Does Restructuring Improve Performance? An Industry Analysis Of

Nigerian Oil & Gas Sector

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Abstract
This paper assesses whether restructuring improve the performance of firms by conducting an industry analysis of
the oil and gas sector in Nigeria. The study is limited to a sample of pair companies listed on the Nigerian Stock
Exchange (NSE) drawn from the sector. Data were collected from the NSE Factbook and Annual Statement of
Accounts and Reports of the firms. Comparisons are made between the mean of 3-years pre-restructuring and 3-years
post-restructuring financial ratios, while the year of restructuring is exempted. Using financial ratio analysis and
paired ‘t’ test, the study reveals that restructuring has significant effects on profitability, liquidity and solvency of the
firms. Also, there is improvement in the firms’ performance after the restructuring. It recommends that restructuring
should not be use to keep failing business alive but to increase competitiveness and financial standing and
management should also instill discipline upon itself so that the continued existence of the firm is not jeopardized.

Keywords: Restructuring, Firm Performance, Mergers and Acquisitions, Oil and Gas Sector, Nigeria, Financial
Ratio Analysis, Paired ‘t’ test.

1. Introduction
Oil is a major source of energy in Nigeria and the world at large. Over the years, oil has become the mainstay in the
Nigerian economy at the expense of agriculture even though Nigeria suffered ‘Dutch disease’ due to oil exploration.
The oil and gas industry began to play a prominent role in the nation at the end of the Nigerian civil war. The
industry occupies a very strategic position in the Nigerian economy as the nation’s major provider of public revenue.
It consists of participants in the upstream and downstream sectors. These participants implement strategies to remain
competitive and increase its profitability. A veritable strategy is corporate restructuring.

The exigency to restructure arises from the growing complexity in the business environment and the need to
strengthen operational capacity. Corporate restructuring refers to the changes in ownership, business mix, assets refer
to the changes in ownership, business mix, assets mix and alliance with a view to maximize shareholders’ wealth and
improve firm value. It may involve ownership, business and asset restructuring. The commonest form is ownership
restructuring basically effected through mergers and acquisitions. Pazarskis, Vogiatzogloy, Christodoulou and
Drogalas (2006) stated that one of the main elements of contemporary corporate restructuring is the boom in mergers
and acquisitions.

Mergers and Acquisitions are used for improving competitiveness of companies and gaining competitive advantage
over other firms through gaining greater market share, broadening the portfolio to reduce business risk, entering new
markets and geographies, and capitalizing on economies of scale etc (Saboo and Gopi, 2009). Merger and
Acquisition (M & A) agreement is taken not necessarily because of lack of corporate strength but an avenue to create
synergy. Many corporations find that the best way to get ahead is to expand ownership boundaries through mergers
and acquisitions (Ismail, Abdou and Annis, 2011).

The potential economic benefits of Mergers and acquisitions are changes that increase value that would not have
been made in the absence of a change in control (Pazarskis et al., 2006). These changes in control according to them
are potentially most valuable when they lead in the re-deployment of assets or restructurings, providing new
operating plans and business strategies. Mantravadi and Reddy (2008) stated the objectives behind merger and
acquisition to be improving revenues and profitability, faster growth in scale and quicker time to market, and
acquisition of new technology or competence. This is largely the reason why merger and acquisition is perceived as
an effective method of corporate restructuring.
One of the common features of Nigerian quoted firms is corporate restructuring. The intent to improve firm value and profitability provided the basis for corporate restructuring in the oil and gas sector. The restructuring exercise has majorly surfaced in form of mergers and acquisitions. A typical example is the consummation of Elf Oil Nigeria Limited, Total Nigeria Plc and Nichemtese Industries Plc, in 2001 to form a single entity called ‘Total finale – Elf of Nigeria Plc’. The primary argument in favour of mergers is that they are good for industrial efficiency without the threat of their companies being taken over and, in all likelihood, the loss of their jobs; managers would act more in their own interest than those of owner (Roll, 1986). This may give rise to agency problem arising from conflict between ownership and management.

Empirical studies such as Selvam, Babu, Indhumathi and Ebenezer, 2009; Yuce and Ng, 2005; Kling, 2006 provide evidence on the positive impact of corporate restructuring by merger on firms. However, it is imperative to note that merger and acquisition is capable of having adverse effect as suggested by Yook (2004), Yeh and Hoshino (2002), King, Dalton, Daily and Covin (2004); Ismail, Abdou and Annis (2010). These conflicting results make the effect of merger and acquisition as a business strategy inconclusive. Therefore, the study will answer whether corporate restructuring through M & A affects liquidity, profitability and solvency objectives which firms pursue.

This study investigates if corporate restructuring affects the performance of firms selected from the oil and gas sector in Nigeria. A sample of four firms that had restructured their operations is drawn from the Oil and Gas sector. The scope of the study covers a period of 3 years before restructuring and 3 years after restructuring for each firm. The rest of the paper is organized as follows – section two presents the literature review, section three provides the methodology, section four focuses on the analysis and discussion of results and section five gives the conclusion and recommendations.

2. Literature Review

Corporate restructuring is a crucial strategy implemented to remain relevant in the business world. Crum and Goldberg (1998) defines restructuring of a company as a set of discrete decisive measures taken in order to increase the competitiveness of the enterprise and thereby to enhance its value or performance. Gibbs (2007) defined restructuring as a change in the operational structure, investment structure, financing structure and governance structure of a company. Sterman (2002) referred to restructuring as diverse activities such as divestiture of under-performing business, spin-offs, acquisitions, stock repurchases and debt swaps, which are all a one time transaction, but also structural changes introduced in day-to-day management of the business. It is perceived that restructuring is concerned with changing structures in pursuit of short and long term gains.

Bowman and Singh (1999) classified restructuring activities into three categories namely portfolio restructuring, financial restructuring and organizational restructuring.

- Portfolio restructuring: it entails significant changes in the asset mix of a firm or the lines of business which a firm operates, including liquidation, divestitures, asset sales and spin-offs.
- Financial restructuring: It includes changes in the capital structure of a firm, including leverage buyouts, leveraged recapitalization and debt equity swaps. A common way for financial restructuring is increasing equity through issuing of new shares.
- Organizational restructuring: It involves significant changes in the organizational structure of the firm, including redrawing of divisional boundaries, flattening of hierarchic levels, spreading of the span of control, reducing product diversification revising compensation, reforming corporate governance and downsizing employment.

The motives behind restructuring stated by Kinshore (2004)

i. Revolution in information technology (IT) has made it necessary for companies to adopt new changes in the communication/information technology for improving corporate performance.
ii. Changed fiscal and government policies like deregulation/decontrol has led many companies to go for newer market and customer segments.
iii. Many companies divisionalized into smaller businesses. Wrong divisionalization strategy has led to revamp themselves. Product divisions which do not fit into the company’s main line of business are being divested.
iv. Global market concept has necessitated many companies to restructure because lowest cost producers only can survive in the competitive global markets.

v. Improved productivity and cost reduction has necessitated downsizing of the workforce both at works and managerial level.

vi. Convertibility of domestic currency has attracted medium sized companies to participate in the global markets.

2.1 Review of Related Empirical Studies

Lot of empirical studies on corporate restructuring focused on the effect of merger and acquisition on firm performance. This is because M & A has been the commonest method of corporate restructuring.

Saboo and Gopi (2007) investigated the impact of mergers on the operating performance of acquiring firms by examining some pre-merger and post-merger financial ratios of these firms and determined the differences in pre-merger and post-merger financial ratio of the firms that went for domestic acquisitions and firms that opted for international/cross-border acquisitions. The results suggest that there are variations in terms of impact on performance following mergers, depending on the type of firm acquired-domestic or cross border. The main finding shows that merger have had a positive effect on key financial ratios of firms acquiring domestic firms while a slightly negative impact on the firms acquiring cross-border firms. Pazarskis et al. (2006) examined empirically the impact of mergers and acquisitions (M & As) on the operating performance of M & A – involved firms in Greece. Using financial, accounting and confidential questionnaire response data, the post-acquisition performance of fifty Greek companies listed on the Athens Stock Exchange that executed at least one merger or acquisition in the period from 1998 to 2002 is evaluated on the basis of certain non-financial characteristics and financial characteristics (a set of seven selected financial sectors). The study showed strong evidence that the profitability of a firm that performed an M & E is decreased due to the merger/acquisition event.

Selvam et al. (2009) conducted a study on the impact of mergers on the corporate performance of acquirer and target companies in India. A sample of companies which underwent merger in the same industry during the period of 2002-2005 listed on the Bombay Stock Exchange. The study focused on comparing the liquidity performance of the thirteen sample acquirer and target companies before and after the period of mergers by using ratio analysis and t-test. It was found out that the shareholders of the acquirer companies increased their liquidity performance after the merger event. Mantravadi and Reddy (2008) evaluated the impact of mergers on the operating performance of acquiring corporate in different industries, by examining some pre-merger and post-merger financial ratios, with the sample of firms chosen as all mergers involving public limited and traded companies in India between 1991 and 2003. The results suggest that there are minor variations in terms of impact on operating performance following mergers, in different industries in India. Specifically, mergers seem to have had a slightly positive impact on profitability of firms in the banking and finance industry; the pharmaceuticals, textiles and electrical equipment eat sectors saw a marginal negative impact on operating performance in terms of profitability and returns on investment. For the chemicals and Agri-products sectors, mergers had caused significant decline both in terms of profitability margins and returns on investment and assets.

Ullah, Farooq, Ullah and Ahmed (2010) examined whether merger delivers value taking the case of Glaxo Smith/cline Merger. They analyzed the pre and post merger performance of the firm by applying the net present value approach of valuation. The study found that mega pharmaceutical merger hasn’t delivered value. The stock prices underperform both in absolute and relative terms against the index. The merger resulted into substantial research and development reduction and downsizing instead of a potential employment haven. Mishra and Chandra (2010) assessed the impact of merger and acquisition on the financial performance of Indian pharmaceutical companies over the period from 2000 – 01 to 2007 – 08. By applying panel data estimation techniques, they found that the profitability of a firm depends directly on its size, selling efforts and exports and imports intensities but inversely on their market share and demand for the products. Their empirical findings suggests that M & A does not have any significant impact on profitability of the firms in the long run possibly due to the resultant X-inefficiency and entry of new firms into the market.

Jin, Dehuan, and Zhigang (2004) examined the impact restructuring had on the operational aspects of the publicly traded firms in China. They used changes in revenue, profit margin, return on assets and the total asset turnover ratio
before and after the restructuring as proxies for firm performance and conducted tests to determine whether restructuring resulted in significant changes. Their study showed that there were significant improvements in total revenue, profit margin, and return on assets following restructurings but there was no evidence of any significant impact on asset turnover ratio. They also found evidence of significant market anticipation and over reaction to the restructuring announcements. Ismail et al. (2010) conducted a study to explore improvements in the corporate performance of firms involved in merger and acquisition. Using a sample of Egyptian companies in the period from 1996 to 2005 in the construction and technology sectors, their results show that merger and acquisition in the construction sector has contributed in improving the profitability of firms while in the technology sector, no improvements were discovered. For both sectors, M & A did not improve efficiency, liquidity, solvency and cash flow positions.

King et al. (2004) employed a meta-analysis technique to assess the impact of mergers and acquisition on firms using the findings of published research on post-acquisition performance. Their study revealed that merger and acquisition does not result to superior financial performance. It further showed that M & A has a moderate unfavorable effect on the long term financial performance of the acquiring firms and no evidence to support and explain variations in performance as a result of mergers and acquisitions using the factors that were supported by the literature. Yeh and Hoshino (2002) evaluated the effects of mergers and acquisitions on firms’ operating performance on the basis of its effect on efficiency, profitability, and growth. The study proxy total productivity as an indicator of the firm’s efficiency, return on assets and return on equity as measures of profitability, and sales and growth in employment to index for firm’s growth rate. Using a sample of 86 Japanese corporate mergers between 1970 and 1994, it was realized that there was insignificant negative change in productivity, significant decline in profitability, significant adverse effect on sales growth rate, and merger caused downsizing in the workforce.

3. Methodology

This paper aims to determine if corporate performance has improved after restructuring in Nigeria’s Oil and Gas sector. A sample of four companies is drawn from the sector to make generalizations. The companies chosen have restructured their operations in the last decade. The estimation method are financial ratio analysis and the paired ‘t’ test to test for the significant differences that occurred in the post-restructuring period. The method employed in the analysis is similar to that of Saboo and Gopi (2009), Mantravadi and Reddy (2008) and Selvam et al. (2009). The financial ratios employed are consistent with Pazarskis et al. (2006) and are categorized into profitability, liquidity and solvency ratios. The ratios were arrived at using data sourced from the Nigerian Stock Exchange (NSE) Factbook and Annual Statement of Accounts and Reports of the respective companies.

3.1 Research Hypothesis

In order to determine improvements in the performance of firms after the restructuring exercise, the study formulated three null hypotheses stated thus;

1. Restructuring does not have significant effect on the profitability of firms in the oil and gas sector in Nigeria.
2. Restructuring does not have significant effect on the liquidity of firms in the oil and gas sector in Nigeria.
3. Restructuring does not have significant effect on the solvency of firms in the oil and gas sector in Nigeria.

3.2 Description of Financial Ratios

i. Profitability Ratio: It shows the extent to which a company has been efficient in its operations or gauges a company’s operating success over a given period of time. In this study, three measures of profitability are employed which include Return on Asset (ROA), Gross Profit Margin (GPM) and Earning before Tax (EBT) divided by Net worth.

- **Return on Assets**: It is a standard measure of profitability in numerous studies. It shows the efficiency of company’s management in utilizing assets at its disposal to earn profit. It is calculated as:

  \[
  \text{ROA} = \frac{\text{Net Income or Profit after Tax}}{\text{Total Assets}}
  \]

- **Gross Profit Margin**: This is a profitability ratio that provides clues to the company’s pricing, cost structure and production efficiency. It shows the average gross profit on goods sold. The formula is given as;

  \[
  \text{GPM} = \frac{\text{Gross Profit}}{\text{Total Sales}} \times 100
  \]
Sales or Turnover

- **Earning before Taxes**: This is the money earned by a company after all expenses incurred except tax expenses have been deducted. Earning before Tax is always related to the net worth of the company and it is calculated as;
  \[
  EBT = \frac{EBT}{Net \ worth}
  \]

ii. **Liquidity Ratio**: A firm is said to be liquid if it can meet its short-term obligations in due course. Liquidity ratio measures the ability of a company to pay its short-term debt and meet unexpected cash needs. Failure of a firm to meet its obligations as a result of lack of liquidity results into bad ratings and loss of creditors’ confidence among others. The two ratios used in this study are Current ratio (CR) and Quick Ratio (QR).

- **Current Ratio**: This is one of the balance sheet financial performance measures of a company’s liquidity i.e. the level of safety provided by the excess of current assets over current liabilities. The conventionally acceptable current ratio is 2:1. It is calculated by dividing the current assets by the current liabilities that is;
  \[
  CR = \frac{Current \ Assets}{Current \ Liabilities}
  \]

- **Quick Ratio**: This is a preferable and better method to test for liquidity because it excludes stocks from current assets. This is because stocks may suffer obsolescence, damage and pilferage. It shows the extent to which a firm is able to meet its short term obligations from its liquid assets. The recommended bench mark for quick ratio 1:1 and it is calculated as;
  \[
  QR = \frac{Current \ Assets - Inventories \ or \ Stocks}{Current \ Liabilities}
  \]

iii. **Solvency Ratio**: It indicates a company’s ability to meet long-term obligations when due and measures the long term financial strength of a firm. The solvency best for this study is conducted via Total Debt ratio (TDR) and Total Assets ratio (TAR).

- **Total Debt Ratio**: It is the ratio of the total liabilities of a firm including all short and long term debts to its net worth. It is mathematically expressed as;
  \[
  TDR = \frac{Total \ Liabilities}{Net \ Worth}
  \]

- **Total Asset Ratio**: This relates the net worth of a firm to its total assets. It is given as;
  \[
  TAR = \frac{Net \ Worth}{Total \ Assets}
  \]

The financial ratios are classified and assigned codes in the table below;

### Table 1
**Classification of Financial Ratios**

<table>
<thead>
<tr>
<th>Class</th>
<th>Code</th>
<th>Financial ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profitability</td>
<td>P₁</td>
<td>Earning before tax/Net worth</td>
</tr>
<tr>
<td></td>
<td>P₂</td>
<td>Return on Assets</td>
</tr>
<tr>
<td></td>
<td>P₃</td>
<td>Gross Profit Margin</td>
</tr>
<tr>
<td>Liquidity</td>
<td>P₄</td>
<td>Quick ratio</td>
</tr>
<tr>
<td></td>
<td>P₅</td>
<td>Current ratio</td>
</tr>
<tr>
<td>Solvency</td>
<td>P₆</td>
<td>Total Asset ratio</td>
</tr>
<tr>
<td></td>
<td>P₇</td>
<td>Total Debt ratio</td>
</tr>
</tbody>
</table>

A Priori Expectation.
Post-restructuring P₁ > Pre-restructuring P₁
Post-restructuring P₂ > Pre-restructuring P₂
Post-restructuring $P_1 >$ Pre-restructuring $P_3$
Post-restructuring $P_4 >$ Pre-restructuring $P_4$
Post-restructuring $P_5 >$ Pre-restructuring $P_5$
Post-restructuring $P_6 >$ Pre-restructuring $P_6$
Post-restructuring $P_7 <$ Pre-restructuring $P_7$

The stated a priori expectations shows that all the financial ratios are expected to improve after restructuring. $P_1 - P_6$ are expected to rise while $P_7$ is expected to decline.

4. Analysis and Discussion of Results

In order to arrive at a logical conclusion, financial ratios in the pre and post restructuring era are compared. The selected financial ratios for each company in the sample over a 3-years period before restructuring (year $T - 3, T - 2, T - 1$) and 3-years after restructuring (year $T + 1, T + 2, T + 3$), the restructuring exercise are summed up, and the mean for each financial ratio for year $T - 3, T - 2, T - 1$ and year $T + 1, T + 2, T + 3$ are calculated. The study excludes the year restructuring took place because it usually includes recognition of a number of a typical event which distorts comparison.

Testing the Hypotheses Using the Mean Ratios

Table 2

<table>
<thead>
<tr>
<th>Financial ratio</th>
<th>Pre-Restructuring</th>
<th>Post-Restructuring</th>
<th>T-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$P_1$</td>
<td>2.7883</td>
<td>1.8933</td>
<td>2.930*</td>
</tr>
<tr>
<td>$P_2$</td>
<td>0.5912</td>
<td>2.1447</td>
<td>-4.642*</td>
</tr>
<tr>
<td>$P_3$</td>
<td>50.7433</td>
<td>35.7600</td>
<td>1.239</td>
</tr>
<tr>
<td>$P_4$</td>
<td>4.6542</td>
<td>8.0600</td>
<td>-7.813*</td>
</tr>
<tr>
<td>$P_5$</td>
<td>5.8233</td>
<td>14.1533</td>
<td>-3.292*</td>
</tr>
<tr>
<td>$P_6$</td>
<td>1.7250</td>
<td>2.1967</td>
<td>-4.311*</td>
</tr>
<tr>
<td>$P_7$</td>
<td>12.4643</td>
<td>5.3267</td>
<td>2.183*</td>
</tr>
</tbody>
</table>

(*) denotes significance at 0.05 significance level

Source: Author’s calculation.

The results show that most of the ratios (mean) improved as a result of restructuring i.e. they conform to the a priori expectations, with the exclusion of $P_1$ and $P_3$. $P_1$ declined in the post-restructuring period from 2.7883 to 1.8933, and the decline was statistically significant and $P_3$ also declined after restructuring from 50.7433% to 35.7600%, and the t-value of $P_3$ depicts that the decline is not statistically significant. $P_2$ increased from 0.25912 to 2.1447 after restructuring, and the increment is statistically significant. Overall, it can be said that restructuring has had a significant effect on the profitability of firms; hence, hypothesis 1 is rejected.

It can also be deduced that the liquidity position of firms improved in the post-restructuring era. $P_4$ rose from 4.6542 to 8.0600 and $P_5$ increased from 5.8233. Their respective t-values show that the improvements were statistically significant; therefore suggesting that restructuring has a significant positive effect on the liquidity of firms. Hypothesis 2 is rejected on the basis of this finding.

Due to restructuring, Pre-restructuring $P_6$ and $P_7$ improved and their improvements were statistically significant. $P_6$ marginally increased from 1.7250 to 2.1967 and $P_7$ tremendously reduced from 12.4643 to 5.3267 after the restructuring exercise. Hypothesis 3 is also rejected because there is clear evidence that restructuring had a significant effect on the solvency of the firms.

The significant decline in $P_1$ implies there is a significant downward movement in $P_1$, hence, restructuring has reduced the earning power of the firms. $P_2$ significantly increased after the firms restructured their operations. The
increment of $P_2$ shows that there is an increase in management efficiency in employing available assets to earn profit. The significance of $P_2$ means that a decrease in the management efficient use of assets leads to a significant decline in profitability. $P_3$ reduction in the post-restructuring is attributed to the reduced earning power of firms, though the effect of $P_3$ on their profitability is not statistically significant, implying that $P_3$ does not play much of an important role on firm’s performance. However, $P_2$ is a proficient and standard measure of profitability, therefore restructuring can be said to have significant positive effect on firms’ profitability in the Oil and Gas sector.

Restructuring demonstrated a significant positive influence on the liquidity position of firms. $P_4$ and $P_5$ significantly rose, implying that firms in the Oil and Gas sector are strategically positioned and their ability to meet their short-term obligations and any other unforeseen contingencies has been enhanced. Also, $P_6$ significantly increased and $P_7$ significantly reduced drastically, signifying that the survival position of the firms has been further improved in the face of restructuring. It could therefore be inferred that restructuring has a significant beneficial effect on the solvency position of the firms in the sector because of their improved ability to meet long-term financial commitments.

5. Conclusion and Recommendations

Corporate restructuring is aimed at increasing efficiency, enhancing competitive advantage, achieving synergy and improving firm value. Restructuring pursues the profitability, liquidity and solvency objectives of an organization. The study was carried out to determine whether improvements occur after restructuring was undertaken. The analysis and result shows that firms in the Oil and Gas sector performed better in the post-restructuring era compared to the pre-restructuring era. It was also realized that restructuring played a significant role on the profitability, liquidity and solvency position of these firms, thereby suggesting that there has been increase in management efficiency, improved capital adequacy, strengthened operational capacity and assurance of the continued existence of these firms.

Based on the findings in this study, it is cognizant to give recommendations in order to reap more gains from restructuring. It is recommended that;

- Management restructuring their operations should do so not to keep their failing business alive but to increase their competitiveness and financial standing.
- Management should instill discipline upon itself by ensuring good corporate governance, promote technological progress, and increase its paid up capital regardless of the statutory requirements so that the continued existence of the firm is not jeopardized.
- Management should develop a sound approach towards asset and liability management so as to avert the problem of mismatching investments and also the quality of assets should be enhanced.
- Management should put into consideration the degree of transferability and marketability of assets invested in so that these assets can provide liquidity to firm with ease.
- Further research in other sectors of the economy should be embarked upon so as to obtain further insights.

References


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