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Is Economic Value Added (EVA) or Net Profit a Better Predictor of Commercial Banks' Performance: A Study on Dhaka Stock Exchange

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Abstract

Purpose of the study: This paper assesses the relationship between Economic Value Added i.e. EVA and Net Profit with Market Value Added i.e. MVA for banking industry of Bangladesh.

Methodology: Data was collected from annual reports of 23 Dhaka Stock Exchange (DSE) enlisted commercial banks over the period of 2010-2019. Years 2020 and 2021 were not considered to avoid any possible distortion due to COVID pandemic. To analyze the data, correlation analysis, Pooled OLS model and simple regression were used.

Findings: Results show that 19 banks display a positive relationship between EVA and MVA, but results of the Pooled Regression analysis contradict the findings and suggest that EVA and MVA don't show any statistically significant relationship. Net profit showed positive relationship with MVA and the relationship is statistically significant at 5% level of significance. The results of simple regression analysis also show that compared to EVA, Net Profit better explains the variations in MVA. This study concludes that for the commercial banks listed in Dhaka Stock Exchange (DSE), value-based performance measure like EVA doesn't show strong association with MVA while a traditional performance measure like Net Profit demonstrates a positive relationship with MVA.

Implications: Practically, this study determines that Net Profit is more reliable than EVA while explaining the shareholders' value creation. This outcome will provide important insights to the managers, investors and concerned stakeholders for effective investment decision making.

Limitations and Future direction: The study can be extended further in future by taking more performance variables such as ROA, ROE, Operating Profit or Operating Cash Flow into account in the analysis. Similar study can be done for other industries of Bangladesh as well.

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1. Introduction

The objective of a firm is to maximize the shareholder's wealth. By adding value to its existing net worth, a manager can satisfy the ultimate goal of the stockholders. Whereas Market Value Added is an external measure of how investors view a firm's performance, a number of value-based performance measures are gaining popularity now a day. Besides traditional performance measures, one widely used performance measure is Economic Value Added (EVA) which gauges internal performance of a finance manager. Traditional measures such as ROA, ROE, Net Income are critiqued for not taking the opportunity cost of invested capital into consideration. EVA overcomes that problem and provides a comprehensive performance metric by incorporating the cost of fund in calculations (Stewart, 1991). It has been found that EVA shows a strong association with external performance metric like Market Value Added.

Although a number of researches have been conducted in developed economies regarding the relationship between MVA and EVA, only few researches have been conducted in this area in Bangladesh. Further study is required in such area and there exists a clear research gap. The paper evaluates the perceived relationship of 23 listed commercial banks from 2010 to 2019. Data from years 2020 and 2021 was not included so that any possible distortion of performance due to COVID pandemic doesn't affect the study. In addition to finding the relation between MVA and EVA for these banks, the paper also assesses the impact of traditional measures such as Net Profit on the Market Value Added of the selected banks. The paper employs statistical tools to evaluate the relationship in the overall banking system and at micro level i.e. on each bank separately. The first three sections explain the concept of EVA and MVA and explore relevant literature and discuss calculation process of MVA and EVA for the selected 23 banks. Remaining sections of this paper use correlation analysis, simple and multiple regression analysis to evaluate the influence of EVA and Net Profit on MVA of the selected banks. Finally, the discussion of the results section summarizes the overall findings of this research.

2. Concept of EVA and MVA

EVA was coined by J.B. Stewart. He used this concept as a value-based measure which can present the true profit of a business. EVA measures a company's economic value while taking that company's cost of capital (COC) i.e. both debt and equity into consideration. Normal accounting calculation only measures the effect of debt (Kd) which is the interest expense, while EVA also takes into consideration the equity cost, Ke. The concept is based on the fact that value is generated when an investment's return exceeds the cost of capital (COC) i.e. debt and equity, encompassing the risk of investment (Nakhaei & Hamid, 2013).

MVA measures the total wealth of an organization for the stockholders and shows the difference between the invested equity of the shareholders and the amount they receive when they decide to sell the shares. In other words, MVA shows if stockholders' wealth has been increased or decreased (Ehrbar, 1999).

3. Literature Review

In the traditional literature of financial management, Brigham and Ehrhardt (2002) in their book Financial Management: Theory & Practice suggest that MVA has a robust association with EVA compared to other financial measures. They present their observation in their book that MVA and EVA are directly related. If a firm shows a past lineage of negative EVAs, then the company's MVA will most likely be the same, and vice versa (Brigham & Ehrhardt, 2002).

Susana M. Peixoto's study on the Portuguese public companies looks into the connection between bottom line i.e. net income, operating profit, and EVA with the market value. The sample consisted of 39 Lisbon listed companies (1995-1998). The results of this study showed that the correlation coefficient among the variables were 62.1%, 60.87%, and 80.84% respectively. Peixoto concluded that EVA is not a strong measure in terms of supplementing with information regarding market value of variables. However, EVA and MVA were proved to have substantial association (Peixoto, 2002).

Paula and Elena (2009) in their study on the relationship among Earnings per share, Dividend per share, EVA and Operating Cash Flow with MVA from 1996 to 2006, found that significant relationship exist between MVA and OCF. However, EVA does not coincide with MVA (Paula & Elena, 2009).

Wibowo and Berasategui (2008), conducted a study on 50 companies in Indonesia from 2004-2007. Their study found that 60.60% of variability in net earnings of the companies can be justified by EVA and MVA. However, reported earnings can be better explained through MVA than EVA (Wibowo & Berasategui, 2008). Nakhaei and Hamid (2013), in their study on the listed companies of Tehran Stock Exchange (TSE) found that accounting variables like net profit and operating profit show higher degree of relationship with market value of stock than EVA. The correlation coefficient between bottom line, operating profit, and EVA by market value found were 78%, 77%, and 65% respectively (Nakhaei & Hamid, 2013).

In another study on Tehran Stock Market, Panahi (2014) examined the possible correlation of EVA and MVA and share price firms in the stock market of Tehran. Their findings show that there is an affirmative connection of EVA, MVA and share price, implying that this correlation is useful to comprehend the behavior of share price (Panahi, Preece, Zakaria, & Rogers, 2014).

Coming to the South Asian stock markets, Niresh and Alfred (2014) conducted a study on 6 quoted private Sri Lankan banks using the data from 2011 to 2013. The objective was to test the association among EVA, leverage and MVA. Using Pearson correlation and simple regression methods, the R value was insignificant as the values were found to be -0.275 and -0.172 respectively. The researchers concluded, from the Sri Lankan market, that it cannot be claimed that the shareholders benefit from EVA (Niresh & Alfred, 2014). Kyriazis (2007) identified the association among EVA and accounting measures such as Profit and Operating Profit and MVA on the firms listed in The Greece Market. Interestingly, the relative information content test showed a more noteworthy relationship between Profit and MVA than EVA and MVA. The author concluded that the traditional performance measures like Net Profit can explain the variation in MVA to a greater extent whereas EVA adds only marginal value to MVA analysis.

Pablo Fernandez (2002) carried out a study on selected firms of USA using parameters such as EVA, MVA, NOPAT and WACC. The results of the research show that correspondence between NOPAT and MVA was higher than that between EVA and MVA. Whereas the correlation between MVA and EVA was only 18%, the average correlation between NOPAT and EVA was 22.5%. The author concluded that NOPAT plays a vital role in influencing MVA but a complicated performance measure like MVA is not equally effective in analyzing and describing the difference in Stock return and the MVA of these 582 companies.

Andrew Worthington (2004) conducted a study on 110 Australian companies over 7-year period to estimate the link between EVA and financial performance measures with stock return. The authors used relative information contents test to evaluate the aforementioned relationship. The results show that Residual Income, Net Profit and net cash flow have significant association with market value of the selected companies.

The recent studies however found very mixed results regarding EVA and MVA as the performance indicators. An investigation on how the financial performance metrics such as EVA, MVA and PE ratio of the listed oil and gas companies at Indonesian stock exchange influence the stock market performance was conducted. The study found that EVA, MVA and PE ratios have a positive and statistically significant effect on the stock returns of these companies. (Rahma, Amboningtyas, & PT, 2000). A different study on 50 companies listed on the Bombay Stock Exchange (BSE) in India found that there is a very weak correlation between EVA and MVA with stock price as well as stock return. (Vanlalzawna & Singh, 2021) The influence of corporate performance indicators on the stock process of some of the FMCG firms listed in the stock market of India was assessed. The study finds that EVA, EPS and PE ratios exert a statistically significant impact on the selected FMCG firms' share prices. (Bagchi, 2023) On the other hand, a study on the factors that influence the stock market performance of the listed companies in the Indonesia Stock Exchange reveals that whereas the indicators such as EVA and MVA have no effect on the stock prices, ROE and EPS have a positive effect on the stock prices of the selected stocks. (Pernamasari, 2020)

Review of the existing literature reveals that although there have been several researches conducted on the relationship of EVA and other accounting measures such as NOPAT or leverage with MVA, there is no conclusive study to compare between EVA and Net Profit as an explanatory variable for MVA. Moreover, no such study exists in the context of Bangladesh Stock Market. Therein lies the research gap which this study aims to explore.

4. Methodology of the Study

This is a deductive periodic study, seeking the relationship among EVA and MVA over a specified period of time (2010-2019). This is mainly a secondary research as it seeks to explore the relationship between variables that are reported in annual reports and stock market listings.

The secondary data were gathered from the audited reports of the scheduled banks of Bangladesh. As this article includes analyzing the market value of the companies, the sample consists of the 23 DSE listed banks. Some of the banks were listed after 2010. As such, data was taken from the listing year to 2019. Out of these 23 banks, 4 banks followed a Shariah based Islami Banking model (IBBL, EXIM, Al Arafah & First Security Islami Bank). The data were duly gathered from the financial statements of the banks and then organized in a uniform manner.

For this research, only the commercial banks listed in DSE have been included in the sample. Other listed financial corporations are out of scope of this study. Moreover, the data analyzed for this study are gathered from the audited published financial statements of the banks and those are limited to a certain time period from 2010 to 2019.

Frist of all, the paper explains the process to derive the MVA and EVA for each bank. An illustration is given to demonstrate how the MVA and EVA of the bank were calculated. Next, Pearson Correlation is calculated between MVA and EVA for the selected 23 commercial banks. Based on the link between MVA and EVA, the paper identifies four categories of banks - Winner, Looser, Problem Child & Real Option Holders. This model was developed by Ali Fatemi (2003) to illustrate the link between top executives' salary and MVA & EVA.

Then the paper conducts a Pooled regression analysis on the 23 firms over 10 years to assess the association between MVA and two other measures i.e. EVA and Net Profit. The objective of the analysis is to see which variable influences MVA the most. Finally, the paper shows the impact of EVA and Net Profit over MVA for the 23 banks individually using simple regression analysis.

4.1 EVA & MVA Calculation

Economic Value Added= (ROIC-WACC) * Capital Invested

= Net Income- Cost of Equity*Equity

EVA is measurement of internal performance of a firm. While traditional profitability measures are influenced by accounting adjustments, rules and methodologies, EVA goes beyond that and considers the opportunity cost of the investors as well. For example, when a firm earns 20% return with a 15% cost of capital (COC), the firm is said to add a 5% value to its net worth. However, if it generates only 12% return with the same COC of 15%, the firm adds a negative value to its net worth. While 12% return sounds good, in reality, the investors could earn a better return by investing elsewhere. In this way, EVA considers the opportunity COC, which some other profitability standards.

If a manager consistently generates positive value after considering the opportunity COC, the manager is supposed to be an outperformer. As a result, such superior performance will add value to the capital and enhance the market value of the company. Thus, a positive association between EVA and MVA is presumed.

MVA shows the difference between the market value and book value of capital. In a nutshell, MVA= (MV of Equity+ MV of Debt)- (BV of Equity & Debt)

= (Market Capitalization+ MV of Debt)- (BV of Debt & Equity)

The positive MVA implies a signal of future stream of positive EVA.

4.2 Calculation of EVA and MVA for banks

The following table shows how the EVA and MVA were calculated for Prime Bank Limited for 2010,2011 & 2012.

Table 1: Calculation of EVA and MVA for Prime Bank for 2010,2011 & 2012 respectively

Amounts in Million Taka	**2010**	**2011**	**2012**
Shareholders' Equity	16,908	19,139	20,787
(Add) Cumulative Provision for Loans & Advances	2,975	3,503	4,082
Total Investment by Shareholders	19883	22642	24869
Average Investment by Shareholders [A]	**17,011**	**21262.5**	**23755.5**
Earnings			
Profit After Tax	3,101	3,662	2,699
(Add) Provision for Loans & Advances	540	661	3,216
(Less) Write-off During the Year	257	200	404
Total Earnings [B]	**3384**	**4123**	**5511**
Average Cost of Equity[C]	**12.26%**	**13.46%**	**13.46%**
Cost of Average Investment by Shareholders [D=AxC]	2085.5486	2861.9325	3197.4903
EVA [B-D]	1298.4514	1261.0675	2313.5097
Face Value per Share [A]	290.3	24.54	22.21
Market Value per Share [B]	944.75	44.5	37
No. of Shares Outstanding [C]	57,763,671	779,809,558	935,771,469
Total Book Value [D=AxC]	16768793691	19136526553	20783484326
Total Market Value [E=BxC]	54572228177	34701525331	34623544353
MVA [E-D]	37803434486	15564998778	13840060027
MVA [E-D] Million Taka	**37803.43**	**15565.00**	**13840.06**

First, the average investment by shareholders is calculated by adding cumulative provision for loans and advances to shareholder's equity. Then, Cost of average investment by the shareholders was calculated by multiplying the average investment of shareholders by average cost of equity. EVA was found by subtracting the cost of average investment by shareholders from total earnings of the bank. The cost of equity (Ke) is considered to be the weighted average rate on the Sanchaypatra (National Savings Certificate) issued by Bangladesh Bank plus a two percent risk premium.

MVA is simply the difference between the market capitalization (MV of all outstanding shares) and the total BV of the shares outstanding. Since technically the market value and book value of banks liabilities roughly the same, these were ignored while calculation the MVA. For each of the 23 banks, the same methodology was followed while calculating the MVA & EVA.

5. Result Analysis

5.1 Analysis of Correlation between MVA & EVA

Table 2: Correlation between MVA & EVA

Bank	***Correlation***	***Bank***	***Correlation***
First Security Islamic Bank	0.76	EXIM	0.28
Prime Bank	0.75	Brac Bank	0.28
AB Bank	0.69	Al Arafah	0.22
NCC	0.65	UCBL	0.19
Pubali Bank	0.63	Mercantile Bank	0.18

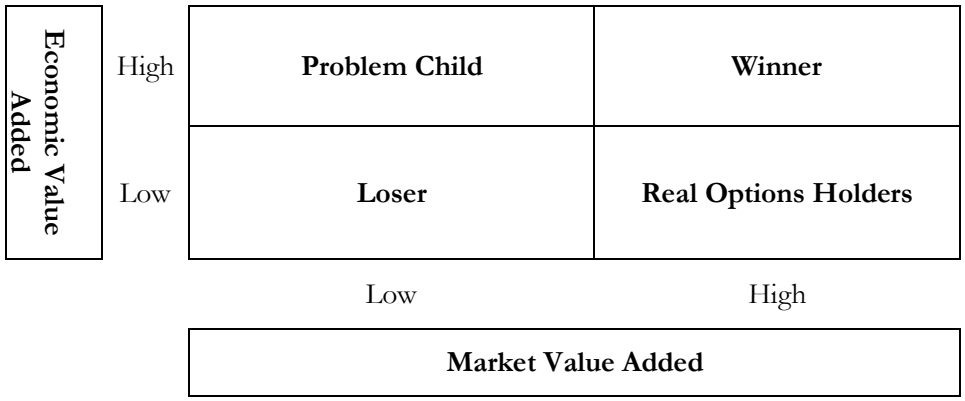
Bank	***Correlation***	***Bank***	***Correlation***
Rupali Bank	0.55	Trust Bank	0.10
One Bank	0.53	Premier Bank	0.06
IFIC Bank	0.48	Bank Asia	-0.007
MTB	0.40	DBBL	-0.20
Dhaka Bank	0.35	Jamuna Bank	-0.84
IBBL	0.32	EBL	-0.98
Southeast	0.30		

The table shows the strength and direction of the association between MVA and EVA among 23 commercial banks of Bangladesh. It has been observed that 19 of the 23 banks demonstrate a positive relation between MVA & EVA. The highest correlation is displayed by First Security Islamic Bank. The bank has a correlation of 0.76, reflecting a strong assertive association between MVA & EVA. Prime Bank, AB Bank, NCC Bank, Pubali, Rupali and One bank display a correlation value greater than 0.5. For these banks the market value of the firm is highly related with Economic Value added. Firms that generate a positive Economic Value Added i.e. excess return over the cost of fund employed by the investors have a positive market value. As the goal of a firm should be maximizing the firm's net worth, for these banks creating a positive EVA ensures a rise in the MVA of the bank.

Interestingly, some banks such as Al Arafah, UCBL, Mercantile Bank, Trust Bank and Premier bank show a very weak correlation (less than 0.25) between MVA & EVA. It implies that for these banks although the relationship between MVA & EVA is positive, but the strength of the relationship is not so strong. To the contrast, for Bank Asia, DBBL, Jamuna Bank & EBL, the relationship is negative. For these banks, MVA and EVA move in opposite directions. The results are mixed for Islami Banks. Apart from First Security Islami Bank with the highest positive correlation value of 0.76, the rest of the Islami Banks displayed relatively weak to moderate relationship between EVA & MVA. Rest of the three Islami Banks namely IBBL, Exim Bank & Al Arafah showed a correlation value between 0.22 to 0.32. In a nutshell, 83% of the selected banks show a positive correlation between MVA & EVA. The positive relationship between these two variables has been supported by a number of literatures including Peixoto (2002) and Panahi, Preece, Zakaria, & Rogers (2014).

5.2 Classification of banks based on MVA & EVA

Ali Fatemi (2003) developed a model based on the relationship between MVA & EVA.



Source: Adapted form (Ali Fatemi, 2003)

According to this model, firms that display a consistent positive EVA and positive MVA are considered *"Winner"*. (Ali Fatemi, 2003) These firms generate positive earnings over the cost of fund and hence display a strong internal performance. Superior performance by the managers is reflected on the external marketplace where investors reward the firm by increased market value of shares. From the analysis, Trust bank is considered

to be in the category of winner because over the years the bank has been able to generate positive EVA & MVA. Although the EVA has fluctuated over time, the market value added remained relatively stable.

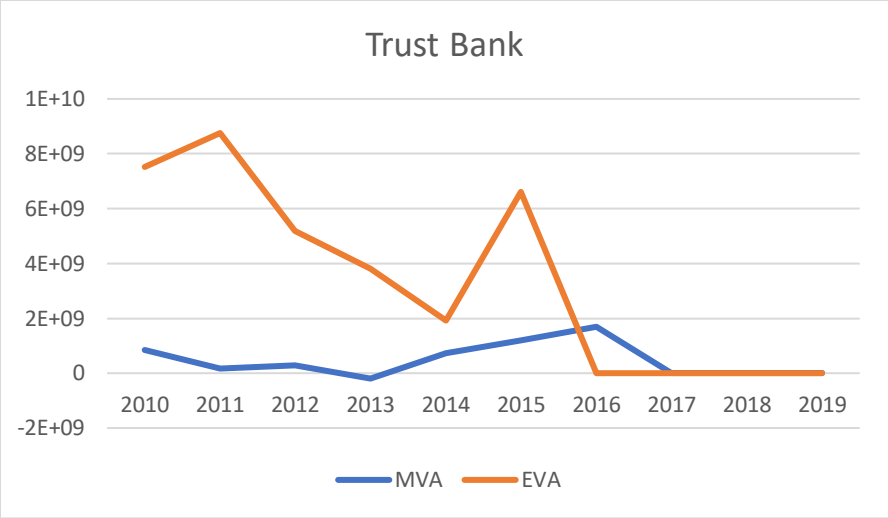


Figure 1: MVA & EVA of Trust Bank (example of "Winner" category)

The graph shows that the EVA had a downward trend whereas the MVA has fluctuated a bit over the years. However, the bank has showed a solid internal performance as it has been able to generate positive EVA after considering the COC. The consistent positive EVA has signaled the market about the consistent performance of the managers and the investors have shown their confidence in the form of increased market value of time.

According to Fatemi. Firms that show a negetive EVA but a positive MVA falls under the category of *"Holders of Real Options*" AB Bank is an example of this type of firm.

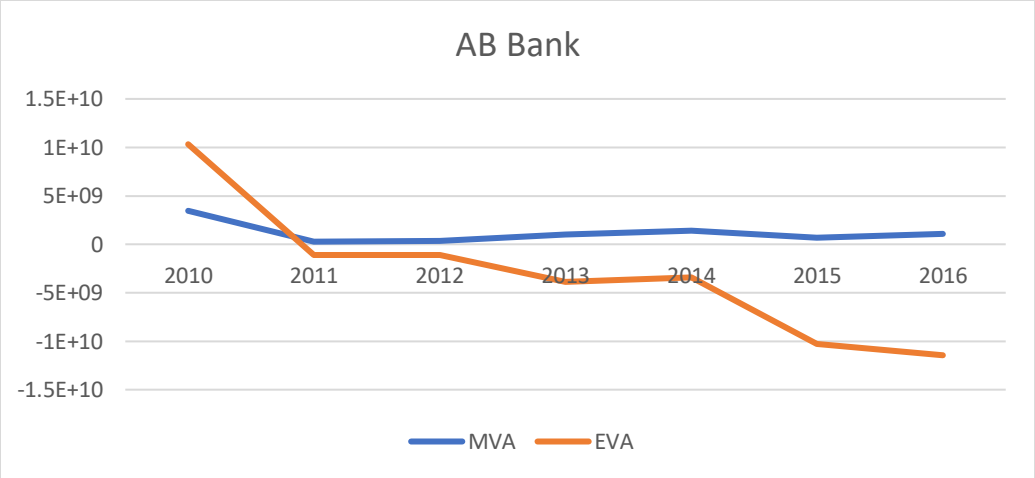


Figure 2: MVA & EVA of AB Bank (example of "Holders of Real Options" category)

Over the time, although the EVA has been negetive, the MVA is positive. It implies that although the managers could not generate a profit over the cost of fund, the market has rewarded the bank with additional net worth. Each year the market value has gone up despite a negetive EVA. Perhaps the investors expected a better future performance despite a negetive EVA over time.

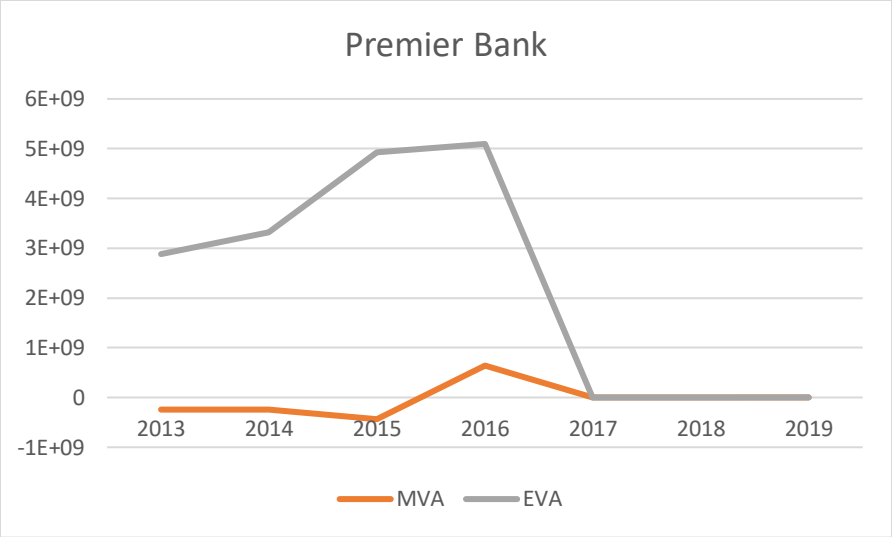


Figure 3: MVA & EVA of Premier Bank (example of "Problem Child" category)

Premier Bank generated positive EVA for most of the years but experienced negetive MVA for initial years. According to Fatemi, Premier Bank falls under the category of *" Problem Child"* because despite generating positive EVA, the bank could not add value to its market capitalization. This bank produced positive EVA at the cost of MVA.

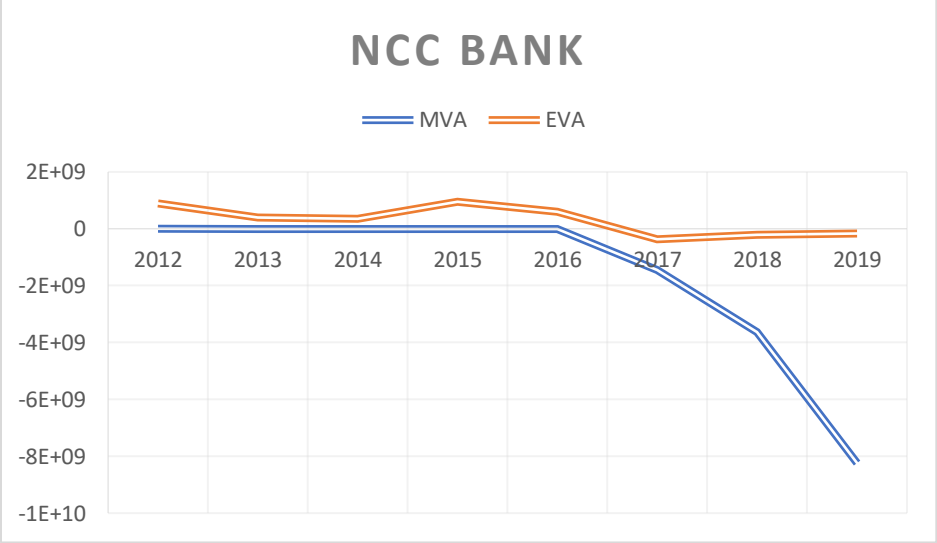


Figure 4: MVA & EVA of NCC Bank (example of "Loser" category)

NCC Bank had a negetive trend of EVA over the last 8 years. Particularly after 2016, the market value added has become negetive and it follows a decreasing trend. Investors are not confident enough as depicted by the contineous decline in the MVA of the company for the last few years. The reason is quite clear from the fact that the banks internal performance measured by EVA was poor form 2012. Even, it became negetive after 2016 and hence the poor performance is reflected on the capital market as its market value has gone down accordingly in recent years. According to the model developed by Fatemi, NCC bank falls under the category of '*Loser',* firm that show both negetive EVA & MVA.

5.3 Pooled Regression Model

MVA is influenced by EVA, However. A number of studies also found that for most of the firm's profitability ratio such as ROA, ROE, EPS, Net Profit margin influence the MVA positively. Whereas EVA consider cost

of fund while evaluating performance of a firm, Net Profit is a performance measure that complies with Generally Accepted Accounting Principle. To assess the effect of EVA and Net Profit on MVA, the following two hypotheses were developed:

H_1: There is no association between MVA and EVA

H_2: There is no association between MVA and Net Profit.

The model developed to assess the hypothesis was: $\mathbf{MVA_{it} = a+b_1\ EVA_{it}+ b_2\ NPM_{it} + e_{it}}$

To test the hypothesis, a Pooled Regression was conducted on the 23 commercial banks over a period of 2010 to 2019. A pooled OLS model was run using E-views software. The output of the regression is given below:

Variable	Coefficient	Std. Error	t-Statistic	Prob.
	-7.01E+13	5.22E+14	-0.134471	0.8932
EVA	-136.0897	357.5565	-0.380610	0.7039
NP	1086297.	338506.9	3.209083	0.0016
Root MSE	5.62E+15	R-squared		0.054351
Mean dependent var	8.70E+14	Adjusted R-squared		0.043959
S.D. dependent var	5.80E+15	S.E. of regression		5.67E+15
Akaike info criterion	75.40069	Sum squared resid		5.84E+33
Schwarz criterion	75.45292	Log likelihood		-6971.564
Hannan-Quinn criter.	75.42186	F-statistic		5.230225
Durbin-Watson stat	0.093139	Prob(F-statistic)		0.006186

From the value of R squared, we can conclude that only 5.4% variability in the MVA is explained by the variation in EVA & Net Profit. So, there must be a number of factors which influence the Market Value Added of these banks other than EVA and Net Profit.

However, the F statistic is 5.23 with 0.006186 as probability which is far below 5% level of significance. Therefore, we can say that the overall model is statistically significant.

The regression output shows a negative relation between MVA and EVA. However, the coefficient -136 is not significant since the corresponding value of p is 0.7039>0.05. So, the relationship between MVA & EVA is not statistically different from zero.

Net Profit: The results of the regression show that MVA and NP are positively related. Here, p value=0.0016 which is lower than 0.05. It implies that at 5% level, the null hypothesis is rejected. So, Net Profit positively influences MVA.

5.4 Simple regression of EVA on MVA for each bank

For each bank, EVA was regressed on MVA to see how value-based measure, EVA influences the MVA of each bank. The simple regression model was: MVA=a+b* EVA

a=constant, b= coefficient or sensitivity of MVA with respect to change in EVA for each bank.

The regression coefficient, p-value and R-Squared values are listed below for each of the 23 banks.

Table 3: Results of simple regression

Bank	***Coefficient***	***P-value***	***R Squared***
First Security Islamic Bank	**0.000006***	**0.01**	**76%**
Prime Bank	**0.0711***	**0.05**	**74%**
AB Bank	0.1038	0.08	69%

Bank	*Coefficient*	*P-value*	*R Squared*
NCC	3.74	0.08	65%
Pubali Bank	10.49	0.13	62%
Rupali Bank	0.000014	0.26	54%
One Bank	0.0169	0.11	53%
IFIC Bank	0.1446	0.18	49%
MTB	0.063	0.25	39%
Dhaka Bank	2.84	0.35	35%
IBBL	2.7	0.37	31%
Southeast	0.13	0.47	30%
EXIM	15.2	0.65	28%
Brac Bank	8153144	0.51	27%
Al Arafah	6.26	0.55	22%
UCBL	0.0081	0.71	19%
Mercantile Bank	2.13	0.63	18%
Trust Bank	0.0175	0.78	10%
Premier Bank	0.008	0.9	5%
Bank Asia	-0.001	0.98	0.70%
DBBL	-0.9	0.58	20%
Jamuna Bank	**-13.16***	**0.00**	**84%**
EBL	**-0.28***	**0.001**	**97%**

Simple regression shows that at 5% level of significance, only 4 banks out of total 23 banks show a significant association between the variables. While First Security Islami Bank and Prime Bank show that an increase in EVA results in increase MVA, the relationship is negative for Jamuna Bank and EBL. AB Bank and NCC bank show a significant association between the variables at 10% level of significance. However, rest of the banks do not show any statistically significant relationship between EVA and MVA. So, we can conclude for the majority of the banks that EVA as a value-based measure do not influence MVA too much.

97% of the deviation in the MVA was described by EVA for EBL, while for Jamuna Bank, the R-squared value was 84%. For First Security Islami, Prime, AB, NCC, Pubali, more than 60% variation in the MVA was explained by variation in EVA. However, for most of the banks, EVA had moderate to low explanatory power. Perhaps, many other factors beyond EVA explain the variation in MVA for these banks.

5.5 Simple regression of Net Profit on MVA for each bank

For each bank, Net Profit was regressed on MVA to see how a popular traditional measure, Net Profit influences the MVA of each bank. The simple regression model was:

MVA=a+ x* Net Profit [a=constant, x= coefficient or sensitivity of MVA with respect to change in Net Profit for each bank]

The regression coefficient, p-value and R-Squared values are listed below for each of the 23 banks.

Table 4: Results of simple regression

Bank	*Coefficient*	*P-value*	*R Squared*
First Security Islami Bank	**0.53***	**0.0007**	**88%**
Prime Bank	1.54	0.13	63%
AB Bank	**0.84***	**0.00**	**92%**
NCC	**-4.34***	**0.04**	**66%**
Pubali Bank	-12	0.15	60%

Bank	*Coefficient*	*P-value*	*R Squared*
Rupali Bank	**0.000159***	**0.003**	**95%**
One Bank	-0.007	0.19	51%
IFIC Bank	**-1.75***	**0.03**	**71%**
MTB	**0.42***	**0.012**	**75%**
Dhaka Bank	**4.2***	**0.03**	**66%**
IBBL	-3.41	0.63	15%
Southeast	-0.34	0.4	34%
EXIM	28.79	0.51	40%
Brac Bank	**11414542***	**0.006**	**96%**
Al Arafah	-5.9	0.4	29%
UCBL	0.035	0.84	11%
Mercantile Bank	0.06	0.98	1%
Trust Bank	0.53	0.11	53%
Premier Bank	-0.2	0.39	39%
Bank Asia	-0.31	0.63	17%
DBBL	6.67	0.13	50%
Jamuna Bank	1.03	0.79	10%
EBL	-193685	0.36	51%

Here, at 5% level of significance, first security Islami, AB, NCC, Rupali, IFIC, Mutual Trust, Dhaka and BRAC- these banks show a significant association between Net Profit and MVA. Except for NCC and IFIC Bank, all the remaining six banks show an assertive association between Net Profit and MVA. For rest of the banks, there is no statistically significant relation between Net Profit and MVA at a level of 5% significance.

The highest R squared has been observed for Brac Bank (96%). Rupali Bank, AB Bank and First security Islami Bank have R-squared values of 95%,92% and 88% respectively. 14 out of 23 listed commercial banks have R-squared value greater than 50%. That means for 14 of these banks, Net Profit can explain more than 50% of the variation in the Market Value Added. So, when comparing with EVA, it can be concluded that Net Profit is a better predictor of MVA than value-based performance metric, EVA for the selected commercial banks of Bangladesh.

6. Discussion on the Findings

The correlation test shows that 19 of the 23 listed commercial banks have an assertive association between EVA and MVA. The strength of relationship varies from bank to bank. Only 7 banks showed a correlation coefficient value greater than 0.50. Since correlation does not necessarily imply causality; hence, a pooled regression analysis was conducted to test the association. The pooled OLS regression, used to assess whether EVA or Net Profit influence the MVA more, shows an assertive association between Net Profit and MVA. It implies that for the entire banking industry, Net Profit is a critical determinant of MVA - banks that earns higher profit tend to add value to its net worth. This is consistent with the study conducted by Nakhaei & Hamid (Nakhaei & Hamid, 2013) on the Tehran Stock Exchange which showed that Accounting variables such as operating profit and net profit have a positive correlation with the MVA. However, EVA showed a negative relationship in the Pooled OLS and did not display any statistically significant relationship with MVA. Such findings are consistent with those of Niresh and Alfred (2014),Fernandez (2001) and Paula & Elena (2009). The simple regression of EVA on MVA showed that only 4 banks showed an assertive association between EVA and MVA which could explain higher than 50% of the variability in MVA for only 7 banks. To the contrary, 8 banks had Net Profit and MVA which had a significant association, and Net Profit could explain more than 50% variation in MVA for 14 listed banks. So, it can be concluded that for the selected listed

commercial banks of DSE, a traditional measure like Net Profit can influence MVA more than a popular value based standard EVA.

7. Conclusion

This paper investigates the relationship between MVA and EVA. The study includes 23 listed banks on DSE from 2010 to 2019. A simple correlation analysis showed that 19 banks displayed an assertive association of EVA and MVA. However, our regression results do not exhibit any significant connection between EVA and MVA. It showed an assertive connection between Net Profit and MVA. So, we conclude that a value-based performance metric like EVA is not appropriate for the listed commercial banks of DSE. On the other hand, Net Profit, a traditional performance measure is still a better predictor of MVA for the selected banks. Such findings were confirmed by the simple regression of EVA and Net Profit on MVA for each bank. The simple regression also showed that Net Profit could explain the variability in the MVA for the banks in a better way than EVA could do.

The outcome of this study will provide important insights to the managers, investors and concerned stakeholders for effective decision making. Managers can put more focus on Net Profit with respect to generating shareholder wealth, as it has shown to be a more effective measure. This can also make the investment decisions easier, as for the general investors, Net Profit is a simpler term than EVA. The study can be extended further in future by taking more performance variables such as ROA, ROE, Operating Profit or Operating Cash Flow into account in the analysis. Similar study can be done for other industries of Bangladesh as well.

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