Journal of Multidisciplinary Studies
Vol. 5, Issue No. 1, pp. 58-77, August 2016
ISSN 2350-7020 (Print)
ISSN 2362-9436 (Online)
doi: http://dx.doi.org/10.7828/jmds.v5i1.1018

The Potential of Economic Value Added (EVA) as Predictor of Stock's Marketability

Ringgold P. Atienza

College of Business and Management, Misamis University,
H. T. Feliciano St.,Ozamiz City, Philippines
Corresponding author: Ringgold P. Atienza, email: ringgoldatienza@yahoo.com

Abstract

There is very little evidence on the adoption of the value-based management (BVM) performance measure such as the economic value added (EVA) in the Philippine companies. Empirical evidence in other countries showed that EVA is a superior measure for shareholder value. However, the application of EVA is proved to be harder as compared with readily available measures. This study aimed to test the potential of EVA as predictor of stock's marketability. It also aimed to provide companies the justification whether the benefits of using EVA exceeds its costs. Historical data from 2003 – 2016 of the Philippine companies using the Compustat - Capital IQ from Standards and Poor's database were utilized. Out of 293 total companies, only 92 were retained after checking for data completeness and outlier values. The panel data were analyzed using the fixed effects model. The results showed that EVA is a superior predictor of the stock price compared to Return on Equity (ROE), Return on Assets (ROA) and Earnings per Share (EPS), although EPS is almost providing equally comparable results. Results also showed that EVA could capture some invisible value omitted by the financial statement to market valuation. While EVA generally provides potential information on company performance, it should be used with precaution and without expectations beyond what it can give. This study provides a general implication among companies on their decision to embrace EVA in their managerial performance and investor communication.

Keywords: assets, companies, earnings, equity, stock

Introduction

In the last decade, the corporate world has drastically evolved. As a result, managers and investors are seeking for an economic framework which better mirrors the value and profitability of their firms (Al Mamun, & Mansor, 2012). Accounting tools which are still used today are not sufficient to face the challenge arising from efficient capital markets and owners. Value-based measurement (VBM) has been argued as a major development tool which could better reflect the opportunities and downsides compared to the traditional financial performance measures (Erasmus, 2008). The Economic value added (EVA) is one of the VBM performance measures developed by Stern Stewart & Company (Stern, 1985).

Economic value added (EVA) is a corporate finance calculation of the true economic profit generated by a firm (Sharma & Kumar, 2010). It is one of the many performance measures that was developed in an attempt to provide a better representation of company performance (Stewart, 1991). It calculates the economic value achieved or created by the business over a particular period. Economic Value Added is the change in NOPAT (Net Operating Profit after Taxes) less the change in the COC (Cost of the Capital) of a firm that is used to generate the net operating profit (Rappaport, 1999). Thus, EVA basically relies on the firm operating profit, taxes, debt level, and the cost of capital.

Around the late 1980s, the motivation for researching alternative performance measure rose because of the deficiencies of the contemporary accounting measures in terms of predicting stock returns and in inducing management performance (Cordeiro & Kent, 2001). With the use of contemporary accounting performance measures such as earnings per share (EPS), managers can easily make manipulation in accounting techniques and change the performance measure according to their desires. Sometimes, this manipulation does not result in an improvement of shareholder value but instead an attempt to fool investors about the real situation of the company. The financial scandals in the past could have been easily detected if better measures were used such as EVA (Kimball, 2006).

Journal of Multidisciplinary Studies
Vol. 5, Issue No. 1, pp. 58-77, August 2016
ISSN 2350-7020 (Print)
ISSN 2362-9436 (Online)
doi: http://dx.doi.org/10.7828/jmds.v5i1.1018

However, the EVA was less adopted in the early 80s, but in the 90s, it became prominent among corporations. There are number of researchers who found positive results in their study on EVA and therefore have supported the theory of EVA (Forker, & Powell, 2004; Houle, 2008; Issham, 2010). In spite of, earnings management is harder when EVA is used as a performance measure. As a result, EVA was considered the best economic performance measure for assuming the shareholder wealth (Hunt, 1985; Dyl, 1989; Gomez-Mejia & Balkin, 1992).

In the early 90s before the EVA, there was a challenge to conventional earnings measures as appropriate performance benchmarks primarily because conventional measures did not reflect economic profit, and the charge on shareholders' funds was not accounted for (Stern et al., 1995). The EPS-based model of financial management was inefficient that resulted in overinvestment as the wave of hostile takeovers and leveraged buyouts in USA capital markets during 1980s (Stern, 1985). Accordingly, EPS-based decision-making encouraged overinvestment by managers to achieve higher growth. The changing dynamics of the fiercely competitive environment warrants implementation of EVA-based financial management. The system ensures additional investment only if expected returns are more than the total charge on capital employed, and divestment of assets only if earnings produce inadequate returns. Such contention was supported by Girotra and Surendra (2001) who concluded that EVA motivates managers to think like owners. The EVA-aligned performance management offers strategic flexibility by re-engineering existing management practices to do away with prevalent ambiguities in shareholders' value creation, a crucial driver for financial performance, continuity and change business organization (Shah et al., 2014).

There was a question if EVA can provide new information in predicting the stock market prices of the firms in the Philippines when used along with the common measures of returns and earnings such as Return on Equity (ROE), Return on Assets (ROA) and Earnings per Share (EPS). This question is prevalent among extant literature and proves the value relevance of EVA to stock returns when used in

conjunction with accounting earnings and returns measures although general results among the studies differ in different contexts (Garvey & Milbourn, 2000; Girotra & Surendra, 2001; Maditinos et al., 2009; Madhavi & Prasad, 2015).

Also, the problem with alternative measures is the difficulty to acquire them as they are not easily provided by the companies. Rather, investors turn to the bang of the buck measures such as ROA, ROE, and EPS as these are readily-available information in choosing the best opportunities for investment. Because of the prominence of these accounting ratios, alternative performance measures that are not readily and easily calculable like EVA are not easily embraced. Thus, the adoption of EVA among companies in the Philippines is not prevalent. There is very little evidence showing that Philippine companies use EVA as their value-based performance measure in the management nor it is used to present its company performance in their annual reports. Nevertheless, in recent time, EVA has been able to gain attention of the corporate giants like Coca-Cola, Sprint Corporation and Quaker Oats, as it is able to depict the true profitability of the company, but there have been very little research conducted on EVA in Asian countries (Al Mamun & Mansor, 2012).

Considering that EVA might not be present during the determination of stock price, two assumptions are likely possible. First, that investors' decisions were made in the presence of the prominent performance measures, and that these measures already reflect the stock prices of companies. Second, historical data could be used in measuring the predictive ability of EVA when in fact this performance measure was highly unlikely considered or known of by the participants in the market.

The second assumption departs from the theory of value relevance. However, it can be argued that the EVA is part of the reflection of the intangible performances of the companies such as investment in R&D, information technology, brands, human resources, market values, operations, and economic conditions upon which this current study is anchored (Figure 1). These intangible performances are the invisible values omitted from the financial statements (Chen et al., 2005).

Journal of Multidisciplinary Studies
Vol. 5, Issue No. 1, pp. 58-77, August 2016
ISSN 2350-7020 (Print)
ISSN 2362-9436 (Online)
doi: http://dx.doi.org/10.7828/jmds.v5i1.1018

This idea is also supported by Lev & Zarowin (1999) as they pointed out that it is in those intangible performances that the accounting system fails most seriously to reflect enterprise value and performance.

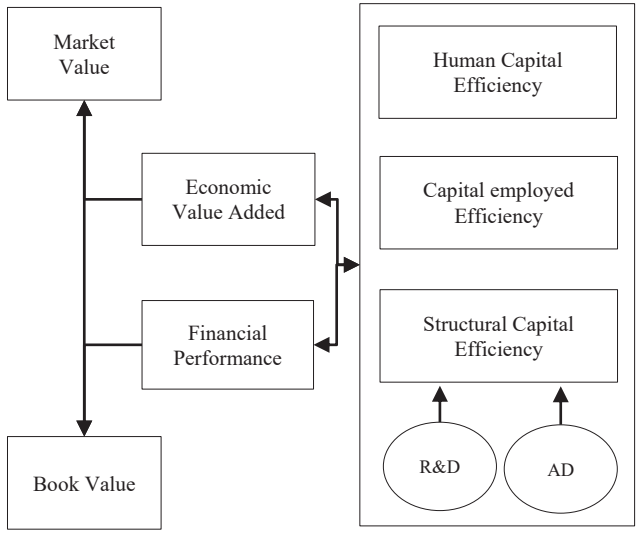

Figure 1. Theoretical framework.

There are two areas to further the knowledge about EVA. First is the potential value relevance of EVA as a future alternative performance measure in the Philippine companies' stock price. Understanding the degree of which EVA can predict the stock price provides confidence in its usage as a predictor stock performance measure. As such, the inclusion of EVA in the companies' reports is deemed beneficial for the investors to improve their assessment of the company' performance. The second, is the ability of the EVA to capture the invisible omitted value of financial statement to the market value of the company. This information is important to provide general confidence of effectiveness of accounting in providing real economic standing of the companies.

Hence, this study aimed to test the potential of economic value added (EVA) as predictor of stock's marketability. Specifically, this study tested the predictive value of EVA by determining the extent how

it affects the coefficient of determination and whether this measure can capture the disparity of book value to market value. This study may provide a general implication among companies on their decision to embrace EVA in their managerial performance and investor communication.

Material and Methods

Data

The analysis made use of the Philippine Stock Market data, spanning the period of 2003 – 2016 using Compustat - Capital IQ from Standards and Poor's database. A total of 293 companies were sampled and companies without complete data from this period were dropped. Data were also cleaned against outliers. A total of 92 companies were used for the final data analysis. The 2008 – 2016 observations of stock price, EVA, ROE, ROA, and EPS were used.

The 2003-2007 data were used to determine the components needed to compute the EVA. The EVA was calculated as the product of the book value of the capital employed in the business and the spread between the rate of return, defined as r, and the cost of capital, defined as c (Stern, 1985):

$$EVA = Capital\ invested\ \times\ (r - c) \tag{1}$$

where *capital invested* is the total assets in the period beginning, the rate of return*, r,* is the return on equity (ROE) and the market-based cost of capital*, c,* is the weighted average cost of capital (WACC):

$$WACC = Cost\ of\ Equity \frac{E}{E+D} + Cost\ of\ Debt\ (1-t)\ \frac{D}{E+D} \tag{2}$$

Journal of Multidisciplinary Studies
Vol. 5, Issue No. 1, pp. 58-77, August 2016
ISSN 2350-7020 (Print)
ISSN 2362-9436 (Online)
doi: http://dx.doi.org/10.7828/jmds.v5i1.1018

This study used the Capital Asset Pricing Model (CAPM) theory in determining the cost of equity. The CAPM is a model widely used throughout finance in determining a theoretically appropriate required rate of return, thus, it is the rate of return an investor expects to gain based on the inherent risk level of an asset. For companies, the required rate of return is the cost of acquiring an investment. The CAPM formula is as follows:

$$(E)R_i = R_f + \beta_i[(E)R_m - R_f] \quad (3)$$

where $(E)R_i$ is the expected return on the capital asset, R_f is the risk-free rate of interest using the government securities yield rates on ten-year T-bond of the Philippines, β_i is the beta or the sensitivity of the assets return in relation to the market return (PSEi). This is calculated using the formula:

$$\beta_i = \frac{Cov(R_{i_{t-5}}, R_{m_{t-5}})}{Var(R_{m_{t-5}})} \quad (4)$$

$(E)R_m$ is the expected return of the PSEi which was calculated using the average return of the previous years starting from year 2003. Consequently, the ten-year T-bond annual yield is used as the *cost of debt*.

The EPS of companies was provided in the dataset of Compustat while the ROE is calculated as,

$$ROE = \frac{Net\ Income}{Average\ Shareholder's\ equity} \quad (5)$$

the ROA as,

$$ROA = \frac{Net\ Income}{Averate\ Total\ Assets} \quad (6)$$

and the disparity of book value to market value is the difference between the market price per share and the book value per share (Table 1).

Levin-Lin-Chu unit root test

Levin et al. (2002) developed a procedure for testing whether a variable has a unit root (i.e., non-stationarity) or, equivalently, that the variable follows a random walk in Panel Data. Levin-Lin-Chu (LLC) suggest a null hypothesis that each time series contains a unit root and an alternative hypothesis that each time series is stationary. The process starts with using the Dickey & Fuller (2016) augmented Dickey-Fuller (ADF) test, on each cross section of the equation:

$$\Delta y_{it} = \rho_i y_{i,t-1} + \sum_{l=1}^{\rho_i} \emptyset_{i,l} \Delta y_{i,t-1} + \alpha_i d_{it} + \varepsilon_{it} \quad (7)$$

where d_{it} are the deterministic components, $\rho_i = 0$ means that the *y* process has a unit root for the individual *í,* while $\rho_i < 0$ means that the process is stationary around the deterministic part.

The LLC then ran two auxiliary regressions: $\Delta y_{it}\ on\ \Delta y_{i,t-l}\ and\ d_{it}$ to obtain the residuals $\hat{e}_{it}$, and $y_{i,t-1}\ on\ \Delta y_{i,t-l}\ and\ d_{it}$ to get the residuals $\hat{u}_{i,t-1}$. Next step involved the standardization of the residuals by performing $\hat{e}_{it} = \hat{e}_{it}/\sigma_{\epsilon i}$ and $\hat{u}_{i,t-1} = \hat{u}_{i,t-1}/\sigma_{\epsilon i}$ where $\sigma_{\epsilon t}$ denotes the standard error from each ADF. Finally, LLC ran the pooled OLS regression $\bar{e}_{it} = \rho \bar{u}_{i,t-1} + \varepsilon_{it}$. Table 2 shows the result of LLC unit root test showing whether the null hypothesis is $\rho_i = 0$ and the alternative hypothesis is $\rho_i < 0$.

Journal of Multidisciplinary Studies
Vol. 5, Issue No. 1, pp. 58-77, August 2016
ISSN 2350-7020 (Print)
ISSN 2362-9436 (Online)
doi: http://dx.doi.org/10.7828/jmds.v5i1.1018

Table 1. Data from descriptive statistics.

Variables	Mean	Median	Min	Max	Std. Dev.	Skew	Kurt	10% Perc.	90% Perc.
Economic value added	15,856.000	2W04.000	-245,345.000	745,105.000	66,959.000	4.507	33.226	-6361.000	47,314.000
Return on equity	.2502	.2250	-.1502	8.486	1.074	-2.884	64.217	-0.242	0.914
Return on assets	0.025	0.022	-1.126	0.918	0.105	-1.678	31.425	-0.043	0.102
Earnings per share	3.975	0.188	-3.965	212.854	18.492	7.837	70.830	-0.045	5.727
Stock price	62.319	3.840	0.003	2,906.000	278.516	7.284	60.018	0.262	86.450
Total assets	125,804.600	9,568.094	1.714	266,8104.000	297,147.300	4.065	23.262	990.450	365,172.500
Net income	3,081.453	317.851	-11,648.100	56,518.000	6,367.187	2.968	14.553	-70.428	10,703.670
Book to market disparity	35.229	0.016	-239.158	2245.861	210.984	7.580	64.542	-6.361	37.265

Table 2. Data from the Levin-Lin-Chu unit root test.

Variables (in log values)	ADF Reg / LR Variance	Unadjusted t	Adjusted t*	P-value
Economic value added	1 lag / 6 lags	-18.418	-8.484	0.000
Return on equity	1 lag / 6 lags	-30.725	-23.645	0.000
Return on assets	1 lag / 6 lags	-29.057	-22.1299	0.000
Earnings per share	1 lag / 6 lags	-12.106	-5.149	0.000
Stock price (log)	1 lag / 6 lags	-24.591	-16.184	0.000

Normality of residuals check

Since the results of the skewness and kurtosis showed the non-normal distribution in the descriptive statistics previously presented in this paper, an initial diagnostic test was done to check the normality of residuals of the dependent variable stock price and book to market disparity with the independents EVA, ROE, ROA, and EPS. The left side panels (a) and (c) in Figures 2 and 3 show that the result of the residuals of stock price and market to book disparity levels are both over-dispersed, which means that both have a leptokurtic distribution and positive excess kurtosis. Both variables were log transformed, and the results showed that the residual distributions were improved (right panels). Thus, log value on stock price and book to market disparity were used in the analysis.

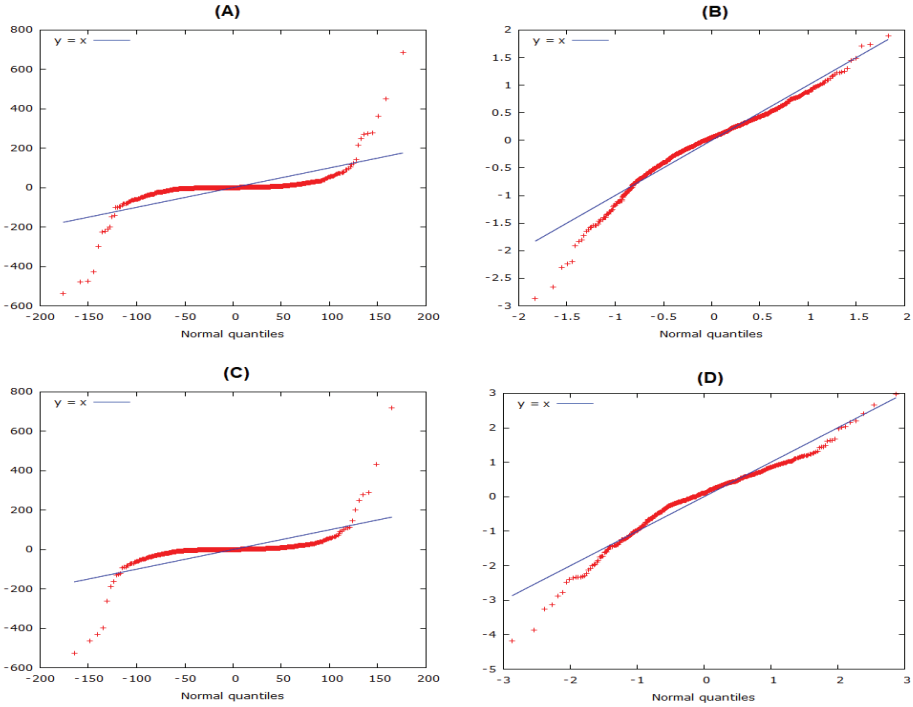

Figure 2. Residual Q-Q plot.

Journal of Multidisciplinary Studies
Vol. 5, Issue No. 1, pp. 58-77, August 2016
ISSN 2350-7020 (Print)
ISSN 2362-9436 (Online)
doi: http://dx.doi.org/10.7828/jmds.v5i1.1018

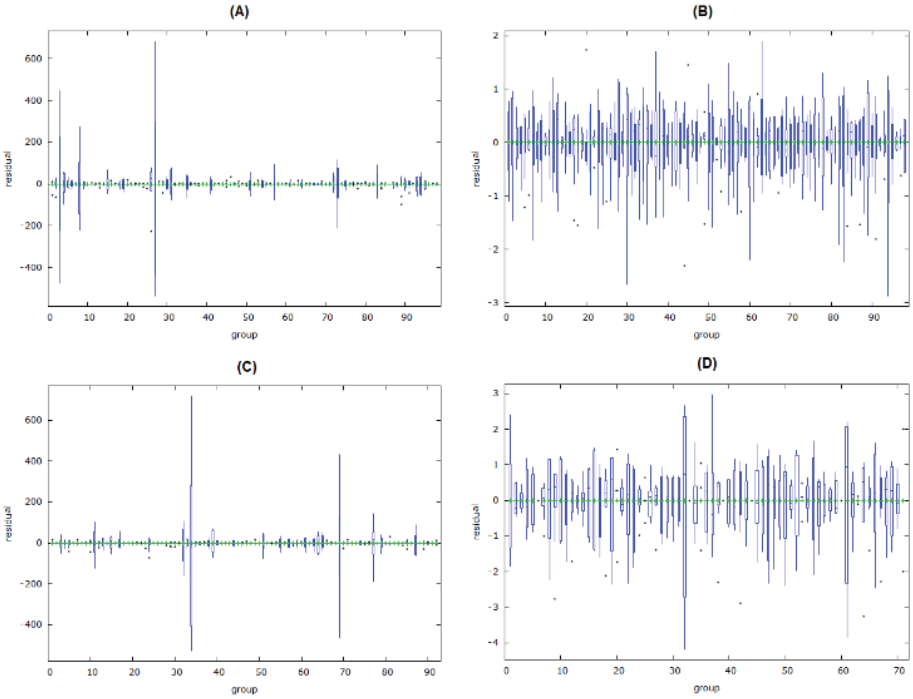

Figure 3. Residual BOX PLOT.

Generalized fixed effects model

Panel data allow the analysis of observations of multiple phenomena obtained over multiple time periods for the same firms. These data are most useful in treating omitted variables bias. If such omitted variables are constant over time, the panel data estimators allow to consistently estimate the effect of the observed explanatory variables. The generalized fixed effects model is shown below:

$$Y_{it} = \beta_1 X_{it1} + \beta_2 X_{it2} + \ldots + \beta_k X_{itk} + a_i + u_{it} \quad (8)$$

where Y_{it} is the dependent variable, and the subscript i is entity and t is time; β is the coefficient for the independent variable; X_{it} represents one independent variable where i is the entity and t is the time; a_i represents the unobservable individual-specific effects and u_{it} represents the

unobserved factors that change over time, and are the idiosyncratic terms that affect the Y_{it}.

Results and Discussion

Table 3 presents the correlation matrix showing that the EVA is significantly correlated with ROE (r = 0.176), ROA (r = 0.098) and EPS (r = 0.599). Although the correlation values are considerably not that high, the fact that it shows significance to all variables of interest in this study raises an important issue of whether the performance measures, ROE, ROA, EPS, have already captured the information that the EVA is trying to measure.

All performance measures: EVA, ROE, ROA, and EPS are significant at a 99% confidence level on the dependent variables stock price and book to market disparity (Table 4). The results are consistent when it comes to ranking the capability of measures in explaining the variation of both dependent variables. Economic value added indicated stronger explanatory variables as compared to the other three measures. This measure as a relatively more superior predictor for stock price or stock return is supported by other studies (Chen & Dood, 1997; Al Mamun & Mansor, 2012). However, the study of Madhavi and Prasad (2015) showed that EPS provides a greater gauge for stock returns. The study of Maditinos et al. (2009) also showed results that do not support that EVA outperforms other earnings measures.

Even if EVA provides a superior measure than the common accounting earnings, it does not necessarily lead to the conclusion that it is the single best internal performance measure that drives the stock price. There is no single determinant on which one can rely to profitably predict the market (Chen & Dodd, 2001). Even though there are advocates who have claimed that improving EVA is associated with the higher stock return, the EVA is not as strong as suggested in anecdotal EVA stories (Chen & Dood, 1997).

Journal of Multidisciplinary Studies
Vol. 5, Issue No. 1, pp. 58-77, August 2016
ISSN 2350-7020 (Print)
ISSN 2362-9436 (Online)
doi: http://dx.doi.org/10.7828/jmds.v5i1.1018

Table 3. Correlation matrix.

Variables	1	2	3	4	5	6
Stock price	1	0.938^{***}	0.497^{**}	0.274^{**}	0.198^{**}	0.466^{**}
Market to book disparity		1	0.518^{**}	0.269^{**}	0.155^{**}	0.498^{**}
Economic value added			1	0.176^{**}	0.098^{**}	0.599^{**}
Return on equity				1	0.479^{**}	0.166^{**}
Return on assets					1	0.110^{**}
Earnings per share						1

Note: $^{*}p \leq 0.10$, $^{**}p \leq 0.05$, $^{***}p \leq 0.01$ (2-tailed)

Table 4. Panel regression with fixed effects model.

Dependent: Stock price (Log)	**Model 1a**	**Model 2a**	**Model 3a**	**Model 4a**
Constant	1.3928***	1.4253***	1.4138***	1.3955***
	(0.0212)	(0.2164)	(0.0199)	(0.0232)
Economic value added	2.33e-6***			
	(4.40e-7)			
Return on equity		0.0713***		
		(0.0200)		
Return on assets			1.1497***	
			(0.2340)	
Earnings per share				0.0119***
				(0.0032)
R-square	0.2305	0.0308	0.0387	0.2070
Dependent: Book to market disparity (Log)	**Model 1b**	**Model 2b**	**Model 3b**	**Model 4b**
Constant	1.1654***	1.2407***	1.2348***	1.1854***
	(0.0574)	(0.0501)	(0.0513)	(0.0625)
Economic value added	2.73e-6***			
	(8.88e-7)			
Return on equity		0.3416		
		(0.2150)		
Return on assets			0.9317	
			(0.5689)	
Earnings per share				0.0116**
				(0.0057)
R-square	0.2686	0.0722	0.0241	0.2481

Note: *p ≤ 0.10, **p ≤ 0.05, ***p ≤ 0.01. Values in parentheses denote standard error.

Journal of Multidisciplinary Studies
Vol. 5, Issue No. 1, pp. 58-77, August 2016
ISSN 2350-7020 (Print)
ISSN 2362-9436 (Online)
doi: http://dx.doi.org/10.7828/jmds.v5i1.1018

Collectively, the model that contains EVA along with other performance measures might greatly improve the yield of R-square, but in most studies, EVA alone was not able to account for more than 30% of the variation of the stock price or stock return. Thus, companies should be cautious in their unrealistic expectation about the potential predictability of EVA on stock performance since there are many factors that could affect stock price, and this study cannot claim that EVA is all the company needs to improve their stock performance (Chen & Dodd, 2001).

The decrease in R-square was highest when EVA was omitted as shown in Table 5, where the R-square value was down to 0.2289 from 0.2852. This result answers our question whether there is a significant benefit for companies if they adopt EVA in addition to the accounting performance measures. Economic value added does provide significant benefit in measuring stock performance as evidenced by the empirical results of this study.

It is also good to note that the R-square value decreased to 0.2333 from 0.2852 when EPS was omitted. The difference of the R-square values on the omission of EVA and EPS is only 0.0044. Therefore, these two measures are almost equally comparable when used in conjunction with ROE and ROA measures. However, this also puts the value of EVA in question if EPS is present. Using EVA rather than EPS may provide some benefit but may not be large enough to justify the extra cost involved in calculating EVA or adjusting the annual reports to reflect EVA. As also shown in the results, the ability of EVA to capture the invisible value omitted from the financial statements had shown to be present as it decreases the R-square to 0.2775 from 0.3461 when EVA was omitted to the model in which all measures are included.

Future adopters should consider that difference of EVA and EPS when omitted only provides additional explanation to the variation of the book to market disparity by about 0.0195 (R-square). The companies should also consider that both measures would provide good explanatory power when used in conjunction along with other accounting performance measures.

Table 5. Panel regression with fixed effects model.

Dependent: Stock Price (Log)	**Model 5a**	**Model 6a**	**Model 7a**	**Model 8a**	**Model 9a**
constant	1.3452***	1.3577***	1.3239***	1.3345***	1.3592***
	(0.0241)	(0.1973)	(0.1846)	(0.1831)	(0.1836)
Economic value added	2.01e-6***		2.22e-6***	2.14e-6***	2.57e-6***
	(4.44e-7)		(4.50e-7)	(4.59e-7)	(4.49e-7)
Return on equity	0.0012	0.0190		0.0494**	-0.0012
	(0.0141)	(0.00241)		(0.0203)	(0.0245)
Return on assets	1.0116***	0.9464***	1.0243***		1.1216***
	(0.2343)	(0.2855)	(0.2358)		(0.2855)
Earnings per share	0.0072**	0.0141***	0.0113**	0.0125***	
	(0.0033)	(0.0031)	(0.0032)	(0.0032)	
R-square	0.2852	0.2289	0.2864	0.2758	0.2333
Dependent: Book to Market Disparity (Log)	**Model 5b**	**Model 6b**	**Model 7b**	**Model 8b**	**Model 9b**
constant	1.0823***	1.1564	1.0877***	1.0943***	1.1247***
	(0.0698)	(0.0649)	(0.0695)	(0.0687)	(0.0615)
Economic value added	2.47e-6***		2.49e-6***	2.46e-6***	2.67e-6***
	(9.00e-7)		(8.99e-7)	(9.00e-7)	(8.88e-7)
Return on equity	0.1883	0.2056		0.2773	0.2112
	(0.2326)	(0.2344)		(0.2145)	(0.2321)
Return on assets	0.6079	0.5892	0.8009		0.6742
	(0.6155)	(0.6204)	(0.5672)		(0.6138)
Earnings per share	0.0075	0.0102*	0.0078	0.0079	
	(0.0058)	(0.0649)	(0.0058)	(0.0057)	
R-square	0.3461	0.2775	0.3299	0.3482	0.2970

Note: *$p \leq 0.10$, **$p \leq 0.05$, ***$p \leq 0.01$. Values in parentheses denote standard error.

Journal of Multidisciplinary Studies
Vol. 5, Issue No. 1, pp. 58-77, August 2016
ISSN 2350-7020 (Print)
ISSN 2362-9436 (Online)
doi: http://dx.doi.org/10.7828/jmds.v5i1.1018

Conclusion and Recommendations

This study is able to prove the potential of economic value added (EVA) as a predictor of the stock's marketability. The potential of EVA becomes even highly evident when used in conjunction with the other accounting performance measures. However, while EVA generally provides potential information on company performance, it should be used with precaution and without having expectations beyond what it can give.

The use of EVA as a management tool for evaluating management performance in the Philippine companies is recommended. However, specific company agency considerations and organizational strategies are to be considered for its usage. The information of EVA should also be constantly communicated among investors through their annual or other periodical reports to provide investors a better assessment of company performance. Future studies can be done in Philippine companies by exploring the EVA phenomenon using case study analysis of firms adopting EVA as their management tool in measuring performance and in communicating company performance to investors. Further studies can also be conducted using in-depth interviews among key informants in some sampled companies regarding challenges on how and why EVA could be a potential predictor of stock's marketability.

Acknowledgment

The author would like to thank the De La Salle University for providing access on Wharton Research Data Services (WRDS).

Literature Cited

Al Mamun, A., & Mansor, S. A. (2012). EVA as superior performance measurement tool. *Modern Economy*, *3*(03), 310. doi: http://dx.doi.org/10.4236/me.2012.33041

Chen, S., & Dodd, J. L. (2001). Operating income, residual income and EVA: Which metric is more value relevant. *Journal of Managerial Issues*, *13*(1), 65–86.

Chen, M.-C., Cheng, S.-J., & Hwang, Y. (2005). An empirical investigation of the relationship between intellectual capital and firms' market value and financial performance. *Journal of Intellectual Capital*, *6*(2), 159–176. doi: https://doi.org/10.1108/146 91930510592771

Chen, S., & Dood, J. (1997). Economic value added (EVA ™): An empirical examination of a new corporate performance measure. *Journal of Managerial Issues*, *9*(3), 318–333. Retrieved from http://www.jstor.org/stable/40604150

Cordeiro, J. J., & Kent Jr, D. D. (2001). Do EVA™ adopters outperform their industry peers? Evidence from security analyst earnings forecasts. *American Business Review*.

Dickey, D. A., & Fuller, W. A. (1979). Distribution of the estimators for autoregressive time series with a unit root. *Journal of the American Statistical Association*, *74*(366a), 427-431. doi: https://doi.org /10. 1080/01621459.1979.10482531

Dyl, E. A. (1989). Agency, corporate control and accounting methods–the lifo-fifo choice. *Managerial and Decision Economics*, *10*(2), 141-145. doi: https://doi.org/10.1002/mde.4090100209

Journal of Multidisciplinary Studies
Vol. 5, Issue No. 1, pp. 58-77, August 2016
ISSN 2350-7020 (Print)
ISSN 2362-9436 (Online)
doi: http://dx.doi.org/10.7828/jmds.v5i1.1018

Erasmus, P. (2008). Value based financial performance measures: An evaluation of relative and incremental information content. *Corporate Ownership & Control*, *6*(1), 66-77.

Forker, J., & Powell, R. (2004, April 3). "Does EVA beat earnings? Evidence on associations with stock returns and firm values—Revisited,". EAA Meeting, Prague (pp. 301-336).

Garvey, G. T., & Milbourn, T. T. (2000). EVA versus earnings : Does It matter which is more highly correlated with stock returns? *Journal of Accounting Research*, *38*(2000), 209 - 245.

Girotra, A., & Surendra, Y. (2001). Economic value added (EVA): A new flexible tool for measuring corporate performance. *Global Journal of Flexible Systems Management*, *2*(1), 7–18.

Gomez-Mejia, L., & Balkin, D. (1992). *Compensation, Organizational Strategy, and Firm Performance*. Cincinnati: Southwestern.

Houle, M. (2008). "Economic value added". Liberty University, Lynchburg.

Hunt, H. G. (1985). Potential determinants of corporate inventory accounting decisions. *Journal of Accounting Research*, *23*(2), 448-467. doi: 10.2307/2490820

Issham, I. (2010). Performance of public-listed companies in Malaysia: Using EVA.

Kimball, B. (2006). *Economic value added: The accurate method of company valuation and just compensation for management*. (A Senior Thesis). Liberty University, Lynchburg, Virginia, USA.

Lev, B., & Zarowin, P. (1999). The boundaries of financial reporting and how to extend them. *Journal of Accounting Research*, *37*(2), 353-385. doi: https://doi.org/10.2307/2491413

Levin, A., Lin, C. F., & Chu, C. S. J. (2002). Unit root tests in panel data: asymptotic and finite-sample properties. *Journal of Econometrics*, *108*(1), 1-24. doi: https://doi.org/10.1016/S0304-4076(01)00098-7

Madhavi, E., & Prasad, M. S. V. (2015). Assessing corporate performance with measures of value added as key drivers of shareholder wealth: An empirical study. *IUP Journal of Business Strategy*, *12*(4), 19–34. doi: https://doi.org/10.1063/1.1716172

Maditinos, D. I., Šević, Ž., & Theriou, N. G. (2009). Economic Value added (EVA®). Is it really the best performance measure? A Review of the theoretical and empirical literature. The case of Athens stock exchange (ASE). *Journal of Modelling in Management*, *4*(3), 182–201.

Rappaport, A. (1999). *Creating shareholder value: A guide for managers and investors*. USA: Simon and Schuster.

Shah, R. B., Haldar, A., & Nageswara Rao, S. V. D. (2014). Economic value added: A financial flexibility tool. *Corporate Ownership and Control*, 1727-9232.

Sharma, A. K., & Kumar, S. (2010). Economic value added (EVA)-literature review and relevant issues. *International journal of economics and finance*, *2*(2), 200-220.

Stern, J. (1985). Acquisition, pricing, and incentive compensation. *Corporate Accounting*, *3*(2), 26–31.

Stern, J. M., Stewart III, G. B., & Chew, D. H. (1995). The EVA® financial management system. *Journal of Applied Corporate Finance*, *8*(2), 32-46. doi: https://doi.org/10.1111/j.1745-6622.1995. tb00285.x

Stewart, G. B. (1991). *The quest for value*. Harper Collins.