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Mergers and Acquisitions Drivers and Shareholders Value in the Banking Industry in Kenya

George K. Gikanga[1], Dr. Joshua O. Bosire[2], Dr. Joshua W. Matanda[3]
[1]*(MBA Candidate, Jomo Kenyatta University of Agriculture and Technology, Kenya)*
[2, 3] *(Lecturer, Jomo Kenyatta University of Agriculture and Technology, Kenya)*

Abstract:
Mergers and acquisitions drivers including operating synergy, liquidity, profitability and solvency are expected to help the shareholders attain maximum value. The research project sought to establish how mergers and acquisitions drivers affect the shareholders' value in the banking Industry in Kenya. Many studies have been conducted to find out how mergers and acquisitions influence the shareholders' value which has not yet been established as most studies had provided mixed findings. The specific objective of the study included to ascertain how operating synergy determines the shareholders' value in mergers and acquisitions. The study was guided by Synergy Gain Theory. The study adopted a descriptive research design in order to find the relationship between mergers and acquisitions and the shareholders' value. The study adopted a census sampling technique due to the low number of mergers and acquisition from 2006-2015. The study adopted secondary data collection techniques which was retrieved from the respective banks audited financial statements, CBK reports, NSE reports and CMA reports where a comparison was done 5 years' pre-mergers and acquisitions and 5 years' post-mergers and acquisitions. The target population of the study included 10 mergers and acquisitions in the banking industry that had been transacted from 2006-2015. Data collected from secondary sources was cleaned to ensure accuracy and functionality and then it was analyzed by use of STATA 15. The Paired sampled t-test indicated that there was significant increase in shareholder value after merger and acquisition. The same was observed for operating synergy. Hausman test indicated that random effect was to be adopted. Prior to merger and acquisition, operating synergy had insignificant negative effect on shareholder values after merger and acquisition; operational synergy had significant effect on shareholder value of firms in banking industry. Similarly, the r-squared moved from 5.6% (0.056) to 12.04% (0.1204) after merger and acquisition. The study concluded that merger and acquisition has significant effect on the Shareholders Value in the Banking Industry in Kenya. The study therefore recommended that the bank should critically evaluate the overall business and operational compatibility of the merging institutions and focus on capturing long-term operational synergies.

Key Word: *Merger and Acquisition Drivers, Shareholders Value, Banking Industry, Operating Synergy*

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I. Introduction

Shareholders" value is the worth guaranteed to residual owners of a firm as a result of the effort of an organization to fully utilize the available resources to generate returns or constant stream of cash flows from one period to another (Largani, Kaviani & Abdollahpour ,2018). Investors and shareholders of a fir m expect a return on their investment for purpose of re ward for the risk that they have taken in investing their financial resources in the firm. Consequently, for this reason therefore, they measure their value in the firm by looking at the Economic Value (EV) of the firm at the end of a given financial period (Mheyamwa, 2017). If the firm's EV is deemed higher in comparison with the EV in the market, then shareholders will be induced to invest more of their shares in the company hence making the firm to be more competitive because of the availability of sufficient financial resources from the shareholders

The main purpose of any firm is to enhance its shareholders' wealth. Investors, management and other stakeholders need to be aware of the company's performance to enable them make informed decisions about the future. Rational investors expect good long-term return on their investment. Chauhan and Patel (2018) observed that maximizing shareholders' value is becoming the new co-operate standard. Hartomo (2015) opines that, creation of shareholder value is becoming increasingly challenging as owners and managers are forced to make appropriate financial decisions that contribute to the management of operations that create value and also identify activities that destroy value. In addition, it is necessary to implement effective instruments which are able to evaluate real value created.

In the last few years' mergers and acquisitions activities across many industries in the world had gained a lot of momentum. This was the most remarkable time that some of the biggest mergers and acquisitions were transacted in history. Some of the driving factors behind this mergers and acquisitions include gaining synergy, dominating the market, liquidity economies of scale, solvency and profitability aimed at increasing the value of the shareholders. Edinburgh School of Business (2016) notes four types of mergers and acquisitions which are distinguished by their sizes and nature of their transactions. They include: horizontal mergers and acquisitions involving firms belonging to the same industry and also offering the same products. The objectives behind this type of mergers and acquisitions are to help a firm to maximize on economies of scale and it's a strategy used by firms to decrease the number of competitors in the industry. Vertical mergers and acquisitions involve firms within the same industry but at different levels of production where one company is ahead of the other in terms of production output. Conglomerate mergers and acquisitions involve companies that are not within the same industry and are not offering the same products or services. Generic mergers and acquisitions involve companies in the same industry with the purpose of extending the market, technology and the product line with the aim of increasing of the returns the acquiring company.

Some mergers and acquisitions theory states that mergers and acquisitions that can be termed as a success increases the profit for both the target and the acquiring firm. Contrary, managerial theories argue that mergers and acquisitions affect negatively the profitability and financial performance of both the acquirer and the target firm. Pinky, Mall & Gupta (2019) carried a study in India and found out that merger and acquisitions had an impact on the stocks of both parties which meant that the price of common stock of both parties may either rise or fall. Further it was noted that shareholders of the buying firm experienced positive abnormal returns in the short run while on the other hand they fluctuated over time.

Kenya was ranked by COMESA as the country which transacted most mergers and acquisitions in East Africa and the whole of the COMESA region compared to other member countries (Mumo, 2016). COMESA was able to generate a total of Ksh 314 million which resulted from the fees charged from firms that had engaged in mergers and acquisitions from 2015- 2016. Among the total mergers and acquisitions 70% was from the financial sector while 30% was from the other sectors. Kenya and Zambia constituted to be the country with large share of merges and acquisitions which was contributed by favorable business environment. Up to date the number of mergers and acquisitions in Africa are still rising across the different industries some of these industries include, telecommunication, mining, finance, retail and private sector equity. Study by Ellis, Kimberly, Lamont, Bruce Reus, Taco, Faifman, Leon (2015) observed that deals in mergers and acquisitions worth over $ 500 million were transacted in the period 2015 to 2016. Among these mergers and acquisitions transactions 54% were across border while 45% were mergers in the same country and the same industrial sector. Wangari (2015) study to evaluate effect of mergers and acquisitions on the financial performance of financial institution in Kenya.

According to Shehzad & Faisal (2015) the main objective of a firm is to maximize its profit and create wealth for the shareholders by giving high dividend payout. Due to the growing market a firm will need to adopt new tools and techniques to ensure survival in the changing market where a lot of capital is needed to make this happen however on the other hand small or less profitable organization with no other option but to quit the market are left with no other option rather than merge. Abdul, Masila & Jalu (2017) study in the United Kingdom listed companies involved in mergers and acquisitions the results indicated that mergers and acquisitions led to decrease in ROA, a reduction on ROE and a slight increase in EPS.

Akenga & Oleng (2017) conducted a study to determine the effect of merges and acquisitions on the performance of commercial bank in Kenya. They studied 6 commercial banks in Kenya that had transacted mergers and acquisitions from year 2011- 2017. The study found out that synergy derived from mergers and acquisitions and asset growth due to combination of assets from the two banks had an impact on the financial performance and the shareholders' value in commercial banks. Further they observed that banks which had the aim to elevate the shareholders' value should consider engaging in mergers and acquisitions as this will be a tool that will enable them to lower their operations cost. Malhotra & Sahay (2018) conducted a study in India to evaluate how mergers and acquisition in the Indian banking industry affected the value derived by the shareholders. They found out that mergers and acquisitions in banks had an impact on the shareholders' value where the shareholders enjoyed abnormal returns in the short run and while on the other hand mergers had no effect on the shareholder's value in the long run. Rotich, Toroitich, Lulia & Omwano (2015) carried a study to find the effect of mergers and acquisitions on banks they found there was no relationship between mergers and acquisition and the performance of banks. Oloye & Osuma (2015) in Nigeria found out that mergers and acquisitions affected the profitability and stability of banks, firm restructuring ensured capital adequacy and synergy was enhanced when a merger or an acquisition occurred compared to when firms operated in isolation. Ayako, Murungi, Musyoki (2015) conducted a study on post mergers and acquisitions performance of bank listed by NSE Kenya where they measured ROA and ROE after mergers found out that synergies derived from mergers and acquisition come with a lag and that despite banks being involved in mergers and acquisition they never outperformed other banks in terms of performance.

Mergers and acquisitions in banks are carried mainly for efficiency and for growth escalation. Mergers and acquisitions in banks are a strategy used by weak banks to achieve the following benefits, improving the shareholders' value, increasing efficiency and increasing the financial standing of weak banks. According to a study by Delloitte (2018) the driving forces towards mergers and acquisitions include, synergy through increase in capital base of the merged firm, extension of the customer base, diversification of products and services offered by the company, talent acquisitions and acquiring of technology assets. The report further urged that 65% of merged companies grew their cash reserves by 58% after a successful mergers and acquisitions deal. Muange (2018) carried a study aimed at evaluating how mergers and acquisitions influenced the wealth derived by shareholders for listed companies in Kenya. The results showed that market share and cost efficiency led to decrease in earnings per share while increase in capital base led increase in shareholder's wealth.

Rajab Barasa (2015) study focused on the impact of mergers and acquisitions on the stock value of NSE listed firms. The study found out that many companies had different criteria for achieving growth which included engaging in new investments and merging and acquiring other firms in order to create value to shareholders of the company. Results indicated that when information of an involvement in mergers and acquisitions was made available to the public it had a great impact on the behavior stock price. The study further asserted that when mergers and acquisitions transaction was announced the price of shares raised and shareholders realized abnormal return. Ogada et al., (2016) observed that mergers and acquisitions were transacted in order to achieve synergies that could be utilized in the future to generate cash flows therefore increasing the shareholders' value. Further he argued that operational synergies could be achieved by combining two firm's units such as sales force and knowledge. Masoudi (2015) observed that firms were motivated to merge to achieve the following objectives; expanding portfolio, risk diversification, venturing in to new geographical locations and for the firms to maximize on the economies of scale.

Mergers and acquisition strategies have been an issue to strategic finance managers and financial analysists as they work on how to position their companies due to the changing market conditions, globalization and competition. Many researchers have conducted studies to evaluate the effect mergers and acquisitions have on the financial performance of firms. The studies are also aimed at determining how mergers and acquisitions influences the shareholders' value in different industries. Such studies include, a study by Tang (2015) which wanted to establish the effect mergers and acquisitions had on the financial performance of banking industry in Philippines. The study found out that banks did not generate any form of synergy, there was a marked decrease in return on assets and a state of indifference was also evidence which illustrated that bank involvement in mergers was not a determinant of the financial performance in banks.

Mergers and acquisition have been increasing gradually over the past decade in the banking industry in Kenya. Among the driving forces to this surging number in mergers and acquisitions include; to aid banks in achieving the standards set by the Central Bank of Kenya by attaining the set capital requirement of banks in order for a bank to operate, to enable banks be on the competitive edge and to meet statutory requirement (Jangiro & Ondieki, 2015). Further the study found out that mergers and acquisitions had been used as a tool to aid in increase the market share, raising firms' profitability, increasing the shareholders' value, creating synergy and utilization of economies of scale. Afande (2015) in Kenya observed that firms engaged in mergers and acquisition as a plan of maximizing economies of scale, as a remedy of management inefficiency, acquire more assets, to reduce the level of profitability exposure by diversification strategies.

Statement of the Problem

In the recent years there have been tremendous deals of mergers and acquisitions being transacted in Kenya particularly in the Banking Industry which has attracted extreme interest to find the motives behind these mergers and acquisitions. Mergers and acquisition drivers are expected to help a bank realize its organizational goal such as gain operational synergy, enhanced liquidity, capital adequacy, increase profitability, lead to expansion, enhance solvency and proper utilization of assets aimed at increasing the shareholders' value. According to the Central Bank of Kenya (2020) since 1989-2019 there have been 34 mergers and 11 acquisitions in. In Kenya the performance in the banking industry has been impressive in the recent yeas. According to (CBK, 2018) the banking sector in Kenya recorded an increase in pretax profits from Ksh 133.2 billion to Ksh 152.7 billion which marked a 14.6% increase in pretax profit where the results were compared from previous year 2017. There has been a marked increase in banks' income from Ksh 486.3 billion to Ksh 513.5 billion a comparison done from December 2017-December 2018 (CBK, 2018). This shows that banks in Kenya are benefiting from mergers and acquisitions as a result of increased efficiency and strong asset bases leading to increase in income (KFSSR, 2018). Despite all these numerous studies how mergers and acquisitions influence the shareholders' value has not been established as prior studies have provided mixed findings. Tang (2015) observed that there was a consistency in study findings where the target company earned positive returns however the evidence on the acquiring firm returns had mixed findings. Rani, Yadav & Nain (2015) observed that results obtained from many studies differed from each other and questions remains unanswered as to whether mergers and acquisitions in banks leads to generation of profit or losses, leads to shareholders' value creation or shareholders' value destruction, leads to value gain for the acquirer or target firms or the combined banks. According to Godfred (2016) globally the rate of failure of mergers and acquisitions to create value is greater than 50% regardless of the high hope of shareholders. Empirically studies carried out by Akoth (2016), Akenga & Oleng (2017), Malhotra & Sahay (2018), Joshi (2012), Kaol (2017) and Ayako, Murungi, Musyoki, (2015) on mergers and acquisitions has seen a little emphasize being given to how they affect the shareholders' value in the banking industry in Kenya. Therefore, this study will try to address this gap by finding solutions to: how mergers and acquisitions drivers affect the shareholders' value in the Kenyan banking industry?

II. Literature Review

Theoretical Framework

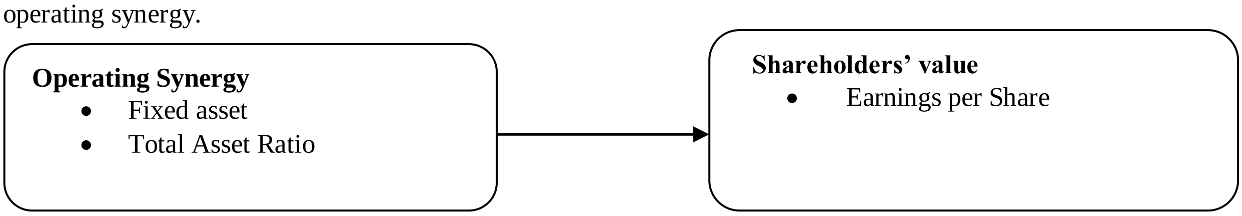
The study was guided by Synergy Gain Theory. Synergy means a situation where a merged firm has more value than the sum of the two combining firms which is stated to as 2+2=5. The theory was developed by Fluck and Lynch (1998) the synergy hypothesis suggests that the value of merged firm is greater than that of an individual firm. The hypothesis suggests that managers should not only create wealth to the shareholders but also but they need to have the ability to measure the value of a merged firm. According to the theory there are many forms of synergies that result from a merger other than economies of scale which include operational synergy, managerial capabilities, research and development, innovation and creativity and market development and coverage as a result of availability of resources, skills and opportunities provided by a merger. Company assets include human capital, organizational capital and tangible capital. A company having these resources will yield a competitive advantage because these resources cannot be imitated or be substituted by competitors and they will give a great market value, through mergers and acquisition these resources can be of significant synergies.

Operational synergies result from both economies of scale and scope. When a merger is transacted it's possible to reduce the cost and expenses incurred by the firm and increase revenue generated as result of shares distribution channels, systems and brand names. Ombaka (2018) stated that combining two firms with different cash flows and opportunities of investment may reduce the cost of capital and tax liabilities hence increasing profits. Further when two firms merge the debt capacity may be larger than the capital capacity before the merger and acquisition. The synergy theory states that when two firms merge where the acquiring firm has cash flows greater than that of the merging firm then the acquiring firm investment opportunity increases due to capital relocation. Consistent cash flows reduce the level of insolvency and enable a merged firm to be able to service large amounts of debt. Managerial synergy is as a result of excellent managerial competence, effective employment of management skills across the business and replacing of the underperforming managers. Financial synergy is as a result of diversification of risk which is achieved through investment in other businesses. According to (Song, Walking, 2000) the announcement of a merger in an industry can lead to the rise in price of stock prices of rival firms in the industry as a result of future anticipation of a merger happening.

A critic has been laid against the synergy theory on the stock price testing the collusive synergy hypothesis. This theory is based on the fact that both the parties will gain value and efficiencies resulting from the merger and acquisition involvement activities. Pahuja and Argawaal (2016) criticized this theory by arguing that in some instances there is no mutual gain when there is involvement in mergers and acquisitions. This theory is important to this study because it shows how merger and acquisitions leads to enhanced operating and financial synergy. This could occur if the merged firms have cash flows that are relatively uncorrelated, that realize cost savings from lower securities‟ issuance and transactions costs, or that result in a better matching of investment opportunities with internally generated funds. The theory informs on the operating synergy variables in the study.

Conceptual Review

Conceptual framework is a diagrammatic presentation of the relationship between dependent and independent variables. In this study the dependent variable is shareholder's value while independent variable is operating synergy.



Independent Variables **Dependent Variable**

Figure 1.0: Conceptual Framework

Empirical Review

Kioko, Mbae and Nzioki (2018) carried a study to determine how capital base led to synergy on the shareholders' value of listed firms by NSE. The study was carried out between a period of 6 years from 2008-2014. The study used secondary data that was retrieved from the financial statements of the firms comparing prior and after merger and acquisition performance. Data was analyzed by use of SPSS software and data presented in frequency tables and other measures of central tendencies including the mean. The study established that a marked increase in capital base affected the shareholder's wealth positively. A similar study carried by Kimmetto (2019) to indicate how merger and acquisitions impacted synergy in the Sidian Bank Kenya. The study covered a period of 1 year which was 2017. The specific objectives of the study were to indicate effect of operational synergy, to evaluate the effect of financial synergy and to establish how managerial synergy indicated on the financial performance of Sidian Bank. The study found out that there was a positive relationship between operating synergy and the shareholders' value.

Ogada, Achoki and George (2016) study that focused on determining how synergy impacted the performance of Kenya financial institutions. The target population of the study comprised of institutions that had been involved in mergers and acquisitions over a period of 4 years from 2009- 2013. The study adopted a secondary data collection method where comparison on pre-mergers and after mergers performance of financial institutions in Kenya was done. Primary data was used to explain results of secondary data. The results showed that there was a strong correlation between ROA, ROE and synergy. Yousef (2016) carried a study that focused on ascertaining how mergers and acquisitions implied on the shareholder's value and risk in USA where the study involved 180 countries around the world where mergers had been announced. The study covered a period of 25 years from 1977- 2012. The study employed census sampling design where the total population was involved in the study. The study found out that synergy through mergers and acquisitions led to increase in the shareholders' value.

Diaw (2015) carried a study on mergers and acquisition on the shareholders' value a case of European Banks. The study covered a period of 11 years ranging from 1997-2008. The study focused on how to find, the short time effect of mergers and acquisitions and how mergers and acquisitions impacted the n performance in relation to synergy. Results indicated that there was a marked an increase in shareholders' gain on the target firm when a merger was announced alternatively the shareholders' value of the acquiring firm was minimized after mergers. Oloye & Osuma (2015) studied mergers and acquisitions and its implication on the performance of Nigerian commercial banks. The performance of the banks determined the shareholder's value buy sharing profit after tax with the number of shares held. Therefore, the study wanted to examine how mergers and acquisitions in Nigerian banks influenced performance. The results indicated that banks were being involved in mergers and acquisition for the purpose of synergy which led to increase in shareholders' value.

III. Material And Methods

A descriptive research design was adopted in this study. Shina (2019) illustrated that a descriptive research design is capable of facilitating collection of data that can be accurately and systematically describe a situation or a phenomenon. The population of the study consisted of banks that had been involved in mergers and acquisitions in Kenya. The target population of this study comprised of those banks that had been involved in mergers and acquisitions ranging from 2006- 2015. A period of 10 years was chosen to increase accuracy as it gave a greater room for comparison of data 5 years before and 5 years after mergers and acquisitions. The target population of the study comprised of 10 banks that have engaged in mergers and acquisitions from 2006- 2015 according to the Central Bank of Kenya report (2020). Comparison was done for operating synergy for 5 years preceding and 5 years post mergers and acquisitions. In the Kenya banking industry there has been 45 mergers and acquisitions this study hence had 45 banks as the sampling frame. The study adopted a census sampling technique. A census was adopted due to the few numbers of banks that had been involved in mergers and acquisitions from 2006-2015. The study adopted secondary data as the source of data which was retrieved from the financial statements of respective banks and a comparison was done between pre and post mergers and acquisitions. Data was retrieved from NSE reports, audited financial statement, Central Bank of Kenya reports and other related studies and journals. The study consisted of two variables the independent variable which are the key elements of mergers and the dependent variable which is the shareholders' value indicators. Variable used in measuring shareholders' value was earnings per share (EPS). Quantitative data collected was analyzed by use of STATA 15. A multi regression analysis to determine the relationship between the independent variables and the shareholders' value was carried out. The study adopted a regression data analysis to show how the independent variable and dependent variable related. The study adopted a descriptive research approach whereby results were represented by use of tables and figure to ease understanding. The study employed a 5% significance level.

IV. Result and Discussion

Descriptive Analysis

The descriptive statistics entailed mean, standard deviation, minimum, maximum and standard error. Besides the study conducted paired sampled t test. The study applied a two tailed paired sample T-test statistics at a significance level of 5% to test whether there were statistically significant differences of means between the premerger/acquisition and post-merger/acquisition variables with the null hypothesis being that the true mean difference between the paired samples is zero while the alternate hypothesis was that the true mean difference between the paired samples is not equal to zero.

Shareholder Value in the Banking Industry

The study evaluated the Shareholder Value in the Banking Industry in Kenya over the 10 year period between 2006 and 2015. The results are as illustrated in Table 1.

Table 1: Shareholder Value in the Banking Industry

	Pre-Merger/Acquisition					Post-Merger/Acquisition			
Year	Max	Min	Mean	SD	Year	Max	Min	Mean	SD
2006	8.55	-2.54	1.643	3.36	2011	7.53	-0.78	1.738	2.67
2007	2.97	-0.47	0.581	1.04	2012	9.54	-1.4	2.711	3.29
2008	3.17	-0.17	0.797	1.15	2013	6.72	-0.29	2.073	2.33
2009	5.17	-1.4	1.226	2.18	2014	9.9	-1.7	2.002	3.49
2010	8.55	-0.04	3.289	3.10	2015	12.97	-0.78	2.809	4.23
Total	**8.55**	**-2.54**	**1.5072**	**2.47**	**Total**	**12.97**	**-1.7**	**2.2666**	**3.16**

Based on Table 1 above, in the pre-merger/acquisition period, the EPS value before merger/acquisition ranged from -2.54 to 8.55 with a mean of 1.51 and a standard deviation of 2.47. EPS value after merger/acquisition ranged from -1.7 to 12.97 with a mean of 2.266 and a standard deviation of 3.16. These mean EPS values indicate that, in general, financial institution in the banking industry performed better in the post-merger/acquisition period than in the pre-merger/acquisition period.

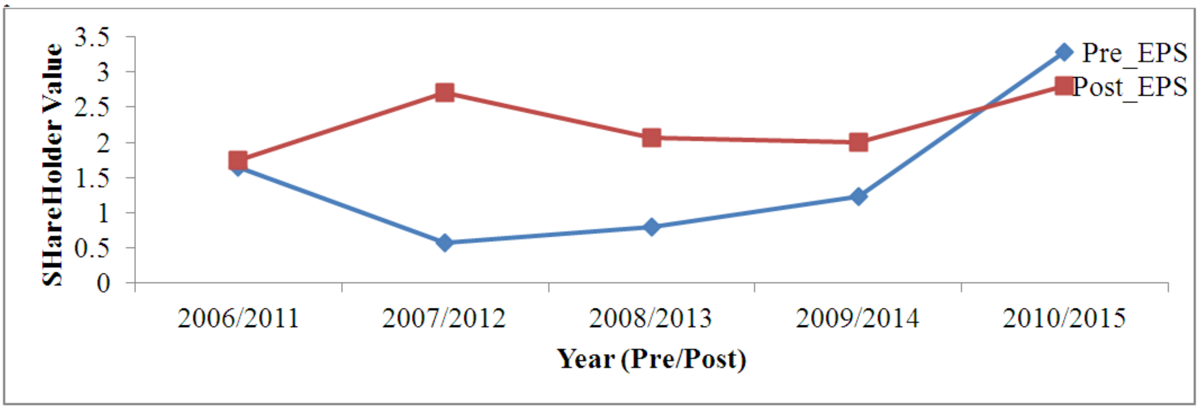


Figure 2: Line Graph Comparing Shareholder Value during Pre and Post Merger/Acquisition

In Table 2, the result of the paired sample t-test analysis showed that there is a significant difference between pre and post-merger/acquisition in regard to EPS as indicated by $t(49)= -5.836, P=0.00\ \alpha=0.05$. By extension, the mean difference is -2.465 at a confidence level of 95%. The EPS (1.507) for the pre-merger/acquisition differ significantly from the EPS (2.66) of post-merger/acquisition, which implies that the EPS of post-merger/acquisition was better as compared to pre-merger/acquisition.

Table 2: Paired Sample Test for EPS

Paired Differences					T	df	Sig. (2-tailed)
Mean	Std. Deviation	Std. Error Mean	95% C.I Difference				
			Lower	Upper			
-2.465	2.9907	.42286	-3.3167	-1.6024	-5.836	49	.000

Operating synergy in the Banking Industry

The study evaluated the operating synergy in the Banking Industry in Kenya over the 10 year period between 2006 and 2015. The results are as illustrated in Table 3.

Table 3: Operating synergy in the Banking Industry

Pre-Merger/Acquisition					Post-Merger/Acquisition				
Year	**Max**	**Min**	**Mean**	**SD**	**Year**	**Max**	**Min**	**Mean**	**SD**
2006	0.477	0.292	0.486	0.066	2011	0.956	0.708	0.907	0.076
2007	0.476	0.289	0.396	0.059	2012	0.927	0.732	0.992	0.055
2008	0.584	0.285	0.491	0.061	2013	0.898	0.726	0.994	0.049
2009	0.575	0.194	0.289	0.060	2014	0.996	0.731	0.891	0.047
2010	0.486	0.292	0.389	0.061	2015	0.893	0.729	0.899	0.051
Total	**0.584**	**0.194**	**0.41**	**0.059**	**Total**	**0.996**	**0.708**	**0.937**	**0.055**

Based on Table 3 above, in the pre-merger/acquisition period, the operating synergy before merger/acquisition ranged from 0.584 to 0.194 with a mean of 0.410 and a standard deviation of 0.059. Operating Synergy value after merger/acquisition ranged from 0.708 to 0.996 with a mean of 0.937 and a standard deviation of 0.055. These mean operating synergy values indicate that, in general, financial institution in the banking industry performed better in the post-merger/acquisition period than in the pre-merger/acquisition period.

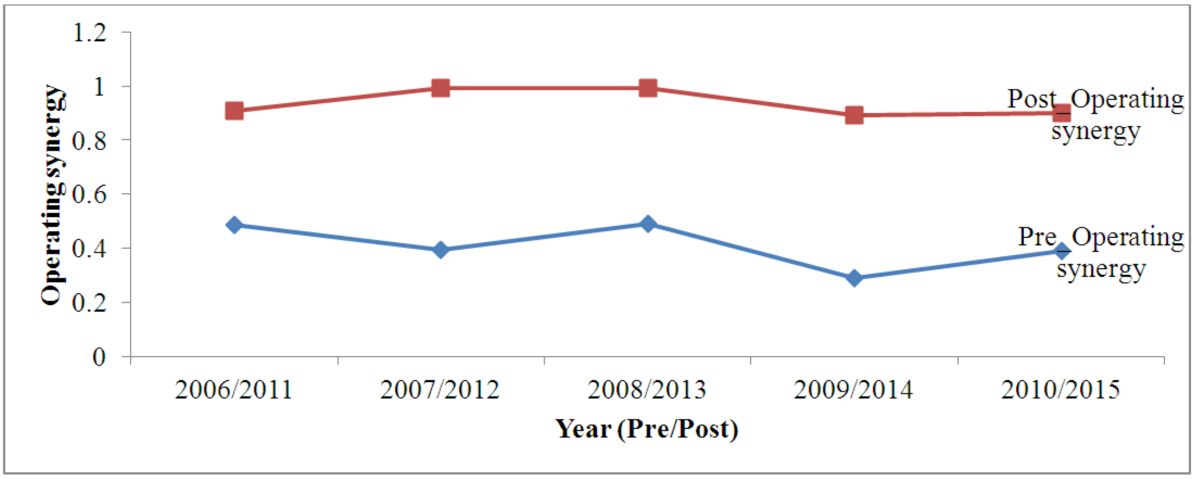


Figure 3: Line Graph Comparing Operating Synergy during Pre and Post Merger/Acquisition

In Table 4, the result of the paired sample t-test analysis showed that there is no significant difference between pre and post-merger/acquisition in regard to operating synergy as indicated by t(49)= -2.586,P=0.001, α=0.05. By extension, the mean difference is -.527 at a confidence level of 95%. The operating synergy (0.41) for the pre-merger/acquisition differs insignificantly from the operating synergy (0.937) of post-merger/acquisition, which implies that the operating synergy of post-merger/acquisition was not significantly better as compared to pre-merger/acquisition.

Table 4: Paired Sample Test for Operating Synergy

Paired Differences					**T**	**df**	**Sig. (2-tailed)**
Mean	**Std. Deviation**	**Std. Error Mean**	**95% C.I Difference**				
			Lower	**Upper**			
-.527	.056973	.008057	-.020911	.011472	-2.586	49	.001

Inferential Analysis

Unit Root Test

The study carried out a unit root test to ensure that there was no presence of unit roots (the panel data are stationary). Unit root test were conducted to ensure that the series were stationary and check the problem of having a spurious regression. A variable can only be said to be stationary when it has no unit root. The results are as shown in Table 5.

Table 5: Unit Root Tests

	Statistics	P-Value	Significant
Operating synergy	5.8887	0.000	**
Shareholders' value	2.8979	0.0019	**

* sig at 0.05, ** sig at 0.01

The study used Phillips–Perron test to examine unit root test. Phillips–Perron (1988) test that a variable has a unit root. The null hypothesis is that the variable contains a unit root, and the alternative is that the variable was generated by a stationary process One advantage of the PP tests is that the PP tests are robust to general forms of heteroscedasticity in the error term. It also it does not need to specify a lag length for the test regression. The results indicated that there was absence of unit root for all the study variables.

Hausman Test (Choice of Model)

The Hausman test is sometimes described as a test for model misspecification. In panel data analysis (the analysis of data over time), the Hausman test can help you to choose between fixed effects model or a random effects model. The null hypothesis is that the preferred model is random effects; the alternate hypothesis is that the model is fixed effects. Essentially, the tests look to see if there is a correlation between the unique errors and the regressors in the model. The null hypothesis is that there is no correlation between the two. The results are as shown in Table 6.

Table 6: Hausman Test

	(b) Fixed	(B) Random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
Operating Synergy	-8.83194	-10.8217	1.989762	2.449732

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg
Test: Ho: difference in coefficients not systematic
chi2(4) = (b B)'[(V_b V_B)^(1)](b B)
= 1.55
Prob>chi2 = 0.8183

Results in the table 6 indicated a prob>chi2 value of 0.8183 which is greater than critical P value at 0.05 level of significance which implies that the null hypothesis that a Fixed Effect model is the best was accepted. The study hence used a random effect regression model.

Linear Regression Analysis

The study investigated the effect of merger/acquisition on shareholders' value in the banking industry in Kenya. The results are presented pre-merger and acquisition as well as post-merger and acquisition. Table 7 shows linear regression for pre-merger and acquisition period.

Table 7: Regression Random Effect of Merger/Acquisition on Shareholder value before Merger and Acquisition

Random-effects GLS regression	Number of obs =	50
Group variable: BANKID	Number of groups =	10
R-sq:	Obs per group:	
within = 0.0394	min =	5
between = 0.0755	avg =	5
overall = 0.0566	max =	5
corr(u_i,X) = 0 (assumed)	Wald chi2(2) =	2.17
	Prob > chi2 =	0.1405

Shareholder value	Coef.	Std. Err.	Z	P>z	[95% Conf. Interval]	
Operating Synergy	-3.06085	2.076618	-1.47	0.14	-7.13095	1.009242
_cons	2.548204	1.657526	1.54	0.124	-0.70049	5.796895
sigma_u	0.416592					
sigma_e	0.439929					
Rho	0.472773	(fraction of variance due to u_i)				

The result obtained from random effect model indicated that before merger/Acquisition, operating synergy accounted for 5.66% (Overall R square = 0.0566) of the variation in shareholder value in the Banking Industry in Kenya. The findings revealed Wald chi-square = 2.17 with a corresponding p-value = 0.1405. This implies that in pre-merger/acquisition, operating synergy insignificantly influence shareholder value in the Banking Industry in Kenya. The overall regression model is as shown below:

$Y_{it} = 2.548204-3.06085X_1$

Where Y=Shareholder Value

X_1=Operating Synergy

From the findings, operating synergy had a regression co-efficient of -3.06085 implying that a unit increase in operating synergy across time and among firms in banking industry would result in a decrease of 3.06085 units in shareholder value. This relationship was further found to be statistically insignificant since the p-value was 0.14 which was higher that the adopted significance level of 0.05. The results are in consistency with Bouraoui and Li (2014) found that operating synergy has insignificant effect on shareholder value. Synergy was found to be insignificant towards firm performance (Pervan, Višić & Barnjak, 2014; Al-Hroot, 2016; Rashid & Naeem, 2017). However, Meier and Schier, (2016) found that companies that have operating synergy have a significant positive impact on company performance because the transfer of knowledge will provide new innovations in terms of products and production efficiency that will make company performance improve. Table 8 shows multiple linear regression for pre-merger and acquisition period.

Table 8: Regression Random Effect of Merger/Acquisition on Shareholder value after Merger and Acquisition

Random-effects GLS regression				Number of obs =		50
Group variable: BANKID				Number of groups =		10
R-sq:				Obs per group:		
within = 0.1068				min =		5
between = 0.1478				avg =		5
overall = 0.1204				max =		5
corr(u_i,X) =	0	(assumed)		Wald chi2(2) =		5.77
				Prob > chi2 =		0.0163
Shareholder value	**Coef.**	**Std. Err.**	**Z**	**P>z**	**[95% Conf. Interval]**	
Operating Synergy	4.80608	2.001454	2.4	0.016	0.72886	8.880033
_cons	3.59764	1.589545	2.26	0.024	0.48219	6.713091
sigma_u	0.437259					
sigma_e	0.504031					
Rho	0.429418	(fraction of variance due to u_i)				

The result obtained from random effect model indicated that operating synergy accounted for 12.04% (Overall R square = 0.1204) of the variation in shareholder value in the banking Industry in Kenya after merger/acquisition. The findings revealed Wald chi-square = 5.77 with a corresponding p-value = 0.0163. This implies that merger/acquisition significantly influence shareholder value in the Banking Industry in Kenya. The overall regression model is as shown below:

$Y_{it} = 3.59764+4.80608X_1$

Where Y=Shareholder Value

X_1=Operating Synergy

From the findings, operating synergy had a regression co-efficient of 4.80608 implying that a unit increase in operating synergy across time and among firms in banking industry would result in an increase of 4.806087 units in shareholder value. This relationship was further found to be statistically significant since the p-value was 0.016 which was lower that the adopted significance level of 0.05. There operating synergy was found to be significantly and positively related to shareholder value in the banking Industry in Kenya after merger and acquisition. The results concur with Yousef (2016) who carried a study that focused on ascertaining how mergers and acquisitions implied on the shareholder's value and risk in USA where the study involved 180 countries around the world where mergers had been announced. The study found out that synergy through mergers and acquisitions led to increase in the shareholders' value. Oloye & Osuma (2015) studied mergers and acquisitions and its implication on the performance of Nigerian commercial banks. The results indicated that banks were being involved in mergers and acquisition for the purpose of synergy which led to increase in shareholders' value. Mwanza (2013) studied the effect of mergers and acquisitions on the financial performance of commercial banks listed on the Nairobi Securities Exchange. He concluded that mergers and acquisitions had insignificant effect on the financial performance of commercial banks. Mwaniki (2011) analysed the mergers and acquisitions of non-listed commercial banks and their effect on the financial performance in Kenya from 2004 to 2008. He concluded that mergers and acquisitions had insignificant influence on the financial performance of the non-listed commercial banks in Kenya.

V. Conclusion and Recommendation

The study concluded that operating synergy has significant positive effect on shareholder value in the Banking Industry in Kenya. Prior to merger and acquisition, operating synergy had insignificant effect on shareholder value in the Banking Industry in Kenya. The operating synergy of firms in banking industry increased after merger and acquisition unlike during pre-merger and acquisition. This increase in operating synergy increased the shareholder value in the Banking Industry in Kenya. Companies engage in mergers and acquisition to combine both tangible and intangible assets of the acquirer and the merging company. This synergy is reflected when the merged firm creates value which is more than the initial value when each firm was operating in isolation. Mergers and acquisitions result to lowered cost of capital due to increase in assets from the merging and acquiring firm. Overhead cost can be reduced by sharing of combining service station like finance and accounting, sales and marketing executive and legal. The study recommended that the bank should critically evaluate the overall business and operational compatibility of the merging institutions and focus on capturing long-term operational synergies. The study also recommended that banks should leverage on operational synergies to improve their decision making and enhance the economies of scale from the larger market share. Further, the study recommends that those firms facing operational constraints should to consolidate their energies by resorting to merger so as to improve their shareholder's value as the merger is not just for the best interest of the shareholders and also managers which will not be achieved when the firm is operating separately on its own.

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