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Post-Merger and Acquisition Financial Performance of Banks Reconceptualised: Towards A Collaboratively Oriented Value-Based Financial Performance Metrics

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Abstract

The purpose of this paper is to examine the post-mergers and acquisitions financial performance of banks listed on the Ghana Stock Exchange using a value-based approach (proxied by economic value added (EVA), market value added (MVA) and cash value added (CVA). A cross-sectional survey was employed comprising four (4) acquirer banks listed on Ghana Stock Exchange. Data were analyzed using descriptive statistics and regression analyses. The acquisitions in the Ghanaian Banking Sector resulted in value addition regarding EVA. The acquisition was successful with MVA. The banking sector recorded an abysmal performance in CVA over the acquisition period which shows that the banks face liquidity problems. The overall post-acquisition financial performance of the banks of negative GH¢56,845,508 is an indication that the acquisition has not resulted in value additions to shareholders. The overall fall in value lends to the massive loss in CVA. The study rejects the first hypothesis that there is a significant positive effect of EVA on MVA of acquirer banks listed on the Ghana Stock Exchange. The results indicate a significant positive effect of EVA on CVA of acquirer banks listed on the Ghana Stock Exchange. The study also confirms that MVA has a significant positive effect on CVA of acquirer banks listed on the Ghana Stock Exchange. The study employed only a single research methodological approach, therefore future research could be undertaken using a mixed approach and triangulate to compare findings. Furthermore, the findings from the present study are cross-sectional, considering the limitations there in, a longitudinal approach should be explored. Emphasis should be place on value-based financial performance metrics that indicate whether shareholder value is maximised or destroyed post acquisition. This will help practitioners make legitimate decisions and conclusions that can foster business growth.

Keywords: Value-based Financial Performance, Economic Value Added, Market Value Added, Cash Value Added, Value-based Financial Performance, Ghana Stock Exchange

Introduction

Maintaining banks' continuity and their ability to withstand external threats is contingent on more than just strong operational preparedness and planning. Such processes must be supported by a constant examination in order to execute and accept the processes and procedures in order to achieve the intended results. The performance follow-up evaluation is what it's called. Most analysts, researchers, and administrators have paid close attention to the performance evaluation in order to improve performance and develop performance measurement tools that are consistent with the conditions in the surrounding environment. They believe that the performance evaluation is critical for all parties who benefit from the economic facilities. Bashatweh and Ahmed (Bashatweh and Ahmed, 2020).

Given the various scales required for measuring financial success and the existence of critical trends around traditional performance indicators as they do not measure the performance of the economic profit, failure to reverse the real value due to its dependence on estimates, and influence on many used accounting methods, there was a near consensus on the need to review the traditional performance indicators (Shah & Sengupta, 2015). Many academics have critiqued standard performance measurements. Traditional performance measurements, according to critics, do not provide enough direction for strategic decision-making for three reasons: first, they neglect the cost of capital that is spent to generate profit. Second, standard performance measurements are too aggregated to describe the influence of numerous strategic elements. The third point raised by opponents of these performance metrics is that they are incapable of determining the causes for a company's high or bad performance (Chen and Dodd, 1997). Value-based measurements were developed to address these flaws. The key reason for the popularity of value-based performance measurements is that if a company's primary goal is to increase its stockholders' wealth, it is vital to apply effective instruments that can assess true value creation. Value-based measures may be useful tools for evaluating a company's operations and real produced value over a set period of time (Kim, 2009).

The constraints of traditional accounting-based performance indicators have been addressed by value-based performance indicators. Among the different value-based performance indicators, EVA, MVA, and CVA have the most clout, and are currently used more frequently than other tools for internal and external company performance review (Lehn and Makhija, 1996). This research is based on these three performance indicators.

It is imperative to opt for the right metric (the Value-Based Corporate Performance) that aids banks' measurement progress in meeting their strategic goal – creating and maximizing shareholder value. According to Sharma and Kumar (2012), the Value-Based Corporate Financial Performance (VBCFP) appears the framework for enhancing shareholder value or wealth. The Value-Based Corporate Performance can represent the framework for value enhancement that will guide management decision process in terms of financial planning, monitoring and controlling. Traditional performance metrics such as rate of return, shareholders' profit, earning per share, market capitalization, and price-earnings ratio have inherent problems. Balance Sheet based measures are prone to accounting anomalies that generally measure notional profit, whereas market-driven measures are prone to volatility. Addressing these deficiencies calls for a mix and match measure that incorporates a market

value of the company. Moreover, it should be a real measure of its financial performance extracted from its financial statements.

In assessing the post-M&A performance of the banks under review, this study employs value-based financial performance such as (EVA, MVA and CVA. This approach is unique and the first of its kind in a Ghanaian context since all the previous post-M&A performance assessment hinged on traditional accounting measures. EVA, MVA and CVA will reflect the economic returns that accrue to the acquirer after the merger or acquisition. EVA, MVA and CVA are performance measure that reflects shareholder's wealth and responsive to the actions of the managers of the merged firms. Shareholder value is considered an essential measure of post-acquisition organisational performance. It reflects the quantum of incremental value the acquirer firms generate for shareholders after accounting for its operation cost, including capital cost. The motivation of this study, therefore, is to find out whether the outcome of the selected M&A deals in the Ghanaian banking industry has been "Value conserved", "Value created" or "Value destroyed" with regards to shareholders. Managers to be well-informed about the best financial decision and appropriate M&A strategies (merger motives; pre and post-M&A success factors and managerial competencies) required to improve the banks' performance and shareholders' wealth.

It has been found from the past literature that shareholders are less attracted to the Ghanaian Banking sector while investing their money in the capital markets. Banking sector is considered to be more of a service sector rather than a value creating sector. Thus, there is a need to identify the reasons for this and devise ways for making this sector more attractive to the shareholders. This research evaluates how value-based measures explain shareholder's value creation in Ghanaian Banking Sector and thereby identify the major contributor to value creation in this Sector.

Research Objectives
- To determine whether the various acquisitions created/increased shareholder value or destroyed shareholder value in the banking sector of Ghana
- To determine whether a positive and significant relationship exist between EVA and MVA
- There determine whether a positive and significant relationship exist between EVA and CVA
- There determine whether a positive and significant relationship exist between CVA and MVA

Literature Review
The Capital Markets School (Financial Economic School)
The capital market school, often known as financial economics theory, is divided on whether M&A transactions produce financial value (Haspeslagh and Jemison, 1991). The core thesis of this school is that acquisitions improve the market's efficiency for corporate control and generate net value for shareholders. The primary focus of financial researchers has been on whether mergers and acquisitions added financial value to shareholders (Catwright and Schoenberg 2006).

The major goal of this theory is to investigate the relationship between corporate control and shareholder value (Datta, 1991, p. 282). The key aim that has to be maximized within this stream is shareholder value (Birkinshaw et al., 2000, p. 397). Following the transactions, the movements of the capital markets are examined in order to discover the elements that contribute to value creation (Haspeslagh and Jemison, 1991, p. 293). These reactions take place throughout a certain time period, from the announcement date to the post-merger phase (Haspeslagh and Jemison, 1991, p. 295). The financial economics theory believes that a positive net change in market value provides wealth for shareholders (Haspeslagh and Jemison, 1991, p. 295). As uncertainties and speculations grow, the most dramatic fluctuations in share prices are predicted shortly after the sale is announced (Jensen and Ruback, 1983, p. 9-15). Several ideas support the financial economics school of thinking, as seen in Table 2.3. Some financial economists, for example, based their viewpoint on the agency theory, which states that managers act as agents for shareholders and may have conflicting interests (Haspeslagh and Jemison, 1991, p. 294). Another grounding comes from free cash flow, where economists think that in a circumstance like an M&A deal, management would return the free cash flow to their shareholders (Haspeslagh and Jemison, 1991, p. 294). To summarize the financial school of thinking, it is still debatable if transactions benefit the purchasing firm financially (Meyer, 2008, p. 197). Furthermore, this school of thinking disregards other factors that may have an impact on the share price's movement (Buono and Bowditch, 2003, p. 10).

Value-Based Financial Performance Measurement Metrics
Value-based financial performance measurements, according to its proponents, are a significant improvement above standard performance measures. Most crucially, it is stated that by integrating a firm's cost of capital in their calculations, they may be used to assess a firm's value-creating potential (Young & O'Byrne, 2001: 431; Lehn & Makhija, 1996: 35). If a company's projects provide higher returns than its cost of capital, the projects will have positive net present values, which will improve shareholder value (Grant, 2003: 81). It is also suggested that these value-based measurements aim to address the flaws and deficiencies identified by standard performance measures. Because these three indicators (economic value added, market value added, and monetary value added) can be calculated using publicly available financial data, this study concentrates on them. Some of the other value-based measurements need data that isn't publicly available, making them hard to compute.

Analysis of Economic Value Added (EVA)
EVA is described as a value-based measure of performance, a tool for making investment decisions, and an indication that reflects genuine shareholder value over time (Chen and Dodd, 1997; Bromwich and Walker, 1998). EVA is a financial management and strategy development technique that helps businesses obtain a higher return on investment than the cost of capital. EVA is a metric that quantifies the difference between a company's capital expense and return (Stewart, 1991). It indicates that if EVA is positive, the firm has generated value for its shareholders, and vice versa.

According to traditional accounting, the majority of the businesses appear to be profitable. Despite this, many companies are undermining shareholder value by squandering earnings due to their high cost of capital. EVA corrects this flaw by stating unequivocally that when managers use capital, they must pay for it. EVA calculates the amount of wealth generated or

destroyed in each reporting period by taking into account all capital costs, including the cost of equity. EVA for a certain duration can be expressed as a formula:

EVA = NOPAT – (WACC X CE), Where
NOPAT: Net Operating Profit After Taxes but before financing costs
WACC: Weighted Average Cost of Capital
CE: Capital Employed (Total of the balance sheet – non-interest-bearing current liabilities at the beginning of the year)
COST OF CAPITAL: Cost of equity x proportion of equity in Capital + Cost of debt x proportion of debt in Capital (1- tax).

Economic add value = net income after tax - (average weighted capital cost × total capital). Added economic value can be seen as income after the capital costs. On the other hand, it has been demonstrated that accounting trends provide numerous expenses to attain the profit indicated in the financial statements, but the cost of capital is not deducted (al-Janabi & Mohammed, 2014; Al-Awawdeh & Al-Sakin, 2018). EVA is a valuation-based way of measuring financial performance that quantifies the difference in financial terms between the return on firm capital and the cost of capital. This is similar to how profits are calculated in traditional accounting, with one major difference: EVA assesses the cost of all capital (Masyiyan & Isynuwardhana, 2020).

Analysis of Market Value Added (MVA)
The value that is created for the firm above that value is called the premium value which is called the Market Value Added, also known as Management Value Added. It is a value that is created because of the quality of the management to earn superior rates of return above the required for risk. The Market Value Added is the difference between market value of a company and the capital which is contributed by the investors. Market Value Added = Market value of the Equity + the book value of debt – all of the capital investors have provided (including loans, retained earnings and paid in capital). The difference between a company's total market value and its economic capital is the MVA. The economic capital is the amount of money invested in the firm, which is equal to fixed assets minus net working capital.

MVA = Total Market Value – Total Capital
= (MV of Stock + MV of Debt) – Total Capital
Where MV of Stock = Market Capitalization = Shares Outstanding x Stock Price
MV of Debt = Book Value of Debt (as an estimate to the MV)
Total Capital = Total Book Value of Debt and Equity

It basically means what investors have put into the company and what they could get from the company if they sold the company in today's market. A positive MVA is more preferred as it indicates that the management has increased the value of its capital, creating shareholder's wealth. It can also be negative suggesting that the company has destroyed shareholder wealth. It thus indicates that MVA is of great importance for the shareholder's because it represents premium value created, but the problem is cannot be used as a basic concept in valuation, as it measures the value only till the consolidated level of the company. The MVA is mostly affected by the external forces, for example – 75% of the company's market value is determined by the factors unrelated to the company's performance i.e. the general state of the world, interest rates, inflation, economic expectations and industry conditions, all factor into the market value of the company.

Analysis of Cash Value Added (CVA)

The Boston Consulting Group (BCG) coined the term Cash Value Added (CVA), which is a mix of EVA and CFROI. A capital charge depending on the capital invested in the company is removed, similar to EVA. As a result, CVA is a different type of return on investment. CVA, on the other hand, estimates the surplus cash flows generated above the capital cost rather than utilizing economic profit statistics. The metric incorporates all of EVA's advantages while also seeking to enhance it by focusing on cash flows rather than profit statistics (Martin & Petty, 2000: 128). Depreciation and accruals are added back when computing the cash flow figures contained in CVA, which is one of the major variances between CVA and EVA. When calculating the capital cost, the cumulative depreciation is also included with the invested capital amount.

CVA is computed by deducting a gross capital charge from operational cash flow rather than operating profit (as was the case with EVA). Depreciation and amortization are used to turn NOPAT into operating cash flow (Martin & Petty, 2000: 128). To convert NOPAT into a cash flow statistic, changes in other long-term obligations, such as provisions and deferred taxes, are also included. Unlike EVA, the capital charge is based on the gross value of the invested capital rather than the net number (Martin & Petty, 2000: 141). Depreciation that has accrued is added back to the invested capital.

$$CVA_t = \text{Operating cash flow - gross capital charge}$$
$$= (NOPAT_t + CVAAdj_{op}) - [c^* \times (IC_{t-1} + AccDepr)]$$

$CVAAdj_{op}$ = Depreciation, amortization and changes in other long-term liabilities
$AccDepr$ = Accumulated depreciation

Empirical Review

The influence of mergers and acquisitions on financial performance has been studied in the past, but the results have been mixed (Aggarwal & Garg, 2019). Existing research provides inconsistent data on whether M&As create or destroy value. The extant research has been classified into short- and long-term studies that look at the link between M&As. Rani et al (2015) explored the major question related to the long-term performance of the acquiring firm with 305 M&A deals during the period from 2003 to 2008. The study examined the long-term pre- and post-merger financial data, using 14 major ratios, related to profitability, efficiency, leverage and liquidity. The results showed improvement in performance and argued that the improvement in operating cash flows is due to the improvement in the post-M&A operating margins of the acquirers, not due to the efficient utilization of the assets' turnover to generate higher sales.

Mohapatra (2016) found a positive impact of M&A announcement on the 180 days of cumulative abnormal returns, which signify that shareholders of the acquiring firms in the Indian construction industry have been benefitted from M&A activities, indicating that growth rate of the industry, nature of business and types of arrangements between acquiring and target firms play a significant role in M&A performance. Kuriakose and Paul (2016) explored the financial and strategic similarities of acquiring firms in the banking industry during India's post-liberalization period. The study found that banks are dissimilar in the target relative size, earnings diversity, financial leverage, efficiency, prudential norms and profitability. The study concluded that a bank's performance has an adverse impact on the post-merger period. Patel (2018) compared the pre- and post-merger positions of the long-

term profitability of Indian banks and found that there was a negative impact of mergers on return on assets, return on equity (ROE), net profit ratio, yield on investment and yield on advance. However, the profit per employee, earnings per share and business per employee had increased during the post-merger period. It was also found that equity, investment, assets and advances of all banks increased after the merger, but their yield decreased due to underutilization of the same.

Singh and Das (2018) investigated before M&A and after M&A performance of the India banking industry. Their study concluded that, initially, the market reacted negatively to the announcement of bank merger, and banks showed no improvement in the cumulative abnormal
average return and argued that stock prices reflected the market's expectations for future cash flows; however, actual results may differ from those expectations. Tarigan et al. (2018) studied the financial performance of non-banking companies of Indonesia from 2009 to 2012 and concluded that the performance improved significantly in the post M&A period. They argued that a higher solvency ratio indicated a lower cost of capital, which could be achieved through financial synergy, but this had come at the expense of ROE, which could be due to an increase in operating profit that was not as high as expected, implying that operating synergy may take longer to fully realize. Shah (2018) analysed the impact of M&As on the Indian chemical and fertilizer firms. The study concluded that the financial performance, operating performance and shareholders return increased but were not statistically significant. Aggarwal and Garg (2019), analysed the manufacturing and service industries' profitability, liquidity and solvency ratios, using Indian M&A deals. They found that acquiring firms of the service sector have outperformed the acquiring firms of the manufacturing sector. The study also found that profitability and liquidity of acquiring firms had a positive impact on the merger, but there was no impact of the merger on solvency position of acquiring firms.

Dixit (2019) examined the operating performance, using difference-in-difference methodology, to empirically test performance differences, among acquirers who pursued partial and full acquisition using Indian M&A. It was found that Indian acquiring firms realized no change in accounting measures, while their operating performance significantly reduced in the post-acquisition period for full acquirers. Shah and Butt (2019) analysed the performance of Indian fast-moving consumer goods listed firms by examining the financial performance, operating performance and shareholders' wealth by examining pre-M&A and post-M&A performance. Their findings showed that the operating performance, financial performance and shareholders' wealth increased during the post-M&A period but were statistically insignificant.

Using traditional accounting methods, Rao-Nicholson, Salaber, and Cao (2016) investigated the impact of mergers and acquisitions on ASEAN nations' performance. Tamragundi (2016) employed profitability, liquidity, and efficiency as the major performance metrics to examine the influence of mergers on the performance of selected commercial banks in India. Using typical accounting performance indicators, Li, Li and Zhang (2016) empirically analyzed the impact of mergers and acquisitions on Chinese listed firms' performance. Fakarudin (2014) looked at the impact of mergers and acquisitions on revenue efficiency and the factors that influence it, using data from Malaysian banks. Olagunju and Obademi (2016) discovered a link between before and post mergers and acquisitions, on the one hand, and commercial bank

capital base and profitability, on the other other hand. According to Walter and Uche (2015), mergers and acquisitions improved the efficiency of Nigerian banks.

Beverly et al (2019) analysed the financial performance of Indonesian non-financial companies, from 2010 to 2014, using 14 major ratios related to profitability, leverage, efficiency and liquidity. They found that merging firms had outperformed during the post-merger period. The profitability ratio created the synergy during the post-merger period; however, the ratio to expenses, activities and liquidity showed no improvement in these areas. The reason could be the wrong selection of targets, poor resource utilization and cultural integration issues. Jain et al (2020) examined the impact of cross-border acquisitions (CBAs) on the financial and operating performance of acquiring firms in India. The study concluded that the acquirers' financial and operational performance had exhibited a decreasing trend for first-time and frequent acquirers during the post-acquisition period. They argued that Indian firms' international expansion or strategic actions are not motivated by synergy creation.

Apart from changes in earnings per share and profit per share, Seidu (2008) analyzed the impact of M&A on Guinness Ghana Limited's corporate financial performance and determined that the merger had not produced the desired advantages. The post-M&A financial performance of Ecobank Ghana – The Trust Bank Takeover and UT Financial Services – BPI Merger, according to (Barnor and Twumwaah, 2015). The research looked at how standard accounting measurements like the acquiring bank's Return on Equity (ROE) reflected post-acquisition performance. Buadee (2015) also evaluated Access Bank Ghana Limited's (ABG) acquisition of Intercontinental Bank Ghana Limited and its influence on ABG's financial performance. In examining post-M&A financial performance, the author mostly used standard accounting metrics. Agyapong (2015) also conducted a research to evaluate Bank of Africa's performance following the acquisition of Amalgamated Bank. Financial parameters such as profitability, liquidity, and financial leverage were used in the study. According to Gatsi and Agbenu (2006), SG-SSB LTD's performance increased after it was acquired in Ghana. Marfo and Agyei (2013) found that the performance of acquirer and acquiring enterprises in Ghana has improved significantly.

With 305 M&A deals between 2003 and 2008, Rani et al (2015) investigated the major question of the acquiring firm's long-term performance. Using 14 major ratios related to profitability, efficiency, leverage, and liquidity, the study looked at long-term pre- and postmerger financial data. The findings revealed improved performance, and it was suggested that the increase in operational cash flows was attributed to the acquirers' improved post-M&A operating margins, not to the effective use of asset turnover to create higher sales. Mohapatra (2016) discovered that M&A announcements have a positive impact on 180 days of cumulative abnormal returns, indicating that M&A activities have benefited shareholders of acquiring firms in the Indian construction industry, indicating that the industry's growth rate, nature of business, and types of arrangements between acquiring and target firms all play a role in M&A performance.

During India's post-liberalization period, Kuriakose and Paul (2016) investigated the financial and strategic similarities of acquiring enterprises in the banking market. Banks differ in goal relative size, earnings diversity, financial leverage, efficiency, prudential rules, and

profitability, according to the study. According to the findings, a bank's performance has a negative influence on the post-merger era. Patel (2018) studied the long-term profitability of Indian banks before and after mergers and discovered that mergers had a negative influence on return on assets, return on equity (ROE), net profit ratio, yield on investment, and yield on advance. During the post-merger period, however, profit per employee, profits per share, and business per employee all grew. It was also discovered that while all banks' equity, investment, assets, and advances rose following the merger, their yield declined due to underutilization. Singh and Das (2018) looked into the performance of the Indian banking industry before and after mergers and acquisitions. Their research found that the market initially reacted negatively to the announcement of a bank merger, with banks showing no improvement in the cumulative abnormal average return. They also claimed that stock prices reflected the market's expectations for future cash flows, but actual results may differ from those expectations.

Almost half of the changes in MVA are due to changes in EVA (Stewart, 1991). Walbert emphasizes the close link between EVA and MVA, as well as EVA and variations in MVA (1994: 110). Stewart also mentions the benefit of EVA while describing changes in MVA (Stern Stewart EVA Roundtable, 1991). Grant (2003: 37) finds statistically significant connections between EVA-to-capital and MVA-to-capital, with an adjusted R2 value of 27%.
In South Africa, Hall (1998:198) looked at the link between MVA and EVA and other financial measures including ROA, ROE, and EPS. On the whole, Hall's (1998:198) analysis revealed poor correlation coefficients. With inflation changes to the data, the strongest connection was found between MVA and discounted EVA. Biddle (1999) investigated whether Economic Value Added (EVA) is more closely linked to stock returns and business valuations than accrual profits, and whether components of EVA, if any, play a role in these relationships. The study employed a sample of 6174 firm-years from 1984 to 1993, covering both EVA adopters and non-adopters. Earnings were more strongly connected with return and firm values than EVA, RI, or cash flow from operations, according to the correlation and regression test.

EVA and Market Value Added (MVA) were investigated by Lehn and Makhija (1996) as a performance indicator and a signal of strategy shift. The study included data from 241 big US corporations from 1987 to 1996, which was examined using descriptive statistics and multiple correlation. EVA and MVA successfully assessed the quality of strategic choices and functioned as indications of strategic change, according to the findings. They were discovered to be negatively connected to turnover and highly correlated with stock price performance. O'Byrne (1996) investigated the explanatory power of capitalized EVA, Net operating profit after tax, and free cash flows as a function of market value split by invested capital. For the period starting in 1985 and ending in 1993, the research made two revisions to Stern and Stewart's initial model. The author analyzed nine years of data and included 9000 of the biggest publicly listed firms in the sample. The data was examined using descriptive statistics and a regression model. NOPAT and EVA have about equal explanatory power, according to the findings. He came to the conclusion that the EVA is correlated with market value and serves as a useful tool for determining investor expectations.

The link between MVA and EVA was investigated by (Grand, 1996). The research looked at 983 firms from the Stern Stewart Performance 1000 in the United States in the years 1993 and 1994. It also used various correlations to look at the influence of the economy and EVA

on MVA. The findings reveal that EVA and GDP have a considerable impact on MVA, and that MVA and EVA have a high level of connection for enterprises with positive EVA. According to the author, corporate profits should be defined in terms of the quantity of capital spent to achieve a certain degree of profitability. His research revealed that EVA has a considerable influence on a company's MVA.

Milunovich and Tsuei (1996) investigated EVA in the computer industry to see which variables had the strongest correlation with stock prices. They studied the association between standard financial measures (such as EPS, ROE, and EVA) and the MVA of enterprises in the US Computer Technology Industry (so-called 'server-vendors') from 1990 to 1995. The poll covered the top 11 computer companies in the United States. In the computer industry, the data found varied degrees of connection between several performance indicators and MVA. They discovered that EVA has the strongest relationship with MVA and stock price, and that it is the most important predictor of MVA variations. The superiority of a quantitative method paired with a comparable approach to financial analysis, and the focus on industrialized nations are among the significant difficulties found in the research. Most of the research focused on traditional accounting criteria including profit margin, return on capital used, equity, liquidity, and long-term solvency to analyze post-M&A performance.
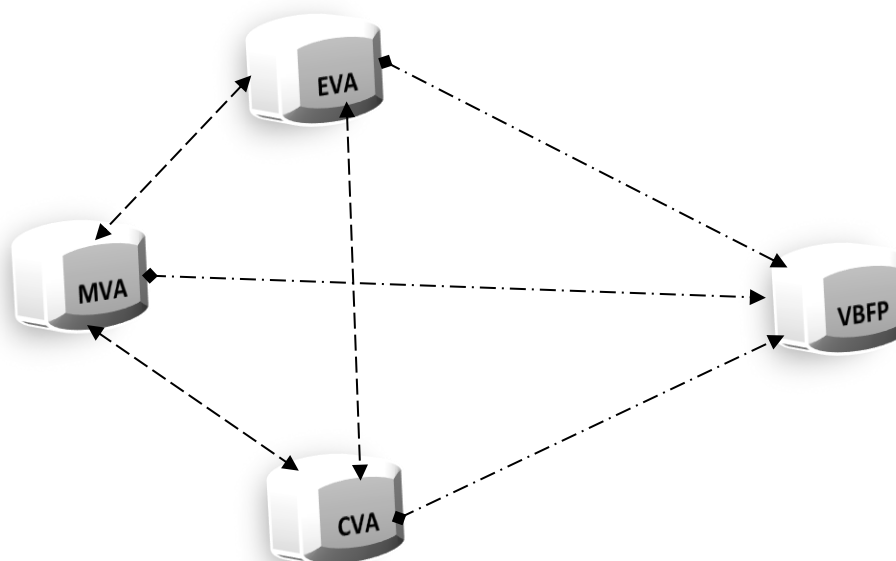
A study by Singh (2005) suggested that the relationship between EVA and MVA is statistically significant for Indian Banks. The study showed impressive performance in terms of EVA by banks such as State Bank of Bikaner and Jaipur, Jammu and Kashmir Bank, Global Trust Bank and IndusInd Bank. Rajesh et al (2012), investigated a comparative study between EVA and MVA for the selected cement companies in India and found that EVA and MVA play an important role in order to assess the financial performance of the companies. The findings also proved the two measures (EVA and MVA) provide consistent shareholder's value creation activities. Shrikant (2014) applied economic measures like Economic Value Added (EVA) and Market Value Added (MVA) combined with the accounting measures to perform a comparative study in order to identify the most appropriate measures and found that very few of the construction companies were having positive EVA for the creation of Shareholder's wealth. It was also found that there is a strong relationship between created shareholder's value and economic value added.

The above-mentioned literature clearly demonstrates that studies are mostly focused on the banking business or other industries, with relatively few researches in the banking sector in the Ghanaian context. Furthermore, a major portion of the extant M&A research is based on non-Ghanaian data. Furthermore, the study duration is cliched, especially in the case of Ghanaian studies. There is a significant research vacuum because none of these studies have looked at the combination of EVA (Economic Value Added), MVA (Market Value Added), and CVA (Cash Value Added) as metrics for evaluating M&A deal financial success.

The above reviewed literature results in the formulation and testing of the following hypothesis:

- H_{01}: EVA has a significant positive effect on MVA of the listed acquirer banks
- H_{02}: EVA has a significant positive effect on CVA of the listed acquirer banks
- H_{03}: MVA has a significant positive effect on CVA of the listed acquirer banks

Conceptual Framework

EVA = Economic Value Added
MVA = Market Value Added
CVA = Cash Value Added
VBFP = Value-Based Financial Performance

Methodology
Research Design
Both descriptive and correlational research methods were used in this study. The study also used a quantitative data gathering strategy. The analysis is based on secondary data from Ecobank Ghana Limited, Access Bank Ghana Limited, Societe Generale Ghana Limited, and GCB Bank Limited's audited annual reports from 2008 to 2020.

Data Analysis Methods
The data was collated, summarized, and evaluated by the researchers, who used value-based financial performance metrics and regression analysis to present the results in tables. The financial statements (statement of financial position, statement of profit or loss, and other comprehensive income and cash flow statement) of the listed banks are used to calculate EVA, MVA, and CVA.

The study adopted the following model to test the significant relationship between economic value added, market value added, and cash value added.
$$MVA = ß_0 + ß_1 X_1 + \varepsilon$$
$$CVA = ß_0 + ß_1 X_1 + \varepsilon$$
$$CVA = ß_0 + ß_2 X_2 + \varepsilon$$

Where:
MVA = market value added
CVA = Cash Value Added
$ß_0$ = Constant variables that affect the value-based financial performance of acquirer banks listed on the Ghana Stock Exchange

$ß_1$, $ß_2$ are Parameters which were the coefficient of the independent variables
X_1 = Economic Value Added
X_2 = Market Value Added

Results and Discussion
Value-based Financial Performance of Listed Acquiring Banks in Ghana
Table 1.1 shows the percentage changes in each variable in the comparative years for each bank for the entire post-acquisition period. It also shows the average percentage change and standard deviation of each variable's percentage for each bank.

Table 1.1: Percentage Changes of the Variables for the Banks (2008-2020)

Company	Stock Price	Stock Price % Change	EVA	EVA % Change	MVA	MVA % Change	CVA	CVA % Change
			GH¢ 000	%	GH¢ 000	%	GH¢ 000	%
EGH	7.09	18.40	134,455.104	-48.09	1,136,006.930	23.37	- 668,962.126	-136.76
SOGEGH	0.73	1.19	- 28,393.627	-253.72	- 23,579.814	-148.59	- 144,820.387	-1096.30
GCB	4.73	1.69	600,297.208	22.55	- 236,610.500	-125.39	- 704,913.433	-727.65
ACCESS	4.08	9.09	187,608.295	2.28	29,221.497	77.18	- 507,691.180	-104.20
AVERAGE	4.16	7.59	223,491.745	-69.24	226,259.528	-43.36	- 506,596.781	-516.23
SD	2.62	8.06	267484.42	126.52	617,287.799	110.73	255,978.747	481.30

Source: Annual Financial Reports of selected Banks from Ghana Stock Exchange (2008-2020)
Furthermore, the aggregate (average) percentage changes of variables for each bank for the full post-acquisition period were computed in order to understand how Economic Value Added (EVA), Market Value Added (MVA), and Cash Value Added (CVA) responded to the stock price. A decrease in price (for stock price) and value is indicated by a negative change (for Economic Value Added, Market Value Added and Cash Value Added). A positive change in the value of Economic Value Added, Market Value Added, and Cash Value Added shows an increase in price (for stock price) and a rise in the value of Economic Value Added, Market Value Added, and Cash Value Added. Table 1.1 demonstrates that the average % gain in stock price was recorded by the four acquirer banks (Ecobank Ghana, Societe Generale Ghana, GCB Bank, and Access Bank). This backs up the claim that a positive percentage change in stock price leads to positive Market Value Added (MVA), Economic Value Added (EVA), and Cash Value Added (CVA). With reference to Table 1.1, GCB Bank's comparatively strong track record of positive Economic Value Added (EVA) explains why the bank managed an average percentage change in net operating profit after tax of 32.39 percent above its average percentage change in capital employed of 31.85 percent. Despite having the largest percentage change in stock price (18.40%), Ecobank Ghana Limited came in third behind GCB Bank and Access Bank Limited in terms of economic value created. The reason for this is that Ecobank Ghana Limited's percentage change in net operating profit after tax of 17.98% (the lowest of the four acquirer banks) was much lower than its percentage change in capital used of 67.20%. (the highest among the four acquirer banks). Although Societe Generale Ghana recorded an average percentage increase in the stock price of (1.19%), this reflected an inverse relationship with Economic Value Added, Market Value Added and Cash Value Added.

This lends to the fact the bank's average percentage change in Net Operating Profit After Tax (NOPAT) increased by 28.36% relative to the average percentage change in capital employed of 52.35% with reference to Table 1.2. It implies that the bank failed to raise adequate net operating after-tax to cover its cost of capital. The bank further witnessed a fall in market value added because the average percentage increase in the stock price of 1.19% was far below the average percentage increase in book value of equity of 25.81%. This shows that an increase in stock price does not necessarily translate into positive EVA, MVA and CVA. This is true, especially when banks experience high capital employed and book value of equity relative to stock price. The bank's inability to generate enough net operating profit after tax and cash from operating activities may have adversely affected the stock price.

The stock price and the Market Value Added were found to have an adverse connection at GCB Bank. The average percentage change in GCB Bank's book value of equity of 21.86 percent was more than the average percentage change in stock price of 1.69, resulting in a decrease in market value created. As seen in Table 1.1, all four acquirer banks were inefficient in terms of cash value added during the post-acquisition period, with all four banks recording negative cash value added. Access Bank Ghana was worse off in terms of cash value added because it was unable to earn enough net cash from operational operations to cover its capital costs (-37.06 percent). This suggests that Access Bank Ghana is cash-strapped and will be unable to satisfy its short-term financial commitments when they become due.

Table 1.2: Percentage Change in NCFOP and NOPAT for the Post-acquisition Period

Company	Net Cash Flow from Operating Activities	% Change	Net Operating Profit After Tax	% Change
			GH¢ 000	%
EGH	429,287.417	19.84	408,422.000	**17.98**
SOGEGH	131,216.370	653.71	106,314.228	**28.36**
GCB	1,316,780.000	104.62	948,924.500	**32.39**
ACCESS	162,684.750	-37.06	383,659.750	**19.75**
AVERAGE	**509,992.134**	**185.28**	**461830.119**	**24.62**
SD	**554230.22**	**317.67**	**352427.54**	**6.88**

Source: Annual Financial Reports of selected Banks from Ghana Stock Exchange (2008-2020)

Table 1.3: Percentage Change in Capital for the Post-acquisition Period

Company	Book Value of Equity	% Change	Capital Employed	% Change	Gross Capital	% Change
	GH¢ 000	%	GH¢ 000	%		
EGH	1,007,007.571	**19.40**	2,786,820.143	**67.20**	7,898,986.714	**18.48**
SOGEGH	304,365.444	**25.81**	888,911.802	**52.35**	1,802,753.800	**23.7**
GCB	1,488,735.500	**21.86**	1,950,401.500	**31.85**	11,525,896.00	**14.01**
ACCESS	583,206.250	**23.80**	1,017,672.250	**54.05**	3,532,953.250	**18.42**
AVERAGE	**845,828.691**	**77.18**	**1,660,951.424**	**51.36**	**6,190,147.441**	**18.65**
SD	**516,869.033**	**2.74**	**887,170.595**	**14.60**	**4385591.875**	**3.96293**

Source: Annual Financial Reports of selected Banks from Ghana Stock Exchange (2008-2020)

For the whole research period, the table below illustrates the rank of the selected banks based on their factors. The average values for each variable recorded by each bank were compared for the ranking. The banks were rated based on their average Economic Value Added (EVA), average Market Value Added (MVA), and average Cash Value Added (ACVA) because the research was about their financial performance (CVA). To reach this goal, all four (4) acquirer banks were first rated based on their average total variables, which represented their scores. The method for ranking the banks was as follows: the greatest value received the first place, designated by '1', followed by '2', and so on until the fourth position, signified by '4' (see table 1.4).

From Table 1.4 below, there are three significant rakings – Economic Value Added Rank, Market Value Added Rank, and Cash Value Added Rank. None of the banks was ranked first in all three rankings. GCB Bank, Ecobank Ghana Limited and Societe General Ghana were ranked first in Economic Value Added, Market Value Added, and Cash Value Added, respectively. Access Bank Ghana Limited and GCB Bank Limited were ranked first and last respectively in all the three rankings. GCB Bank Limited was ranked 1st in economic value added, and 4th in both market value added, and cash value added, suggesting that GCB Bank Limited performed poorly during the entire post-acquisition period. However, it may be argued that GCB Bank Limited had data covering only two post-acquisition periods as opposed to Access Bank Ghana Limited (four years), Ecobank Ghana Limited (seven years) and Societe Generale Ghana (twelve tears). It is possible that the ranking would have been different should all the acquirer banks have the same data covering the post-acquisition period. Contrary to this view, it may also be argued that since this study used the average values as the scores, the number of years would not affect the performance ranking so much.

Table 1.4: Rank of Selected Banks per their Variables (2008-2020)

Company	EVA	Rank	MVA	Rank	CVA	Rank	Sum of Ranks	Overall Rank
	GH¢ 000		GH¢ 000		GH¢ 000			
EGH	131,104.612	3	1,136,006.930	1	-668,962.126	3	7	2
SOGEGH	-28,393.627	4	-23,579.814	3	-144,820.387	1	8	3
GCB	600,297.208	1	-236,610.500	4	-704,913.433	4	9	4
ACCESS	187,608.295	2	29,221.497	2	-507,691.180	2	6	1
MEAN	222,654.120		226,259.530		-506,596.780			
SD	267,861.155		617,287.799		255,978.747			

Source: Annual Financial Reports of selected Banks from Ghana Stock Exchange (2008-2020)

Table 1.4 above is consistent with the study conducted by Rajesh, Ramana and Nayarana (2012). According to the empirical evidence gathered by the researchers, ACC Cement Limited, Anjani Cement Limited and Grasim Cement Limited, who occupied first, second and third positions in the ranking based on their Market Value Added and Economic Value Added (EVA), all recorded very impressive Market Value Added (MVA); but did not record very good Economic Value Added (EVA). Likewise, Ecobank Ghana, which recorded the first rank in market value added, also recorded low economic value added (EVA) [see tables 1.4]. The ranking in this study statistically asserts the current status of the banks in Ghana. For instance, Ecobank Ghana Limited occupied the 1st position in terms of stock price, 3rd in terms of Economic Value Added (EVA), 1st in terms of Market Value Added (MVA) and 3rd in Cash Value

Added, and this reflects in their current status because they have maintained the highest stock price among the listed banks (see table 1.4). Access Bank Ghana Limited, which emerged 1st in the overall rankings, also performed well on the stock market.

Research objective one: To determine whether the various acquisitions created/increased shareholder value or destroyed shareholder value in the banking sector of Ghana

With reference to Table 1.5 below, the overall post-acquisition economic value added for all the acquirer banks was GH¢223,491,745. This means that acquisitions in the Ghanaian Banking Sector resulted in shareholder value addition (SVA) regarding economic value added (EVA). What accounted for this stellar performance in economic value addition was the fact that net operating profit after tax increased by an average of 24.62%. This is also in tandem with respondents' views on whether there has been an annual and average increase in net operating profit after tax (NOPAT) after the acquisition. To expatiate further, the overall economic value addition recorded lends to an insignificant increase in the weighted average cost of capital (0.24%) which was dwarfed by the significant average increase in net operating profit after tax by 24.62% over the acquisition period. This is corroborated by the results in table 5.107, which clearly shows three banks (Ecobank Ghana Limited, Societe General Ghana and GCB Bank Limited) recording a decrease in the weighted average cost of capital of 2.14%, 0.86% and 3.43% respectively. Although there was a 54.36% average increase in post-acquisition Capital employed (Total Assets less Current Liabilities), it could be concluded that this percentage increase was insignificant due to the overall increase of 0.24% in the weighted average cost of capital. This results in a lower cost of financing the banks. Although the results show economic additions to the banks, it is worth stating an average loss in the Economic Value Added of 69.24% over the twelve-year period (2008-2020).

It is clear from table 1.5 that the acquisition was successful with a market value added of GH¢226,259,528. This means the acquisition in the banking sector of Ghana resulted in shareholder value addition in terms of market value added (MVA) over the acquisition period (2008-2019). There is an average increase in stock prices of 7.59% after the acquisition, as shown in table 1.1. This increased the acquirer banks' market value due to the high number of shares in issue. The average increase in market value dwarfed the average increase in the book value of equity of 77.18% (see table 1.3 above). The results from table 1.1 indicate an average fall in market value added of 43.36% relative to a fall in the economic value added of 69.24% over the acquisition period (2008-2020).

Concerning table 1.5, the banking sector recorded an abysmal performance in cash value added over the acquisition period. An average post-acquisition cash value added of negative GH¢506,596,781 clearly shows that the banks faced liquidity problems. This means the acquisition has destroyed shareholder value in terms of cash value added. It is quite apparent that the banks lack good internal cash controls and accounting processes. Although the banks recorded impressive net cash flow from operating activities over the acquisition period, they were insufficient to cover the cost of capital, considering the substantial average gross capital of GH¢6,190,147,441. Although the average increase in the weighted average cost of capital was rather insignificant (0.24%), the substantial average gross capital resulted in a high finance cost that exceeds the average net cash flow from operating activities GH¢509,992.134 (see table 1.2). The value of the post-acquisition weighted average cost of capital as a percentage of gross capital has increased over the post-acquisition period. The banks' post-

acquisition liquidity level is not good enough to defray their short-term financial obligations as they fall due.

Negative cash value added is bad for both banks and their present and potential investors since it shows the banks' incapacity to create cash from one financial period to the next, resulting in low liquid profit. It demonstrates the banks' incapacity to control how money flows in and out of them. The acquiring banks are unable to meet the normal operations' basic cash requirements. It implies the banks are having trouble keeping up with the minimal amount of cash that must come into them on a regular basis in order for them to stay open. This indicates that banks are having difficulty paying suppliers, staff, or servicing debt commitments to investors (shareholders and Debtholders).

The acquiring banks' negative cash value added indicates a lack of managerial competency or inefficiency in management. It's possible that the bank's operational expenses are covered by a large number of client deposits. Boadi et al (2016) compare managerial efficiency to total deposits (in terms of bank interest expense). They noted that the quantity of client deposits that bank managers utilize to cover their banks' operational expenses reveals whether or not management is efficient. A larger ratio indicates inefficient management, which will impact liquidity, resulting in a drop in liquidity, and vice versa. Al-Harbi (2017); Boadi et al (2016) both found a strong and positive association between managerial efficiency and liquidity. Staff-related expenses, bank investments in ICT that suffer from interconnection issues, and marketing operations all have substantial overhead costs.

Another aspect is that asset quality has deteriorated over time, resulting in a rise in non-performing and past-due loans. The banks may have significantly greater net interest revenue and well-managed expenditures, but their collection method appears to be inefficient. This translates to a large amount of accounts receivable but little cash flow. Ghana's banks had the highest loan charge-offs and nonperforming loan percentages, which might be a result of their poor lending policies. The common consensus is that while making loan choices, lenders evaluate the following six factors of borrowers: capital, coverage, ability, circumstances, collateral, and character. These proposals emphasize the importance of cash flow analysis in evaluating loan applications. However, the lending procedures of Ghanaian banks reveal a lack of understanding of borrowers' projected cash flows from their enterprises. Instead, banks have relied primarily on borrowers' collateral's projected worth.

The overall post-acquisition financial performance of the four-acquirer banks of negative GH₵56,845,508 is a clear indication that the acquisition has not resulted in value additions to shareholders. The overall fall in value lends to the massive loss in cash value added.

Table 1.5: Overall Value-based Financial Performance

Company	EVA	MVA	CVA	Total
	GH¢ 000	GH¢ 000	GH¢ 000	GH¢ 000
EGH	134,455.104	1,136,006.930	(668,962.126)	
SOGEGH	(28,393.627)	(23,579.814)	(144,820.387)	
GCB	600,297.208	(236,610.500)	(704,913.433)	
ACCESS	187,608.295	29,221.497	(507,691.180)	
AVERAGE	223,491.745	226,259.528	(506,596.781)	(56,845.508)
SD	267484.42	617,287.799	255,978.747	

Hypothesis Testing: Regression Analysis
Because each bank was listed on the Ghana Stock Exchange at a different time, the post-acquisition years that constitute the foundation for financial performance varies. Similarly, each of the banks included in the research undertook mergers and acquisitions at various times. As a result, certain companies may have had better financial success in the years after their purchase.

H_{01}: EVA has a significant positive effect on MVA of the listed acquirer banks
The results of the linear regression in table 1.3 indicate that R = 0.059 and R^2 = 0.004. The R-value 0.059 indicates a weak positive linear relationship between Economic Value Added and Market Value Added of listed acquirer banks in Ghana. The R^2 indicates that about 0.4% of the variation in market value added is explained by the model MVA = α + β1 (EVA), and 99.6% is unexplained by the model.

Table 1.6: Model Summary for EVA and MVA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.059[a]	.004	-.019	443718.6313614

a. Predictors: (Constant), EVA

The ANOVA for the linear model presented in table 1.7 of economic value added and market value added has an F value = 0.159 and significant at p-value = 0.692, which is greater than 0.05. This is depicted by linear regression model MVA = α + β1(EVA), where MVA is market value added and EVA is economic value added, with a p-value of 0.692, implying that the model was not significant.

Table 1.7: ANOVA for EVA and MVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1　Regression	31214261961.348	1	31214261961.348	.159	.692[b]
Residual	8859880071776.800	480	196886223817.262		
Total	8891094333738.150	481			

a. Dependent Variable: MVA

b. Predictors: (Constant), EVA

The regression coefficients (β), the intercept (α), and the significance of all coefficients in the model were subjected to the t-test to test the null hypothesis that the coefficient is greater than zero. The resulting model's beta coefficient in Table 1.8 shows that the constant α = 267423.530 is greater than zero and significant since the p-value = 0.001 is ≤ 0.05. The coefficient β = 0.117 is also greater than zero with a p-value = 0.692, which is greater than 0.05 level of significance, whiles the t-value for EVA is 0.398 with a p-value of 0.692 more than 0.05 level of significance. This implies that the first (H$_0$) null hypothesis is rejected and the model: MVA = 267423.530 + 0.117(EVA) + ε. is not significantly fit. The reason is that, although the EVA coefficient (β) shows a positive value of 0.117, this is insignificant since its p-value = 0.692 is > 0.05 level of significance. Thus, the study rejects the first null hypothesis that *"EVA has a significant positive effect on MVA of acquirer banks* ". Thus, the contribution of EVA to MVA was by chance.

Table 1.8: Coefficient for Regression between EVA and MVA

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1　(Constant)	267423.530	71295.904		3.751	.001
EVA	.117	.293	.059	.398	.692

Dependent Variable: MVA   .a

.b

The findings back with Kramer and Pushner's (1997) findings, which looked at the strength of the EVA-MVA link. Economic value added was shown to explain just 10% of market value changes, resulting in a statistically negligible positive connection between the two variables. Furthermore, the findings support Biddle et al (1999), who note that various statements of a substantial link between EVA and MVA have been made, the majority of which are based on "anecdotal evidence" or "in-house investigations." Their studies revealed that the link between economic value added and market value added is weak or non-existent.

This contradicted the findings of (Al-bahri, 2017), who found that the EVA was linked to the facility's increased MVA and that the EVA had more interpretative power than standard accounting measures. It also contradicted the findings of (Abu Wadi & Al-Hait, 2016), who discovered a statistically significant link between the EVA and the MVA of Jordanian banks. In addition, the study contradicted findings by Ahmed (2015), which revealed that the EVA measure has a positive association with the MVA of the shares when compared to the profitability measure per share. Finally, the findings contradict those of Muraleetharan

(2014), who discovered a positive association between EVA and MVA, as well as the fact that the MVA is heavily impacted by the EVA.

Although both EVA and MVA are superior indices of shareholder value, inflation can affect the computation of EVA, resulting in a null or small influence on MVA (De Villiers,, 1997). According to De Villiers (1997), the cost of capital is used to calculate EVA, however because the cost of capital is prone to distortions in periods of high inflation, the actual representation of the EVA may not be shown. Ghana's monetary policy report from January 2020 stated a target inflation rate of 8% with a 2% asymmetric range, indicating that the country's economy would be better off with at least 8% inflation - the worst-case scenario would be 10%. The yearly average inflation rates in Ghana from 2008 to 2020 were produced using this comparison to determine the risk of severe inflation affecting the EVA calculated for this study. In 2015 and 2016, 17.5 percent and 17.2 percent, respectively, were reported, indicating strong inflation (Knoema.com, 2019). These figures were much higher than the national average for those years. According to Akwaa (2018), the highest rate since 2014 was 19.2% in March 2016, while the lowest rate since 2014 was 11.6 percent in October 2017. According to these findings, inflation may have tainted the calculation of EVA, resulting in a statistically negligible connection with MVA.

H_{02}: EVA has a significant positive effect on CVA of the listed acquirer banks
The results of the linear regression in table 1.9 indicate that R = 0.404 and R^2 = 0.163. The R-value 0.404 indicates a moderate positive linear relationship between EVA and CVA listed acquirer banks in Ghana. The R^2 indicates that the explanatory power of the independent variables is 0.163. This means that about 16.3% of the variation in cash value added is explained by the model CVA = $\beta 0$ + $\beta 1$ (EVA) and 83.7% is unexplained by the model. It implies that 16.3% of the variation in the CVA can be explained by a unit change in EVA, whiles the remaining percentage of 83.7% is explained by other variables.

Table 1.9: Model Summary for EVA with CVA as the Dependent Variable

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.404[a]	.163	.144	320145.9827062

a. Predictors: (Constant), EVA

The ANOVA for the linear model presented in table 1.10 has an F-value = 8.769 and significant at p-value = 0.005. This is depicted by linear regression model CVA = $\beta 0$ + $\beta 1$(EVA), with p-value 0.005 ≤ 0.05, implying that the model is significant. The analysis of variance table value (F value) of 8.769 at p-value ≤ 0.05 confirms the significant contribution of EVA towards CVA. Thus, the contributi on of EVA to CVA was not by chance.

Table 1.10: ANOVA for EVA (with CVA as the Dependent Variable)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	898772493810.972	1	898772493810.972	8.769	.005[b]
	Residual	4612205260930.370	480	102493450242.897		
	Total	5510977754741.340	481			

a. Dependent Variable: CVA

b. Predictors: (Constant), EVA

The results on the beta coefficient in table 1.11 indicate that the constant α = -117730.605 is less than zero and significant since the p-value of 0.027 is less than 0.05 significance level. The coefficient β = 0.625 is greater than zero and significant since its p-value of 0.005 is less than 0.05, which implies that the second null hypothesis (H_{02}) is accepted and the model is significantly fit. The t-value for constant is -2.289 while the t-value for EVA is 2.961 resulting in the model: CVA = -117730.605 + 0.625(EVA) + ϵ. This confirms a significant positive linear relationship between EVA and CVA of listed acquirer banks in Ghana. That is to say the study accepts the second null hypothesis that **"*EVA has a significant positive effect on CVA of acquirer banks listed on the Ghana Stock Exchange"*.** The findings are consistent with those of Farhad et al. (2012), who found that EVA had a strong beneficial impact on CVA. EVA accounted for 0.625 of every change in CVA, according to the regression model. It measures the average change in CVA as a result of the banking sector's EVA.

Table 1.11: Coefficients for Regression between EVA and CVA

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-117730.605	51440.475		-2.289	.027
	EVA	.625	.211	.404	2.961	.005

a. Dependent Variable: CVA

H_{03}: MVA has a significant positive effect on CVA of the listed acquirer banks
The results of the linear regression in table 1.12 indicate that R = .289[a] and R^2 = 0.084. The R-value of 0.289 indicates a positive linear relationship between MVA and CVA of listed acquirer banks in the Ghanaian Banking Sector. The R^2 indicates that about 8.4% of the variation in cash value added is explained by the model CVA = $\beta 0$ + $\beta 1$(MVA) and 91.6% is unexplained by the model.

Table 1.12: Model Summary of MVA (with CVA as the Dependent Variable)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.289[a]	.084	.082	1.57930

a. Predictors: (Constant), MVA

The ANOVA for the linear model presented in table 1.13 has an F-value = 43.860 which is significant because the p-value of 0.000 is less than the significance level of 0.05. This is depicted by linear regression model CVA = $\beta_0 + \beta_1$(MVA), with a p-value of 0.000, implying that the model was significant.

Table 1.13: ANOVA MVA (with CVA as the Dependent Variable

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	109.393	1	109.393	43.860	.000[b]
Residual	1197.204	480	2.494		
Total	1306.598	481			

a. Dependent Variable: CVA
b. Predictors: (Constant), MVA

The regression coefficients (β), the intercept (α), and the significance of all coefficients in the model were subjected to the t-test to test the null hypothesis that the coefficient is greater than zero. The results on the beta coefficient in table 1.14 show that the constant α = 22.646 is greater than zero and significant since the p- value of 0.000 is less than a significance level of 0.05. Moreover, the EVA coefficient β = 0.109 is also greater than zero and significant since its p-value of 0.000 is less than the significance level of 0.05. It implies that the study accepts the third null hypothesis (H_{03}) that **"MVA has a significant positive effect on CVA of acquirer banks listed on the Ghana Stock Exchange"**. It also implies that the model is significantly fit. The t-value for constant is 61.094 while the t-value for MVA is 6.623 resulting in the model: CVA = 22.646 + 0.109(EVA) + ε. This confirms a significant positive linear relationship between market value added and cash value added of listed acquirer banks in Ghana. The regression model also indicates that MVA accounted for 0.109 of every change in CVA. It expresses the average change in CVA given the effect of the MVA. Thus, given a unit positive effect of MVA, CVA will increase by 0.109. The result supports previous studies by Farhad et al. (2012) who revealed that MVA has a significantly positive effect on CVA.

Table 1.14: Regression Coefficients for Cash Value Added (CVA)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	22.646	.371		61.094	.000
MVA	.109	.017	.289	6.623	.000

a. Dependent Variable: CVA

Conclusion, Implication and Recommendation
Conclusion
The overall post-acquisition EVA for all the acquirer banks was GH₵223,491,745. This means that acquisitions in the Ghanaian Banking Sector resulted in value addition regarding EVA. The acquisition was successful with a MVA of GH₵226,259,528 because of an average increase in stock prices of 7.59% after the acquisition and the high number of shares in issue. The banking sector recorded an abysmal performance in cash value added over the acquisition period. An

average post-acquisition CVA of negative GH₵506,596,781 clearly shows that the banks face liquidity problems. The overall post-acquisition financial performance of the four-acquirer banks of negative GH₵56,845,508 is a clear indication that the acquisition has not resulted in value additions to shareholders. The overall fall in value lends to the massive loss in CVA. The study rejects the first hypothesis that there is a significant positive effect of EVA on MVA of acquirer banks in Ghana. The results in Table 1.15 indicate a significant positive effect of EVA on CVA of acquirer banks in Ghana. The study also confirms that MVA has a significant positive effect on CVA of acquirer banks in Ghana.

Table 1.15: Hypothesis testing of EVA, MVA and CVA

Significant Positive Relationship between Dependent Variables	Coefficient	F-Test	P-Value	Hypothesis Accept/Reject
H1: There is a significant positive relationship between Economic Value Added (EVA) and Market Value Added (MVA) of the listed acquirer banks	0.117	0.159	0.692	Rejected
H2 There is a significant positive relationship between Economic Value Added (EVA) and Cash Value Added (CVA) of the listed acquirer banks	0.625	8.769	0.005	Accepted
H3: There is a significant positive relationship between Market Value Added (MVA) and Cash Value Added (CVA) of the listed acquirer banks	0.109	43.860	0.000	Accepted

P<0.05

EVA, MVA, and CVA are value-based financial performance yardsticks, investment selection tools, and performance measures that reflect the absolute amount of shareholder value generated. According to the findings, EVA-CVA and MVA-CVA have a considerable positive dependency. As a result, value-based performance measurements might be used to highlight post-M&A financial success. EVA, CVA, and MVA are relevant measurements that investors should consider when making decisions regarding their wealth and form value in comparison to typical performance indicators. In general, organizations and investors should shift their mindsets and place a greater emphasis on value-based metrics such as EVA, CVA, and MVA when evaluating corporate performance. The findings show that accomplishing the banks' aims and expanding their potential to prosper, develop, and continue to grow in the face of internal and external conditions is dependent on performance. As a consequence, before investing in any of the stocks, investors are seeking for the best firms to provide performance-related variables for inspection.

Theoretical Contributions
This study attempts to bridge and integrate different value-based approaches to the evident phenomenon of corporate acquisitions. From the viewpoint of academic researchers, the findings highlight the importance of taking a broad perspective in studying acquisition performance from the viewpoint of shareholders instead of reliance on traditional accounting performance indicators such as ratios. The creation of shareholder value is considered the most important objective of firms. Over the years, organisational performances have been measured in terms of profit or earnings per share. Increasing dissatisfaction with these measures points to the development and promotion of whole new array of metrics in relation to shareholder value. These measures recognize the fact that capital invested in an organization is not free, and it carries a charge for its use in the operations of organization, in terms of cost of capital and hence they have shifted the focus away from profits to cash flows.

Shareholders are the owners of organisations and the board of directors as their representatives elected by them. The objective function of organisations is to maximize the shareholders' value. Managers in most of the developed world must focus on building shareholder's value. If the managers and director do not maximize value, there is always the threat of a hostile takeover. Shareholders as owners of business unions try to increase their wealth, and increasing the wealth causes the assessment of business union favourably, which is very important for business owners.

The Value-based Management (VBM) system is an integrated framework for measuring and managing businesses with the explicit objective of creating superior long-term value for shareholders. VBM is the principle of incorporating the cost of investment into traditional accounting measures, such as profit after tax, in order to manage for the maximum shareholder value. This implies that a company that uses the VBM principles needs to identify those measures that are closely related to creating shareholder value, and incorporate them into strategic decision making.

Managerial Implications
This study helps banks and other business entities to understand the importance of post-merger and acquisition EVA, MVA and CVA in assessing the risk and returns of a merger or acquisition as a corporate strategy. Moreover, it gives managers the idea of whether or not banks should engage in M&A activities and predict returns based on available information. Thus, the study's findings will be of interest to decision-making executives as well as M&A consultants and employees. Adopting the proposed appropriate M&A framework for this study will improve the utilization of the bank's resources and maximize success in achieving the targeted objectives of a merger or acquisition. The framework could guide the management team of financial institutions engaging in M&A. It allows for efficient planning and better results. This study offers an insight into the reasons for the recent growth in M&A activities, especially among banking institutions in Ghana. The government, regulatory bodies concerning policymaking and financial market players may refer to the study as reference material. This study creates awareness in the general public about mergers and acquisitions and its possible effects on banks' growth and performance in Ghana. Since banks thrive financially on the regular deposits and investments by customers composed of the general public, it is needful for the general public to be aware of the personnel's competencies in managing their deposits and life savings. The value-based metrics of corporate performance helps the public to appreciate the economic, market and cash value generated over the years by the banks. If the banks' post-merger and acquisition performance reveal a considerable and notable reduction in EVA, MVA and CVA, risk-averse or risk-sensitive customers will be proactive to withdraw their investments from these banks to avert the event of protracted legal battles to recover their investments should the banks be liquidated.

A bank's management creates value when it takes decisions that provide benefits, in excess of costs. These benefits may come to banks in the near or distant future depending on the strategies
involved in decision making process. While projects are generally viewed financially from NPV or IRR point of view, they may not really convey the fact that whether value is being added to the shareholders (Verma, 2009). EVA, MVA and CVA seek to measure the periodic performance in terms of changes in value. EVA, MVA and CVA are a value-based measure that

help managers to evaluate business strategies, capital projects and to maximize long-term shareholders wealth and the value that has been created or destroyed by the firm during the period. It also helps corporate managers in taking decisions like withdrawing value-destructive activities and investments in projects that are critical to shareholder's wealth which will lead to an increase in the market value of the firm. EVA, MVA and CVA attempt to overcome the problems of traditional measures by setting managerial performance target and linking it to reward systems thereby setting a single goal of maximizing shareholder value unlike diversified goals of various traditional measures. It has been found from various research reports that managers are more likely to respond to EVA, MVA and CVA incentives while making various financial, operational and investing decisions (Biddle and Gary, 1998), being motivated to behave like true owners of the organization. As EVA, MVA and CVA focus on end result and not on means to achieve it, no EVA, MVA and CVA model dictate how to achieve wealth maximization, thereby giving freedom and scope of creativity and innovativeness to the managers and decision makers (Sengupta et al., 2007).

The present analysis indicates that the acquirer banks in Ghana may get better value by analysing the major value-based determinants such as EVA, MVA and CVA. They have a better scope of applying value-based measures to generate economic profit rather than accounting profit in order to create higher shareholder value. Since EVA, MVA and CVA are found to be major contributor in shareholder value creation, acquirer banks in Ghana and developing countries should concentrate more upon increasing their EVA, MVA and CVA in order to create higher shareholder value.

Limitations and Recommendations for Future Research
The banking industry in Ghana has a less elucidative reporting structure, which makes it difficult to assess their financial reports, according to this study. Ecobank Ghana, for example, disclosed non-interest-bearing assets and liabilities without specifying whether they were current or noncurrent. This issue affects the precision of the estimations in this investigation. All non-interest-bearing assets and obligations were presumed to be noncurrent in the research, however this was not always the case. Some non-interest-bearing elements, such as capitalization expenses, employee perks, and so on, are said to be current in the literature (Investopedia, 2019).

Another constraint is the estimate of the beta (β), which is used to determine the stock's sensitivity in order to calculate the cost of equity. Some historical data from the Ghana Stock Exchange about the composite index (the benchmark against which stock prices are measured) did not match the data from the individual banks. On some dates, such as public holidays, data for the stock prices of specific banks was available, but not for the composite index. Again, some of the banks that changed their trading names, such as Societe Generale Ghana (from SGSSB to SOGEGH) and Ecobank Ghana (which used to trade as EBG but is now EGH), did not have automatic stock price data for their previous trading before the change of name because, as of the 18th March 2020, Ecobank as EGH only had automatic data for the years 2016 to 2020. Ecobank, on the other hand, did not have automated data, as did EBG. Similarly, Societe Generale had automated data for their current trading name SOGEGH from 2013 to 2020, but no automatic data for SGSSB. The years' remaining data was manually searched, which is prone to mistakes.

However, there were few mergers and acquisitions in the banking industry throughout the time, thus a larger sample covering a longer period might have shown better findings. It is suggested that future research be expanded to include further merger and acquisition operations by companies listed on the Ghana Stock Exchange in other areas.

More surveys on other value-based measures of performance like Economic Profit (EP), Cash Flow Return on Investment (CFROI), Shareholder Value Added (SVA) in Ghana Stock Exchange and other stock markets around the world are recommended for a better understanding of the quality of value-based measures of performance and their role in evaluating shareholders' wealth.

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