



Board Gender Diversity, Firm Performance and Risk-Taking: The Case of Non-Financial Firms of Pakistan

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ABSTRACT

This paper examines the influence of board gender diversity on firm performance and risk taking. We employed the panel data of seventy-five non-financial firms of KSE-100 index listed in the Pakistan Stock Exchange. The data consists of 2005-2018 period. Results of panel regression reveal that board gender diversity have adverse influence on the firm performance i-e Tobin's Q and return on assets. Moreover, it further provides that board gender diversity has decrease the firm's risk-taking i-e insolvency risk. Overall, the inclusion of females in the boardroom reduces the financial performance and decrease the risk-taking of non-financial firms in Pakistan. This study provides the managerial and practical implications in compliance with SECP Act of 2017, to include the females in boardroom to discourage the risk-taking behavior of firms.



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1. Introduction

The inclusion of female directors in boardrooms is attracting considerable attention in the corporate sector of Pakistan due to the compliance requirement of the Security and Exchange Commission of Pakistan (SECP) (Ud Din et al., 2021). The revised rules of corporate governance necessitate audit listed firms to have at least one woman on the board within three years (SECP Act, 2017). Therefore, the extent of women directors in the listed organizations is expected to increase (Solakoglu & Demir, 2016). This percentage was considerably low in the previous years, as a report by the Securities and Exchange Commission of Pakistan mentions that 69 companies in the KSE 100 index do not have any female director on their boards (SECP, 2017).

In the recent years, inclusion of women on the board and at the top management positions within an organization is discussed in the literature (Amin et al., 2021). Extant literature provides mix evidences about the role of females on the boardroom on the organizational performance. For instance, Umer et al., (2020) provided that women are good monitors and have an encouraging influence on the firm's performance. However, Saeed & Sameer, (2017) found that diversity increases interpersonal clashes among board members that ultimately deters organizational financial performance due to their risk-averse behavior (Kweh et al., 2019).

Although Pakistan is ranked among the most underdeveloped countries where women have to work hard to achieve top managerial positions (Gauhar, 2015), however, the recent work of various social activists (Ssenyonjo, 2020), and the policy makers (SECP, 2017), that highlighted gender diversity concerns have uplifted the women inclusion board room in Pakistan (Shehar Yar & Ahmed, 2021),. Additionally, the guidelines of SECP paved the route of board gender diversity in the registered non-financial corporations in Pakistan.

In Pakistan, board gender diversity becomes a commonly discussed topic where increase in number of females on the board has raised up many queries about firm's performance (Karim et al., 2021). Women in Pakistani firms lack the identical convenience as men do (Herbst, 2020) because of their inability to display risk-taking potential (Bruna et al., 2019). According to prior literature, it is revealed that between 2008 and 2010 only 25% firms have minimum one woman in the board and percentage of women working as CEO found to 3.33% amongst all the enterprises registered on KSE 100 index in Pakistan (Yasser, 2012).

Considering the rising participation of women in the boardroom in Pakistan and the inconclusiveness of the research findings, the current paper scrutinizes the impact of board gender diversity on firm performance and its risk taking behavior among the non-financial firms listed at the Pakistan Stock Exchange.

2. Literature Review

2.1. Board Gender Diversity and Firm Performance

The board of directors plays a crucial role in formulating corporate policies (Campbell & Mínguez-Vera, 2008). Board gender diversity – presence of female directors on the board – is one of the key factors to influence corporate policymaking that in turn determine the success of an organization. Drawing upon resource dependency theory, women on the board can bring social capital for the company that can create strong linkages between a corporation and its external environment (Brahma et al, 2021). Women on the board help sustaining human capital resources to boost legitimacy and channel communication (Fernando et al., 2020). Positive linkage between gender diversity and corporate performance can be found through the implications of human capital theory of Becker (1964) who contended that individuals capabilities, skills, education, and experience significantly augment the organizational performance (Duppati et al., 2020). Talking through the lens of agency theory, diversity on the board increases board strength to safeguard the interest of stockholders- the principal. Almarayeh, (2021) justified the positive association of board gender diversity with firm performance on the bases of agency theory.

Several researchers acknowledge the decisive role of women on the board in defining the corporate success. Li and Chen, (2018) determined that women being more risk averse make rational decision making which in turn accentuate corporate performance. Gupta et al., (2021) confirmed a positive role of board gender diversity for corporate financial performance. Boone and Yoshikawa (2004) concluded that women on the board through their stable presentation in diverse business contract significantly influence corporate performance. Bear et al., (2010) found that women on the board increases board efficient through removing communication barrier on the board. Sial et al., (2018) acknowledged a direct association of board gender diversity with the organizational performance.

On the contrary, few researchers determine adverse influence of board gender diversity with organizational performance (Mukarram et al., 2018; Sani, 2021; Suciú et al., 2021; Vo & Bui, 2017). Mustafa et al., (2020) concluded that board gender diversity negatively influence

firm dividend payout that is eventually reflected in the market capitalization of the firm. Aghadike, (2021) found that in Nigeria corporate board diversity dampens the financial performance. Considering the above theoretical and empirical evidences, we hypothesize that board gender diversity influence firm performance.

2.2. Board Gender Diversity and Risk-taking

Corporate governance mechanisms have a direct bearing on financial and strategic decision making of a corporation where the board of directors perform key role. The hypothesis about the implications of gender differentials in the firm's upper echelon for a firm's strategic decision-making is currently augmented (Owen & Temesvary, 2018). Gender differentials influence business decision-making because it involves risk taking and uncertainties (Cardillo et al., 2021). Several researchers investigated the gender of the CEO on risk taking behavior (Skala & Weill, 2018; Hussain Khan et al, 2020).

Researchers reveal that women on board are more risk averse than their male counterparts (Doan & Iskandar-Datta, 2020; Khor et al., 2020) declaring that women have lower confidence on their estimation skills (Rivers et al., 2020). Bucher-Koenen et al., (2021) asserted that females lack confidence in the situations dominated by men. It suggested that in the uncertain situations it is less likely to place a woman at a decisive position due to their lesser ability to combat risk.

Gender diversity can affect firms through various mechanisms. According to Chen et al., (2019), there is a encouraging impact of board gender diversity on financial risk taking of firm. Likewise, Nathaniel (2017) also finds a positive effect of board gender diversity on risk taking. Likewise, Main et al (2014) expressed that gender diversity on the board emphatically influence firm's operations and its risk taking. Also, more noteworthy board gender diversity together with different factors, for example, a lower board size, more prominent board and lower grouping of institutional possession, includes a lower default chance (Cao et al., 2015).

3. Research Methodology

3.1. Sample

The sample consists of seventy-five non-financial firms, registered on the Pakistan Stock Exchange (PSX) for the time from 2005–2018. Thus, constituting the final sample of 976 observations.

3.2. Variables of the Study

We conduct panel regression model to find the consequence of gender diversity in board on performance of firm and its risk taking behavior. The method and data clarifies the methodology of current paper. This section provides details of the dependent, independent and control variables (See Table 1).

3.3. Dependent Variable

This paper takes firm performance and risk taking as dependent variables. Tobin's Q and Return on Asset (ROA) are taken to operationalise firm performance. Whereas, risk taking is measured by the insolvency risk. Table 1 explains the measurement of these variables.

3.4. Independent Variable

Gender diversity in board is taken as independent variable. We uses four alternative measures to quantify gender diversity in board: (a) FENUM: total number of female directors on the board. (b) FEDUM: the dummy variable, we use 1 if there is at least one women in board of director 0, otherwise. (ci) FERAT: percentage of female directors to total board of directors. (d) FEBLAU: Gender variety in board is defined as $feblau = 1 - \sum_{i=1}^n P_i^2$, Here P_i is ratio of female directors and n here represents entire number of genders in the board.

3.5. Control Variables

We used (a) Firm size- calculated through log of total assets; (b) B-MEET - calculated through natural log of total number of meetings held by the board in a year. (c) STCOM - measured through proportion of shareholdings of directors to total number of shares; and(d) DEBT - calculated by a proportion of total liabilities with total Assets.

Table 1
Measurement of the Variables

Sr. No	Variables	Measurement
1	Tobin's Q	It is calculated as total of market capitalization and more total liabilities by total assets.
2	Return on Asset	Return on asset is measured by net income over total asset.
3	Z-score	It is demonstrated as: A= Working Capital / Total Asset B = Retained Earning / Total Asset C = EBIT / Total Asset D = Market Value of Equity / Total Liabilities E = Sales / Total Asset Z-score = 1.2 A + 1.4 B + 3.3 C + 0.6 D + 1.0 E
4	Fenum	It is measured by means of total number of women in board of director.
5	Fedum	Fedum is a dummy variable used as number of females in the panel of director. Fedum gives 1, if there is at least 1 women in the board and 0, otherwise.
6	Ferat	It is ratio of females in the board.
7	Feblau	Gender variety in board is defined as $feblau = 1 - \sum_{i=1}^n P_i^2$, Here P_i is ratio of associates in every gender and n here represents entire number of genders in the board.
8	Firm Size	Firm size is calculated through log of total assets.
9	B-meet	B-meet is calculated through natural log of total number of meetings held by the board in a year.
10	STCOM	It is measured by proportion of shareholdings of directors to total number of shares.
11	Debt	It is calculated by Total Liabilities divided by Total Asset.

3.6. Econometric Model

This study uses the research model of Ahren, (2012) that shows the influence of gender diverse panels n performance of firm and its risk taking.

$$ROA_{i,t} = \alpha_0 + \beta_1 \times Women_on_Board_{i,t} + \beta_2 \times Debt_{i,t} + \beta_3 \times Bmeet_{i,t} + \beta_4 \times Firm_Size_{i,t} + \beta_5 \times Stcom_{i,t} + \varepsilon_{i,t}$$

Here "i" represent firms in addition "t" indicate the time. $ROA_{i,t}$ shows the return on asset of the firm value. $Women_on_board_{i,t}$ is the ratio of women board director. $Debt_{i,t}$ signifies book price of long-term debt as percentage of total assets. $Bmeet$ is number of meetings held by the

board. While, $Firm_size_{i,t}$ indicates log of total asset, and $Stcom$ represents the ratio of directors' shareholdings to total shares. Whereas ε_{it} express error term for firm i in time t .

$$Tobin's\ Q_{i,t} = \alpha_0 + \beta_1 \times Women_on_Board_{i,t} + \beta_2 \times Debt_{i,t} + \beta_3 \times Bmeet_{i,t} + \beta_4 \times Firm_Size_{i,t} + \beta_5 \times Stcom_{i,t} + \varepsilon_{i,t}$$

The dependent variable $Q_{i,t}$ is the Tobin's Q for non-financial organizations indicates the degree of firm performance. $Women_on_board_{i,t}$ is the proportion of female associates in the panel. $Debt_{i,t}$ signifies the book value of long-term debt in percentage of total assets. $Bmeet_{i,t}$ presents the complete number of meetings held in one year. While $Firm_size_{i,t}$ indicates log of total asset, Whereas, $Stcom$ is the ratio of directors shareholdings to total shares. ε_{it} express error term for firm i in time t .

$$Risk_{i,t} = \alpha_0 + \beta_1 \times Women_on_Board_{i,t} + \beta_2 \times Debt_{i,t} + \beta_3 \times Bmeet_{i,t} + \beta_4 \times Firm_Size_{i,t} + \beta_5 \times Stcom_{i,t} + \varepsilon_{i,t}$$

The dependent variable risk shows "i" for firms and "t" indicate the time. $Risk_{i,t}$ used as a degree for performance of firm. $Women_on_board_{i,t}$ is percentage of female board members. $Debt_{i,t}$ signifies the book value of long-term debt as percentage of total assets. $Bmeet_{i,t}$ presents the entire number of meetings held in one year. While $Firm_size_{i,t}$ indicates log of total asset. Whereas, $Stcom$ is percentage of shareholdings of directors divided by total shares and ε_{it} express error period for firm i in time t .

4. Results and Discussions

4.1. Descriptive Statistics

Table 2 provides descriptive statistics of the current paper. Board gender diversity is used as an independent variable and it is measured by using four proxies i.e: $Fenum$, $Fedum$, $Ferat$ and $Feblau$. $Fenum$ is the independent variable which is calculated by means of total number of women in board of director. The minimum value of $Fenum$ is 0 and maximum value is 4 which means that number of women in board is between these values. The value of mean is 0.482234 and value of standard deviation is 0.797671. $Fedum$ is a dummy variable used as number of females in the panel of director. $Fedum$ gives 1, if there is at least 1 women in the board and 0, otherwise. The value of mean is 0.32335 and value of standard deviation is 0.467667. $Ferat$ is the ratio of females in the board. Its minimum value in the table is 1 and maximum value is 0.428571. While, value of mean is 0.056534 and standard deviation is 0.094414. Gender variety in board is defined as $Feblau = 1 - \sum_{i=1}^n P_i^2$, Here P_i is ratio total number of women and n here represents entire number of genders in the board. Value of mean for $Feblau$ is 0.088871 and standard deviation is 0.139741.

4.2. Correlation Matrix

According to Table 3 Tobin's Q and FEBLAU have a correlation of (-0.0822) and (-0.0828) respectively have negative impact of Tobin's Q on FEBLAU with a significance level of (5%). It shows that there is no relation exists between them. In relation with the correlation of Tobin's Q and FEDUM there is negative effect of Tobin's Q on FEDUM (-0.0822) and (-0.1060) with a significance level of (5%). In the results of Tobin's Q and FENUM hence table shows the correlation coefficient of (-0.0822) and for FENUM it shows coefficient of (-0.0632) which means that Tobin's Q have negative and insignificant impact of FENUM. For FERAT study shows the result of coefficient for Tobin's Q as (-0.0822) and for FERAT as (-0.0717) which means there exists negative and insignificant influence of Tobin's Q on FERAT.

According to the results of ROA with FEBLAU it is indicated that ROA have negative as well as insignificant effect on FEBLAU with a correlation coefficient of (-0.1856) and (-0.0842) respectively. The results of RAO and FEDUM comprises that with a coefficient of (-0.1856) and (-0.1212) ROA effects negatively on FENUM by a significance level of (5%). Outcomes of ROA with FENUM shows the correlation coefficient of (-0.1856) and (-0.0591) it shows negative and insignificant impact of ROA on FENUM. The relationship of ROA and FERAT shows that ROA have negative but significant influence on FERAT with a coefficient correlation of (-0.8156) and (-0.0703).

Table 2
Descriptive statistics

Variables	Mean	Median	Min	Max	Std. Dev.
ROA	0.1047	0.0912	-0.0529	0.3599	0.0936
TOBIN's Q	1.4928	1.2514	0.6051	4.4698	0.7793
RISK	22.6243	10.4889	-1.3340	406.5188	38.2258
FEBLAU	0.0889	0.0000	0.0000	0.4898	0.1397
FEDUM	0.3223	0.0000	0.0000	1.0000	0.4677
FENUM	0.4822	0.0000	0.0000	4.0000	0.7977
FERAT	0.0565	0.0000	0.0000	0.4286	0.0944
FIRMSIZE	16.7089	16.7257	12.2571	20.2569	1.4110
BMEET	1.6727	1.6094	0.6931	3.4965	0.3323
DEBT	0.5686	0.5413	0.0237	18.0494	0.6741
STCOM	11.1410	2.3254	0.0000	78.0894	16.2887

Table 3
Correlation Matrix

Probability	BMEET	DEBT	FEBLAU	FEDUM	FENUM	FERAT	FIRMSIZE	RISK	ROA	STCOM	TOBIN
BMEET	1										
DEBT	0.2273 ***	1									
FEBLAU	0.0000 -0.0672	-0.0947 **	1								
FEDUM	0.1033 -0.0072	0.0216 -0.0411	0.9286 ***	1							
FENUM	0.8615 -0.0067	0.3191 -0.0787 *	0.0000 0.9568 ***	0.8814 ***	1						
FERAT	0.8706 -0.0775 *	0.0562 -0.1027 **	0.0000 0.9926 ***	0.0000 0.8841 ***	0.9554 ***	1					
FIRMSIZE	0.0601 0.3692 ***	0.0127 0.1271 ***	0.0000 0.0073	0.0000 0.0498	0.0000 0.0188	-0.0010	1				
RISK	0.0000 -0.1299 ***	0.0020 -0.5003 ***	0.8597 0.0096	0.2270 -0.0088	0.6497 -0.0015	0.9808 0.0120	-0.1207 ***	1			
ROA	0.0016 -0.1856 ***	0.0000 -0.4463 ***	0.8170 -0.0842 **	0.8318 -0.1212 ***	0.9710 -0.0591	0.7704 -0.0703 *	0.0034 -0.2152 ***	0.4856 ***	1		
STCOM	0.0000 -0.1009 **	0.0000 -0.0415	0.0411 0.2991 ***	0.0032 0.2670 ***	0.1518 0.3104 ***	0.0883 0.2971 ***	0.0000 -0.3037 ***	0.0000 -0.0877 **	-0.0495	1	
TOBIN	0.0143 -0.0822 **	0.3151 -0.1176 ***	0.0000 -0.0828 **	0.0000 -0.1060 **	0.0000 -0.0632	0.0000 -0.0717 *	0.0000 -0.1200 ***	0.0334 0.5584 ***	0.2305 0.5159 ***	-0.1300 ***	1
	0.0460	0.0043	0.0445	0.0101	0.1254	0.0820	0.0035	0.0000	0.0000	0.0016	

In relation with Risk and FEBLAU the correlation coefficients are (-0.1299) and (0.0096) with shows that FEBLAU consume a positive influence on risk taking of firm, if we add females in the panel of directors it decreases the risk taking of firm. In relation with Risk and FEDUM it shows that Risk have negative effect on FEDUM with a coefficient of (-0.1299) and (-0.0088). This table shows the correlation coefficient of Risk and FENUM as (-0.1299) and (-0.00115) which shows Risk have negative and insignificant effect on FEDUM. In the end the table shows the impact of Risk on FERAT with correlation of (-0.1299) and (0.0120), it depicts that Risk have positive influence on percentage of women and risk taking. If proportion of females in panel increases, risk taking decreases.

4.3. Regression Analysis

Table 4 covers the findings of panel regression model, which indicate results of fixed effect. C represents the intercept value of 0.3198, which is the starting point of return on asset and Tobin's Q in the selected sample. In model (1) it reports the negative co-efficient of fenum (-0.0079) for the return on asset which is significant on (10%) level. In model (2) (3) and (4) our table shows negative co efficient of fedum i.e: (-0.0260). It suggests that inclusion of females in boardroom reduces the firm's return on assets. Therefore, the firms are less profitable where female performs on the boardroom. It may be the reason that more and more increase in gender assortment rises the chance of conflicts (Kweh et al., 2019), the female directors take more time to make decision (Li & Chen, 2018)), and having risk-averse behavior (Li & Chen, 2018)., When gender diversity decreases, the firm generates more value for its owner (Saeed & Sameer, 2018).

Table 4
Board Gender Diversity and Firm Performance (ROA)

Variables	Model (1)	Model (2)	Model (3)	Model (4)
Constant	0.3198***	0.3159***	0.3205***	0.3200***
FENUM	-0.0079* (-1.8461)			
FEDUM		-0.0260*** (-3.6490)		
FERAT			-0.0994*** (-2.7327)	
FEBLAU				-0.0741*** (-3.0756)
BMEET	-0.0164 (-1.5672)	-0.0168 (-1.6211)	-0.0180* (-1.7321)	-0.0179* (-1.7292)
DEBT	-0.0406*** (-4.2804)	-0.0422*** (-4.4806)	-0.0416*** (-4.4020)	-0.0420*** (-4.4504)
FIRMSIZE	-0.0103*** (-3.6661)	-0.0097*** (-3.4933)	-0.0101*** (-3.6022)	-0.0100*** (-3.5779)
STCOM	-0.0002 (-0.8065)	-0.0001 (-0.3883)	-0.0001 (-0.5575)	-0.0001 (-0.4534)

Dependent Variable: Return on Asset

Notes. The first value in every cell is coefficient of regression variable and the value in parentheses is the T-value. ***p<.01. **p<.05. *p<.10.

The above results are supported by the existing literature in the theoretical paradigm of gender diverse board and performance of firm (Rene'e B. Adams & Ferreira, 2009; Ahren, 2012; Ararat, 2015; Bøhren & Strøm, 2010; Carter et al., 2010; Coles et al., 2008; Eulerich et al., 2017; Farrell & Hersch, 2005; Gallego-Álvarez et al., 2010; Haslam et al., 2010; Isidro & Sobral, 2015; Menicucci & Paolucci, 2021; Okoye et al., 2021; Saeed et al., 2021; Salim Darmadi, 2011). Hence, the existence of females as director in the meeting room reduces the firm presentation.

Board meeting consumes negative and significant (10%) power on the performance of firm. It specifies that greater amount of meetings detained by managements of board negatively influence performance. It may be the reason boards that meet more frequent have more conflicts. Firm debt have significant but negative outcome on performance. It shows that the greater dependence of a firm on the debt reduce the firm performance. It may be the reason that agency problems may take the firm strategy to chasing very high debt, thus resulting in worse performance. Firm size coefficient is negative but significant (5%) it means that larger firm effects negatively on the performance of firm, "to big to fail". Stcom has negative consequence on performance as well as insignificant. Firm risk has significant positive impression on performance of firm. It is because of the reason that as risk decreases performance of firm increases.

Table 5 shows the findings of board gender diversity with Tobin's Q. In model (1) table reports the negative co-efficient of fenum (-0.0557) for the return on asset which is significance on (10%) level. In model (2) fedum shows coefficient of (-0.1675). Model (3) shows coefficient of ferat is (-0.5909). In model (4) feblau shows the coefficient of (-0.4814). Hence all the models shows the adverse effect of gender diversity in board on Tobin's Q.

Table 5
Board Gender Diversity and Firm Performance (Tobin's Q)

Variables	Model (1)	Model (2)	Model (3)	Model (4)
C	2.3091	2.2287	2.3296	2.3015
FENUM	-0.0557* (-1.5097)			
FEDUM		-0.1675 (-2.6387)		
FERAT			-0.5909* (-1.9225)	
FEBLAU				-0.4814* (-2.2922)
BMEET	-0.0636* (-0.6991)	-0.0702* (-0.7750)	-0.0733* (-0.8059)	-0.0750* (-0.8268)
DEBT	0.0970* (0.7779)	0.1033 (0.8319)	0.0982* (0.7899)	0.0958* (0.7718)
FIRMSIZE	-0.0548* (-2.2241)	-0.0484** (-1.9585)	-0.0549* (-2.2369)	-0.0526* (-2.1408)
STCOM	-0.0041*** (-2.1969)	-0.0036*** (-1.9586)	-0.0039*** (-2.0841)	-0.0037*** (-1.9573)

Dependent Variable: Tobin's Q

Notes. The first value in every cell is coefficient of regression variable and the value in parentheses is the T-value.
***p<.01. **p<.05. *p<.10.

Table. 6 shows the effect of gender diverse boards on risk taking of firms. As according to table it is seen that in model (1) and (2) FENUM and FEDUM are positively related to risk taking at (10%) level of significance. While in model (3) and (4) FERAT and FEBLAU are positively connected to risk-taking at (10%) significance level. Which means that women in the boardroom can give positive effect to the firm and risk taking level of firm decreases. This positive effect is due to the fact that females are less self-confident as equated to men (Shagufta Gul et al., 2021). The decisions made by females in the meeting rooms are different from men (Shava &

Chasokela, 2020). Females are more affectionate toward other they thought about the benefits of other first same as they thought about their customers first (Wu et al, 2021). Women are more sensitive to intuition because they are not confident about their intuition power (Delfabbro et al., 2018). Large board size decreases risk (Pereira & Filipe 2022). If we talk about investment choices then women are better than men because they take more time for making decision and think more about their choices (Li & Chen, 2018).

Based on former literature and results of theories, there are different researchers at different times which shows positive impact of board gender diversity on risk taking (Renée B. Adams & Ragunathan, 2015; Renée B Adams & Funk, 2011; Agnew et al., 2000; Belkacemi et al., 2021; Cardillo et al., 2021; Davies, 2016; Faccio et al., 2016; Fall et al., 2021; Hoogendoorn et al., 2013; Huang & Kisgen, 2013; Main et al., 2018; Manita et al., 2018; Parrotta & Smith, 2013; S & I., 2018; Sharda, 2019; Sindhu et al., 2016).

Table 6
Board Gender Diversity and Firm Risk

Variables	Model (1)	Model (2)	Model (3)	Model (4)
Constant	-127.55***	-129.97***	-127.47***	-128.23***
FENUM	4.0085* (1.6079)			
FEDUM		7.0641* (1.7593)		
FERAT			45.26** (2.1120)	
FEBLAU				30.05** (2.0980)
BMEET	3.8116 (0.7350)	3.9462 (0.7609)	4.3137 (0.8324)	4.2477 (0.8200)
DEBT	-9.4971* (-1.6956)	-9.6362* (-1.7234)	-8.0306 (-1.4775)	-8.0313 (-1.4776)
FIRMSIZE	7.9580*** (3.4188)	8.0839*** (3.4825)	7.8093*** (3.3592)	7.8584*** (3.3827)
STCOM	-0.0191 (-0.1099)	-0.0350 (-0.2013)	-0.0223 (-0.1281)	-0.0323 (-0.1858)

Dependent Variable: Insolvency Risk

Notes. The first value in every cell is coefficient of regression variable and the value in parentheses is the T-value. ***p<.01. **p<.05. *p<.10.

BMEET have positive but insignificant impact on risk taking. It may be the reason that women in the meeting room gives more powerful ideas as compared to men. Debt have negatively significant impact on risk taking behavior of firm as if the debt increases risk increases and thus it results in the decreases the firm performance. Firm size have a positive substantial impact on the performance of firm and risk taking. It may be because more board of directors are present in the firm and all make better decision for firm which reduces the risk taking of firm and hence, increases its performance. Stcom have a negative and insignificant effect with risk taking of firm. ROA have positively significant impact on risk taking of firm it may be due to that existence of females in the boardroom increase ROA and thus reduces the risk taking.

5. Conclusion

This study finds a negative effect of gender diversity in board on firm performance whereas, positive influence of board gender diversity on risk taking. Our paper refers to the effect of board gender diversity on firm performance and it is based on clear and strong effects shown in this study ROA, Tobin's Q, Risk and a number of control variables based on performance

of firm and its risk taking. The conclusion of this study is supported by highly significant regression coefficient and descriptive statistics.

We find the effect of board gender diversity on firm risk and financial performance in Pakistani registered non-financial firms. According to prior literature it is shown that board gender diversity may affect firm risk and financial performance of firm. By increasing the board gender diversity firm risk decreases due to gender differences in risk preferences. This study report that board gender diversity have positive impact on risk taking by using one measure of risk, i.e: Z-score and negative impact on firm performance, as measured by ROA and Tobin's Q.

Results of this study shows that diversity in boardroom have negative effect on firm performance. It shows that board gender diversity have negatively significant effect with both the measure used to measure firm performance and shows positive effect of board gender diversity on risk taking of firm. This study uses panel regression and fixed effect to measure the effect of board gender diversity on firm performance and risk taking. Overall it shows that by adding women in board of director, decreases firm performance and its risk taking behavior.

5.1. Suggestions for Future Research

Based on the results, discussion and the limitations of this paper several suggestions for future research will be presented in this section. Firstly, the chosen of a cross sectional design has limited the time frames of the study to the years of 2005-2018. Employing a longitudinal research design that stretches over more than the selected time period. Secondly, this study only investigates the Pakistan Stock Exchange. Conduct the same research to another location would be possible to investigate if the results remain similar over different times and locations. A third option could be to conduct different statistical tests on the data.

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