B and the quarterly EPS and expected EPS are relevant to the PEG. Conversely, the financial metrics are not relevant to the P/E of the firm. On the firm’s stock performance, the financial metrics are relevant to the changes in MPPS in different periods. Primarily, the ROA is relevant to the change in MPPS in periods of 3 months, 6 months, and YTD. In a period of one (1) year, the DY and ROA are relevant to the change in MPPS. The findings empirically establish the value relevance of financial metrics and these give implication to firms and stakeholders.

Introduction

Advances in technology and the availability of online platforms make it easier for stakeholders such as financial analysts, investors, stockholders and creditors to have access on financial metrics that can be used in their investment decisions. There are myriad of financial metrics being used and these serve as a financial language among stakeholders that enable them converge in terms of investment opinions and decisions. Financial metrics are useful in evaluating whether the firm’s actors (i.e. BODs, management and employees) are working in the best interest of the stakeholders. These also reflects whether the firm’s decisions are relevant in creating value to the firm that would manifest whether past management’s decisions are favorable or unfavorable to the firm’s value and performance. These financial metrics would be further interpreted by external financial analysts, shareholders and potential investors. In fact, the investment side uses fundamental analysis that uses financial metrics in order to determine the intrinsic value of the firm.

Stakeholders have different concerns in terms of firm value and they are expecting that every firm’s decisions must be relevant in the creation of firm value. These stakeholders would include financial analysts, investors, stockholders and creditors who are weighing the firm’s decisions whether these would improve the firm’s financial performance, brings potential growth, or increase the risk level of the firm. Financial analysts for instance would focus on information that they can use for reporting and for giving investment advisory for their clients. Investors and stockholders would also focus on return on investment and on stock market value. Creditors would focus on the risk reduction effort and growth of the firm. The ability of the firm
to create value for the stakeholders could guarantee future growth and cash flows of the firm. For instance, creditors, stockholders, and investors ensure the future availability of investment capital to fund the firm’s business operations. Hence, firm decisions would have to pass through a process to tedious evaluation of these stakeholders and investment opinions generally translate into the firm’s market value.

Apparently, firms would publicly disclose financial data and information that can aide stakeholders to immediately evaluate the firm’s financial performance and stakeholders can compare which of these firms are creating value for the stakeholders. As found by Kargin (2013), financial data represents the firm’s decisions and it has an empirical and statistical relations to the firm value. These firm’s decisions reflects their day-to-day operation, investment and financing activities and these could be relevant to the firm value that could trigger stakeholders and the management to make decisions. It is said to be value relevant if it could impact the firm’s performance, growth and market value. The firm’s growth would make the firm to have an easier and cheaper access to debt or equity capital while increasing level of risk brings more stringent and costly access to debt and equity capital. The past management’s decisions should provide the stockholder’s with favorable return and increase in the market value of their shares and the future decisions must continually promise the investors with growth and sustainable increase in their wealth.

In a financial perspective, firm value is captured in terms of firm effectiveness, firm’s market value and stock market performance. Value is said to be created when the firm is able to generate operational profit as they utilize their assets and eventually compensate the invested capital (equity) of the shareholders. If the firm succeeds by generating profit then they can satisfy the expected returns of the shareholders and they can be able to pay dividends. Dividend payment will give additional wealth to the shareholders in addition to their capital gains (Endri & Fathony, 2020). Moreover, stakeholders are interested on the firm’s market value. It the firm succeeds in most of their decisions then the perceived worth of the firm increases that would result to the firm’s growth. The firm’s growth increases the book value per share of every shareholder thereby increasing their wealth in the firm. Finally, shareholders measure the firm value in terms of stock market performance. Firm value is created when firm decisions can positively impact its stock price by attracting more investors who are willing to invest their funds. By attracting more investors to the firm, stock price would increase which also means that the capital gains of the shareholders increases (Soetjanto & Thamrin, 2020).

Literature is scarce in terms of measuring the value relevance of financial metrics. Relevant literatures provide limited and mixed results in terms of the relationship and effect of financial metrics to firm value and it varies from stock exchanges. In the study of Soetjanto and Thamrin (2020) among listed consumer goods industry in Indonesia Stock Exchange, capital structure (solvency) and profitability have a positive effect on the firm value while liquidity does not affect firm value. While the study of Jihadi, et. al. (2021), they found that liquidity, leverage (solvency) and profitability are significant to the firm value in the same stock exchange. In the study of Khidmat and Rehman (2014) among listed chemical sector in Pakistan, liquidity and solvency have positive relationship with the firm’s performance. Meanwhile, the study of Gharaibeh and Sarea (2015) found that financial leverage (solvency) is a significant determinant of the value of the firm among listed firms in Kuwait Stock Exchange. The mixed and sometimes opposing results pose a challenge for a continuous endeavor to measure the value relevance of firm decisions as measured in terms of financial metrics. This means that literatures need to be thoroughly updated in order to generate contemporary management implications of financial metrics to both firms and stakeholders.

Objectives of the study. The study aims to determine the value relevance of financial metrics as observed among publicly listed firms. These financial metrics includes measurements in terms of the firm’s liquidity, solvency, profitability, revenue, dividend and earnings. On the other hand, firm value metrics would be in terms the firm’s effectiveness, market value, and stock market performance. Thus, the research is guided by the following questions:

1. Do the firm’s publicly disclosed financial metrics affect the firm’s effectiveness?
2. Do the firm’s publicly disclosed financial metrics affect the firm’s market value?
3. Do the firm’s publicly disclosed financial metrics affect the firm’s stock market performance?
The Value Relevance Theory

Value relevance is a finance concept which suggests that firm’s decisions must be significant to impact the firm’s effectiveness, market value and stock performance in order to create wealth for the shareholders. Literatures are adamant that the end goal of financial management is value creation (Chowdhury & Chowdhury, 2010). Internally, the management needs to make decisions to ensure firm’s effectiveness by generating return from the assets they utilize and to satisfy the required rate of return of the fund providers such as the creditors and shareholders. The shareholders are the owners of the firm and they expect to accumulate wealth in terms of the firm’s continuous growth, dividends and market value. Creditors on the other hand are external providers of fund and they expect that the firm will be profitable so that the firm can sustain the required interest payments. As a rule of thumb, a firm needs to meet a satisfactory level of return from their assets and equity to meet every shareholders expectation.

In addition, a publicly traded firm must be concern on the perceived market value of their revenue, book value, earnings, and earnings growth. In fact, there were limited literatures delving on these areas. Yet, these are relevant metrics of firm value that indicates the willingness of the investors to pay for the firm’s operational performance and activities. For instance, investors consider the firm’s span of customers or target market since this is the primary source of their revenue for the firm. Investors are willing to buy shares of a firm if it has a competitive advantage over competitors. Traditional finance also gives importance on the book value per share because it represents the net claim of the shareholders. Investors would be willing to buy shares of the firm at a certain price if these would mean a worthy financial claim from the firm. Moreover, earnings and its growth is important because this builds up the wealth of the shareholders. Investors are proactively investing in firms that generate earnings and that can sustain earnings growth over time.

Various literatures link firm value to stock performance or equity valuation of the market participants (Ota, 2003). For instance Kargin (2013) have shown that the value for shareholders is in terms of stock market values. Similar to Liu and Liu (2007), value relevance depicts the connection between financial data and stock prices. Since the firm’s owners are the shareholders, the firm should be able to make decisions that would impact the market price per share (MPPS) of the firm so that the shareholders would accumulate capital gains. Value relevance is in terms of the continuous growth in the stock yields for the shareholders over time. Investors would commit their fund and expect that within their investment time frame, they can generate return.

Liquidity Metrics and Firm Value

Among the important aspect of firm decision is in terms of liquidity. Liquidity ensures that assets can be converted into cash smoothly and the firm is capable of meeting maturing debts. The study of Rashid (2018) found that liquidity influences firm’s performance in terms of profitability and it has an impact on the firm’s share price. This supports the findings of Warrad (2014) that share price is significantly influenced by liquidity and also the findings of Madushanka and Jathurika (2018) that that firm’s liquidity affects profitability. These study manifests that liquidity metrics are relevant to firm value and these can be useful for firms since they can quickly monitor and improve their liquidity performance so that they can enhance their firm value. Traditionally, managers utilize liquidity ratios such as inventory turnover, quick ratio and current ratio.

**Inventory turnover (ITO).** Firms and stakeholders are concerned about how quick the firm’s inventory will be replenished until it will be sold to customers. The frequency of ITO generally translates into the firm’s revenue as well as into cash that can be used to pay for the firm’s maturing obligations. Managers would exert effort to increase the frequency of ITO in order to enhance the firm’s operational performance and to maintain adequate level of liquidity. As found by Kwak (2019), ITO can be a good indicator of firm’s performance and sustainability.

**Quick or Acid-Test (QR).** According to Warrad (2014), QR is a more stringent measure of liquidity as compare to current ratio because it does not include inventories and other assets such as prepaid expenses
that might not be very liquid. Based on the findings of Durrah, et. al. (2016), QR has a positive relationship with the firm’s performance.

**Current Ratio (CR).** The CR is a measure of firm’s liquidity that accounts for the total current assets which includes inventories and prepaid expenses. A ratio of one (1) or above means that the firm have favorable liquidity position since they can finance their short-term debts while having less than one (1) expresses deficiency (Durrah, et. al., 2016). According to the findings of Chowdhurry and Chowdhurry (2010), CR has a positive relationship to the firm value.

**Solvency Metrics and Firm Value**

Solvency can influence the performance and market value of a firm. The firm can the amount of debt in order to have greater access to capital but it can also magnify risk wherein the firm may not be able to repay its debt in the long run. Firms can benefit by having greater access to capital but can favorably or unfavorably affect profitability. By having more capital, they can increase their internal capacity and revenue. On the other hand, increasing debt would also mean greater cost which can affect profitability. The findings of Rahman (2017) shows a negative relationship of solvency and profitability implying that firms can unfavorably affect their profitability by employing too much debt.

**Debt-to-Equity (DE).** The DE presents the extent of how the firm was financed by debt in relation to shareholder’s equity (net assets). According to Satryo, Rokhmania and Diptyana (2016), a high DE ratio means that the firm employed more debt than the amount financed by the shareholders. For example a DE ratio of more than one (1) means that in debt is greater than shareholders’ equity. A high DE ratio indicates that the firm was able to raise more capital by employing debt but it can also mean that the firm has a weak financial solvency and loss of control (Rahman, 2017). On the other hand, a low DE ratio also indicates the inability of the firm to have access to greater capital that can limit the firm’s growth and operation.

**Revenue Metrics and Firm Value**

Revenue growth can influence firm value. An investor typically looks for a firm having an upward trend in terms of sales since it is a component of the firm’s profitability and sustainability. Chowdhur and Chowdhury (2010) emphasized that sales growth is relevant but their empirical result shows that sales growth have negative coefficient on the firm’s stock market price. This study further aims to determine whether sales growth could affect firm value since investors in reality consider sales growth as a factor in their investment decisions. The study would utilize the 12 month sales growth since it captures the calendar sales activity of the firm.

**Profitability Metrics and Firm Value**

Profitability indicates the result of the firm’s business activities and it measures the management’s effectiveness. According to Hakim and Sugianto (2018), profitability serves as the most appropriate measurement to indicate the firm’s effectiveness and efficiency in managing its activities.

**Operating margin (OM).** Operating margin represents the net amount of profit after deducting costs from gross profit. This ratio represents the firm’s ability to generate profit from ordinary operations. A low OM indicates a weak control over operating costs (Rahman, 2017).

**Pre-tax margin (PTM).** The ratio indicates taxable profit of the firm after deducting all costs from revenue.

**Net margin (NM).** The ratio includes operating profit plus extraordinary revenue (non-recurring) and minus extraordinary expenses (Rahman, 2017).

**Dividends and Earnings Metrics and Firm Value**

Dividends and earnings are the main concerns of the shareholders of the firm because these represent their residual claims on the firm’s profitability after deducting the operating and financing costs from their revenue. These metrics serve as a decision factor for shareholders whether they will retain or withdraw their
investments in the firm. **Earnings per share (EPS).** For investors, the EPS is a significant indicator of the firm’s financial health and profitability. The firm’s EPS is being compared across firms and investors are value firms with high EPS. In the findings of Seetharaman and Raj (2011), there is a very strong positive relationship between EPS and stock prices which means that when EPS increase the stock price also increases. **Dividend Payout (DPO).** There are firms whose objective is to improve their internal funds by retaining their earnings. However, investors are also mindful on how much dividend will be declared by the firm’s board of directors. Even if the firm was able to generate high EPS but they give out minimal dividend then the shareholders will be dissatisfied resulting to their withdrawal from the firm. Hence the challenge for firms is to balance the firm’s objective and the investors’ expectations. Investors expect to receive dividends for them to continue their investment commitment. In the findings of Ali, Jan and Sharif (2015), DPO has a significant relationship with share price. **Dividend Yield (DY).** Dividends are returns earned by the shareholders from their investment in the firm. In the findings of Ahmed (2018), dividends are brings a positive coefficient to the stock price which means that an increasing dividend positively influence stock price movement. In general, investors would calculate the DY by dividing their dividend per share with the current MPPS and assess whether the yield rate is favorable based on their expectation. If investors would not sell their share, then their source of return would primarily be coming from dividends.

### Financial Metrics of Firm Value

Stakeholders use wide ranges of financial metrics that include horizontal analysis, vertical analysis, and financial ratios. Horizontal analysis uses base periods (e.g. beginning of the year, yearly, semiannual, quarterly, etc.) to interpret the changes in the financial data. Vertical analysis uses base amounts (e.g. total asset, gross revenue, etc.) in order to interpret the relationship of the financial data. Financial ratios are standardized ratios that can immediately give insights as to the firms’ liquidity, solvency and profitability.

#### Firm’s effectiveness.

The firm’s effectiveness can be measured in terms of return on asset (ROA) and return on Equity (ROE). The ROA indicates the firm’s ability to generate income from utilizing their assets (resources). ROE on the other hand indicates the firm’s ability to provide profit for the money invested (or equity) of the shareholders. To investigate the relationship between ROE and ROE and its explanatory variables, the following models are developed:

\[
P_{\text{OA}} = a + B_1TTO_1 + B_2P_2 + B_3XP_3 + B_4DE_4 + B_5OM_7 + B_6ITM_8 + B_9NM_9 + B_{13}\DeltaPO_{13} + B_{14}\DeltaM_\Sigma_\gamma_{14} + \epsilon_\pi
\]

\[
P_{\text{OE}} = a + B_1TTO_1 + B_2P_2 + B_3XP_3 + B_4DE_4 + B_5OM_7 + B_6ITM_8 + B_9NM_9 + B_{13}\DeltaPO_{13} + B_{14}\DeltaM_\Sigma_\gamma_{14} + \epsilon_\pi
\]

#### Firm’s market value.

Market value refers to the perceived intrinsic value of the firm on a per share basis. Investors would have different assessment on the value of the firm as translated into market price per share (MPPS). Investors are those buyers and sellers who are influential in terms of determining the value of the firm as reflected in the MPPS. Buyers would bid higher prices for firms that they perceived to be worthy of investment while they bid lower prices for firms if the firms do not meet their investment expectations. On the side of the seller, they tend to hold the firms’ stock if they perceived it to be valuable while they sell firms’ stocks if they perceive that these firms do not meet their investment expectations. The commonly used indicator is the price-to-earnings (P/E) ratio. The P/E ratio reflects the multiplier on many times the investors are willing to pay for the earnings-per-share of the firm. Additionally, the price-to-cash flow (P/C) and the price-to-book (P/B) are also being used. The P/C ratio indicates how the investors value the operating cash flow per share of the firm. Finally, the P/B ratio indicates the willingness of the investors to buy the shares of the firm in relation to book value per share. To investigate the relationship between P/E ratio, P/C ratio and P/B and its explanatory variables, the following models are developed:

\[
\Pi/E = a + B_1TTO_1 + B_2P_2 + B_3XP_3 + B_4DE_4 + B_5\DeltaM_\Sigma\gamma_5 + B_6OM_6 + B_7ITM_7 + B_8NM_8 + B_9\Delta\Psi_9 + B_{10}\DeltaD_\Sigma_{10} + B_{11}\DeltaM_\Pi\Sigma_{11} + B_{12}\DeltaPO_{12} + B_{13}\DeltaE\Pi\Sigma_{13} + B_{14}\DeltaE(\Pi\Sigma)_{14} + B_{15}\DeltaPA_{15} + B_{16}\DeltaOE_{16} + \epsilon_\pi
\]
Publicly Disclosed Financial Metrics

1. Changes in market prices were as of the current date. The disclosed financial metrics are provided in Table 11.2-month periods of April to May 2021. The financial data were as of the last quarter of the year 2020 while the market prices were as of the current date. The disclosed financial metrics are relevant in the firm’s performance and value.

Methods

Research Design. The study used a quantitative approach using cross-sectional study in order to establish the value relevance of publicly disclosed financial metrics to publicly listed firms. Value relevance was measured in terms of correlation and regression analysis. The study presumes that past financial information derived from disclosed financial metrics are relevant in the firm’s performance and value.

Data. The study analyzed 300 publicly listed firms in the NYSE and NASDAQ wherein these comprise of 100 large-cap corporations (above US$10 Billion market capitalization), 100 mid-cap corporations (within US$2-10 Billion market capitalization), and 100 small-cap firms (below US$2 Billion market capitalization). Among these firms, were 196 (n = 65%) listed in the NYSE while there were 104 (n = 35%) listed in NASDAQ. The study utilized secondary data obtained from the website of Macrotrends LLC (2010-2021) during the months of April to May 2021. The financial data were as of the last quarter of the year 2020 while the changes in market prices were as of the current date. The disclosed financial metrics are provided in Table 1.

Table 1. Publicly Disclosed Financial Metrics

\[
\Pi/\Sigma = a + B_1 ITO_1 + B_2 P_2 + B_3 XP_3 + B_4 DE_4 + B_5 12M\Sigma + B_6 OM_6 + B_7 ITM_7 + B_8 NM_8 + B_9 \Delta \Psi_9 + B_{10} 12M \Delta_1 + B_{11} 12 MEPS_{11} + B_{12} \Delta PO_12 + B_{13} \Xi EP_13 + B_{14} E (EIS)_14 + B_{15} POA_{15} + B_{16} POE_{16} + \epsilon _\pi
\]

\[
\Pi/\beta = a + B_1 ITO_1 + B_2 P_2 + B_3 XP_3 + B_4 DE_4 + B_5 12M\Sigma + B_6 OM_6 + B_7 ITM_7 + B_8 NM_8 + B_9 \Delta \Psi_9 + B_{10} 12M \Delta_1 + B_{11} 12 MEPS_{11} + B_{12} \Delta PO_12 + B_{13} \Xi EP_13 + B_{14} E (EIS)_14 + B_{15} POA_{15} + B_{16} POE_{16} + \epsilon _\pi
\]

\[
\Pi/\gamma = a + B_1 ITO_1 + B_2 P_2 + B_3 XP_3 + B_4 DE_4 + B_5 12M\Sigma + B_6 OM_6 + B_7 ITM_7 + B_8 NM_8 + B_9 \Delta \Psi_9 + B_{10} 12M \Delta_1 + B_{11} 12 MEPS_{11} + B_{12} \Delta PO_12 + B_{13} \Xi EP_13 + B_{14} E (EIS)_14 + B_{15} POA_{15} + B_{16} POE_{16} + \epsilon _\pi
\]
### Variables Financial Metrics Abbreviation Formula

<table>
<thead>
<tr>
<th>Variables</th>
<th>Financial Metrics</th>
<th>Abbreviation</th>
<th>Formula</th>
</tr>
</thead>
</table>
| **Liquidity** | Inventory Turnover | ITO | \[
\frac{\text{Cost of Goods Sold}}{\text{Average inventory}}
\] |
| | Current Ratio | CR | \[
\frac{\text{Current Assets}}{\text{Current Liabilities}}
\] |
| | Quick Ratio | QR | \[
\frac{\text{Quick Assets}}{\text{Current Liabilities}}
\] |
| **Solvency** | Debt/Equity | DE | \[
\frac{\text{Total Liabilities}}{\text{Total Shareholder's Equity}}
\] |
| **Revenue Growth** | 12-Month Sales growth | 12MSg | \[
\frac{(\text{Sales}_t=12\text{mos.} - \text{Sales}_t=0)}{\text{Sales}_t=0}
\] |
| **Profitability** | Operating Margin | OM | \[
\frac{\text{Operating Income}}{\text{Revenue}}
\] |
| | Pre-tax Margin | PTM | \[
\frac{\text{Revenue} - \text{Cost}}{\text{Revenue}}
\] |
| | Net Margin | NM | \[
\frac{\text{Net Income}}{\text{Revenue}}
\] |
| **Dividends and Earnings** | Dividend Yield | DY | \[
\frac{\text{Actual Dividends per Share}}{\text{Current EPS}}
\] |
| | 12 Month Dividend | 12M-Div | \[
\text{Sum of Dividends for 12 Months}
\] |
| | 12 Month EPS | 12M-EPS | \[
\text{Earnings per Share for the 12 month period}
\] |
| | Dividend Payout Ratio | DPO | \[
\frac{\text{Dividends Paid}}{\text{Net Income}}
\] |
| | 12-Month EPS Growth | \[?\]EPS$_{t=12\text{mos.}}$ | \[
\frac{(\text{EPS}_t=12\text{mos.} - \text{EPS}_t=0)}{\text{EPS}_t=0}
\] |
| | Last Quarter EPS Surprise % | QEPS | \[
\text{Actual Reported Quarter EPS} - \text{Consensus EPS Estimate}
\] |
| | Estimated EPS Growth Next Year | E(EPS)$_f$ | \[
\text{rolling 12 month forecast of EPS based on estimates of analysts}
\] |
| **Effectiveness** | Return on Assets | ROA | \[
\frac{\text{Net Income}}{\text{Average Total Assets}}
\] |
| | Return on Equity | ROE | \[
\frac{\text{Net Income}}{\text{Average Shareholders' Equity}}
\] |
| **Market Value Indicators** | P/E Ratio | P/E | \[
\frac{\text{Market Price per Share}}{\text{Earnings per Share}}
\] |
| | Price/Book Ratio | P/B | \[
\frac{\text{Market Price per Share}}{\text{Book Value per Share}}
\] |
| | Price-to Sales Ratio | P/S | \[
\frac{\text{Market Price per Share}}{\text{Revenue per Share}}
\] |
| | PEG Ratio | PEG | \[
\frac{(\text{P/E})}{\text{Annual EPS growth}}
\] |
| **Stock Market Performance** | 3-Month % Change | \[?\]MPPS$_{t=3\text{mos.}}$ | \[
\frac{(\text{MPPS}_t=3\text{mos.} - \text{MPPS}_t=0)}{\text{MPPS}_t=0}
\] |
| | 6-Month % Change | \[?\]MPPS$_{t=6\text{mos.}}$ | \[
\frac{(\text{MPPS}_t=6\text{mos.} - \text{MPPS}_t=0)}{\text{MPPS}_t=0}
\] |
| | YTD % Change | \[?\]MPPSYTD | \[
\text{f (change in the current market price per share compared to the beginning of the calendar or fiscal year)}
\] |
| | 1 Year % change | \[?\]MPPS$_{t=1}$ | \[
\frac{(\text{MPPS}_t=3\text{mos.} - \text{MPPS}_t=0)}{\text{MPPS}_t=0}
\] |

**Note:** The financial metrics were acquired from Macrotrends.net as of the month of April and May 2021.

**Test of Normality.** A normality test was conducted using Shapiro-Wilk Test and the result reveals that the significance value is lower than 0.05 indicating that the data significantly deviates from a normal distribution. Hence, the degree of linear relationship can be interpreted by using a range of values for Spearman’s rho Coefficient of Correlation as presented in Table 2.

**Table 2.** Spearman rho Coefficient Values with Descriptive Interpretation

<table>
<thead>
<tr>
<th>Spearman rho</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>± 0.81 to ± 0.99</td>
<td>Very (positive/negative) strong relationship</td>
</tr>
<tr>
<td>± 0.61 to ± 0.80</td>
<td>Strong (positive/negative) relationship</td>
</tr>
<tr>
<td>± 0.41 to ± 0.60</td>
<td>Moderate (positive/negative) relationship</td>
</tr>
<tr>
<td>± 0.21 to ± 0.40</td>
<td>Weak (positive/negative) relationship</td>
</tr>
<tr>
<td>±0.01 to ± 0.20</td>
<td>No to very weak (positive/negative) relationship</td>
</tr>
<tr>
<td>0</td>
<td>None</td>
</tr>
</tbody>
</table>

**Model Fit and Multicollinearity.** Model fit is determined using the r-square value. Since the study is a social science in the field of finance using financial data, a low r-square can still be acceptable (Cohen, 1992). However, the study improved the r-square by removing variables with collinearity issues such as those with...
high variance inflation factor (>5 VIF).

Results

This section presents the correlation and regression analysis of 300 publicly listed firms within 2020-2021. In this study, the relationship of firms’ effectiveness (ROA and ROE), market value (PE, P/S, P/B, P/C and PEG), and stock market performance (MPPS\(t=3\)mos., MPPS\(t=6\)mos., MPPSYTD, MPPS\(t=1\), MPPS\(t=3\), MPPS\(t=5\), and MPPS\(t=10\)) with the firms’ financial metrics such as liquidity (ITO, CR and QR), solvency (DE), profitability (PEG, P/S, OM, PTM and NM), Dividends (DY, 12MDiv, 12EMPS and DPO) and revenue and earnings growth (12MSalesg, 5YSalesg, 12MEPSg, 5EPSg, QEPS and EEPS).

Descriptive and Normality Test

Table 3 presents a summary of descriptive statistics of independent and dependent variables used in the research. Statistics presents the mean, median, standard deviation, minimum, maximum, skewness and kurtosis. Additionally, it also provides a Shapiro-Wilk Test to test the normality which is a pre-requisite for conducting a correlation analysis of the variables.

Table 3. Descriptive Statistics and Test of Normality

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Median</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Liquidity</td>
<td>A. Liquidity</td>
<td>A. Liquidity</td>
<td>A. Liquidity</td>
</tr>
<tr>
<td>1. ITO</td>
<td>8.25</td>
<td>1.52</td>
<td>25.70</td>
</tr>
<tr>
<td>2. CR</td>
<td>2.58</td>
<td>1.47</td>
<td>4.71</td>
</tr>
<tr>
<td>3. QR</td>
<td>2.37</td>
<td>1.28</td>
<td>4.76</td>
</tr>
<tr>
<td>B. Solvency</td>
<td>B. Solvency</td>
<td>B. Solvency</td>
<td>B. Solvency</td>
</tr>
<tr>
<td>1. DE</td>
<td>1.31</td>
<td>0.56</td>
<td>2.83</td>
</tr>
<tr>
<td>C. Revenue</td>
<td>C. Revenue</td>
<td>C. Revenue</td>
<td>C. Revenue</td>
</tr>
<tr>
<td>1. 12MSg</td>
<td>0.05</td>
<td>-</td>
<td>0.34</td>
</tr>
<tr>
<td>D. Profitability</td>
<td>D. Profitability</td>
<td>D. Profitability</td>
<td>D. Profitability</td>
</tr>
<tr>
<td>1. OM</td>
<td>(1.56)</td>
<td>0.08</td>
<td>28.03</td>
</tr>
<tr>
<td>2. PTM</td>
<td>(15.55)</td>
<td>0.08</td>
<td>235.41</td>
</tr>
<tr>
<td>3. NM</td>
<td>(1.65)</td>
<td>0.07</td>
<td>28.04</td>
</tr>
<tr>
<td>E. Dividend and Earnings</td>
<td>E. Dividend and Earnings</td>
<td>E. Dividend and Earnings</td>
<td>E. Dividend and Earnings</td>
</tr>
<tr>
<td>1. DY</td>
<td>0.01</td>
<td>0.01</td>
<td>0.02</td>
</tr>
<tr>
<td>2. 12M-Div</td>
<td>1.19</td>
<td>0.46</td>
<td>1.90</td>
</tr>
<tr>
<td>3. 12M-EPS</td>
<td>2.72</td>
<td>1.53</td>
<td>8.56</td>
</tr>
<tr>
<td>4. DPO</td>
<td>0.11</td>
<td>-</td>
<td>3.11</td>
</tr>
<tr>
<td>5. [?]EPS(t=12)mos.</td>
<td>3.42</td>
<td>(0.01)</td>
<td>74.70</td>
</tr>
<tr>
<td>6. QEPS</td>
<td>0.17</td>
<td>0.07</td>
<td>1.20</td>
</tr>
<tr>
<td>7. E(EPS)</td>
<td>0.59</td>
<td>-</td>
<td>6.78</td>
</tr>
<tr>
<td>F. Firm’s Effectiveness</td>
<td>F. Firm’s Effectiveness</td>
<td>F. Firm’s Effectiveness</td>
<td>F. Firm’s Effectiveness</td>
</tr>
<tr>
<td>1. ROA</td>
<td>1.45</td>
<td>0.10</td>
<td>8.74</td>
</tr>
<tr>
<td>2. ROE</td>
<td>0.05</td>
<td>0.03</td>
<td>0.22</td>
</tr>
<tr>
<td>1. P/E</td>
<td>42.17</td>
<td>18.56</td>
<td>113.94</td>
</tr>
<tr>
<td>2. P/S</td>
<td>49.90</td>
<td>3.39</td>
<td>766.21</td>
</tr>
<tr>
<td>3. P/B</td>
<td>12.78</td>
<td>3.82</td>
<td>59.17</td>
</tr>
<tr>
<td>4. P/C</td>
<td>41.10</td>
<td>13.89</td>
<td>186.01</td>
</tr>
<tr>
<td>5. PEG</td>
<td>8.21</td>
<td>1.12</td>
<td>84.54</td>
</tr>
<tr>
<td>H. Firm’s Stock Performance</td>
<td>H. Firm’s Stock Performance</td>
<td>H. Firm’s Stock Performance</td>
<td>H. Firm’s Stock Performance</td>
</tr>
<tr>
<td>1. [?]MPPS(t=3)mos.</td>
<td>0.30</td>
<td>0.11</td>
<td>3.56</td>
</tr>
<tr>
<td>2. [?]MPPS(t=6)mos.</td>
<td>0.42</td>
<td>0.29</td>
<td>0.76</td>
</tr>
<tr>
<td>3. [?]MPPSYTD</td>
<td>0.20</td>
<td>0.12</td>
<td>0.84</td>
</tr>
</tbody>
</table>
Table 3 presents the descriptive statistics of the financial metrics disclosed by publicly traded firms. The financial metrics show that the firms are liquid wherein they are capable of disposing their inventories and they were able to maintain adequate capacity to repay their short-term debts. The solvency metric presents a degree of risk wherein the firms employ greater debt than the capital supplied by the shareholders. In terms of revenue, the firms show positive growth within their year-round operation. The firms’ however are not profitable in their current operation. In terms of dividend and earnings, the firms show that they are able to earn and pay dividends to the shareholders. The firms are effective in which they were able to earn from their existing resource (asset) and were able to earn positive return for the shareholders. In terms of market value, the metrics show that investors are willing to pay several times for the firm’s earnings, sales, book value, cash and earnings growth. Lastly, the firms’ stock performances show positive growth in terms of market price per share. The skewness and Shapiro-Wilk test present that there is lack of normality in the variables. The non-normality of the data recommends the use of a non-parametric correlation analysis particularly the use of spearman’s rank correlation. In the regression analysis, normality is least important hence, linear regression will be used determine the value relevance of financial metrics.

### The Relationship of the Financial Metrics to Firm Value

Table 4 presents the correlation analysis conducted using the Spearman’s rho coefficient of correlation. The result shows the relationship of the financial metrics to the firm’s value indicators such as effectiveness, market value and stock performance.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Effectiveness</th>
<th>Market Value</th>
<th>Stock Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ROA</td>
<td>P/E</td>
<td>MPPS</td>
</tr>
<tr>
<td>Liquidity</td>
<td>A.</td>
<td>A.</td>
<td>A.</td>
</tr>
<tr>
<td>1. ITO</td>
<td>.352**</td>
<td>.480**</td>
<td>.556**</td>
</tr>
<tr>
<td>2. CR</td>
<td>.317**</td>
<td>.612**</td>
<td>.549**</td>
</tr>
<tr>
<td>3. QR</td>
<td>-.030</td>
<td>-.112</td>
<td>-.099</td>
</tr>
<tr>
<td>B. Solvency</td>
<td>B.</td>
<td>B.</td>
<td>B.</td>
</tr>
<tr>
<td>1. DE</td>
<td>.121*</td>
<td>-.002</td>
<td>-.002</td>
</tr>
<tr>
<td>C. Revenue</td>
<td>C.</td>
<td>C.</td>
<td>C.</td>
</tr>
<tr>
<td>1. OM</td>
<td>.338**</td>
<td>.354**</td>
<td>-.174**</td>
</tr>
<tr>
<td>PTM</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4. The relationship of the financial metrics to firm value
A correlation analysis present that in terms of liquidity metrics, inventory turnover and current ratio have a significant relationship with the firm's effectiveness (ROA & ROE) and to the firm's market value (P/E, P/C, P/B & P/S). This indicates that when the firm improves their liquidity the firm can also generate
positive return from utilizing their assets and contributed capital of the shareholders. Moreover, the firm improves their economic worth wherein the firms can have an increasing market price in relation to their earnings, cash, book value and sales.

In terms of solvency, there is a significant relationship between debt-to-equity (DE) to the firm’s effectiveness (ROA & ROE) and market price per share (MPPS). It shows that there is a positive relationship between DE and the firm’s effectiveness while there is a negative relationship with the MPPS. This indicates that the use of debt enables the firm to maximize the use of their assets and generate return for the shareholders. However, stock market investors perceive that the firm also increases their risk of insolvency, hence it decreases the MPPS.

In terms of revenue growth, there is a significant relationship between the 12-month sales growth to the firms’ effectiveness (ROA & ROE) and with the MPPS. It shows that the 12-month sales growth has a positive relationship to ROA and ROE but there is a negative relationship to the MPPS. This indicates that if the firm improves on their revenue then the firms can enhance their effectiveness in utilizing their assets and equities. However, an aggressive revenue growth can be interpreted by stock market investors as risky because increasing sales could mean that the firm needs to use more resources to support their selling activities and it entails costs that may affect the future performance of the firm hence it decreases the MPPS.

In terms of profitability, there are significant relationships between the operating margin, pre-tax margin and net margin to the firm’s effectiveness, and market value. This indicates that the firms’ profitability enables the firm to maximize the use of their assets and they are able to generate return for the shareholders. The firm’s market value also improves if the firms are profitable. Also, the firms’ pre-tax margin has a significant relationship to the change in MPPS to the 1-year period. This means that stock market investors are willing to commit to firms at a longer term when they are profitable.

In terms of dividend, there are mix results in terms of their relationships to the firm’s effectiveness, market value and stock performance. The results however, shows that dividend decisions are significant in terms of the influencing the value indicators. For instance, dividend yield have positive relationships with the firm’s ROE, P/C, PB and change in the MPPS for a year. The 12-month dividend has a positive relationship with the firms’ ROA, P/E, P/C, P/B, P/S and on changes in MPPS for 3 months and year-to-date while there is a negative relationship with the change in MPPS for 1 year a year. The 12-month earnings per share have positive relationships with the firms’ effectiveness for both ROA and ROE and with the firm’s market value in terms of P/E, P/C, P/B and P/S. The dividend payout have positive relationships with the ROA, P/E, P/C, P/B, P/S while there is a negative relationship with the change in the MPPS for 1 year. The quarter EPS of the firms have positive relationships with ROA, ROE, P/E, P/C, P/B, P/S and with the change in MPPS for 1 year. Lastly, the expected EPS has a positive relationship with ROA, ROE, P/E, P/C, P/B and P/S.

A correlation analysis was also conducted to see whether the firm’s effectiveness has a relationship with the firms’ market value and stock performance. As shown, the ROA has a positive relationship with the P/E, P/C, P/B, P/S and with the change in MPPS for 6 months and 1 year. The ROE also has a positive relationship with P/E, P/C, P/S and with the change in MPPS for 1 year.

The Value Relevance of the Financial Metrics to the Firm’s Effectiveness

Table 5 presents the conducted regression analysis to assess the relevance of the financial metrics to the firm’s effectiveness. An initial multicollinearity test was conducted using the variance inflation factor (VIF) and it recommends the omission of financial metrics such as quick ratio (QR), operating margin (OM) and pre-tax margin (PTM).

**Table 5. The value relevance of the financial metrics to firm’s effectiveness**

<table>
<thead>
<tr>
<th>Regression</th>
<th>ROA</th>
<th>ROA</th>
<th>ROA</th>
<th>ROE</th>
<th>ROE</th>
<th>ROE</th>
</tr>
</thead>
<tbody>
<tr>
<td>coeff</td>
<td>p-value</td>
<td>vif</td>
<td>coeff</td>
<td>p-value</td>
<td>vif</td>
<td></td>
</tr>
</tbody>
</table>
The multiple R (MR\textsubscript{ROA}=0.2501, MR\textsubscript{ROE}=0.1328) indicate positive relationships between the selected independent variables with the dependent variables. The r-squared (R\textsuperscript{2}\textsubscript{ROA}=0.0625, R\textsuperscript{2}\textsubscript{ROE}=0.01764) and adjusted r-square (AR\textsuperscript{2}\textsubscript{ROA}=4.33\%, AR\textsuperscript{2}\textsubscript{ROE} = -0.25\%) show weak linear relationship between the independent and dependent variables. The standard errors show however that the independent variables have closer variability with the ROA (SE\textsubscript{ROA}=0.2166) while there is a high variability with the ROE ((SE\textsubscript{ROE}=8.7546). The F-Test (p<0.05) shows that the financial metrics are significant predictors of the ROA while it was found not significant in terms of ROE. Despite the weak linear relationship between the variables, the result reveals that the financial metrics are primarily relevant to the firm’s ROA. In the model, the most significant predictor of the ROA is debt-to-equity (DE). This means that the firm’s decision in terms of capital structure and debt management is relevant to the firm’s effectiveness. The study reveals that:

\[ ROA_t = 0.03935 + 0.01658DE + \epsilon_t \]

Regression Analysis of Financial Metrics and Firm Market Value

Table 6 presents the conducted regression analysis to assess the relevance of the financial metrics to the firm’s market value. An initial multicollinearity test suggests that some independent variables such as quick ratio (QR) and operating margin (OM) need to be omitted from the equation.

Table 6. The value relevance of financial metrics to firm’s market value

<table>
<thead>
<tr>
<th>Regression</th>
<th>P/S\textsubscript{t}</th>
<th>P/S\textsubscript{t}</th>
<th>P/B\textsubscript{t}</th>
<th>P/B\textsubscript{t}</th>
<th>P/E\textsubscript{t}</th>
<th>P/E\textsubscript{t}</th>
<th>PEG\textsubscript{t}</th>
<th>PEG\textsubscript{t}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-1.10</td>
<td>0.67</td>
<td>0.28</td>
<td>0.28</td>
<td>53.88</td>
<td>0.00</td>
<td>0.45</td>
<td>0.73</td>
</tr>
<tr>
<td>ITO</td>
<td>-0.04</td>
<td>0.50</td>
<td>1.03</td>
<td>0.79</td>
<td>0.03</td>
<td>0.06</td>
<td>1.03</td>
<td>0.03</td>
</tr>
<tr>
<td>CR</td>
<td>0.16</td>
<td>0.68</td>
<td>1.20</td>
<td>2.37</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>DE</td>
<td>-0.64</td>
<td>0.30</td>
<td>1.12</td>
<td>4.77</td>
<td>0.00</td>
<td>1.12</td>
<td>-2.27</td>
<td>0.58</td>
</tr>
<tr>
<td>12MSg</td>
<td>16.75</td>
<td>0.00</td>
<td>1.14</td>
<td>-5.26</td>
<td>0.00</td>
<td>1.14</td>
<td>-6.73</td>
<td>0.84</td>
</tr>
<tr>
<td>PTM</td>
<td>0.00</td>
<td>0.64</td>
<td>1.07</td>
<td>0.01</td>
<td>0.52</td>
<td>1.07</td>
<td>0.02</td>
<td>0.63</td>
</tr>
<tr>
<td>NM</td>
<td>-27.36</td>
<td>-</td>
<td>1.08</td>
<td>0.08</td>
<td>0.50</td>
<td>1.08</td>
<td>0.19</td>
<td>0.64</td>
</tr>
<tr>
<td>DY</td>
<td>189.34</td>
<td>0.10</td>
<td>1.44</td>
<td>-392.7</td>
<td>0.09</td>
<td>1.44</td>
<td>-1242.1</td>
<td>0.10</td>
</tr>
<tr>
<td>12M-Div</td>
<td>-0.68</td>
<td>0.54</td>
<td>1.63</td>
<td>0.72</td>
<td>0.74</td>
<td>1.63</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>12M-EPS</td>
<td>0.68</td>
<td>0.00</td>
<td>1.26</td>
<td>-0.22</td>
<td>0.61</td>
<td>1.26</td>
<td>-0.82</td>
<td>0.57</td>
</tr>
<tr>
<td>DPO</td>
<td>-0.07</td>
<td>0.90</td>
<td>1.04</td>
<td>0.49</td>
<td>0.65</td>
<td>1.04</td>
<td>0.12</td>
<td>0.97</td>
</tr>
</tbody>
</table>
The Multiple R indicates that the financial metrics have positive relationships with the firms’ market value indicators. The R² and adjusted R² show strong relationships between the financial metrics with price-to-sales and price-earnings growth while having weak relationships with price-to-book and price-to-earnings ratio. The F-Test (p < 0.05) shows that the financial metrics are significant predictors of the P/S_t, P/B_t and PEG_t while it was found not significant in terms of P/E_t.

The regression analysis result shows that in terms of price-to-sales, the significant financial metrics are 12-month sales growth, net margin, 12-month earnings-per-share and return on asset. This means that investors perceive that the firm is creating value if their revenue (sales), earnings per share and return on asset is improving. Thus, $P/S_t = -1.10 + (16.75 \times 12MSalesg) + (-27.36 \times NM) + (0.68 \times 12MEPS) + (37.73 \times ROA) + e_{it}$

Moreover, the regression analysis shows that the price-to-book of the firm is influenced by the firm’s current ratio and debt-to-equity. This means that the liquidity and solvency of the firm is relevant in the perceived value of the equity of the firm. Thus, $P/B_t = 5.71 + (2.37 \times CR) + (4.77 \times D/E) + e_{it}$

Lastly, the regression analysis result shows that the quarterly earnings surprise and the expected earnings per share are significant predictors of price earnings growth. Thus, $PEG_t = 0.45 + (2.05 \times QEPS) + (12.38 \times E(EPS)) + e_{it}$

### The Value Relevance of Financial Metrics to Firm’s Stock Performance

Table 7 presents the conducted regression analysis to assess the relevance of the financial metrics to the firm’s stock performance. An initial multicollinearity test was conducted using the variance inflation factor (VIF) and it recommends the omission of financial metrics such as quick ratio (QR) and operating margin (OM).

#### Table 7. The value relevance of financial metrics to firm’s market value

<table>
<thead>
<tr>
<th>Regression</th>
<th>MPPS_t=3 mos.</th>
<th>MPPS_t=3 mos.</th>
<th>MPPS_t=3 mos.</th>
<th>MPPS_t=6 mos.</th>
<th>MPPS_t=6 mos.</th>
<th>MPPS_t=6 mos.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>coeff</td>
<td>p</td>
<td>vif</td>
<td>coeff</td>
<td>p</td>
<td>vif</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.64</td>
<td>0.04</td>
<td>1.03</td>
<td>0.05</td>
<td>0.00</td>
<td>1.03</td>
</tr>
<tr>
<td>ITO</td>
<td>(0.00)</td>
<td>0.62</td>
<td>1.03</td>
<td>(0.00)</td>
<td>0.63</td>
<td>1.03</td>
</tr>
<tr>
<td>CR</td>
<td>(0.05)</td>
<td>0.24</td>
<td>1.20</td>
<td>(0.01)</td>
<td>0.18</td>
<td>1.20</td>
</tr>
<tr>
<td>DE</td>
<td>0.08</td>
<td>0.27</td>
<td>1.12</td>
<td>0.02</td>
<td>0.27</td>
<td>1.12</td>
</tr>
<tr>
<td>12MSg</td>
<td>0.07</td>
<td>0.90</td>
<td>1.14</td>
<td>(0.06)</td>
<td>0.67</td>
<td>1.14</td>
</tr>
</tbody>
</table>
The Multiple R indicates that the financial metrics have positive relationships with the firms’ market value indicators. The R² and adjusted R² show weak relationships between the financial metrics with the changes in market price per share for the periods of 3 months, 6 months, year-to-date, and for 1 year. The F-Test (p<0.05) shows that the financial metrics are significant predictors of changes in the MPPS in different periods.

The regression analysis result shows that primarily, the accepted predictor variable is the return on asset (ROA) that would explain the changes in the MPPS for 3 months, 6 months and to date. Thus,

\[ \text{MPPS}_{t=3\text{mos.}} = 0.64 + (-6.72 \times \text{ROA}) + e_{it} \]
\[ \text{MPPS}_{t=6\text{mos.}} = 0.54 + (-1.31 \times \text{ROA}) + e_{it} \]
\[ \text{MPPS}_{\text{YTD}} = 0.29 + (-1.42 \times \text{ROA}) + e_{it} \]

For the change in MPPS for 1 year, it was found that dividend yield and return on assets are significant predictors. Thus,

\[ \text{MPPS}_{t=1} = 1.00 + (-9.65 \times \text{DY}) + (-0.58 \times \text{ROA}) + e_{it} \]

**Conclusion**

The study was pursued in order to determine the value relevance of the publicly disclosed financial metrics. Financial metrics are being used by firms to convey information about their business activities and strategies. In the point of view of stakeholders such as financial analysts, investors and shareholders, they analyze these financial metrics to evaluate whether the firms are able to create value which leads them to make rational investment decisions. A correlation analysis reveals that the firm’s effectiveness is significantly related to liquidity, solvency, revenue growth, profitability and dividend metrics. The firm’s market value is significantly related to liquidity, solvency, profitability and dividends. The firm’s stock performance suggests mixed results wherein change in market price per share is influenced by liquidity, profitability, dividends and the firm’s effectiveness. A regression analysis of the firm’s effectiveness found that the financial metrics are relevant factors to the return on asset however they are relevant to the return on equity. On the regression analysis of the firm’s market value, it was found that 12-month sales growth, 12-month earnings-per-share, and return on asset are relevant factors to the price-to-sales. In addition, the current ratio and debt-to-equity is relevant.
to the price-to-book. Also, the quarterly earnings-per-share and expected earnings-per-share is relevant to the price-earnings-growth. On the other hand, the financial metrics are not relevant to the price-to-earnings of the firm. On the regression analysis of the firm’s stock performance, it was found that the financial metrics are relevant to the changes in market price per share in different periods. Primarily, the return on asset is the most relevant financial metric that influences the market price per share in 3 months, 6 months and to date. In a year period, the dividend yield and return on asset are relevant to the change in market price per share.

The findings imply that the firms should continually improve on their business activities and strategies as reflected in the financial metrics. The firms must consider their liquidity, solvency, revenue growth, profitability, and dividend and earnings since these significantly influences the firm’s effectiveness, market value and stock performance. The mix results in the correlation and regression analysis do not suggest that firms must be reluctant on the financial metrics but instead they must enhance them since it could result to a favorable firm value. On the other hand, the stakeholders should consider financial metrics in their investment decisions hand-in-hand with other external factors that were not covered in this research.

Future research must continuously endeavor to find other relevant factors that could influence firm value. This study empirically establishes quantitative information found in financial statements of firms but off-balance sheet information may be relevant to firm value.

References


