An Empirical Examination of the Impact of Corporate Governance Measures and Capital Structure on Firm Profitability in Pakistan

Awais Javeed
Visiting Lecturer, Management Sciences Department, The Islamia University of Bahawalpur, Pakistan

Rana Muhammad Shahid Yaqub
Head of Department of Management Sciences, The Islamia University, Bahawalpur, Pakistan

Abstract
The rationale of the study is to observe the influence of corporate governance measures and leverage on the non-financial firms profitability. Panel econometric method ordinary least squares used to examine the impact of capital structure and corporate governance measures on the profitability of non-financial companies regularly traded on the Karachi Stock Exchange Pakistan for the period of 2008-2012. Empirical results for capital structure explored negative relation with return on assets. This inverse association between leverage and firm profitability shows that agency problem may lead the companies to use excessive than suitable levels of external debt in capital structure. Moreover, results for the ownership concentration and board size are statistically significant and directly related to firm profitability while, CEO duality is also significant but inversely associated to firm profitability. Possibly this may be the first research study on this issue by using the most recent data set non-financial firms from Pakistan.

Keywords: Corporate governance measures, Capital structure, Firm profitability, Karachi Stock Exchange, Non-financial firms.

INTRODUCTION
Capital structure and its relationship with firm profitability is a hot issue in literature at finance since the publication of Modigliani and Miller (1958). According to them, by assuming perfect market which is free of tax and any friction cost the choice of equity or debt does not matter in such environment. The seminal paper of Jensen and Meckling (1976) elucidated the agency problem in the organization and related outlay. To condense the agency outlay there is call for some systematic controls. Although various alternative capital structure theories have been developed during the last 50 years so as to determine the appropriate level of capital structure and its impact on firm profitability, they differ in their relative emphasis. For instance, while trade-off theory suggests an optimum debt level or target level in terms of balance between tax savings and bankruptcy cost, pecking order theory (Myers and Majluf, 1984; Myers, 1984) assumes hierarchy of financial decisions under which firm resort to external financing only in absence of internal financing. Similarly agency theory (Jensen and Meckling, 1976) talks about agency costs which arise on account of conflict between managers and shareholders. In emerging nations, the Substance of governance differs from the developed nations in one significant aspect. In the advanced economies, the firms are run by impartially independent executives who have little or no ownership in the firm. In contrast in developing economies firms are run by the executives of the company who are also controlling shareholders. They treat directors as workers of the family controlling the firm rather than the company. In advanced economies the governance emphasis on executive directors whereas in the emerging nations the ownership structure is mainly focused. Now a day’s more and more investors in Pakistan are becoming aware of the Significance of taking corporate governance measures into account when making investment decisions.

Managers of a firm serving in a competitive market could be forced to take on capital structure choices those are consistent with the shareholder's assets maximization objectives. If they are not capable to meet up this goal, they possibly will undergo the risk of being detached from their jobs. Literature of corporate governance intends to identify a system that supports the performance of management. So for as the performance of the firms is concerned the capital structure has significant impact on it and different authors analyzed the association between the leverage and profitability and found different outcomes that vary because of different methodologies used and also because the different proxies involved in analysis. There exists a tradeoff between risk and return of a firm causing from capital structure. With an increased level of leverage, chances of magnification of earning per share increases, at the same time chances of not being able to meet fixed financial obligations against debt also increases, this concept is known as Trade off Model. Capital structure of a firm has close relationship with EPS. Managers of a firm are forced to take actions that are reasonably consistent with shareholder's wealth maximization objective. If they depart from this goal as argued by Brigham (1995) they run the risk of being removed from their job. Some researchers have explored this topic and found different results about this...
relationship.

**Literature Review**

- **Capital Structure And Firm Profitability**
  The issue of capital structure and its association with firm profitability has been a debated issue in corporate finance literature ever since the publication of the important paper of Modigliani and Miller (1958). Modigliani-Miller (MM) propagated that in a perfect capital market free of taxes, transaction costs and other frictions, capital structure is irrelevant in determining firm value. They showed that the choice between debt and equity financing has no material effect on the firm value. This led to a plethora of research on the topic (both theoretical and empirical) with researchers examining the robustness of the MM model in the light of realistic assumptions relating to market frictions and the information asymmetries. Trade-off theory suggests an optimum debt level or target level in terms of balance between tax savings and bankruptcy cost, pecking order theory (Myers and Majluf, 1984; Myers, 1984) assumes hierarchy of financial decisions under which firm resort to external financing only in absence of internal financing. Similarly agency theory of debt (Jensen and Meckling, 1976) talks about agency costs which arise on account of conflict between managers and shareholders. Jenson (1986) had a view that increase in leverage is a signal or commitment for the improvement in the performance. Asem and Sherridane (1997) analyzed the operating performance of the firms that increased their leverage. Wiwattanakantang (1999) documented negative association between leverage and return on assets. The study further suggested that high level of debt will decrease performance of the firm. Ebaid (2009) explored that capital structure choices have a weak to-no impact on company performance. Sami et al (2011) found the negative association between the above said relationships. Salim and Yadav (2012) used three ways to measure capital structure, Short term, long term and total debt as explanatory variable. When return on assets is used as a performance measure the results for all of the three measures of independent variable have negative relationship with firm performance.

- **Corporate Governance Measures and Firm Profitability**
  The relationship between corporate governance and profitability of the firm has also been debated due to its importance. Bhagat and Bolton (2008) showed that good corporate governance is positively and significantly associated to firm profitability. Mashayekhi & Bazazb (2008) reported that number of directors on the board is inversely related to firm profitability while board independence is positively related to firm performance. Sami, Wang and Zhou (2011) documented that composite measure of corporate governance is significant and positively related to firm performance. Yasser (2011) argued that firm having better corporate governance are more profitable and pay more dividends to their shareholders as compared to poorly or moderate governed firm. Latif et al (2013) explored that corporate governance have significant impact on firm performance. Results further explains that board size, CEO role duality have significant impact on return on assets, while board composition have insignificant influence on return on assets.

- **Board size and profitability**
  Eisenberg et al (1998) reported that for small and midsize firms the relationship is negatively correlated. Cheng (2008) provided empirical evidence on the less variability in firm performance due to larger boards and reported negative association between board size and firm performance. Cheng also suggested the reason for less variability in corporate performance that larger board’s needs consensus so that decisions are less extreme. O’Connell and Cramer (2010) found that board size is less significant and inversely related to firm performance for smaller firms, while there is a significant and positive relationship between board independence and firm performance. Uchida (2011) reported that there is no evidence of performance improvement for firms that downsized boards.

- **Board independence and firm profitability**
  Usually independence of the board is judged from the outside directors’ number on the board. Due to their independence from the management outside directors are desirable. Researches explores that whenever large numbers of independent directors are presented on the board there will be an effective monitoring of actions of the management and governance. Bhagat and Black (2002) reported no correlation between Independent members on the board and Firm Performance in the long-term. Arosa at el (2010) found that existence of independent outside directors on the board is positively related to firm performance specifically mentioning that firm is run by first generation. Pombo and Gutierrez (2011) reported positive relationship between both variables relationship with return on assets. While Francis et al (2012) showed no significant effect of board independence on firm performance.

- **CEO duality and firm profitability**
  CEO is the chief executive of the company has managerial responsibilities whereas chairman has responsibilities concerning the supervision of board’s matter of the firm. Boyd (1995) whenever there is CEO role duality, it

- Managerial ownership and firm profitability
Berle and Means (1932) were the first to present the ownership and management separation problem. Jensen and Meckling (1976) examined the insider ownership effect on firm profitability. McConnell and Servaes (1990) explored a strong association between managerial ownership and firm performance direction was negative. Cui and Mak (2002) documented W-shaped association between insider’s ownership and firm profitability. Firm performance initially declines with insider ownership, then rises, then declines again and, finally, rises again. Miguel, Pindado and La Torre (2004) reported a significant but inverse association between managerial ownership and companies’ profitability.

- Ownership concentration and firm profitability

4. RESEARCH METHODOLOGY
This research Study is entirely based on secondary data collected of 155 companies for 5 years (2008-12). Population for the study is comprised of the non-financial companies listed at Karachi Stock Exchange of Pakistan (KSE). Companies are selected on the basis of convenience and availability of data.

4.1. Variables of the study:
Operational definitions of the variables are given below:

<table>
<thead>
<tr>
<th>Table 1: Operational Definition of Variables included in the study</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable Name</strong></td>
</tr>
<tr>
<td>Leverage</td>
</tr>
<tr>
<td>Board Size</td>
</tr>
<tr>
<td>Board Independence</td>
</tr>
<tr>
<td>CEO role duality</td>
</tr>
<tr>
<td>Managerial Ownership</td>
</tr>
<tr>
<td>Ownership Concentration</td>
</tr>
<tr>
<td>Return on Assets</td>
</tr>
</tbody>
</table>

4.2. Population and sample
Companies listed as a non-financial firm at Karachi Stock Exchange of Pakistan (KSE) constitutes the population for the study. To select sample from the population as mentioned in above below, the study used convenience sampling technique which was based on the availability of the data.
Table 2: Listed Companies at Karachi Stock Exchange

<table>
<thead>
<tr>
<th>Total Number of Listed Symbols</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(-) Future contracts</td>
<td>162</td>
</tr>
<tr>
<td>(-) Stock index future contracts</td>
<td>09</td>
</tr>
<tr>
<td>(-) Bonds</td>
<td>41</td>
</tr>
<tr>
<td>Total Companies Listed</td>
<td>(212)</td>
</tr>
<tr>
<td>(-) Commercial Banks</td>
<td>25</td>
</tr>
<tr>
<td>(-) Equity Investment firms</td>
<td>39</td>
</tr>
<tr>
<td>(-) Financial Services</td>
<td>40</td>
</tr>
<tr>
<td>(-) Life Insurance firms</td>
<td>04</td>
</tr>
<tr>
<td>(-) Non-Life Insurance firms</td>
<td>29</td>
</tr>
<tr>
<td>Total Non-Financial firms</td>
<td>(137)</td>
</tr>
</tbody>
</table>

(Source: Karachi Stock Exchange website)

4.4. Econometrical Models of the Research

Following research models are tested in this research study:

4.4.1 Impact of capital structure on firm profitability

\[
\text{ROA}_t = \beta_0 + \beta_1 \text{LEV}_t + \epsilon_t
\]

4.4.2 Impact of corporate governance measures on firm profitability

\[
\text{ROA}_t = \beta_0 + \beta_2 \text{BI}_t + \beta_1 \text{BS}_t + \beta_3 \text{CD}_t + \beta_5 \text{OWC}_t + \beta_4 \text{MNO}_t + \beta_6 \text{LEV}_t + \epsilon_t
\]

Overall model for the research is presented below.

Figure 1: Research model

5. Results

5.1 Descriptive Analysis

Table 3: Descriptive Statistics

<table>
<thead>
<tr>
<th>BS</th>
<th>BI</th>
<th>CD</th>
<th>MNO</th>
<th>OWC</th>
<th>LEV</th>
<th>ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>7.996</td>
<td>0.625</td>
<td>0.230</td>
<td>0.246</td>
<td>0.658</td>
<td>0.579</td>
</tr>
<tr>
<td>SD</td>
<td>1.510</td>
<td>0.224</td>
<td>0.421</td>
<td>0.254</td>
<td>0.188</td>
<td>0.214</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>5.144</td>
<td>0.022</td>
<td>-0.342</td>
<td>0.476</td>
<td>-0.757</td>
<td>-0.126</td>
</tr>
<tr>
<td>Skewness</td>
<td>2.110</td>
<td>-0.679</td>
<td>1.288</td>
<td>0.814</td>
<td>-0.215</td>
<td>-0.336</td>
</tr>
<tr>
<td>Max</td>
<td>15</td>
<td>1.000</td>
<td>1</td>
<td>0.931</td>
<td>0.999</td>
<td>0.980</td>
</tr>
<tr>
<td>Min</td>
<td>6</td>
<td>0.000</td>
<td>0</td>
<td>0.000</td>
<td>0.095</td>
<td>0.002</td>
</tr>
<tr>
<td>Observations</td>
<td>775</td>
<td>775</td>
<td>775</td>
<td>775</td>
<td>775</td>
<td>775</td>
</tr>
</tbody>
</table>

Descriptive statistics about the data is presented in the above table to show the characteristics of the data.

Table 4: Correlation Table

<table>
<thead>
<tr>
<th>BI</th>
<th>BS</th>
<th>CD</th>
<th>LEV</th>
<th>MNO</th>
<th>OWC</th>
<th>ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI</td>
<td>1.000</td>
<td>-0.099</td>
<td>-0.138</td>
<td>0.045</td>
<td>-0.252</td>
<td>-0.024</td>
</tr>
<tr>
<td>BS</td>
<td>1.000</td>
<td>-0.138</td>
<td>0.045</td>
<td>-0.252</td>
<td>-0.024</td>
<td>0.052</td>
</tr>
<tr>
<td>CD</td>
<td>1.000</td>
<td>0.057</td>
<td>0.181</td>
<td>-0.033</td>
<td>-0.150</td>
<td></td>
</tr>
<tr>
<td>LEV</td>
<td>1.000</td>
<td>0.107</td>
<td>-0.070</td>
<td>-0.464</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MNO</td>
<td>1.000</td>
<td>-0.024</td>
<td>-0.080</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OWC</td>
<td>1.000</td>
<td>0.137</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: Pearson correlation coefficient  (**= Significant at 1%, *= significant at 5 %)
Above table don not show any serious concerns about multicollinearity.

**Table 5: Relationship between Capital Structure and firm profitability**

<table>
<thead>
<tr>
<th>ROA</th>
<th>C</th>
<th>LEV</th>
<th>R-squared</th>
<th>Adj. R-square</th>
<th>St. Error of Reg</th>
<th>F-statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.230***</td>
<td>-0.297***</td>
<td>0.642</td>
<td>0.553</td>
<td>0.073</td>
<td>7.171***</td>
</tr>
</tbody>
</table>

(* significant at 10%, ** significant at 5%, *** Significant at 1%)

Equation of capital structure and firm profitability relationship in the above table is estimated by choosing ROA as dependent variable. The model validity is implied by significant F-statistic and high determination power indicated by R-Squared, and adjusted R-squared. Relationship between Leverage and ROA is significant with indirect relation, indicating lower ROA in result of high leverage. Determination power (R-squared: 64%, Adj. R-squared: 55%) of model and the strength of relation (coefficient: -0.297) both indicated the good statistical health of model. Further it is to be stated that capital structure is showing significant relationship (p<0.01).

**TABLE 6: Impact of corporate governance measures on firm profitability**

<table>
<thead>
<tr>
<th>ROA</th>
<th>C</th>
<th>BS</th>
<th>BI</th>
<th>CD</th>
<th>MNO</th>
<th>OWC</th>
<th>LEV</th>
<th>R-squared</th>
<th>Adj. R-square</th>
<th>St. Error of Reg</th>
<th>F-statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.167*</td>
<td>0.007**</td>
<td>-0.011</td>
<td>-0.021*</td>
<td>0.000</td>
<td>0.055**</td>
<td>-0.260***</td>
<td>0.197</td>
<td>0.190</td>
<td>0.073</td>
<td>26.872***</td>
</tr>
</tbody>
</table>

(* significant at 10%, ** significant at 5%, *** Significant at 1%)

The above table tests the relationship between corporate governance measures and firm profitability. Corporate governance measures are used as independent variable, while return on assets as dependent variable. Board size and ownership concentration are showing significant relationship (p<0.05) with firm profitability while CEO duality is significant relationship (p<0.10) with firm profitability. Further it is to be stated that board independence and managerial ownership are not showing significant relationship at a level of significance of 10%.

6. DISCUSSION

6.1 Impact of Capital Structure on firm profitability

Results show that coefficient of leverage is significant and inversely associated to Return on asset. Suggesting that high level of leverage will decrease performance of a firm. It means additional level of debt will decrease profitability (return on asset). The inverse relationship between leverage and ROA is consistent with the results of Sami, Wang and Zhou, (2011), Salim and Yadav (2012).

6.2 Impact of Corporate Governance Measures on firm profitability

In this regression equation same model is estimated again by regressing ROA as dependent. Results shows that the relationship of concentration of ownership and Board size is significant and directly associated to ROA, suggesting that larger board size will handle corporate affairs so effectively that in result improve return on assets. This result is consistent with the previously held studies like Ehikioya (2009), Adams and Mehran (2012). Ownership concentration is also significant and positively associated to ROA. This suggests that block holders as compared to dispersed owners have much more aptitude to pressurize the management to take effective measures to improve performance. This result is consistent with the previously held studies like Ehikioya (2009).
CEO Duality is also significant but inversely associated with ROA. The inverse association explicates that if duality is there, the performance of the company suffers due to lack of independence. The negative relationship between CEO duality and firm profitability is consistent with Omran, Bolbol and Fatheldin (2008). Results of proportion of board independence and managerial ownership are statistically insignificant. Proportion of board independence with negative sign and managerial ownership with positive sign.

CONCLUSION
The research is conducted with the main objective to examine the impact of leverage and governance measures and on firm profitability. Although important steps have been taken by the Pakistani government for the development of corporate governance, but still companies in Pakistan have weak mechanisms of corporate governance. A public firm raises money to finance its operations by issuing debt and equity, mix of these different sources of capital is referred to capital structure. Business decisions on capital structure strategy have been discussed by literature from a long time but issue is still unresolved. One of the main ideas of modern finance presented by Modigliani-Miller (1958) is that, apart from tax considerations it does not matter to a firms investors how the firm raises money. In other words, if taxes are ignored, the choice of debt or equity does not affect firms’ value. But when corporate taxes are taken in to account then the capital structure choice for the firms’ value maximization is excessive leverage, arguments are supported by Modigliani-Miller (1963). Firms’ actions in reality show that it is traditional to have some “acceptable” blend of money owing and equity. A lot of research work is in progress on capital structure, its determinants and other related aspects but mostly in advanced countries. The present study is an effort to make an addition to present the current literature on the association linking leverage and firm profitability of Pakistani listed companies. This study will be helpful for managers for financial decision making related to capital structure formation in underdeveloped economies. For Capital structure and firm profitability this research study found an inverse relationship.

Corporate governance is on its starting phase in Pakistan. No punishment for malpractices and unethical practices led the economy towards weak corporate governance system. In reality many firms are not completely practicing the code of corporate governance. Although important steps have been taken by the Pakistani government in the country for the development of corporate governance, but still companies in Pakistan in contrast with the companies in developed countries have weak mechanisms of corporate governance. This weak mechanism is also evident from recent corporate scandals in Pakistan, name of some scandals are: Taj Company, Crescent Bank Fraud, PTCL privatization, Mehran bank and ENGRO Group of Companies. These corporate scandals were the result of mismanagement or more specifically bad governance. The consequences of these corporate scandals were borne by all the stakeholders. All parties have direct or indirect interest in corporate governance for the effective performance of the firm. Shareholders interest is in their wealth maximization, management in their salaries and other benefits, creditors have interest in the sound position of company to be able to pay back their money along with returns, state have interest due to proper tax assessment and collection. In response these individuals gives value in the form of social, natural, human, and other forms of capital. As the study already stated above that corporate governance is at the evolutionary stage in developing countries.

REFERENCES


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