The Moderating Effect of an Audit Committee on the Relationship between Non-Audit Services and Corporate Performance

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Abstract
The corporate performance is very important issue in developing countries like Jordan. However, there is a lack of studies that investigated this issue in developing countries, particularly in Jordan. This paper investigated the effect of board diversity and non-audit services (NAS) on the corporate performance of Jordanian industrial firms listed on the Amman stock exchange. It also explored the moderating effect of the audit committee on the association between NAS and the performance of firm, which has not been fully investigated so far by other studies on Jordanian firms. In this study, performance was measured using (ROA) return on assets and (ROE) return on equity. This study covered 58 industry firms listed on the Amman Stock Exchange in 2011. The findings showed that NAS and board diversity were significantly related to corporate performance. The results also showed that an audit committee moderates the relationship between NAS and corporate performance for the two models (ROE and ROA). The findings of this study indicated that NAS negatively affected firm performance by confining the functions of an independence auditor, a situation that would lead ultimately to lower financial performance of firms. This study concludes that the existence of an audit committee in the firms contribute positively to improving their performance.

Keywords: corporate performance, non-audit services, audit committee, Jordan, industrial firms

1. Introduction
Effective and good corporate governance is a vital and crucial element for a company to remain competitive and strong (Al-Amarneh & Yaseen, 2014). Corporate governance structure plays a main role in macroeconomic stability and offers a suitable situation for growth. Hence, global organizations have a large concern for good governance and pay attention to this matter at the micro and macro levels. A good corporate governance system is critical at both the corporate and the country levels (Al- Haddad, Alzurqan & Al_Sufy, 2011). The literature of corporate governance indicates that non-audit services (NAS), board diversity and an audit committee are likely to be positively associated with the performance of firms. The related literature also affirms that the independence of auditors for audit and non-audit activities is related to the performance of firms, which in turn, influences firm value (Hay, Knechel, & Wong, 2006; Stanley, 2011; Martinez & de Jesus Moraes, 2014).
The term ‘corporate performance’ has many definitions. Many academics, organizations and researchers have paid great attention to the corporate performance. For instance, accounting and market definitions are used to investigate the correlation between firms’ governance, corporate public responsibility and company performance (Orlitzky, Schmidt, & Rynes, 2003). However, stakeholders claim that company performance comprises the entire wealth accruing to a company before the division of that wealth among stakeholders, not merely the accounting profit specified to shareholders (Riahi-Belkaoui, 2003). Performance of a company has been measured in many different ways. In the empirical research of corporate governance, the financial measures of firm performance consistently used are based both on the measures of market and measures of accounting (Kiel & Nicholson, 2003). The most generally used basic measures of accounting are (ROE) return on equity (Baysinger & Butler 1985), (ROA) return on assets (Kiel & Nicholson 2003), and earnings per share. Little investigation of this relationship has been done in the Jordanian market. Thus, the aim of this study is investigating the interaction between NAS and corporate performance in emerging capital markets by using Jordanian data. This study also contributes to the literature by examining the moderating effect of an audit committee in such relationship.

Some of the most important governance issues facing directors and shareholders in their firms are the gender, racial ethics, and cultural diversity of the board (Carter, Simkins, & Simpson, 2003). These matters have been taken in consideration as a result of international news agencies, shareholders’ suggestions, and the policies of institutional investors. This field of study is significant because it is among the first empirical evidence examining of whether board variety is related with advanced financial value. Many organizations, firms’ managers and researchers in the field of governance believe that a positive relationship exists between board diversity and the audit committee on the firm performance (Aanu, Odianonsen, & Foyeke, 2014; Carter et al., 2003) they also believe that a negative relationship exists between NAS and corporate performance through by confining the functions of an independence auditor. Therefore, this study examines such factors. This includes whether the presence of women on the board enhances firm performance in Jordan. This study addresses the issue of whether high audit fees taken by an external auditor increases the business risks and lead to reduce corporate performance. Furthermore, the current study also contributes to the existing literature on NAS and corporate performance by examining the moderating effect of an audit committee on the relationship between NAS and corporate performance.

2. Literature Review and Hypotheses Development

2.1 The association between NAS and corporate performance

One essential question that is the basis of an argument between the regulators and the accounting profession has been possible threats to the independence of external auditors who provide NAS (Amir et al., 2009). According to De Angelo (1981), the provision of non-audit activities by auditors can make auditors financially dependent upon their customers. This dependency can lead auditors to be less willing to stand up to customers’ pressure because of the fear of losing their business (Simunic, 1984; Beck, Frecka, & Solomon, 1988). Moreover, Watts and Zimmerman (1983) believe that managers seek to decrease costs by employing independent and competent auditors (Jenson & Meckling 1976). Therefore, the consulting character of many non-audit activities makes auditors in managerial posts desire to get positive balances in their audits (DeFond et al., 2002). Kamarudin, Ismail, and Samsuddin (2012) said the provision of non-audit services might reduce independence of auditors as expressed through their boards of directors. In addition, Kamarudin et al. (2012) provide strong evidence that investors perceived NAS as harming the independence of an external auditor and that creation of a more active and effective audit committee would reduce the harmful influence. Auditors might be ready to concede their independence to keep customers who pay big non-audit fees. Therefore, NAS might endanger the independence of auditor and lead to minimize earnings quality (Flynn, 2009). Martinez and de Jesus Moraes (2014) provided evidence of a significant positive association between firms that spend more on audit services and Tobin’s Q. The study also showed a significantly negative influence of spending on non-audit services provided by the independent auditor, resulting in a lower Tobin’s Q. Based on the statement aforementioned, this study suggests the following hypothesis.

H1: A negative relationship exists between NAS and the corporate performance.

2.2 The relationship between board diversity and corporate performance

Female board representation is firmly connected with the accounting outcomes, and this connection is highly positive in nations that have stronger shareholder protections. Shareholder protections stimulate boards to employ the various knowledge, skills, and the responsibility that every member brings to the board (Post &
Byron, 2014). According to Post and Byron (2014), the representation of female board is highly interrelated to the boards’ essential responsibilities, which are supervising and engaging strategy development.

In addition, Lückerath-Rovers (2011) indicated that companies with female directors work better than other companies without female directors in their boards. Brown et al. (2002) also believed that, if the good corporate governance does not lead to improved performance, then an inquiry should arise as to whom should be on the board of the firm or how that board works. Krishnan and Park (2005) indicated that there was a highly positive correlation between various management groups and financial performance. In addition, Carter et al. (2003) claimed that an important positive correlation was present between Tobin’s Q and the presence of women on the boards of the Fortune 1,000 firms. Smith (2006) also claimed that an increased number of women in top management posts leads to positive results for firm performance, even if a difference existed in the characteristics of the firm. The researcher also said that the positive results accredited to the presence of females in top management posts depended on the efficiency and qualifications of these female managers. Carter et al., (2003) investigated the correlation between board variation and company value for Fortune 1000 firms. Their findings showed a statistically positive relationship between the number of females on the board and company value. In light of above-mentioned statements, this paper proposes the following hypothesis.

H2: A positive relationship exists between board diversity and firm performance.

2.3 Audit Committee as a moderator and corporate performance

An audit committee has a dynamic monitoring role to ensure the quality of financial reporting and a firm’s accountability. The audit committee has become a link between the board of directors and the external auditor in avoiding any information asymmetry between them (Azman & Kamaluddin, 2012). Furthermore, Abdullahif and Al-Khadash (2010) considered the audit board as the most significant institution in the corporate governance because it protects shareholders’ financial interests. In addition, the directors serving on an audit board provide direct and fast communication between external and internal auditors. Klein (2002) supported these arguments by emphasizing that the main function of audit committees was to monitor and oversee the financial reporting process. This objective is achieved by meeting regularly with the companies' external auditors and internal financial managers to review and revise financial statements, internal accounting controls and audit process. Furthermore, Frankel, Johnson, and Nelson (2002) said that NAS offer excellent rewards for auditors for complying with customers’ pressures and allowing management outcomes that have been reported to be biased and noisy. Besides that, Kamarudin et al. (2012) proved that investors did realize that NAS reduced auditor independence, which, in turn, reduced the effectiveness of audit board. Furthermore, an effective audit committee could facilitate the reliability of financial reporting, management risks and internal controls (DeZoort et al., 2002).

The moderating variable in the current study is the audit committee. This current study investigates the moderating effect of an audit committee on the relationship between NAS and firm performance. In other words, this study explores whether the presence of an audit committee will mitigate the adverse effects of providing NAS on firm performance. Therefore, to achieve this objective, multiple hierarchical regression analysis was conducted to test the moderating effects. In light of the above mentioned, this paper proposes the following hypothesis.

H3: An audit committee positively moderates the negative relationship between NAS and corporate performance.

3. Methods

This study used two measures of corporate performance: one was return on assets (ROA) and the other was return on equity (ROE). This study is organized into two phases. The first phase involves analysis of financial reports to determine the level of corporate performance among Jordanian industrial firms, while the second phase examines whether providing NAS and diversity on the board influenced corporate performance in Jordan. The Jordanian industrial firms that listed in Amman Stock Exchange were the sample for the current study. This study used secondary data for 58 firms, which was extracted from 2011 annual reports. The industrial sector because this sector was suitable to test the level of firm performance and would give a better indicator of the
relationship between NAS, the audit committee and board diversity and the firm performance in capital markets of Jordan. In addition, this sector contributes about 70% of the Jordanian GDP.

4. Models for this study

In this study, three models were used to examine the influence of independent variables, the moderating variable and firm performance.

Model 1, using return on asset (ROA), tested the interaction of NAS and board diversity on return on assets. The association between independent variables and firm performance using return on assets is represented as follows:

\[ \text{ROA} = \beta_0 + \beta_1 \text{NAS}_{it} + \beta_2 \text{BDIV}_{it} + \varepsilon_{it} \]

Model 2, using return on equity (ROE), tests the interaction of NAS and board diversity on return on asset. The association between independent variables and firm performance using return on equity is represented as follows:

\[ \text{ROE} = \beta_0 + \beta_1 \text{NAS}_{it} + \beta_2 \text{BDIV}_{it} + \varepsilon_{it} \]

The moderating variable in the current study is the audit committee. To achieve this objective, multiple hierarchical regression analysis was conducted to test the moderating effects. The structural equations of the moderating effect are as follows:

\[ \text{ROE} = \beta_0 + \beta_1 \text{NAS}_{it} + \beta_2 \text{BDIV}_{it} + \beta_3 \text{AC} \times \text{ROA} + \varepsilon_{it} \]
\[ \text{ROA} = \beta_0 + \beta_1 \text{NAS}_{it} + \beta_2 \text{BDIV}_{it} + \beta_3 \text{AC} \times \text{ROE} + \varepsilon_{it} \]

Table 1: Definitions of variables and measurements

<table>
<thead>
<tr>
<th>Variables</th>
<th>Definition of Variables</th>
<th>Expected Direction</th>
<th>Relevant Hypotheses</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>Return on assets, measured by using net income divided by total assets.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROE</td>
<td>Return on equity, measured by using net income divided by total equity.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NAS</td>
<td>Non-audit services, measured by a dummy variable coded 1 if auditor provides NAS, 0 otherwise.</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>BDIV</td>
<td>Board diversity, measured by a dummy variable coded 1 if board of director has women and 0 otherwise.</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>AC</td>
<td>Audit committee, measured by a dummy variable coded 1 if firm has an audit committee, and 0 otherwise</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>
5. Analysis

5.1 Correlational Analysis

The objective of the analysis was to determine if there were any problems of multicollinearity between the independent and dependent variables and relationship among variables of this study (Shukeri & Nelson, 2010). According to Hair et al. (2010) and Tabachnick and Fidell (2007), a multicollinearity problem occurs if the correlation among variables exceeds 0.9. Table 2 below shows the Pearson correlation coefficients among all variables. In this study, all the correlation coefficients among the independent variables in the correlation matrix were less than 0.90. This means that multicollinearity was not problem in the regression model.

Table 2: Pearson correlation for the ROA and ROE models

<table>
<thead>
<tr>
<th></th>
<th>ROA</th>
<th>ROE</th>
<th>NAS</th>
<th>AC</th>
<th>BDIV</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>1</td>
<td>.221</td>
<td>-.466**</td>
<td>.000</td>
<td>-.051</td>
</tr>
<tr>
<td>ROE</td>
<td></td>
<td>1</td>
<td>-.359**</td>
<td>.239</td>
<td>.311*</td>
</tr>
<tr>
<td>NAS</td>
<td></td>
<td></td>
<td>1</td>
<td>.023</td>
<td>-.198</td>
</tr>
<tr>
<td>AC</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>.068</td>
</tr>
<tr>
<td>BDIV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

*Note: ROA is return on assets, ROE is return on equity, NAS is non-audit services, AC is audit committee; and BDIV is board diversity. * Correlation is significant at the 0.05 level (2-tailed); **Correlation is significant at the 0.01 level (2-tailed).

5.2 Regression Analysis

The aim of the present study was to examine the association between board diversity and NAS and corporate performance among Jordanian listed firms. To achieve the objectives of the study, multiple regression analysis was used to examine the association between independent variables and the corporate performance. Hierarchical regression was used to test the moderating effect of the audit committee on the association between NAS and corporate performance. This section discusses the results of the regression analysis between the independent variables and corporate performance of the two models (ROA and ROE). The results of regression analysis for ROA and ROE models are shown in Table 3 below.

Table 3 below shows that the $R^2$ for the ROA model was 0.239. This implies that the model explained 23.9% of the variation of corporate performance. For the ROE model, the $R^2$ was 0.189, which indicates that the model is able to account for 18.9% of the variability of the corporate performance using the ROE model in Jordanian firms. In this study, both models were significant; the ROA model was significant (F-statistic = 8.645, p = 0.001), while the ROE model was also significant (F-statistic = 6.411, p = 0.003). This implies that both models of this study (i.e., ROA and ROE) expressively described the differences in the corporate performance in Jordanian firms.
The results of the regression analysis between the NAS and corporate performance are shown in Table 4 below. The results reveal that the association between the NAS and ROA and ROE were negative and significant at the 1% level (t = -2.508, p = 0.013) and (t = 2.213, p = 0.039) respectively. The evidence shows that the provision of NAS by an external auditor contributes negatively to corporate performance. This result aligns with that of Kamarudin et al. (2012) who reported that the provision of NAS might reduce independence of auditors.

As for the effect of board diversity (BDIV) on corporate performance, the regression results revealed that the board diversity had a significant positive relationship to the ROE model at the 1% level (t = 2.015, p = 0.049). The results showed that the presence of women on the board of director had a positive effect on the corporate performance. This finding is consistent with that of Smith (2006), who documented that the number of women in top management was positively significant with respect to firm performance. In addition, the ROA model showed no significant association between board diversity and corporate performance using ROA measurement (t = -1.250, p = 0.217).
5.3 The Moderating Effect of Ownership Concentration

Table 4: Hierarchical Moderated Regression Analysis Results. DV: Return on Asset (ROA)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Step 1 (I. V)</th>
<th>Step 2 (Moderate)</th>
<th>Step 3 (AC*NAS)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(t-value)</td>
<td>Sig</td>
<td>(t-value)</td>
</tr>
<tr>
<td>Main effect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NAS</td>
<td>-3.993</td>
<td>.00***</td>
<td>-3.961</td>
</tr>
<tr>
<td>BDIV</td>
<td>-1.305</td>
<td>.197</td>
<td>-1.303</td>
</tr>
<tr>
<td>ACM</td>
<td></td>
<td></td>
<td>-.265</td>
</tr>
<tr>
<td>Moderating effect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACM</td>
<td></td>
<td>.179</td>
<td>.859</td>
</tr>
<tr>
<td>Interaction effect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AC*NAS</td>
<td></td>
<td>2.212</td>
<td>.031**</td>
</tr>
</tbody>
</table>

Summary of the Hierarchical Regression Model

| R²         | .232          | .232           | .298          |
| Adjusted R² | .203          | .189           | .244          |
| R² Change  | .232          | .000           | .066          |
| F sig change | .001***       | .859           | .031**       |

Note: *Significant at 0.1. ** Significant at 0.05. *** Significant at 0.01.
Table 5: Hierarchical Moderated Regression Analysis Results. DV: Return on Equity (ROE)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(I. V)</td>
<td>(Moderate)</td>
<td>(ACM*NAS)</td>
</tr>
<tr>
<td></td>
<td>(t-value) Sig</td>
<td>(t-value) Sig</td>
<td>(t-value) Sig</td>
</tr>
</tbody>
</table>

**Main effect**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAS</td>
<td>-2.258</td>
<td>-2.378</td>
<td>-2.656</td>
</tr>
<tr>
<td>BDIV</td>
<td>1.806</td>
<td>1.706</td>
<td>1.662</td>
</tr>
</tbody>
</table>

**Moderating effect**

| ACM       | 1.896  | 1.490  |

**Interaction effect**

| AC*NAS    | 2.213  |

**Summary of the Hierarchical Regression Model**

<table>
<thead>
<tr>
<th></th>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>R²</td>
<td>.158</td>
<td>.212</td>
<td>.274</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.127</td>
<td>.167</td>
<td>.218</td>
</tr>
<tr>
<td>R² Change</td>
<td>.158</td>
<td>.053</td>
<td>.062</td>
</tr>
<tr>
<td>F sig change</td>
<td>.010**</td>
<td>.063*</td>
<td>.039**</td>
</tr>
</tbody>
</table>

*Note:* *Significant at 0.1. ** Significant at 0.05. *** Significant at 0.01.

Tables 4 and 5 above show the results of the moderating effects of the audit committee for the ROA and ROE models. The interaction influence between the audit committee and NAS (i.e., AC*NAS) indicated the effect of the audit committee on the association between NAS and the corporate performance. The moderating effect of audit committee in Tables 4 and 5 suggests that they positively moderated the relationship between NAS and corporate performance at the 0.05 level of significance (t = 2.212, p = 0.031) and (t= 2.213, p = 0.039) for the ROA and ROE models respectively. The findings of the moderating regression indicate that the audit committee affected the relationships between NAS and corporate performance reports using ROA and ROE models are affected. The presence of audit committee would reduce the negative influences of the provision of NAS on corporate performance. The above result is consistent with Kamarudin et al. (2012) who reported that clients perceived NAS as impairing auditor independence, and that setting up a more effective audit committee would reduce that impairment.

6. Conclusion

This study extends previous research in determining the factors that may influence corporate performance. The study investigated the relationship among providing NAS and board diversity on corporate performance using a sample of industrial firms in Jordan in 2011. An audit committee remains an important theme in the debates over
corporate governance (Gendron & Bédard, 2006). The key objective of the current paper was to examine the moderating effect of the audit committee on the relationship between NAS and corporate performance. The results of the present study also suggest that more attention should be given to strengthening the independence of the audit committee.

While the guidelines for corporate governance across the world specify that the independence of an external auditor provides much in the way of benefits to investors, shareholders, and regulatory bodies, and regulators should also be wary of cases in which the directors of firms select “seemingly” external auditors and give them an imaginary role in monitoring the financial reporting process (Byrd & Hickman, 1992). In reality, those seemingly external auditors are management tools. Our study suggests that the negative role of NAS on corporate performance was often overlooked in previous research, and, therefore, more emphasis should be provided in mitigating this negative influence by employing a more effective audit committee. Additionally, the key tasks of an external auditor and other services such as consulting and tax services and other non-audit services should be distinguished to ensure the independence of the auditor. Further research is needed to provide further insight into the role of firms’ governance mechanisms and the corporate performance in the Jordanian firms and determine whether the mechanisms of corporate governance enhance the level of corporate performance in these markets.

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