Short-Term Effects of Mergers and Acquisitions in the Nigerian Banking Industry

Ibrahim Magaji Barde* and Mohammad Salisu**

The prevalence of mergers and acquisitions all over the world is due to its (seemingly) dual role of financial activity as well as an investment strategy. We investigated whether or not mergers and acquisitions has the ability to increase shareholders wealth in the short term. The paper uses data from Deposit Money Banks in Nigeria to test the hypotheses that mergers and Acquisitions causes significant changes in the value of the acquirer banks and also that it has significant impact on their abnormal returns. Evidence failed to uphold these hypotheses suggesting that mergers and acquisition is more of a financial activity than an investment strategy.

1. Introduction

As a result of merger "waves" during 1960s and 1980s, many firms engaged in merger activities during these periods, not only in the United States and Europe, but also in Australia and Japan, the reason being that mergers and acquisitions have played an important role in the business environment since the 1960s emerging not only as a part of financial activity but also as part of investment strategy (Sugiarto, 2000). Consequently, more studies were conducted on mergers and acquisition over that period, especially ones which focused on the effect of mergers and acquisitions on shareholder wealth (Mueller, 1969); (Brown & Warner, 1980); (Dodd, Peter, & Ruback, 1977).

In Nigeria, Reformation of banking industry has been accorded by the Federal Government due to its urgency to rescue the ailing financial institutions and to strengthen the capital base and the viability of these corporate institutions to help in stabilizing inflationary treads in the economic growth within and abroad. To achieve these, the federal government through the Central Bank of Nigeria (CBN) developed many policies. One of those policies was to move up the capital base of money deposit banks (commercial banks) from the previous two (2) billion naira to twenty five (25) billion naira. The announcement of this policy in July 2004 was the bedrock of the strong and efficient banks that we witnessed lately, which is due to the mergers and acquisitions (M&A) in the industry, as it led to a tremendous growth in the economy. Though, it is not complete or perfect outing for the then policy, some years later CBN again pointed out that there are indications that some of the new banks are not perfectly in good condition, says neither the industry nor the regulators were sufficiently prepared to sustain and monitor the sector's exclusive growth. Thus, this led to the acquisition of the unsound bank(s) by more viable ones.

The M&As researches, especially those examining the wealth effect from the M&As has been predominantly in the US, Europe and Asia. Yet, with a high announced M&A deals in Nigerian Banking Industry, little is known about the short-term direct effect of the M&As announcement on the shareholders' wealth. This is because previous Nigerian studies e. g Omah, Okolie, & Durowoju (2013) and Michael, (2013) to the best of researcher's

*Dr. Ibrahim Magaji Barde, Department of Accounting, Bayero University, Kano - Nigeria
Email : imbarde@yahoo.com

**Muhammad Salisu, Institute for Continuing Education, Bayero University, Kano - Nigeria
Email: muhammadsalisutar@yahoo.com
knowledge examined the long-term post merger effects using accounting measures. In fact, aforementioned Nigerian studies which examined the wealth effect of M&As used analytical methods other than event study. Thus, in Nigeria the M&As raised an important issue which was the impact of the M&As to the share price and ultimately wealth of the shareholders immediately after the M&A deals announcements. Therefore, this study attempts to fill-in the identified gaps by achieving the following specific objective.

a. To examine the short-term change in value of acquirer bank shares.
b. To examine the short-term effect of M&As announcement on shareholder wealth of acquirer bank.

In order to achieve the stated objective the following research question was investigated:

a. Was there a significant change in the stock prices of acquirer bank due to merger and acquisition announcement?
b. What is the effect of M&As announcement on the shareholders' wealth creation of acquirer bank over the short-term window?

In order to ensure a solid answer, the following null hypotheses were developed for testing:

a. \( H_{01} \): There was no significant change in the value of acquirer bank shares over the event window.
b. \( H_{02} \): M&As do not have significant positive impact on abnormal returns for acquirer banks’ shareholders over the short-term window.

The study may contribute in various ways. Firstly, the study aims to examine whether the management’s decision to acquire or merge with another company is worthwhile for the shareholders of the Nigerian Banks. Thus, it provides an insight as to whether this investment decision has a direct positive impact to the shareholders.

This study may also contribute to the development of the M&A policy in the Nigerian banking industry. The result of this study can give the regulators an insight of the effects of the frequent reforms in the banking industry which is aimed at addressing governance, risk management and operational efficiencies of these banks with attendant growth in earnings to both the banks and providers of bank capital (shareholders).

2. Literature Review

The Concept of Merger and Acquisition

The term ‘merger’ and ‘acquisition’ are often used interchangeably. However, academics have pointed out a few differences that help determine whether a particular activity is a merger or an acquisition.

A particular activity is called a merger when corporations come together to combine and share their resources to achieve common objective. In a merger, both firms combine to form a third entity and the owner of both the combining firms remain as joint owners of the new entity (Sudarsanam, Holl, & Salami, 1996). An acquisition was defined as event where a company takes a controlling ownership interest in another firm, a legal subsidiary of another firm, or selected assets of another firm. This may involve purchase of another firm’s assets or stock (Dapamphilis, 2008). Acquiring all the assets of the selling firm will
avoid the potential problem of having minority shareholders as opposed to acquisition of stock. However, the cost involved in transferring the assets are generally very high (Ross, Waterfield, & Jaffe, 2004).

Shareholder Wealth Creation

Wealth creation refers to changes in the wealth of shareholders on a periodic (annual) basis. Applicable to exchange-listed firms, changes in shareholder wealth are inferred mostly from changes in stock prices, dividends paid, and equity raise during the period. Since stock prices reflect investor expectations about future cash flows, creating wealth for shareholders requires that the firm undertake investment decisions that have a positive net present value (NPV).

Although used interchangeably, there is a subtle difference between value creation and wealth creation. The value perspective is based on measuring value directly from accounting-based information with some adjustments, while the wealth perspective relies mainly on stock market information. For a publicly traded firm these two concepts are identical when (i) management provides all pertinent information to capital markets, and (ii) the markets believe and have confidence in management.

Empirical Studies on M&As and Shareholders’ Wealth

Smeets, (2013) study, researched whether Dutch mergers and acquisitions from the introduction of the Euro in 2002 to 2013 have had an influence on the wealth of shareholders’ of acquiring firms and to what extent using event study. The findings concerning the abnormal returns around the announcement date were all positive and highly significant.

Kariri, (2013) established effect of mergers and acquisitions on shareholders wealth of commercial banks in Kenya. The study employed event study methodology. Key findings of the study established that the share prices of the six sampled firms did not exhibit significant changes within an 11-day event window. The second finding showed that the shareholders’ total cumulated return had not significantly changed due to announcement M&A. The study concludes that past Kenyan bank M&As were not wealth creating for the shareholders of both the bidding entity and the combined entity.

Akben-Selcuk & Altıok-Yilmaz, (2011) Investigate the impact M&As deals on the performance of acquirer Turkish companies. A total of 62 companies involved in M&A deals between 2003 and 2007 were included in the sample. The analysis of both stock market and accounting data weakly support the hypothesis that acquirer companies are negatively affected by M&A activities.

Omah, Okolie, & Durowoju, (2013) examine pre and post merger and acquisition performance of banks in Nigeria during the period of 2001-2010 using Value Added Metrics. The result suggested that shareholders value creation is highly dependent on operating expenses, profit margin, return on Capital Employed (ROCE) and Expenses ratio. The inter-company and intra-industry analysis results indicate that there is marginal positive impact of mergers and acquisitions on shareholders’ value creation.

Barine, (2013), study Bank merger and acquisition and shareholders’ wealth maximization in Nigeria. His findings for 2003 and 2009 of dividend/share and earnings/share shows from the M&As in 2005 made shareholders better-off. The results shows that there is a
significant positive relationship between changes in naira dividend paid by merged sampled banks between 2009 and 2003 and changes in banks’ capital base.

Nigeria, one of the African developing countries, has very little literature on Mergers and acquisitions and shareholders’ wealth. In fact, the few studies in the area uses methods other than event study with the accounting based-data e. g (Omah, Okolie, & Durowoju, 2013) and (Barine, 2013). The finding of these studies shows nearly similar result. (Omah, Okolie, & Durowoju, 2013) Indicate that there is marginal positive impact of M&As on shareholders’ value creation. Whereas, (Barine, 2013) shows that changes in dividend received by shareholders from merged banks is highly attributable to changes in banks’ capital bases made possible by the mergers and acquisitions in the sector. Research in this area using more popular methodology in the area may yield better and more valid result.

3. The Methodology and Model

Population and Sample

Population of the study comprises of the banks that had merger or acquisition in the Nigerian Banking Industry between January 2007 and December 2013.

Table 1: Population of the Study

<table>
<thead>
<tr>
<th>S/No</th>
<th>Target Bank(s)</th>
<th>Acquirer Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Intercontinental Bank Plc</td>
<td>Access Bank Plc</td>
</tr>
<tr>
<td>2</td>
<td>Oceanic Bank Plc</td>
<td>Ecobank Plc</td>
</tr>
<tr>
<td>3</td>
<td>Finbank</td>
<td>First City Monument Bank</td>
</tr>
<tr>
<td>4</td>
<td>African Development Ins. Co. Ltd</td>
<td>Diamond Bank Plc</td>
</tr>
<tr>
<td>5</td>
<td>IBTC Chartered Bank Plc Stanbic Bank (Nig) Ltd</td>
<td>Stanbic IBTC Bank Plc</td>
</tr>
<tr>
<td>6</td>
<td>Equatorial Trust Bank</td>
<td>Sterling Bank Plc</td>
</tr>
<tr>
<td>7</td>
<td>African International Bank Ltd</td>
<td>Ecobank Nigeria Plc</td>
</tr>
</tbody>
</table>


To avoid the problem of information in-availability and inclusion of non-existing banks that has previously merged, the following two point filter was used:

(a) To be included in the working population, the bidder (acquirer) must be listed on the stock exchange as at January 2007.
(b) Information, such as the names and location of the firms involved in the M&A and the stock prices for the study period must be available.

Sample

Applying the above filter, three banks scaled through and they form the working population of the research which were also adopted as the sample of the study. This is shown in the table below.

Table 2: Working Population/Sample of the Study

<table>
<thead>
<tr>
<th>Target Bank</th>
<th>Acquirer Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Intercontinental Bank Plc</td>
<td>Access Bank Plc</td>
</tr>
<tr>
<td>2 Finbank</td>
<td>First City Monument Bank (FCMB)</td>
</tr>
<tr>
<td>3 Equatorial Trust Bank</td>
<td>Sterling Bank Plc</td>
</tr>
</tbody>
</table>

Sources of Data

The paper uses data from secondary sources extracted from the NSE stock prices database, SEC database and banks’ annual reports and accounts for the period 2007-2013.

This study employs event study market model analysis method to determine the effect of shareholders wealth. This methodology is based on the fundamental idea that stock prices represent the discounted value of firms’ future stream of profits. Hence, when observing a stock market reaction to the announcement of a particular event (M&A), the change in the equity value of firms affected by this event (merging firms and their rivals) can then be taken as a measure of the (discounted) additional wealth that they are expected to accrue as a consequence of the event (M&A), using the actual returns and the expected returns, the average accumulative abnormal returns over the selected period. The following steps are followed under event study analysis:

The first step of the analysis was to determine the sample of firms to be included in the analysis and to determine an event window. For the purposes of this study, the 3 NSE-listed banks (See Table 2) involved in M&A deals from 2007 to 2013 were sampled. The M&As announcement dates were sourced from NSE bulletin.

The second step of the event study is the determination and correct identification of the event date which is critical. Brown & Warner, (1980) emphasize this point because misidentification of an event can easily obscure the results of the event study method. To deal with this issue, the event date of this study is taken to be the official announcement day of the M&A deal, as suggested by Dodd, Peter, & Ruback, (1977). 21-day, 10 days prior to the event and 10 days after the event date (event window). These window lengths is appropriate to capture any news that might have leaked shortly before the official announcement was made and also considers any short-term stock price reactions linked to the event after the announcement especially in the emerging market like Nigerian capital market. First the period over which the stock price of the firms involved in M&A announcement will be examined. Let \( T_{-150} \) to \( T_{-10} \) and \( T_1 \) to \( T_{+10} \) be the event window, and 0 the announcement day of the M&A. \( T_{-10} \) to \( T_{-150} \) is the estimation period (see figure 1).

![Figure 1: Timeline](image)

The third step was the prediction of a “normal” return during the event window in the absence of the event.

In order to define the normal returns, a benchmark model is needed. There are several models that can be used. Some examples are the mean-adjusted returns model, the market-adjusted returns model, and the market model. In examining data on daily returns in order to perform an event study, the abilities of the three models to detect the presence of abnormal performance are similar, although there is a slight preference for the market model (Dyckman, philbrick, & stephen, 1984). Therefore, in this study, the market model is chosen to calculate the normal returns. The NSE All Shares Index is used as the benchmark model. To obtain daily returns from the initial historical stock prices of both the
market model as well as the observed banks and their accompanying stock prices in the estimation- and event windows, the following formula is employed:

\[ R_i, t = \frac{P_i, t - P_i, t_{-1}}{P_i, t_{-1}} \]  

(1)

where \( i \) is the stock index and \( t \) is the day, \( R_{i,t} \) is the return of stock \( i \) on day \( t \) and \( P_{i,t} \) is the stock price of stock \( i \) on day \( t \).

To retrieve the normal returns by using the market model, using the NSE All Shares Index, the following formula is used:

\[ NR_i = \frac{1}{T} \sum_{s=T_1}^{T_2} R_{m,s} \]  

(2)

The normal return of stock \( i \) is the average of the market index return during the estimation window. \( T=T_2-T_1+1 \), which is equal to the number of days that the estimation window contains. \( R_{m,s} \) is the stock return of the market index, on day \( s \), which starts on \( T_1 \), 10 days before the event date.

To establish whether there is significant influence on the acquiring firms' shareholder value, the abnormal returns (AR) must be calculated, as this figure shows the difference between the daily return and the normal return.

\[ AR_i, t = R_i, t - NR_i, t \]  

(3)

where \( AR_{i,t} \) is the abnormal return of stock \( i \) on day \( t \), \( R_{i,t} \) is the actual return of stock \( i \) on day \( t \) and \( NR_{i,t} \) is the normal return of stock \( i \) on day \( t \).

The intervals investigated are \([-1, +1] \), \([-3, +3] \), \([-5, +5] \), \([-7, +7] \), and \([-9, +9] \). The cumulative abnormal returns (CARs) can be found through the aggregation of the abnormal returns for the whole period within the event window, calculated using the following formula:

\[ CAR_i = \sum_{t=t_1}^{t_2} AR_i, t \]  

(4)

Where \( CAR_i \) is the cumulative abnormal return of stock \( i \). When the CARs are calculated, the next thing is to compute (CAARs) using the following formula:

\[ CAAR = \frac{1}{N} \sum_{i=1}^{N} CAR_i \]  

(5)

By obtaining a figure for the CAARs for each interval, it is possible to perform a statistical test in the form of a t-test to establish whether these abnormal returns have a significant influence on the acquiring companies' shareholder wealth. \( CAAR^* \) is the overall average value of all acquiring companies, opposed to the CAAR, which represents only one acquiring firm in the sample used. The null hypothesis (\( H_0 \)) presumes that the \( CAAR^* \) values are zero, implying that the merger or acquisition events have no influence on the acquiring companies' shareholder wealth. The alternative hypothesis (\( H_1 \)) assumes that the \( CAAR^* \) is not equal to 0. Thus:

\[ H_0: \ CAAR^* = 0 \]
\[ H_1: \ CAAR^* \neq 0 \]

The parametric t-test was used to test the changes in average abnormal earnings pre-merger and post-merger announcement periods. The T-test is based on the one-way analysis of variance techniques which compares changes in observations between groups or periods.
Therefore, the t-test can be performed, using the following formula:

\[
t = \frac{X - \mu}{s/N^{1/2}}
\]

Where \( s \) is the sample standard deviation, \( N \) is the total sample size, \( \mu \) is the overall average value \( \text{CAAR}^* \) and \( X \) is the sampling average value (CAAR)

4. The Findings

The following are the findings of the study showing the effects of mergers and acquisitions on shareholders wealth.

4.1 Effect on Stock Valuation

In order to examine the impact of M&A on market value of shares, the daily market-adjusted abnormal return was used. The market adjusted abnormal return (AR) shows the change in individual stock’s value after a major corporate event’s announcement date. As the percentage change in market index (average market price) is deducted, the remainder gives the unsystematic portion of the value change, which is specific to that particular stock resulting from its merger or acquisition with a new entity. AR was calculated over a period of 21 days (10 days before and 10 days after) starting from the event date (day 0).

Parametric T-test was applied to establish whether there were significance deviations in the mean values of AR before and after the event dates. T-test is used in comparing the changes in means across various events or groups. The event date was excluded because the trading rules are relaxed on the first day of trading to allow for market forces of demand and supply to determine the value of shares of the newly-merged or acquired entity. The results are presented in Table 3 below which is used to test hypothesis one reproduced below.

\[H_01: \text{There was no significant change in value of acquirer bank shares over the event window}\]

To test hypothesis 1, mean change in abnormal return (AR) around the event window was computed and the parametric test of hypothesis was performed on the mean change in the AR. The result is presented in table 3.

**Table 3: T-Test for Changes In Abnormal Return Before And After The Event Dates**

<table>
<thead>
<tr>
<th>Acquirer Bank</th>
<th>Mean change in AR over -10 days</th>
<th>Mean change in AR over +10 days</th>
<th>T-statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCESS BANK</td>
<td>0.495189286</td>
<td>0.648322286</td>
<td>-0.1340</td>
</tr>
<tr>
<td>FCMB</td>
<td>-0.145563673</td>
<td>0.813399755</td>
<td>-0.3233</td>
</tr>
<tr>
<td>STERLING BANK</td>
<td>-0.908327055</td>
<td>0.236704006</td>
<td>-0.0628</td>
</tr>
</tbody>
</table>

Source: Researcher’s Computation (2014) Using STATA.

T-values greater than the critical value of t (3.25) given the degrees of freedom of 9 are significant at the 1% level (Two tailed significance level =0.01). The t-values for each
interval on table 3 are less than 3.24 (the critical value of t) this makes the CAAR values highly insignificant.

Hence the null hypothesis is supported for all the three banks based on this criterion. This indicates that the share prices had not exhibited significant changes over the event windows. This implies that there was no significant positive change in the values of shares of acquirer banks over the events window.

4.2 Effect on Investors’ Total Return

The second measure used was cumulative abnormal returns (CAR), which measured the Investor’s total return over a period over the 21-days event windows for each bank. CAR was computed as shown in Equation 4. The percentage changes in cumulated abnormal return were tested using t-test against the value of zero, to find out whether or not there was significant gain in the total investors’ returns over the event windows. The findings are presented in Table 4 which is used in testing hypothesis two reproduced below.

\[ \text{Ho}_2: \text{M&A announcement by Nigerian banks will not generate positive abnormal returns for acquirer banks’ shareholders over the short-term window.} \]

To test hypothesis two, first, the CAAR for each of the observed period need to be computed. This was done using equation 5. The CAARs are shown Table 4.

<table>
<thead>
<tr>
<th>TIME INTERVAL</th>
<th>CAAR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(-1, 1)</td>
<td>0.011</td>
</tr>
<tr>
<td>(-3, 3)</td>
<td>0.039</td>
</tr>
<tr>
<td>(-5, 5)</td>
<td>0.108</td>
</tr>
<tr>
<td>(-7, 7)</td>
<td>0.083</td>
</tr>
<tr>
<td>(-9, 9)</td>
<td>0.099</td>
</tr>
</tbody>
</table>

Source: Researcher’s Computation (2014).

The average of all CARs for an interval depends on the interval CAAR. After calculations, the CAAR of the interval [-1, +1] is 0.010547 thus, 1.00%, for the interval [3, +3] is 0.039047, 4%, for the interval [-5, +5] is 0.108453, 11%, for [-7, +7] is 0.082826, 8% and that of [-9, +9] is 0.099455 which is 10%.

The next step is to test the significance of these CAAR values. The hypotheses tested are as follows:

\[ \text{H}_0: \text{CAAR} = 0 \]
\[ \text{H}_1: \text{CAAR} \neq 0 \]

Thus, whether the CAAR values for each interval are significantly different from zero must be established, in order to reject the \( \text{H}_0 \) hypothesis. This was done by performing a t-test (one sample t-test). The t-values calculated, are given in Table 5.
Table 5: Cumulative Average Abnormal Return (CAAR) for each interval and their corresponding t-values.

<table>
<thead>
<tr>
<th>TIME INTERVAL</th>
<th>CAAR (%)</th>
<th>T-VALUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>(-1, 1)</td>
<td>0.011</td>
<td>0.68</td>
</tr>
<tr>
<td>(-3, 3)</td>
<td>0.039</td>
<td>6.22</td>
</tr>
<tr>
<td>(-5, 5)</td>
<td>0.108</td>
<td>4.14</td>
</tr>
<tr>
<td>(-7, 7)</td>
<td>0.083</td>
<td>2.28</td>
</tr>
<tr>
<td>(-9, 9)</td>
<td>0.099</td>
<td>3.37</td>
</tr>
</tbody>
</table>

Source: Researcher’s Computation (2014) Using STATA.

T-values greater than the critical value of t (9.92) given the degrees of freedom of 2 are significant at the 1% level (Two tailed significance level =0.01). The t-values for each interval on table 4.4 are less than 9.92 this makes the CAAR values highly insignificant. Therefore, $H_0$ is supported as the CAAR values for the observed intervals did not differ significantly from zero. Hence it is found that the bank mergers and acquisitions observed have no significant influence on the acquiring firms’ shareholder wealth. The findings concur with earlier findings above which had shown that the share valuation over the event windows had not significantly changed. The findings therefore indicate that the acquiring bank shareholder’s total cumulative abnormal return had not positively changed due to announcement of a merger and acquisition.

5. Summary and Conclusions

This research centers on an examination of mergers and acquisition and their impact on shareholders wealth in the short term. Specifically, the study examines the effect of mergers and acquisitions on value of acquirer banks and whether or not it has significant impact on their abnormal returns. Findings from the research indicate that mergers and acquisitions neither increases shareholder value in the short run nor significantly impacts abnormal returns.

Based on the above findings, the following conclusions were drawn:

1) As a result the speculative information leaking into the markets prior to the release of bid details. Bidders received little positive cumulative abnormal returns (CARs), because the bidders also realized some capital gain of around between 1 and 10%. This is evidenced in the computed CAR and the market reaction around the event window.

2) Nigerian banks mergers or acquisitions were not wealth creating projects for the shareholders of the bidding (acquirer) entity. Because the shareholders' total Cumulated Abnormal Return (CAR) had not significantly changed positively due to the announcement of a merger or acquisition

3) Nigerian banks seem to have planned to benefit from in-market consolidation and to exploit the scale economy and synergistic gains. However, a point to note in this study is the negative abnormal returns to the bidder’s shareholders (though insignificant) that did not result to build-up of shareholders’ wealth for the bidding entity which is inconsistent with related local studies. The high competition in the banking markets, unrelaxed regulatory environment, and yet the pattern of increasing growth in profitability in the banking industry in Nigeria is spreading a good picture of the future performance in general.
References


