The Impact of Financial Slack on Firm Performance in a Recessed Economy: The Nigerian Experience

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**Abstract**

Adopting the current economic recession in Nigeria, this study investigates whether firms that pile up excess resources until the inception of the crisis experience superior performance during the meltdown. The variables for financial slack were measured as: The proportion of current assets to current liabilities, the ratio of equity to total debt, and the ratio of general and administrative expenses to sales. These proxies are measured over the period 2013 to 2014 prior to the recession. The variable of financial performance is then evaluated over the period of 2015 to 2017. The results show that high pre-crisis levels of liquidity do not impact performance during recession period. However, the findings agree with the view that high pre-crisis levels of debt have a negative influence on firm performance during economic crisis. For the variable of absorbed slack, its relationship with performance was found to be positive, although at a declining rate. Both findings align with the hypothesis that financial slack has value during economic recession. The uniqueness of the approach lies in the assessment of both linear and curvilinear performance effects of financial slack for listed Nigerian firms during the economic recession.

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**Keywords**

economic recession, firm performance, financial slack, Nigeria

**1. Introduction**

A critical issue in effective management is to apply a firm’s available resources so as to minimize the impact of exogenous threats on the organization while attempting to capture opportunities. In the quest to considering the relative attractiveness of available financial instruments, decision making in corporate organization needs to strike a balance between, among others, the need for (future) adaptability and current and future performance. Varying financial resource simulations arise as a result and empirical studies suggest that firms use internally available cash, debt, or equity issues in a manner that differs greatly, even within the same industry (Meier et al., 2013).

All such broad diversity is hard to fit in with dominant theories on optimal choice of capital structure, as theories in financial literature cannot explain the cross section of statement of financial position found among firms. However, potential explanation can

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be found within firms’ preference for financial flexibility. Prior surveys have found such flexibility to be of great concern to managers, as it ensures the option of making future investments possible (e.g. Bancel & Mittoo, 2004; Graham & Harvey, 2001). If the tendency of significant future capital needs is sufficiently great, then it is likely that managers will be reluctant to borrow today, (DeAngelo & DeAngelo, 2007). Accordingly, the presence of excess resources – a critical source of operational and financial flexibility – as enabler of corporate financial performance has received ample attention in organizational literature. But empirical evidence on the relevance of financial flexibility is still scarce (de Jong et al., 2012).

This research study focuses on financial flexibility and whether it provides value to firms. Financial flexibility is been understood as excess financial resources, such as debt capacity and cash reserves, also connoted as financial slack. Following Amit & Schoemaker (1993) financial resources offer a high level of transferability to profit-yielding activities. A firm that possesses such resources is capable of, funding new profitable projects without the hassles of raising funds externally, leaving it in a better position than a firm confined into a single course of action (Foss, 1998). Hence, firms with high levels of financial slack may be able to profit from greater flexibility in the application and adaption of their resources, expanding the range of viable options available to management. In contrast, firms without such flexibility may face difficulties in responding advantageously to external changes in turbulent market situations.

If financial litheness severed from the presence of slack resources provides options for adapting to unanticipated changes, such is expected to reach a higher value during times of heightened uncertainty. The current economic downturn, with tighter credit principles on the supply side which results to curtailed financing activity, represents a typical situation where the gains of financial slack should attain its premium. This study puts this expectation to the test in a Nigerian context, examining whether Nigerian firms with high levels of financial slack outperformed their peers during the current economic recession. A confirmatory outcome would lend credence to the notion that financial flexibility has value. Again, this would partially explain reasons for firms’ deviation from theories of optimal capital structure.

The findings suggest that pre-crisis high levels of available slack, captured as the current ratio, do not have a significant impact on firm performance during a financial crisis. However, low (high) levels of debt (potential slack) at the onset of the crisis as well as high levels of absorbed slack had a positive impact on firm performance during the crisis lending support to the hypothesis that financial slack has value.

The work relates to various studies on financial slack, as the issue has gained popularity in recent years. Gamba & Triantis (2008) model the effect of financial flexibility on firm value. Latham & Braun (2008) examine the impact of financial slack on the performance of US software firms in the early periods of 2000s recession. Meier et al. (2013) examine whether US companies that built up financial flexibility ahead of the most recent financial crisis experienced superior stock returns. This paper presents a different approach in that three key types of financial flexibility and their potential curvilinear associations with performance are examined. Also, to our knowledge, the study is the first to empirically examine the value of financial slack during a recession for Nigerian listed firms.
2. Methods

In this study, the value of financial slack will be analyzed following three common dimensions of financial slack. Engaging the definition of a resource cushion, researchers have highlighted different dimensions of the financial slack concept, such as the amount of managerial discretion offered (Sharfman et al., 1988) or the accessibility of slack (e.g. immediate vs deferred; Finkelstein & Hambrick, 1990). Various types of slack have resulted and, in consequence, a wide array of financial ratios has been developed in empirical studies to measure the phenomenon quantitatively. A comparison between the operationalization of slack used by Tan & Peng (2003); George (2005) makes this issue transparent.

Cheng & Kesner (1997); Daniel et al. (2004) noted that out of all possible options, the most widely and acceptable classifications of slack seem to be available Slack, absorbed and potential slack. These three measures of slack are differentiated based on their “ease of recovery”. Prior literature most often defines available slack as the difference between available working capital and required working capital (As in Bradley et al., 2011; Bromiley, 1991; Chiu & Liaw, 2009; Geiger & Cashen, 2002). This difference is known as the current ratio, and have been employed in the overviews given by Daniel et al. (2004) – where 14 out of 23 studies applied the current ratio to measure available slack—and Tan & Peng (2003). However, this study also applies the current ratio, measured as current assets divided by current liabilities.

Following Hambrick & D’Aveni (1988) potential slack indicates the firm’s potentials to gain external resources. It is commonly captured by using a leverage ratio; here, the ratio of equity to total debt is adopted. Finally, Bromiley (1991); Daniel et al. (2004); Iyer & Miller (2008); Wefald et al. (2010) defined absorbed or recoverable slack as excess resources tied up in salaries, overhead expenses and other administrative expenses, meaning that it requires some effort to access. This type of slack is generally measured as the ratio of general and administrative expenses (SG&A) to sales.

These proxies are measured for a sample of Nigerian listed firms as an average over the two years prior to the crisis, from 2013 to 2014 and two years into the crises. The sample was collected from listed Nigerian firms as most of the previous studies relating to financial slack and economic crises mentioned in this paper focuses either on US or Asian firms. Statement of financial position and income statement information is taken from the firm’s annual reports as compiled by Machame Ratios, and no financial company is included. Furthermore, the sample was constrained to fifty publicly-listed firms randomly selected from listed companies on the Nigerian stock exchange and has an annual turnover above 100 million naira. A separate variable was added to control for industry effects. This results to a 200 firm year observations.

In line with previous relevant research efforts, the choice of performance measure was trimmed to accounting-based ratios. Within this category of performance measures, return on assets (ROA), return on equity (ROE) and return on sales (ROS) are common. ROE was ruled out due to its strong sensitivity with capital structure differences. ROA and ROS were found to be highly correlated. ROA was relied upon as performance measure and resources. It was measured as an average over the period of 2015. In addition, ROA of 2012 was added as a control variable.
Next, the association between the independent and the performance variable was examined employing heteroscedastic t regression analysis. Since the variables included in the analyses represent financial ratios, they carry extreme values that shift the variables’ distribution away from the normal distribution. Lau et al. (1995); McLeay (1997) noted that the accounting construction of the numerator and denominator in the case of financial ratios is responsible for such extreme values, and the departure of financial ratios from normality is well documented. Both accounting and statistical literature have suggested that t distribution provides the best fit to ratios (Taylor & Verbyla, 2004). They argue that the t distribution has more probability in the tails than the normal distribution, meaning that it accommodates the fact that extreme values are more likely to occur for ratios. Hence, employing the t specification to modeling a regression is therefore a widespread way of making an analysis more robust.

3. Results and Discussion

Table 1 presents descriptive statistics and correlations statistics for the variables used in the study. As the results suggests there were no high correlations between the independent variables and between the two performance measures. In addition, multicollinearity diagnostics were run, finding no statistically significant issues with values of variance inflation factors less than 10 (VIF<10). As such, multicollinearity was not a problem in the study.

Table 1  Descriptive Statistics and Correlations Statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Means</th>
<th>S.D</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>POS</td>
<td>44.2</td>
<td>23.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>ABS</td>
<td>0.31</td>
<td>0.20</td>
<td>0.370**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>AVS</td>
<td>70.6</td>
<td>558.7</td>
<td>0.401**</td>
<td>0.085</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>PRP</td>
<td>51.8</td>
<td>127.9</td>
<td>0.049*</td>
<td>-0.422</td>
<td>0.088</td>
</tr>
<tr>
<td>5</td>
<td>PIR</td>
<td>8.3</td>
<td>10.6</td>
<td>-0.058</td>
<td>-0.186</td>
<td>0.031</td>
</tr>
</tbody>
</table>

**P < 0.01,** Two tailed
*P < 0.05,** Two tailed

Where:
PRP = Previous Performance
POS = Potential Slack
ABS = Absorbed Slack
AVS = Available Slack
PIR = Performance in Recession

Table 2 refers to the results from a 3-step hierarchical regression analyses. Profitability was regressed on all explanatory variables after controlling for industry dummy and past growth, as revealed in Table 2. The log likelihood associated with the entry of the main effects and the quadratic terms is significant at the 0.05 level or better in all three models. As shown in Model 1, while no predictions were made for the impact of the control variables onto performance, past performance played the role it was expected to. The adverse impact of environmental hostility presents a greater threat to firms which might already be struggling. The industry dummy showed no significant relationship with performance at the time of an economic crisis.
Model 2 reports the results for the effects of the main explanatory variables. With the exception of available slack, all are highly significant. The findings suggest that the presence of absorbed slack is positively associated with performance \((p < 0.05)\), while potential slack exhibits a negative association with performance \((p < 0.001)\), which corresponds to a positive relationship between performance and debt levels. The linear model therefore suggests that firms with high levels of absorbed financial resources and debt perform better than their peers during an economic crisis.

Model 3 considers the possible quadratic effects. While available slack remains insignificant, the quadratic terms of absorbed and potential slack are both highly significant \((p < 0.05 \text{ and } p < 0.001, \text{ respectively})\). In the case of absorbed slack, the quadratic term reveals a negative coefficient, while the linear term is positive, positing that the negative effect dominates at low levels of absorbed slack, the positive effect takes over at high levels. This results in a concave or inverse-shaped U. Since the median is slightly lower than the mean in this case, for most firms in the sample, the association with performance is therefore positive, but at a declining rate.

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Regression Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Variables</td>
<td>Model 1</td>
</tr>
<tr>
<td>PF</td>
<td>0.76 (0.03)**</td>
</tr>
<tr>
<td>IDD</td>
<td>0.04 (0.03)</td>
</tr>
<tr>
<td>POS</td>
<td>-0.06 (0.00)**</td>
</tr>
<tr>
<td>ABS</td>
<td>2.44 (1.30)*</td>
</tr>
<tr>
<td>AVS</td>
<td>-1.13 (1.00)</td>
</tr>
<tr>
<td>QPOS</td>
<td>0.00 (0.00)**</td>
</tr>
<tr>
<td>QABS</td>
<td>-5.81 (2.16)*</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.44 (1.12)</td>
</tr>
<tr>
<td>LR-Stat</td>
<td>17.814***</td>
</tr>
</tbody>
</table>

Notes: \(P < 0.10; ^* P < 0.05; ^{**} P < 0.01; ^{***} P < 0.001\)

Where:
- PF = Previous Performance
- IDD = Industry Dummy
- QPOS = Quadratic Potential Slack
- QABS = Quadratic Absorbed Slack

For potential slack, the linear term is negative with a positive quadratic term. This means that at low levels of potential slack, the negative effect will dominate, while at higher levels, the positive primary effect will dominate. This produces a convex or U-shaped relationship. This posits that high (low) levels of debt (potential slack) are negatively related to performance, while low (high) levels of debt (potential slack) reveals a positive relationship with performance during an economic recession.

Overall, the findings lend credence to the central proposition that financial slack has value in difficult market situations. The financial flexibility offered by higher levels of financial slack revealed a strong influence on performance during an economic distress, as uncertainty was at its highest. Lack of a significant relationship between available slack and performance is tandem with the findings of Meier et al. (2013); Simutin (2010) who found that excess cash and cash equivalent resources have no impact on firm value during financial crisis. All together, the findings support the
opinion that the impact of slack on performance may not always be potent which justifies the contingency approach.

No prior study examines the possibility of non-linear effects during a declining economic situation. Chiu & Liaw (2009); George (2005); Wefald et al. (2010) stated that studies that do identify a non-linear relationship between financial slack and performance have found the shape of the association to be inverse curvilinear. In this study, the relationship between potential slack and performance is found to be U-shaped. Two aspects modify what seems to be a counterintuitive finding. Firstly, previous studies examine slack-performance relationship in environments of higher munificence, while this study argues that the relationship will depend upon varying circumstances. Secondly, the finding of a U-shaped relationship between potential slack and performance empirically supports (Bromiley, 1991) commonly cited theory that firms with an average level of slack will be stuck in the middle.

Bromiley (1991) argued that available resources in the form of slack can provide strategic advantages, as a firm with slack resources can utilize opportunities not available to firms without such resources. Alternatively, a firm with low levels of slack may miss out on such opportunities and will seek to improve performance through improved management, leading to cost reductions and in turn higher performance. Bromiley (1991) became one of the first researchers to detect a curvilinear relationship between slack and performance, noting that either action – taking advantage of opportunities via slack or managing more carefully due to a shortage of slack – should result in performance improvement. This seems to be the case for the sample firms during the economic crisis. Chiu & Liaw (2009) opined that another interpretation of this finding would be that a threshold to potential slack exists. Performance will only improve if and only if the level of financial slack held by a firm exceeds a certain threshold. Else, no financial slack would be preferable.

4. Conclusion

The inverse curvilinear relationship identified between absorbed slack and performance is in line with behavioral arguments of slack, which relate higher levels of slack to the beneficial effects of experimentation, risk taking, and coalitions among managers. Previous inquiries have also found organizational theory to have higher validity when dealing with absorbed slack.

Although hardly a unique resource, slack may play an important role in firm performance and add to the explanatory power of resource-based arguments. The finding reveals that different types of slack may exhibit different relationships with performance. However, in other to enhance performance, balancing the types of financial slack is therefore a prerequisite, and both low- and high-discretion slack should be maximized. A combined, summary show that these findings make it clear that the relationships between slack and performance are not homogenous, justifying an analysis according to type of slack. Furthermore, the impact of slack on performance may not always be as useful at all times, and this has been seen to align with the contingency approach.
It is likely that the impact of slack on performance will vary across industries. Although the present analysis controlled for industry effects, further studies might focus on several types of slack within a single industry.

References


