Full Length Research Paper

Effect of capital size on the profitability of listed insurance firms in Nigeria

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Financial reforms have been an ongoing process, not only in Nigeria but the world over. Prior to the recapitalization of the insurance sector in 2005, the industry was characterized by the inadequate capital base, the dearth of appropriate human capital and weak performance. The objective of this paper is to examine the effect of capital size on the profitability of insurance companies in Nigeria. The researcher used correlational research design to carry out the study. Secondary data was sourced from Nigerian Stock Exchange Fact Book 2012, and we used Panel regression model (random effect) to estimate the impact of capital size on the profitability of insurance companies in Nigeria. The results provided evidence to believe that capital size and gross premium have a positive but insignificant effect on the profitability of insurance businesses in Nigeria. Hence regulators should not put much emphasis on the issue of recapitalization of insurance companies, but on other policies that will increase the market penetration ability of the insurance companies as indicated by the gross premium earned.

Key words: Recapitalization, capital size, and profitability.

INTRODUCTION

The financial sector is the nucleus of the productive activity of every economy. It consists of a notable network of institutions ranging from banks, insurance companies, specialized banks, capital market, to finance companies. The Nigeria financial sector has been driven by structural and institutional reforms (Ogujiuba and Obiechina, 2011). It has intensified in recent times because of the impact of globalization, which has been spurred by incessant integration of the world economies (Adeeko, 2013). The 2005 reform of the Nigerian insurance sector was carried out to increase shareholder value, ensure greater efficiency and provide the insurance companies with the requisite capacity to underwrite high-risk (Epetimehin, 2013). Some analysts believed that National Insurance Commission (NAICOM) had not been efficient in designing the 2005 reform package. It succeeded in following the banking sector reforms without a clear articulation of the primary objectives insurance business (Ujunwa and Modebe, 2011).

Omanufeme (2014) reported that the Nigerian insurance industry has recently experienced an average growth of 40% from about 3% in the last three years. He affirmed
that the growth was based on the reforms introduced by the National Insurance Commission (NAICOM). He reported that the industry had the capacity to grow between 200 and 400% if compulsory insurance is strictly complied.

Nigeria with a population of about 170 million has the biggest insurance market in Africa, but industry weaknesses have not allowed the country to reap the tremendous benefits provided by insurance business (African Business, 2007). Insurance companies perform significant economic roles in the development of every nation. The insurance sector stabilizes the economy through efficient diversification of risks (PanAfrican Capital, 2013). The total insurance gross premium for Nigeria amounted to about US$1.8 billion as at 2012. Even though this makes Nigeria the third largest insurance market in Africa, the penetration ratio is small given the size of the country’s population. The head of the National Insurance Commission lamented that only 2.25 million Nigerians have access to one form of insurance policy or the other (KPMG, 2014). Chukwuluzie (2008) indicated that inadequate capital base, dearth of appropriate human capital, poor returns on investment; poor corporate governance structures; and the absence of risk management framework are among the major problems that have prevented the Nigerian insurance sector to impact positively on the economy. Government, therefore, believed that it is imperative to reposition the insurance industry to make it a major player in the world insurance markets. Zurich (2005) reported that the Nigerian insurance industry represents only 0.02% of the worldwide stock markets. The report put Nigeria at 62 position out of the 88 countries in terms of annual premium volumes; 69th on life funds and 86th on insurance density.

Prior to the 2005 reforms, the Nigerian financial sector was weak and fragmented that usually financed short-term projects are rather contributing to the real sector of the economy (Ogujiuba and Obiechina, 2011). To strengthen the financial system, the Central Bank of Nigeria (CBN) increased the capital base of commercial banks from about N2 billion to N25 billion (CBN, 2004). Following the successful recapitalisation of the banking sector, the insurance industry as a component of the financial system also introduced its aspect of reforms. NAICOM proposed recapitalization as an economic strategy that offer numerous benefits relating to higher liquidity, risk minimization and enhanced growth opportunities among others (Brito, 2006). To create a better enabling environment, NAICOM introduced Market Reconstruction and Development Initiative (MRDI) in 2012. This policy initiative has led to an annual growth of the gross premium income (GPI) by about 25% in the last five years hitting N300 billion in 2012 (Abiodun, 2013). The total premium income was ₦201 Billion Naira in 2010, representing 0.7% of GDP (IMF and World Bank, 2013).

The industry presents a lot of growth opportunities due to the low insurance penetration of 0.37% as at the first quarter of 2013 (CardinalStone, 2014). Some of the insurance companies adopted integration strategies to enable them increase their resource, expand their market share and increase profitability (Adeyele and Maiturare, 2012). The asset of the Nigerian insurance sector is less than 2% of GDP.

Several studies have been conducted in the areas of consolidation, merger and acquisitions within the Nigerian financial industry (Ewedemi and Lee, 2008; Ibiwoye and Adeleke, 2008). While some believed that increasing the firm’s capital base may not increase firm’s performance (Mohan, 2005). Others believed that increase in the capital base will enhance the performance of a firm (Adegbaju and Olokoyo, 2008). Also, very few studies have empirically examined the effect of capital size on the performance of Nigerian insurance companies (Ibrahim and Abubakar, 2011).

Profitability refers to the state where a firm gains financial profit. As such, profitability in this study refers to profit after tax. It is a performance ratio that is calculated by dividing net income after taxes by net sales. Aransiola (2013) used the same measure to gauge the effect of consolidation on the profitability of banks in Nigeria. Wood and Sangster (2008) affirmed that profitability is affected, by the way, the assets of a business venture are used. The primary objective of this study is to find out the extent to which share capital size affects the profitability of quoted insurance companies in Nigeria? The rest of the paper proceeds as follows. Section 2 reviews previous studies related to the topics. Section 3 explains the methodology. Section 4 discusses the findings while section 5 concludes the paper.

LITERATURE REVIEW

Insurance as any other discipline defies any single or universally accepted definitions. Rejda and McNamara (2014) have explained that American Risk and Insurance Association viewed insurance as the pooling of fortuitous losses by insurers, who agree to indemnify the insured in the event of contingencies. Although this definition may not be acceptable to all insurance scholars, it has captured all the major arrangements of an insurance plan. Mishra and Mishra (2007) noted that there are several kinds of risk which people may wish to insure. However, for that to be possible, certain features must be in place. For instance, before any person can be allowed to take an insurance policy for any property, that person must evidently have an insurable interest in the subject matter of insurance. Therefore, insurance is a co-operative device that spread the losses of the insured over those that have agreed to protect themselves against that risk (Mishra and Mishra, 2007). Thus, for insurance companies to actively perform their functions,
they require large capital base.

Nnabugwu (2011) reported that the recapitalization of insurance sector is a strong policy drive that will increase not only the profitability level of the industry but also its stability and will improve the capacity of insurers to underwrite “significant risks”. The driving factor for this study is based on the idea that reforms are necessary for repositioning financial sector for it to achieve sound economic development. One of the theories advanced to explain financial sector reform is based on the principle of necessity. The advocate of theory believed that financial institutions are the hub of every economy and determine to some extent the prospect of the entire economic system (Bernard and Michael, 2014). As such they argued that it is necessary to regulate the activities of the financial institutions. On the other hand, the advocate invisible hands argued for self-regulation through the forces of demand and supply (Okpara, 2011).

Recapitalization is an important component of the economic policy reform package. It is a process where firms increase their capital stock by issuing shares to existing shareholders or new shareholders or a combination of both. In whatever way one sees it, recapitalization is one of the government’s policy reforms that enables organizations to increase its capital stock substantially to sustain adequate economic growth and development. Recapitalization requirements may be accomplished by raising additional funds or through mergers and acquisition (Adegbaju and Olokoyo, 2008). Aransiola (2013) examined the effect of consolidation on the profitability of commercial banks in Nigeria between the year 2000 and 2010. The study used a t-test to find out whether a significant difference exists between the profitability ratios before and after consolidation.

The study revealed that bank consolidation has improved the efficiency of the banks and it showed that bank consolidation program is of great success in the Nigerian context. Though the study reported that banks have recorded significant improvement after the consolidation, the study suffers some methodological deficiencies. The study did not explicitly specify the profitability measures adopted for the study though he mentioned several measures of profitability. As such efficient recapitalization that is cost-effective could be of beneficial to the shareholder (Philippon and Schnabl, 2013). Also, Adegbaju and Olokoyo (2008) investigated the impact of the recapitalization on the performance of Nigerian banks using secondary data obtained from NDIC annual reports. The study found significant increase on the mean values of the three performance indicators after the recapitalization.

On the other hand, Mohan (2005) asserted that it would be difficult to argue that greater size has any serious effect on bank performances in India. At the very least, such argument needs to be backed by rigorous research so as to explain what constitute the optimal size of assets in the Indian context. In the same trend, Ibrahim et al. (2012) in their study reported an insignificant decrease in return on assets of banks after recapitalization, hence concluded that recapitalization would subject banks (especially the small banks) in Nigeria into severe liquidity crisis. Recapitalization should be undertaken with dexterity because the major obstacle facing Nigerian banks is not peculiar with a shortage of capital alone. Similarly, Ibrahim and Abubakar (2011) have assessed the pre and post effect of the recapitalization on the profitability of quoted insurance companies in Nigeria. The study though descriptive in nature revealed that recapitalization has not impacted significantly on the profitability of quoted insurance businesses in Nigeria. It is obvious that the methodology adopted for the study is not robust hence there is a need to adopt a more robust analytical technique to gauge the effect of this significant policy reform package. Also, Nicolo et al. reported in their study that consolidation may not necessarily lead to a resilient banking industry. As there are several other factors that improve bank performances.

**METHODOLOGY**

The study adopted a correlational research design to examine the effect of share capital size on the performance of insurance companies in Nigeria. Secondary data was sourced from the Nigerian Stock Exchange Fact Book, 2012 for the period 2006-2012. A proportional sample size formula developed by Ralph et al. (2002) was used to drive the sample size. The sample of the study was drawn using Ralph et al. (2002)’s sample size formula:

\[
\frac{\log \beta}{\log p} = n
\]

\(n = \) sample size
\(\beta = \) Level of precision (0.01)
\(p = \) Proportion of existing insurance companies to the number of insurance prior to recapitalization.

To achieve the highest level of possible precision a 99% confidence level is chosen, which gives a precision level of 0.01 (i.e. \(\beta = 0.01\)). Data from the Nigerian Stock Exchange Fact Book, 2006 indicated that 71 listed insurance firms were in existence prior to the recapitalization exercise of 2005. The number of listed insurance companies operating after the recapitalization exercise stood at 36 as at December, 2012. To compute the proportion, the population of the study was dichotomized into two. Firstly, we use the number of listed firms (71 firms) in existence prior to the introduction of recapitalization policy. The second class comprised the number of insurance companies (36) in existence after the introduction of the recapitalisation exercise as at 31st December 2012. The proportion of existing insurance companies relative to the number of insurance firms that were in existence before 2005 recapitalization exercise was computed using the formula below:

\[
P = \frac{36}{71}
\]

\(P = 0.5070\)

\[
\frac{\log 0.01}{\log 0.5070} = n
\]

\(n = -6.78\)

\(n = \frac{-2}{-0.2949} = 6.78\)
on for the last five years. More so, the results provide evidence torown at an annual average of 25% GPE. The minimum value of a profit figure is only for the seven listed firms that made up the study sample (Table 2).

Table 1. Descriptive Statistics.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean N000million</th>
<th>Median N000million</th>
<th>Maximum N000million</th>
<th>Minimum N000million</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>Jarque Bera</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAT</td>
<td>351057</td>
<td>273979</td>
<td>1343879</td>
<td>-438492</td>
<td>0.7267</td>
<td>2.9715</td>
<td>4.3140</td>
<td>0.1157</td>
</tr>
<tr>
<td>CAPSZ</td>
<td>545500</td>
<td>5234268</td>
<td>14024734</td>
<td>354827</td>
<td>0.4856</td>
<td>2.6819</td>
<td>2.1321</td>
<td>0.3444</td>
</tr>
<tr>
<td>GPE</td>
<td>345580</td>
<td>2252740</td>
<td>14952247</td>
<td>244808</td>
<td>1.6295</td>
<td>5.1871</td>
<td>4.314</td>
<td>0.1157</td>
</tr>
</tbody>
</table>

Table 2. Regression results.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficients and t-values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>26663.06</td>
</tr>
<tr>
<td>Capital size</td>
<td>0.0274*</td>
</tr>
<tr>
<td>(1.5309)</td>
<td></td>
</tr>
<tr>
<td>Gross Premium Earned</td>
<td>0.0718***</td>
</tr>
<tr>
<td>(3.9205)</td>
<td></td>
</tr>
<tr>
<td>Standard error</td>
<td>249183</td>
</tr>
<tr>
<td>R2</td>
<td>48.28%</td>
</tr>
<tr>
<td>Adj. R2</td>
<td>46.03%</td>
</tr>
<tr>
<td>F-Stat</td>
<td>21.4796***</td>
</tr>
<tr>
<td>Durbin-Watson</td>
<td>1.5235</td>
</tr>
</tbody>
</table>

Source: Eviews 8.0 Regression Results-statistics are reported in parentheses and the symbols *** indicate statistical significance at the 1% level while * indicates statistical significance at 10%.

\( n = 7 \)

The regression model

A panel Random Effect Regression Model was used to estimate the variables as shown below:

\[ \text{PAT}_{it} = \beta_1 \text{CAPSZ}_{it} + \beta_2 \text{GPE} + (\alpha_i + \mu_{it}) \]  

\( (\text{Eqn. 1}) \)

Where:

- \( \text{PAT} \) = Profit after tax
- \( \text{CAPSZ} \) = Capital Size
- \( \text{GPE} \) = Gross Premium Earned (Control variable)
- \( \beta \) = beta coefficient
- \( \alpha_i \) = intercept
- \( \mu_{it} \) = Statistical error term

Hausman test

To determine the best model that fit the data, a Hausman test was used. Below is the Hausman hypothesis:

- \( H_0 \): Random Effects Model Appropriate
- \( H_1 \) : Fixed Effects Model is Appropriate

The decision criteria are that if the p-value < 0.05, we reject the \( H_0 \), otherwise we accept the \( H_1 \).

From the Hausman Test output, the probability value for the cross section random effects model is 53% that is greater than 0.05%. As such we accept the \( H_0 \) (null) that random effect model is appropriate. Hence we estimated a random effect model.

RESULTS AND DISCUSSION

From Table 1, the average values of the profit- after- tax (PAT) and that of the capital size are 351057 and 5455003 respectively. Also, the variables in the table exhibit some level of variability as the mean are larger than the median. The minimum value of a profit-after-tax is -438492 within the period while that of capital size is 354827. In contrast, the maximum value for PAT within the period under investigation is 1343879 while the share capital is 14024734. This small profitability figure may be attributed to inability of the industry to market innovative products that will be appealing to low-income owners who constitute the majority of the population. The annual growth of premium revenue for the entire industry was about N300 billion for the last five years. More so, the above profit figure is only for the seven listed firms that made up the study sample (Table 2).

The equation shows that the independent variables have a positive but insignificant effect on the profitability of insurance companies in Nigeria. A one unit increase in capital size and gross premium earned increases the firm profit by 2.7 and 7.1% respectively. The Durbin-Watson statistic shows no serial correlation as the value is within the range of 1.5 to 2.5. The results provide evidence to believe that capital size and the gross premium earned positive but insignificant effect on the profitability of insurance companies in Nigeria. This result is consistent with Aransiola (2013); Adegaju and Olokoyo (2008) who affirmed that recapitalization or greater capital size have a significant effect on the performance of the recapitalized institutions. Also, the results indicated that gross premium income has a significant impact on the profitability of insurance companies. The Gross Premium Income (GPI) has grown at an annual average of 25% in the last five years (2008 – 2012), hitting N300 billion in 2012 (Abiodun, 2013). The full results are shown in Appendix I. In terms of the fitness of the model, the regression equation indicates an adjusted coefficient of determination of 46.03%. The result shows that 46% of the variations of \( \text{PAT} \) (profit after tax) are explained by the combined influence of the two explanatory variables used in the model. Another factor in favour of the fitness of the model is the F-Statistics value of 21.47595 shown
by the model is found to be significant at 1%.

CONCLUSION AND RECOMMENDATION

An insurance company is a financial institution whose primary function is to provide compensation for different kinds of risks affecting both the public and private sector of the economy. It plays a vital role in the financial markets as well as for the economic development of a nation by providing cover and assistance to a variety of firms and government agencies. The insurance industry is still developing in Nigeria. It is, therefore, apparent that this important area, if adequately monitored and the current effort sustained, can turn around the Nigerian economy. The study, therefore, conclude that capital base alone may not create a sound insurance industry, the insurance sector can deepen the market and increase gross premium earned which in turn will lead to higher profitability. Therefore, the regulators should not put much emphasis on the capital base of insurance companies as it may not have the capacity to increase the profitability of insurance firms in Nigeria. However, emphasis should be placed on other performance indicators. The government should continue to encourage insurance companies to ensure efficiency in underwriting to deepen market penetration. The quoted insurance companies should adopt strategies that will enhance insurance patronage, hence high profitability.

Conflict of Interests

The author has not declared any conflict of interests.

REFERENCES


