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Board Financial Expertise and Debt Policy

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ABSTRACT

This study examines whether board financial expertise affect firm leverage for the sample of Pakistan non-financial listed firms. Using panel data for the year 2010-2015, we examine the relationship between financial expertise on board and firm leverage. We find a significant positive relationship between presence of financial expertise on board and firm leverage. To control possible endogeneity, this study employs propensity score matching and found similar results. This study is important as it exhibits that the presence of financial expertise on board affects firm economic decision beyond reporting quality accuracy.

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Introduction

Debates on the corporate governance still revolve around board composition that who will serve in shareholders' best interest. Confidence of shareholders have been shaken by various accounting scandals and financial crisis since 1990s like ENRON, HealthSouth, Tyco, and WorldCom and financial crisis of 2007-2008, these have stressed regulators and market makers about the need of financial expertise of board members. Their underlying assumption is that the presence of more financial expertise on board can improve board efficacy, help directors in understanding and monitoring management reporting process more meritoriously that they will not be accused of failure in their watchdog role and will better serve shareholder interest.

Benston & Hartgraves, (2002) documented that these accounting scandals have raised doubts about the ability of directors specifically audit committee members to understand such operational irregularities. Presence of financial expertise on board has gained more attention in response to widespread outcry followed by various accounting scandals since 1990s. In response to these accounting scandals, US congress has passed Sarbanes-Oxley bill in 2002 that require each member of audit committee should be independent and financial literate and one of its members should be 'financial expert'. Blue Ribbon Committee in 1999 have stressed the need of financial experts by recommending NYSE and NASD that each large listed company should have an audit committee comprising of 3 members and each of whom is financial literate. Smith committee in

2003 also proposed that at least one member of audit committee should have significant relevant and recent knowledge of financial experience.

Many academic researchers have support shareholders claim by empirically showing financial expertise are related to higher reporting quality (Agrawal and Chadha (2005), Mangena and Pike, 2012; Benston & Hartgraves, 2002; Kusnadi, Leong, Suwardy and Wang, 2015). Recent strand of research on financial expertise focus on the fact that their financial expertise as board member effects beyond reporting quality, they effect major corporate policies like investment, dividend, tax planning and hedging (Guner et al., 2008; Robinson, Xue, and Zhang, 2012 and Dionne and Triki, 2005; Sarwar et al, 2018). In this paper, we analyze whether presence of financial expertise on board effect beyond reporting quality in Pakistan by investigating the relationship between proportion of financial expertise on financial leverage. This study would contribute to existing literature in several ways, this study has focused financial expertise of Pakistani non-financial listed firm's board members for which no study has so far been conducted. This study would help investor to analyze firm policies and board member expertise while investing in firms could higher their confidence that they are investing their money in companies whose board members better understands their interest and misreporting by management who are not the owner (Agency cost). For economic stability, firms are in greater need of financial reporting efficacy and regulators are more likely to force companies to plead more knowledgeable directors on board. This study could force regulators to force companies to have financial expertise on board to cater need of shareholder by maximizing their wealth and perform their monitoring role more vigorously. To the best of researcher knowledge this study first time analyze the impact of board financial expertise on firm leverage.

Debt Policy and Board

In order to achieve firm goals all their investment should be financed appropriately. Financing policy is one of the important policies that will influence the firm's value. Financing mix of the company must be determined because it impacts the valuation of firm. Literature provides evidence that capital structure of company is oftenly a combination of several securities including bank loans, debentures or bonds, shares, lease financing and the utilization of retained earnings. Numbers of theories have been developed in past to determine optimal capital structure. Optimum capital structure is the tradeoff between benefits and cost associated with debt financing. Trade-off theory predicts that when firm set a target debt level, there is trade-off between benefits and costs associated with debt. Static trade-off theory argues that trade-off capital structure advocates optimal debt ratios, that are based on the trade-off between interest tax shield and cost of financial distress. Titman and Wessels (1988) documented that target debt ratios maximize firm value and reduce external claims over the firm. In context of trade-off between debt and equity; Agency theory hypothesized that target debt level is set to minimize agency cost between debt and equity financing (Jensen, 1986).

Dynamic trade-off theory hypothesized that adjustment cost associated with frequent adjustment of leverage ratio prevent firms from frequent capital adjustments. In contrast to trade-off theories pecking order theory argue that firm uses their internal finances first before going for external finances and issuance of equity. POT argues that firms do not have any target debt ratio (Mayers and Majluf ,1984) , therefore firms uses capital with such preferences ; accumulated earnings , short term borrowings , long term borrowings and then issuance of capital in order to get maximum benefit of debt and equity. In context of TOT and POT theories, companies have two sources to finance their projects; one is internal financing (Equity) and other one is external financing (Debt). First method is less risker than external financing with respect to cash flow commitments. When companies use debt financing as a source of funding, they are obliged to service their debt. Companies are considered to be high leveraged if they have debt more than the equity. If

companies are unable to service their debt properly, they may be at bankruptcy risk. Shareholders perspective about debt is not always bad but they considered debt can increase their return on investment because of tax advantage associated with it.

In contrast to TOT and POT agency theory argue that agency cost determines capital structures. Debt financing can mitigate agency problem in several ways. First, short term debt can reduce discretionary funds as well as managers perks consumption. Debt requires the firm to pay out extra cash that is available for mangers to violate for their own benefits. Second, use of leverage can increases mangers efficiency, because the likelihood of bankruptcy force mangers to make efficient use of their abilities in order to avoid value decreasing corporate policies (Grossman and Hart, 1982). Mangers who fail to meet debt obligations can be replaced by efficient managers who can better serve the interest of shareholders. Mangers need to meet debt obligations, they are likely to return access cash flows to shareholders instead of violating cash for their own benefits and for investing in negative NPVs (Lubatkin and Chatterjee, 1994).

Third, leverage can lessen agency costs by increasing mangers ownership in firm. Higher leverage increase percentage of equity owned by management and reduces the level of equity owned by shareholders. As mangers equity increases their interest aligns with shareholders' interests. One of the ways to reduce agency conflict is to increase mangers ownership in firm (Jensen and Meckling, 1976). Harford et al., (2008) documented that use of debt help lessen agency conflict by exposing firms to be more frequently monitored by bond holder, bond rating agencies, investment banker and lenders, thereby restricts self-serving behavior of managers.

Because debt impose constraints on mangers discretion, agency theory suggests that mangers may adopt sub-optimal capital structure that does not necessarily maximize the wealth of shareholders. Managers may choose debt ratio that maximize their own personal interest rather than the maximization of shareholder wealth. Extent to which mangers take sub-optimal debt ratio vary with corporate governance strength as corporate governance is designed to combat conflicts among shareholders and mangers. Literature shows capital structure decisions are shown to be affected by corporate governance mechanism. Berger er al. (1997) empirically analysed that entrenched managers prefer equity to debt, whereas mangers prefer more long-term debt who will get less equity-based incentives documented by (Datta et al, 2005). Ashbaugh-Skaife et al. (2006) documented that corporate governance practices are found to be associated with firm credit rating and cost of debt. Thus, corporate governance plays an important role in deciding optimal capital structure. In addition to corporate governance firm investment policy can affect corporate leverage policy. Growth opportunities are identified as one of significant determinant of firm leverage documented by (Myer, 1977; Rozeff, 1982). Capital expenditure as proxy for firm growth can affect leverage. Firms with higher growth opportunities may not issue debt. High growth firms with outstanding debt when need extra equity financing for investment, they may forgo such opportunities if wealth is transferred from shareholders to debtholders. (Myers, 1977). Jensen and Meckling (1976) documented that leverage is negatively related to growth opportunities. Rajan and Zingales, (1996) provide empirical evidence of negative relationship between leverage and growth opportunities.

Empirical evidence shows the board has power to set firm financing policy and board uses it. Guner et al (2008) documented that composition of board impact firm financial policies. Board has power to force mangers based on their expertise for higher debt, therefore positive relation is expected.

H1: proportion of financial experts on board are positively related to level of leverage.

Possible endogeneity:

Several methods are employed to control possible endogeneity, this current study has used propensity score matching method to test endogeneity. Empirical accounting studies wherein hypothesized casual variable is endogenous choice by mangers board of directors or other stakeholders, propensity score matching method should be employed to check endogeneity (Armstrong, Jagolinzer, larcker ,2010). Lennox, Francis and Wang (2012) documented that major advantage for using propensity score matching is that it does not require any appropriate exogenous instrument variables and not relying on specific functional form. For propensity score matching method, propensity scores were computed based on probability that firm has financial expertise with given firm characteristics; all firm characteristics included in main regression. Propensity score matching method matches observations based on probability of financial expertise. Logit estimations and one to one nearest neighbor match without replacement is used to calculate propensity scores

Research Sample:

Initially selected sample size for current study consists of 396 non-financial listed firms as per "Financial Statement Analysis report of non-financial listed companies at Pakistan Stock exchange from 2009-2014". Banking and other financial sector companies are excluded from current sample size having different regulatory requirements and their board members are also subject to specific regulations of Pakistan Central Bank (State Bank of Pakistan). For the targeted 396 non-financial listed firms, we try to manually collect annual reports for the period 2010-2015 from different sources; company's websites and opendoors.pk database. Board members profiles including their educational background, working experience collected from annual statements and company's websites and from SECP (regulatory body of Pakistan). Further, data for corporate policies are collected manually from company's annual statements. Due to non-availability of board members profile for targeted companies as well as annual statements on companies' websites, I collect complete data for 187 non-financial listed companies from 2010-2015.

Research Model:

Board Financial Expertise

Board financial expertise is measured by using proportion of financial expertise on board. According to Sarbanes- Oxley Act of 2002 (SOX) Section 407, financial expert as a person who has experience of accounting, finance or having supervisory expertise, financial expert has experience in accounting, auditing, finance positions, or supervising employees with financial responsibilities. Different researchers have used SOX definition to define financial expertise (Defond, Hann, and Hu, 2005; Krishnan and Visvanathan, 2008). For recent study, I classify financial expert as person having degree in accounting, finance, and economics, having experience of working as accountant, auditor, chief financial officer, finance manager, financial advisor or financial analyst in any financial or non-financial firm.

Debt Policy

H_1: **Proportion of Financial expertise on board is positively related to level of leverage**

$LEVERAGE = \beta_{0+} \beta_1 FIN + \beta_2 LnTA + \beta_3 ROA + \beta_4$TaxShield $+ \beta_5$DivDummy $+ \beta_6 CapExp + \beta_7$NetWorkingCapital$+ \beta_8 IntangAsset + \beta_9 CarryForward + \beta_{10}$INST $+ \beta_{11}$ PPE

For Debt Policy Hypothesis, dependent variable is LEVERAGE

LEVERAGE: Total Debt/Total Assets

Independent Variable:

FIN = proportion of financial experts on board.

Other control variables are:
LnTA = natural logarithm of Total Assets
ROA = Net Income/Total Assets
TaxShield = Depreciation+ Amortization/Total Assets
DivDummy=1 is firm pays dividend otherwise DivDummy=0
CapExp= capital Expenditure/Total Assets
NetWorkingCapital= (Current Assets-Current Liabilities)/ total Assets
IntangAsset= Intangibles/Total Assets
CarryForward = 0 if firm has net operating loss otherwise CarryForward = 1
INST = percentage of institutional investors holdings
PPE= PPE/Total Assets

To test H_1 , current study has used OLS regression model. Several researchers DeAngelo and Masulis, (1980), Titman and Wessels, (1988), Mehran,(1992) and Faulkender and Petersen, (2006) have used firm characteristics that can effect firm capital structure are firm size (LnTA) , ROA (Company Profitability) , non-debt tax shield (TaxShield), PPE (tangibility of assets), dividend , capital expenditure , working capital and intangible assets as control variables. Therefore, current study has also considered these control variables in context of developing market of Pakistan. Shleifer and Vishny (1986) documented that larger shareholders have incentive to oversee management activities, therefore percentage of institutional investor on board is also considered as control variable for identifying firm capital structure.

Results & Discussion

Summary statistics table shows summary statistic for current study sample, including mean, standard deviation and median. Result shows this sample includes comparatively large firms having total asset mean over 22.6 billion with a standard deviation of 1.6 Billion. Financial expert's proportion on board as mean for current sample is 57.9 %.

Table 1: Descriptive statistics of regression variables

Variable	**Obs**	**Mean**	**Std Dev**	**Median**
FIN	1085	.5794	.1713	.5714
DivDummy	1085	.6525	.4763	1
LEVERAGE	1085	.5988	.3565	.581
capexp	1085	.0469	.05934	.027
LnTA	1085	22.580	1.552	22.437
ROA	1085	.0500	.0999	.045
INST	1085	16.355	16.976	11.2
PPE	1085	.4583	.2304	.464
NetWorkingCapital	1085	.0437	.4455	.045
TaxShield	1085	.0372	.0484	.031
IntangAsset	1085	.0070	.0294	0
CarryForward	1085	.2304	.4212	0

Regression Results for Debt Policy

Above table shows OLS regression results for firm debt policy. Dependent variable is leverage. Result shows proportion of financial expertise on board are positively related to firm leverage policy. Board has power to set firm financing policy and board uses it. Results are consistent with findings of (Guner et al, 2008) that documented presence of financial expertise on board are related

to higher loans within firms, and the presence of more financial expertise on board related to marginal increase of leverage.

Table 2: Debt policy and board financial expertise

LEVERAGE	Random Effect GLS Regression	
	Coff	P value
FIN	0.0386	0.002
LnTA	-.0219	0.008
ROA	-.3413	0.000
PPE	.02352	0.563
TaxShield	-.3482869	0.164
NetWorkingCapital	-.7616586	0.000
IntangAsset	-3.356886	0.000
CarryForward	-.1006168	0.001
CapExp	-.0183634	0.185
DivDummy	.03372	0.318
INST	.0000366	0.977
N	1122	
R2	.6373	

Standard errors are clustered at firm level for all regression

There is a negative relationship between firm size and leverage that is consistent with POT (Pecking order theory). POT assumes negative relationship between firm size and leverage. Larger firm have less asymmetry of information therefore they can issue more equity rather than external financing (Rajan and Zingales, 1996). Smaller firms have asymmetry of information therefore they issue less capital because of undervaluation of equity and they don't have collateral for long term debts, so they go for short term debts to meet their financing requirements. Negative and statistically significant relationship is found between ROA and leverage. POT assumes negative relationship between leverage and firm profitability, firms that are more profitable firstly uses their accumulated earnings and then got for external financing, results are consistent with the findings of Long and Malitz (1985), Baskin (1989), Michaelas et al. (1999), Al-Sakran (2001), Dorbetz and Fix (2003) and Chen (2004).

Negative relationship found between asset tangibility and leverage. This negative relationship is consistent with pecking order theory that firms with high tangible assets on their balance sheet rely more on the generation of internal funds from these assets (Degryse et al. 2010). Ratio of sum of depreciation and amortization over total assets is a proxy for non-debt tax shield. Relationship

between non-debt tax shield and leverage is significantly negative indicates non-debt tax deductions are substitute for tax benefits. Significantly negative relation found between networking capital and leverage shows as firms are more liquid, they use less debt. Presence of institutional investor on board does not affect leverage policy.

Endogeneity Test: Propensity Score Matching

By employing propensity score matching method for both treated sample and whole sample, almost same results are found.

Table 3: Matched propensity scores (dependent variable – Debit Policy)

FIN	Coff	Al Robust Std.Error	Z	P>|Z|
ATE	0.035	0.07	-4.33	0.000
Debit Policy				
(1 vs 0)				

FIN	Coff	Al Robust Std.Error	Z	P>|Z|
ATET	0.062	0.05	-2.89	0.000
Debit Policy				
(1 vs 0)				

Conclusion

This study investigates whether presence of financial expertise on board affect firm leverage policy. By using panel data for the year 2010-2015, present study finds a significant positive relation for firms leverage. Presence of financial expertise on board affect beyond financial reporting quality (Sarwar et al, 2018). Board members has power to set firm financing policy, and the result confirms that board uses financial expertise to set firm financing policy. Results further confirm that board member having financial expertise knows more about firm financing, and their directorship has positive impact on firm leverage. Study further employs PSM and produces similar results. Overall, the findings of the study depict that board financial expertise is very important element to set firm leverage. This study is in additional to recent studies that confirms board financial expertise effects beyond reporting quality.

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