Investment Opportunity Set, Corporate Governance Practices and performance of Modarabas

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Abstract

The literature on association between corporate governance and firm performance is based on the paradigm that there is a positive relationship between the two. Since better corporate control mechanism reduces the risk of information asymmetry and align the interests of owners and managers. However, prior studies have documented mixed and to some extent weak results. Many researchers believe the global financial crisis of 2007-09 occurred due to slack board oversight and flawed remuneration of managers that boosts aggressive risk taking (Erkens, Hung, & Matos, 2012; Sharfman, 2009). While for ordinary shareholders, it is difficult to monitor the actions of executives, due to costly state verification. This paper, following the approach of Hutchinson & Gul (2004), postulates, as a principal association, a non-positive relationship between growth and performance of modaraba companies; and then investigate how corporate governance proxies moderate this negative association. In Islamic finance, modaraba is a kind of partnership wherein one party extends capital to other for the purpose of carrying business and sharing profits earned through mixture of investment and expertise. Modarabas are shariah-compliant (i.e., pure Islamic based) financial sector firms. The results support this paradigm to some extent and show that the presence of non-executive and independent directors on the board have positive impact on modaraba sector entities of Pakistan. The evidence indicates significant positive moderating effect of higher ratio of non-executive directors (NEDs) in the relationship between growth opportunities and ROE. But insignificant moderating effect for: (a) fraction of outstanding shares held by independent & executive directors and (b) officers' compensation. The findings provide support for the positive contribution of board of directors' role of supervising and controlling managerial decisions that protect the interests of stakeholders and increases value of modaraba companies.

Keywords: Corporate Governance, Investment Opportunity Set, Modaraba Performance, Sharia'h Compliant Financial Institution, Pakistan

1. Introduction

The agency theory suggests that the presence of different kinds of corporate governance processes depend on agency cost (Hutchinson & Gul, 2004). Resultantly, various corporate governance controls are initiated, which encourage managers to pursue activities that maximize firm value. In this paper the role of corporate governance practices on the performance of modarabas is examined. According to Modaraba concept in Islamic Finance, Modaraba is a type of partnership wherein one party extends capital to other for the purpose of carrying business and sharing profits earned through mixture of investment and expertise. This study focuses on a modaraba's investment opportunity and postulates that the expected adverse relationship between growth prospects and company profitability, from theoretical point of view (see e.g., Baker, 1993), rely on the ratio of independent & non-executive directors (NEDs), executives' shareholding and officers' compensation. Following the methodology of (Hutchinson & Gul, 2004), this study does not presuppose a primary association between corporate governance proxies and modaraba profitability. Because, such relationship is criticized due to endogeneity issue, as corporate governance characteristics can influence modaraba performance; and modaraba performance can, on the other hand, influence corporate governance.

Thus, the goal of this paper is to show that the theoretical negative relationship between growth prospects and business profitability is lower for modarabas with less agency conflicts, such as higher proportion of independent & non-executive directors, greater shareholding by executives, and better reward for officers. The evidence of this paper using multiple regression tool depict that higher levels of non-executive directors on the board moderates the negative association between investment opportunities and modaraba performance. However, executive ownership in the modaraba and higher remuneration of managers do not significantly influence the relationship between growth prospects and company performance. This study contributes to the existing body of knowledge in some ways. First, the research demonstrates the relationship of corporate governance and modaraba profitability rely on an exogenous

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factor, i.e., investment prospects, for modaraba sector companies of Pakistan. Such an approach has not been applied previously in case of Pakistan. Second, the deduction of this paper's results suggests that businesses with growth prospects should adopt better internal control systems to increase firm value. Moreover, the corporate governance factors examined in this paper may not be appropriate for all firms, as only one out of three corporate governance mechanisms have significant impact on modaraba companies, but rather, should be utilized selectively linking with industry characteristics. Third, this paper establishes a link between board monitoring and Shariah-compliant modaraba performance by considering growth opportunity. The evidence is consistent with Ben Barka & Legendre (2016) findings that board independence enhances equity and economic performance of the firm.

The remainder of the study is structured as follows. Section 2 characterizes background, literature review and formulation of hypotheses. Data and methodology are briefly discussed in Section 3. Estimation results are discussed in Section 4 and 5, whereas Section 6 concludes this paper.

2. Background, Literature Review and Hypotheses Development

The Pakistan Stock Exchange Limited (PSX) (2015) listing rule 5.19.23 mandates that "the statement of compliance with the best practices of corporate governance is reviewed and certified by statutory auditors" in the annual accounts. Key issues stipulated for disclosure include composition of the board, independence of non-executive directors, functions of board of directors and directors' remuneration. This primary provision stipulates that, given certain features of the business and their structure, firms should adopt some corporate control mechanisms to reduce agency conflicts.

Corporate governance practices are linked with asymmetric information environment according to agency theory. Nevertheless, different firms experience different degrees of information asymmetry. Hence, it is less likely that corporate control practices translate into better performance for all businesses. Resultantly, sound corporate practices are more crucial for entities with higher asymmetric information risk (Hutchinson & Gul, 2004). Myers (1977) has bifurcated firm value into two parts: the assets-in-place that are determined irrespective of firm's future investment prospects, and the growth options, which are determined based on the company's future arbitrary investment decisions. The noticeability of officers' actions decreases, as investment prospects increase (Smith & Watts, 1992). Because worth of growth opportunities relies on further arbitrary expenditures by officers, whereas assets-in-place do not need such investment (Gaver & Gaver, 1993). Hence, growth firms acquire certain control mechanisms to keep officers motivated and provide adequate compensation (Hutchinson & Gul, 2004).

Extant literature documented a negative link of businesses' investment opportunities and productivity (Baber, Janakiraman, & Kang, 1996; Gul, 1999; Hutchinson & Gul, 2004). Because growth prospects are linked to senior management's arbitrary financial decisions, hence a higher chance for opportunistic behavior. This is likely result in under-utilization of the business. The objective of this paper is to distinguish the corporate control activities which lessen growth modarabas' poor working.

2.1 The Investment Opportunity Set and Supervision by Board

Academics examined the efficacy of a board as a monitoring tool as they bring forward the share owners’ objectives and concerns to officers. They postulate that board independence ensures adequate monitoring and control managerial opportunism (e.g., Munter & Kren, 1995). With higher ratio of independent & executive-directors, executives have higher option towards investment opportunities. As a result, shareholders and bondholders require greater percentage of independent & non-executive directors to observe the actions of management (Hutchinson & Gul, 2004). The aforesaid discussion extends the following hypothesis:

H1: The negative relationship between modarabas' growth prospects and effectiveness are diluted through a greater presence of independent & non-executive directors.

2.2 Investment opportunities and executive certificate ownership

Ownership in the company by executives align the interests of managers with shareholders, as officers are reluctant to undertake actions that may harm the interests of shareholders (e.g., Hutchinson & Gul, 2004). However, the previous research has suggested mixed results (e.g., Hermalin & Weisbach, 1991). One view is that, increased share ownership shifts additional risk to managers, and this excess risk may bring about risk avoiding mentality on the part of executives, which is not synchronized with the interests of stockholders (Hutchinson & Gul, 2004). Another view is that executives with large stock ownership are less likely to exercise their discretion on financial and operational matters that could jeopardize firm value. The aforesaid arguments suggest that growth entities with higher fraction of executive share ownership are more likely surpass entities with high growth prospects and low officer share ownership. Hence the following hypothesis is developed:

H2: The negative relationship between modarabas' investment prospects and productivity is diluted with greater holdings of modaraba certificates by executives.

2.3 Investment Opportunities and Officer Remuneration

Previous literature suggests that executives' interests are not aligned towards business development with less than expected compensation (e.g., Jensen & Murphy, 1990). Generous reward system in growth businesses are likely to reduce conflict between executive and shareholder and ultimately enhances firm's output. However, some studies could not find consistent association between officers' compensation and firm productivity (e.g., Crawford, Ezzell, & Miles, 1995). Managers with higher compensation may spend more time on their own lavish lifestyle and wealth accumulation rather than focusing on market capitalization of business. In this study, the focus is on the strand of literature that suggest better firm performance that reward their executives for bearing uncertainties related with investment opportunities. Hence the third hypothesis follows:

H3: The negative relationship of modarabas' growth prospects and profitability is diluted through better officers' compensation.

3. Data and Methodology

Data is collected for 23 Modarabas listed on the Pakistan capital market for 2013, 2014, and 2015. Data on the composition of BODs, shares ownership, managers' compensation and the IOS is obtained from the Modaraba annual financial reports. Definition of variables are presented in Table 1. OLS regression analysis is conducted to test the three hypotheses.

Table 1: Variables and their definitions

Variable	Definition
MBVA	[(total assets - certificate holders' equity) + certificates outstanding * certificate closing price]/total assets
MBVE	(certificates outstanding * certificate closing price)/certificate holders' equity
IAMVA	Property, plant & equipment / (market value of the modaraba + non-current liabilities)
IOS	Factor score of MBVA, MBVE, IAMVA for the investment opportunity set
ROE 2015	Return on equity for 2015 (net profit after tax divided by certificate holders equity)
ROE 2014	Return on equity for 2014 (net profit after tax divided by certificate holders equity)
NEDs	Ratio of non-executive to executive directors on the board (non-executive directors divided by total number of both executive and non-executive directors)
CERT	Fraction of total issued certificates owned by executive directors (total of executive directors' certificate ownership / total issued certificates)
OR	Officers' remuneration is total remuneration by officers divided by the number of officers
ASSETS	Total assets in Rs000's
LEVERAGE	Current and non-current liabilities divided by total equity
ROE 2014	Lag Return on equity for 2015 (net profit after tax divided by certificate holders equity)
ROE 2013	Lag Return on equity for 2014 (net profit after tax divided by certificate holders equity)

Table 2 presents the results of the common factor analysis for 20 modarabas. Missing data for individual growth variables excludes few firms from further analysis. The initial communalities of each IOS factors are depicted in Panel A. In Panel B, the eigenvalues of the attenuated correlation matrix of the 3 individual values of the IOS are reported. Panel C shows the correlations between the common measure and the three individual variables of the IOS. The common measure is positively and significantly related with MBVA and MBVE and negatively correlated with IAMVA, which confirms that the common factor acquires the underlying construct of the three measures. Panel D of Table 2 depicts the summary statistics for the common measure of the sample.

Table 2: Common factor analysis of the three measures of IOS ($N = 40$)

	MBVA	MBVE	IAMVA
Panel A: Estimated communality of the three IOS measures	0.892	0.919	0.194
Panel B: Eigenvalues	2.005	0.895	0.101
Panel C: Correlations between common factor and three IOS measures	0.944**	0.959**	-0.441**
Panel D: Descriptive Statistics of the common factor – IOS			
Mean	0.001		
Minimum	-1.642		
Maximum	3.137		

MBVA is [(total assets - total common equity) + certificates outstanding * certificate closing price] / total assets; MBVE is (certificates outstanding * certificate closing price) / total common equity; IAMVA is gross property, plant & equipment / (market value of the modaraba + non-current liabilities)

** Correlation is significant at the 0.05 level (two-tailed).

4. Results

Three Modaraba firms have missing values for some of the characteristics, thus the final sample size is 20 firms.

4.1. Summary Statistics

Table 3 reports the summary statistics of variables for the Modaraba size, performance, leverage, board structure, executive directors' shareholding and managers' remuneration. The percentage of NEDs on the board is 77.2%, on average. Executive directors of modaraba sector firms own a very small percentage of the total outstanding shares, i.e., 0.018 of the modaraba's total issued certificates. The average executive compensation is Pakistani Rupees 1.45 million. The average size (total assets) of modaraba is Rupees 1.39 billion, ROE for 2015 is 3.0%, and leverage is 138.80%.2. The higher percentage of leverage is observed because author has taken all current and non-current liabilities to calculate the variable.

Table 3: Summary Statistics ($N = 40$)

	IOS	ROE	NEDs	CERTs	OR	LEVERAGE	LNASSET	LAG-ROE
Mean	0.001	0.030	0.772	0.018	1,447,134	1.388	1,388,915	-0.016
S.D.	1.000	0.259	0.089	0.039	651,918	2.586	1,867,002	0.588
Minimum	-1.642	-0.863	0.500	0.000	223,552	0.020	66,693	-3.592
Maximum	3.137	0.080	0.875	0.171	2,751,996	13.282	6,393,291	0.801

IOS is a factor score for the investment opportunity set; ROE is return on equity (net profit divided by total equity); NEDs is the ratio of independent & non-executive to total directors on the board; CERTs is the fraction of total shares owned by executive directors; OR is officers' remuneration, total remuneration of managers divided by the number of managers; LEVERAGE is total liabilities divided by total equity; LNASSET is the natural logarithm of total assets in Rs.000's; and LAG-ROE is return on equity with one-year lag.

4.2. Correlations

The Pearson's correlation of the computed indicators for the 20 modaraba companies are exhibited in Table 4. The IOS is positively associated to Tobin's Q. The correlations suggest that sampled growth modarabas have higher valuation. Further, IOS is insignificantly correlated with ROE, which suggest that growth firms are not necessarily profitable. This is somewhat inconsistent with the previous broad literature and does not provide initial support for the stated hypotheses of negative association.

Table 4: Pearson's Correlations ($N = 40$)

	IOS	ROE	Tobin's *Q*	NEDs	CERTs	OR	LEV	ASSET	L-ROE
IOS	1.000	0.276	0.570***	-0.004	0.232	0.022	0.106	0.188	-0.113
ROE	0.276	1.000	0.404***	0.002	0.122	-0.177	0.269	0.253	-0.327
Tobin's *Q*	0.570***	0.404***	1.000	-0.041	0.345	0.093	0.479***	0.651***	-0.054
NEDs	-0.004	0.002	-0.041	1.000	-0.480***	0.344	0.202	0.219	-0.092
CERTs	0.232	0.122	0.345	-0.480***	1.000	0.033	-0.101	-0.202	0.113
OR	0.022	-0.177	0.093	0.344	0.033	1.000	0.023	0.326	0.134
LEVRAGE	0.106	0.269	0.479***	0.202	-0.101	0.023	1.000	0.363	-0.652***
LNASSET	0.188	0.253	0.651***	0.219	-0.202	0.326	0.363	1.000	0.014
LAG-ROE	-0.113	-0.327	-0.054	-0.092	0.113	0.134	-0.652***	0.014	1.000

IOS is a factor score for the investment opportunity set; ROE is return on equity (net profit by total equity); NEDs is the ratio of independent & non-executive to total directors on the board; CERTs is the fraction of total shares owned by executive directors; OR is officers' remuneration, total remuneration of managers divided by the number of managers; LEVERAGE is total liabilities divided by total equity; LNASSET is the natural logarithm of total assets in Rs.000's; and LAG-ROE is return on equity with one-year lag.

*** Correlation is significant at the 0.01 level (two-tailed).

5. Regression

OLS regression analysis is used to test the propositions. The analysis tests to what extent corporate controls mitigates the relationship between modaraba profitability and the IOS. Multi-collinearity diagnostic tests were also performed for each regression. Further, IOS as the explanatory variable is positively skewed and leptokurtic, hence following Hutchinson & Gul (2004), the IOS is being transformed by taking the square of the IOS and then including this transformed proxy in the correlation and OLS analysis. The alteration resulted in a normal distribution to a greater extent.

The results in Table 5 assess the indicated hypotheses. The evidence of assessing the hypothesis-1 show a positively significant interaction (β = 0.374; *p-value* = 0.050) for the IOS and NEDs on the modaraba performance. The evidence shows that the negative relationship of modaraba growth prospects and profitability is lower for modarabas with greater ratio of independent & non-executive directors' presence on the board. In other words, modarabas with strong potential of growth and a greater proportion of NEDs exercise the growth alternatives with success. The evidence is consistent with the study of Hutchinson & Gul (2004) and Kallamu (2016). Further, the result does not support the second hypothesis, that is, the evidence suggests that the negative association between modaraba's development prospects and efficiency remains same for modarabas with a larger fraction of executive ownership (β = -0.094; *p-value* = 0.927). However, the result is consistent with the study of Beatty & Zajac (1994), who find inconsistent results between officer stock ownership and firm productivity. Similarly, the evidence contradicts the third hypothesis, that is, the negative relationship between modaraba's growth prospects and performance is unaffected by higher remuneration of officers working in the modaraba sector (β = -0.001, *p-value* = 0.365). However, this result is consistent with the study of Crawford et al. (1995).

In analyzing the results of this paper, few limitations should be considered. First, this study sample is restricted to the 20 Shariah-compliant modaraba sector firms, and thus these results may not be generalizable to other financial sector companies. Second, there is no consistent variable of growth possibilities and here we utilized three proxies to compute IOS following (Hutchinson & Gul, 2004), whereas some studies have applied more than 3 proxies. Third, there are other reward and supervision mechanisms available to businesses, such as CEO compensation, Audit Committee structure, Shariah supervision boards etc.; and this study only considered three of them.

Table 5
Regression results of corporate governance proxies and IOS factor scores: dependent variable is ROE

	Expected sign	Coefficients β	t	Significance
(Constant)		-0.824	-0.89	0.381
LEVERAGE	?	-0.038	-1.49	0.149
LNASSET	+	0.042	0.77	0.449
LAG-ROE	+	-0.175	-1.83	0.079
NEDs	?	0.706	1.06	0.297
CERTs	+	0.855	0.44	0.663
OR	?	-0.001	-1.63	0.115
IOS	-	-0.016	-0.42	0.678
IOS*NEDs	+	0.374	2.01	0.050
IOS*CERTs	+	-0.094	-0.09	0.927
IOS*OR	+	-0.001	-0.92	0.365
R^2		0.454		
Adjusted R^2		0.251		
F		2.240		0.047
$N = 38$				

ROE is return on equity (net profit divided by total equity); LEVERAGE is total liabilities divided by total equity; LNASSET is the natural logarithm of total assets in Rs.000's; and LAG-ROE is return on equity with one-year lag; NEDs is the proportion of independent & non-executive to total directors; CERTs is the percentage of total shares owned by executive directors; OR is officers' compensation, i.e., total compensation of managers divided by the number of managers; IOS is a factor score for the investment opportunity set; IOS*NEDs, IOS*CERTs, and IOS*OR is the interaction between the IOS and NEDs, IOS and CERTs, and the IOS and OR respectively.

6. Conclusion

The paper evaluates how corporate governance proxies impact the connections between modarabas' environmental variables and profitability. The exogenous factor that this study choose as an environmental variable is the modaraba's growth prospect because theoretical framework suggests that IOS is negatively related with business performance. The paper expounds the hypothesis on this fundamental negative relationship and anticipate that the non-positive linkage is mitigated for modarabas with (1) a higher presence of independent & non-executive directors in the board, (2) bigger executive certificate-holdings, and (3) greater executive compensation. The results of 20 modaraba sector firms for the year 2014 and 2015 only support the first hypothesis. That is, the structure of board has positive influence on the performance of modaraba sector firms, consistent with the study of Ben Barka & Legendre (2016).

The evidence has implications for practitioners and policy makers by indicating that the profitability of growth companies is related to the structure of the board. The results of this paper also depict the significance of corporate governance mechanism for companies with greater growth opportunities.

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