The role of traditional and modern financial performance metrics in predicting shareholders' wealth

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Abstract

Shareholders are considered as one of the major key players of an organization. Present arena, stakeholders of the organizations attempt to find a timely and reliable metric to predict shareholders' wealth. The study aims to identify the relationship between traditional and modern financial metrics with shareholders' wealth. ROA and ROE were considered traditional financial performance metrics, while EVA was considered modern. Data of 24 firms based on the highest market capitalization, over five years from 2013-2017, were extracted from their annual reports. Descriptive Statistics, correlation analysis, multicollinearity, and the pooled ordinary least square methods were used to analyze data. The correlation analysis results denoted a positive relationship between ROA, ROE, and EVA with MVA. Hypotheses were tested based on the pooled regression results. The findings of the study revealed that ROA and EVA have a significant positive relationship with MVA, while the EVA is making the highest relationship towards MVA. Thus, it is recommended that the financial managers focus more on EVA in predicting shareholders' wealth.

Keywords: economic value added (EVA), market value added (MVA), return on assets (ROA), and return on equity (ROE)

Introduction

The business paradigm has been evolved from maximization of profit to maximization of shareholders' wealth at present. Any company will not exist in the market if they fail to create sufficient wealth for its shareholders. Therefore, shareholder wealth maximization is a superior objective of the businesses, as they are the firm's real owners. There are several measurement tools available, to predict shareholders' wealth. During the past decades, the linkage between performance measurement tools and shareholders' wealth has been discussed by an ample number of scholars scattered throughout the world. However, there is still a debatable concern to corporate executives to identify a proper measurement tool to predict shareholders' wealth. Such traditional measures have been criticized due to not inclusion of the cost of capital resources of the firm. To overcomesuch issues, economic value-based measure Economic Value Added (EVA) was proposed. (Erasmus, 2008 ;) EVA calculates shareholder wealth and is widely used by management for decision making and increasing productivity. EVA is an estimate of a business's real economic profit for the year, and it differs sharply from

accounting profit as it considers opportunity cost when calculating economic profit. The concept Market value Added (MVA) can be used to measure value added by a company to shareholder investments.

This research is conducted to analyze traditional and modern financial performance metrics' role in predicting shareholders' wealth as proxied by MVA. Data for the study has been collected from the sample of 24 companies listed in the Colombo Stock Exchange (CSE) based on the highest market capitalization. As of 31st October 2018, it has 297 listed companies with a combined market capitalization of over Rs.2793.0 billion. With the evolution of the traditional market into a globalized market, several concepts have emerged in the accounting field. In the 1990's Stern Stewart has introduced the EVA concept. It is calculated to predict shareholders' wealth. Thus, from the last decades the traditional metrics such as Return on Assets (ROA), Return on Equity (ROE), Earning per Share (EPS), and Dividend per Share (DPS) also calculate to predict shareholders' wealth. In Sri Lanka, companies registered in CSE use traditional and modern financial performance metrics to predict shareholders' wealth. Maximization of the shareholders' wealth is an important concept. Therefore, most of the accounting researchers have an interest in research on this topic. Because that research findings will help the shareholders, companies, financial managers, and future researchers. When considering the Sri Lankan context, the researchers realized that there are very little researches done on this topic. Several empirical studies have been conducted in the last two decades, first in the United States and later in the rest of the international market community, to answer whether it is better to use modern value-based performance measures. Those results were quite mixed and controversial.

Similarly, some studies argued that in reality, traditional accounting measures and economic measures have failed to reflect a company's true value due to the lack of long-term sustainability of a business and the issue of cost distortion. (Lev & Radhakrishnan, 2003; Lev & Zarowin, 1999). The efficiency of EVA is also criticized in extant studies (Biddle, Bowen & Wallace 1997).Therefore, these controversial results of the previous researches have inspired the researchers to research more on this topic. The researchers also identified that there are a few kinds of research have done for the Sri Lankan context. Therefore, the researchers identified that research gap and attempt to fill that gap by empirically analyzing the role of traditional and modern financial performance metrics in predicting shareholders' wealth. This study is directed towards answering the following research questions:

- What is the relationship between ROA and MVA?
- What is the relationship between ROE and MVA?

- What is the relationship between EVA and MVA?

This study is directed to achieve the following objectives:

- to identify the relationship between ROA and MVA.
- to identify the relationship between ROE and MVA.
- to examine the relationship between EVA and MVA.

Literature Review

Krupasindhu (2017) studied EVA and traditional accounting measures for shareholder's wealth creation. The researcher selected Malaysian public listed construction companies listed in the main market of Bursa Malaysia to generate findings. All the financial information based on the study's variables has been sourced from Kuala Lumpur stock exchange and Thomson Reuter data-based. The risk-free rate information has been extracted from the annual reports of Bank Negara Malaysia. The study's objective is to examine which measure leads to increasing shareholders' value out of traditional and modern measures. Panel data regression model was utilized in the study to analyze the data. Finally, the researcher concluded that increasing the economic value of shares leads to increase shareholders' value.

Larojan and Thevaruban (2015) conducted a study on EVA and MVA with listed financial companies' profitability performance in Sri Lanka. The objectives are to examine the relationship among MVA, EVA, ROA, and ROE of selected listed companies and investigate the impact of MVA on EVA, ROA & ROE of selected listed companies. The study used a sample of 20 firms listed in CSE from the industry, bank, finance & insurance sector. Annual reports from years 2012-2013 have been used to generate findings. The study applied the ordinary least square regression to test the content of EVA and MVA measures. Pearson correlation and regression methods were used to analyze the data. Finally, the study concluded that there is a significant relation between EVA and ROE with MVA, but there is no significant association between ROA and MVA. The findings showed that EVA is a useful measure in describing the firm's stock market value. Thilakerathne (2015) studied the EVA disclosure practices of Sri Lankan listed companies. The study used 85 Sri Lankan companies listed in CSE as aof2013, based on market capitalization. Annual reports of each company were examined for the financial years from 2009 to 2013 to examine the degree of EVA reporting practices among selected companies,. For this specific identification, he used industry affiliations, residential status, and medium (source of disclosure) and EVA applicability area as characteristics.

Further, univariate analysis was applied to analyze the difference between EVA reporting and non-reporting companies' performance. In this respect, the study used a t-test to assess the statistical significance of the difference between two independent sample means, age and residential status. The study's key findings showed that, based based on highest market capitalization, out of 85 listed companies, only 15 companies were included the EVA disclosure in their published annual reports based on business and financial performance measure. Around 82.35 percent were not reported EVA statements in their published annual reports. Around 26.67 percent of the EVA reporting listed companies likely to use EVA statements in a separate section, and another 26.67 percent of EVA reporting company willing to be included EVA statements in the sustainability report of their published annual reports. Around 46.67 percent of EVA reporting companies come under the Bank, Finance, and Insurance industry sector.

Methodology

This study examined the relationship between traditional and modern measures with shareholders' wealth. ROA, ROE, and EVA are considered independent variables, and the dependent variable is the shareholders' wealth. The concept Market Value Added measures it. The researchers calculated ROA, ROE, and MVA values based on the general equations, while EVA is extracted directly from the annual reports. The CSE had 297 companies representing 20 business sectors as at 31st October 2018. The researchers selected 24 companies as the study sample, out of 297 companies listed in CSE based on the highest market capitalization on the 10th of January 2019. The researchers collected the data by using a purposive or judgmental sampling method while collecting data from annual reports throughout 2013-2017.

Hypotheses of the study

H_1: There is a significant relationship between ROA and MVA.
H_2: There is a significant relationship between ROE and MVA.
H_3: There is a significant relationship between EVA and MVA.

Results and Discussions

Descriptive Statistics

Table 1. Results of descriptive statistics

Variables	Observations	Mean	Standard Deviation	Minimum	Maximum
ROA	120	12.5670	20.0874	0.16	100.50
ROE	120	44.5703	105.5467	0.42	626.51
EVA	120	23.3814	1.3942	19.13	25.66
MVA	120	23.5365	1.8642	17.76	28.74

The statistics denote the mean value of ROA exhibits 12.5670, standard deviation 20.0874, and the minimum and maximum values discovered as 0.16 and 100.50, respectively. Further, the ROE depicts the mean value of 44.5703 with a standard deviation of 105.5467 and the minimum and maximum values as 0.42 and 626.51, respectively. EVA indicates a mean value of 23.3814, with a standard deviation of 1.3942 and the minimum and maximum values as 19.13 and 25.66. Finally the dependent variable MVA indicates the mean value of 23.5365, the standard deviation of 1.8642, and the minimum and maximum values as 17.76 and 28.74, respectively.

Correlation Analysis

Table 2. Results of the correlation matrix

Variables	ROA	ROE	EVA	MVA
ROA	1.0000			
ROE	0.9067	1.0000		
EVA	0.3375	0.3100	1.0000	
MVA	0.5955	0.5439	0.6081	1.0000

Table 2 denotes the correlation outcomes among the dependent and independent variables. According to the results, it depicts a 59.55% relationship between ROA and MVA; at the same time, it illustrates the 54.39% relationship between ROE and MVA, while the EVA depicts the relationship of 60.81% with MVA. Therefore, the results denote that all three metrics have a moderate relationship with MVA. Hence, the EVA denoted the highest relationship with MVA, than the ROA and ROE.

Pooled Linear Regression

Table 3. Results of pooled regression

Variables	Coefficient	Sta. Error	P - Value
ROA	0.0399	0.0140	0.005***
ROE	0.0002	0.0026	0.937
EVA	0.6142	0.0893	0.000***
constant	8.6647	2.0668	0.000
R-squared	0.5417		
Adj. R-Squared	0.5298		
F Value	45.70		
Prob>F	0.0000		

***p<0.01,**<0.05,*p<0.1

Table 3 presents pooled regression analysis findings with information on the impact of an independent and dependent variable. In this study, the value of Adjusted R- Square is 0.5298, which denotes that 52.98% of the variation of the dependent variable (shareholders' wealth) can be defined by the three

independent variables, namely, ROA, ROE, and EVA while remaining 47.02% of the dependent variable defined by the other variables such as EPS, DPS, ROCE, RONW, etc. which were not included in the study. Based on the F-Value statistics, 45.70 along with the P-value of 0.0000, which is lower than 0.01. Therefore, it has been proved that the model utilized in the current study is significant, even at the 1% level. The constant value denotes the value of MVA when all the other variables are remaining unchanged. In this study, the constant value depicts 8.6647. It illustrates that while ROA, ROE, and EVA are being left unchanged when the expected level of MVA is 8.6647. As referring to the results, the pooled regression equation can be illustrated as follows. $MVA = 8.6647 + 0.0399\ X_1 + 0.0002\ X_2 + 0.6142\ X_3 + \varepsilon$

Where,

MVA = Market Value Added

X_1 = ROA

X_2 = ROE

X_3 = EVA

ε = Error term

The regression analysis outcomes indicated that all variables have a positive impact on the shareholders' wealth. Out of all three independent variables, EVA, followed by the ROA, makes the highest influence, making the highest influence on shareholders' wealth by 0.6142 and 0.0399 respectively. At the same time, ROE has the lowest influence, which denotes 0.0002 on shareholders' wealth. It is predicted to increase MVA by 0.006142 when EVA increases by 1%, increases MVA by 0.000399 when ROA increases by 1% and increases MVA by 0.000002 when ROE increases by 1%.

Table 4. Hypotheses testing based on Pooled Regression

No	Coef. Value	P-Value	Criteria	Result
H_1	0.0399	0.005	P< 0.05	Supported
H_2	0.0002	0.937	P> 0.1	Not Supported
H_3	0.6142	0.000	P< 0.01	Supported

Conclusions and Recommendations

Based on the Pooled regression results, ROA and EVA denoted significant positive relationship with MVA while EVA denoted the highest relationship. ROE denoted insignificant positive relationship with MVA. Based on the results, it can be concluded that EVA helps to maximize shareholders' wealth than the ROE and ROA, as it accounts opportunity cost of equity capital. Regression results show that the companies still rely on ROA than ROE when

predicting shareholders' wealth. The research findings denoted EVA has the highest positive relationship with MVA. Based on the results, it can be recommended for companies' financial managers to focus more on EVA when predicting shareholders' wealth, as increase in the economic value of shares leads to increased shareholder wealth creation. Further, it can be recommended for the shareholders to concern more on EVA, as it helps properly take investment decisions. If Companies increase EVA and MVA, it will lead to gain higher financial performance. Finally, when designing shareholder-related policies, if financial managers and the Directors of the companies focus more on the EVA concept, they can uplift the morale and commitment from the shareholders towards their organizations.

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