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Default Risk, Company Ownership, and Earning Response Coefficient (ERC) In Pakistan Stock Exchange (PSX)

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Abstract: The study examines that how company ownership mitigates the effect of default risk on Earning response coefficient (ERC) through its managerial and institutional qualities. Default risk is independent variable, Earning response coefficient is dependent and company ownership acts as moderating variable. The study used reverse regression while randomly selecting 250 non-financial companies listed in Pakistan Stock Exchange (PSX) in the period 2008 to 2015. The result shows that default risk has negative impact on Earning response coefficient (ERC) while company ownership does not mitigate the negative impact of default risk on earning response coefficient (ERC). The result of the study also reveals that investors can invest in Pakistan Stock Exchange without considering the moderating variable (company ownership) and it managerial qualities. The study proves the additional, comprehensive importance in the ERC literature, especially in Pakistan as a developing country.

Key Words: Default Risk, Director ownership and ERC, Default Risk and ERC

Introduction

Default risk arises when firm become unable to pay its obligation. Various models have been adopted to predict risk like Altman Z score (1966) and debt to equity ratio. According to Wang & Lin (2010) who stated that debts and default risk has strong link to one another, because low default risk firms can easily approach to debts while high default risk firms has low access to debts (Grenadier ,1997).They also noticed that the firms with high foreign ownership stake will have high probability to increase ERC. Contrary to this, Gurbuz & Aybrs (2010) who argued that foreign investors have negligible stake apart from good returns to induce the corporate governance facets to affect the default risk and ERC relationship. In this study, percentage of shares held by the foreigners in the companies is taken proxy of foreign ownership.

Shleifer and Vishny(1997) argued that if directors have higher percentage of share, then it will positively monitor and evaluate all the activities of managers which will ultimately enhance the shareholders wealth and firm value. Yermack (1996) also investigated a study to find out the factors which can raise the firm value, so he targeted 453 large US Companies and used Tobin Q as a valuation model. After statistical analysis he concluded that officers and directors who have higher percentage of share are positively associated to maximize the firm value. Contrary to this argument, Faccio and lange (2000) conducted a study and argued that those firms where large director ownership exist may leads the chances of expropriation where overall effect of expropriation exacerbate the agency problem and reduce the market. So this statement shows that director ownership does not significantly effect the earning response coefficient (ERC).

Investors need information before making any investment decision and financial reports of the company is best tool to analyze and evaluate the financial position and performance of the company. Shah (2016) conducted a study in non-financial sectors of Pakistan and found that profit is considered an important elements which assess the performance of the entity as a whole, moreover he also investigated that investors make their investment decision on the basis of profit information which mean that a close association exist between profit/ return of company stocks and stock prices will raises as the earning of stocks increases and vice versa. So the relationship between earning profit and investors' response is termed as earning response coefficient.

Earning response coefficient (ERC) is the combination of two proxies i.e accounting earning and stock price proxy. Schultz (2005) says that CAR (Cumulative Abnormal Return) is the proxy of stock price while EU (Unexpected Earning) is the proxy of accounting earning.

The capital market researchers have consistently found the four significant determinants of earning response coefficient (ERC) including beta, growth, earnings persistence and size (Bernard and Ruland, 1987; Collins and Kothari, 1989; Kai, 2002; Cheng and Nasir, 2010, Zakaria et al, 2013).

Shleifer and Vishny(1986) argued that if company directors (company Ownership) have higher percentage of share, then it will positively monitor and evaluate all the activities of managers which will ultimately enhance the shareholders wealth and firm value. Yermack (1996) also investigated a study to find out the factors which can raise the firm value, so he targeted 453 large US Companies and used Tobin Q as a valuation model. After statistical analysis he concluded that officers and company directors who have

higher percentage of share are positively associated to maximize the firm value. Contrary to this argument, Faccio and lange (2000) conducted a study and argued that those firms where large director ownership (company ownership) exist may leads the chances of expropriation where overall effect of expropriation exacerbate the agency problem and reduce the market. So this statement shows that director ownership does not significantly effect the earning response coefficient (ERC).

Literature Review

Default Risk and ERC

When the company becomes unable to pay its debts/liabilities to the creditors is termed as default risk. Vassalou and Xing (2008) argued that those firms whose assets become less than its liabilities/debts obligation, such firms are considered in default risk. The Dhaliwal, Lee and Farghar (1999) conducted a study to find the effect of financial leverage on ERC. They concluded from their results that there exist negative relationship between ERC ` and debt ratio. Dhaliwal and Reynolds (1996) also investigated the relationship between ERC and default risk of debts while taking accounting earning and stock return as proxies of ERC. Their results suggested that negative and significant relation exist between ERC and default risk of debts.. Similarly, Cho and Jang (1996)also conducted a study to show the relationship between default risk of debts and growth opportunities. They concluded from their results that low growth and high debts ratio is negatively related to ERC.

Director Ownership (Company ownership)

Director ownership plays a significant role to protect the investor's interest. According to Shleifer &Vishny (1997) who argued that board having greater ownership can better monitors and evaluate all the activities of firms which will ultimately enhance the earning response coefficient (ERC) and firm performance. John et al, (2008) says that large board ownership has the advantage of multi industrial and professional skills which will prefers to follow low risk strategies. Moreover, board having large numbers of ownership has the responsibility to own the company and also to increase the firm value. Bhagat and Bolton (2008) stated that all the important decision of corporation related to investment and compensation depend on corporate board. Finally they concluded that as well as the ownership of board members is increasing, it will also increase the return of the assets. Similarly, yermack (1996) conducted a study to find out that how a firm can maximize their value. He collected data of 453 large firms of USA while using Tobin Q Model as a value maximization model. The result showed that higher the percentage of board ownership, greater will be the firm value and performance. So all these statements shows that higher percentage of board ownership plays a significant role to enhance firm value and earning response coefficient (ERC).

Faccio and lange(2000) conducted a study and argued that those firms where large directors ownership exist may leads the chances of expropriation where overall effect of expropriation exacerbate the agency problem and reduce the market value. So this statement shows that director ownership does not significantly effect the earning response coefficient (ERC). Shleifer and vishny(1997) also documented that agency problem mostly causes due to large director ownership because they ignore the importance and

involving of minorities shareholders in most of their decision making which may leads to agency problem and organization become unable to outperform in the market.

Earning Response Coefficient

Earning profit, which is regarded by the corporation as a whole, is the most important component of company success. Ball and Brown (1969) conducted research and found that, on the basis of benefit knowledge, investors make investment decisions. It was noted that the price and return of the company's share price are closely related to each other, which indicates that stock return and share prices are directly proportionate. The investment decision depending on account benefit is shown by ERC and investors try their best

Beta:

A study carried out by Collins and Kothari (1990) showed that beta is an essential variable and is regarded as a measure of systemic risk. They have used reverse regression and showed that beta and ERC have a negative and meaningful relationship. In addition , the study of Collin and Kothari (1990) was expended by Huson, Scott and Wiere (2000) and argued that there is a negative relationship between beta and ERC, implying that as beta increases, ERC will decrease and vice versa.

Growth:

Profit is directly linked to growth opportunities and ERC, Collins and Khotari (1999) argued, as profit data is the most desirable investor factor that will inevitably increase growth opportunities and ERC. This shows that the earnings statement and the ERC are closely related to each other. On the other hand, one assumption is that benefits and growth opportunities are not interrelated and therefore have little impact on the improvement of ERC (Palupi, 2006).

Earning Persistence

The most important factor of ERC is earning persistence which indicates that how long the earning will remain consistent and persistence in the coming future. Previous researchers (Kormendi and Lipe, 1987; Collins and Kothari, 1990; Lip, 1991 investigated and concluded that stock return and earning persistence are associated with one another, if stock return remain constant for long time so earning persistence will also persist in future. This shows that ERC and earning persistence are positively related to one another.

Firm size

Brigham and Houston (2012) argued that size of a firm indicates that how much one firm is larger than the other and for this purpose size of the firm is classified on the basis of total income, total capital and total assets of the firms. Its general perception that big companies share information on company site and investors can easily interpret this shared information and decrease the uncertainty of future cash flow of the companies. This indicates that those companies who are big in size will have higher ERC (Naimah and Siddhartha, 2006).

H1: A negative and significant relationship exists betweenDefault risk and ERC.

H0:A negative and significant relationship does not exist betweenDefault risk and ERC.

H2: Company Ownership (Director Ownership) effect positively and significantly the relationship between default risk and Earning Response Coefficient (ERC).

H0: Company Ownership (Director Ownership) does not effect positively and significantly the relationship between default risk and Earning Response Coefficient (ERC).

Research Methodology

Study Period and Sample Selection:

Population of the study is non-financial firms listed in Pakistan Stock Exchange (PSX). The sample size of the study is 250 firms selected through purposive sample technique from the period 2008-2015. Annual reports, balance sheet analysis and companies own site used as a source of gathering the required data of the firms.

Statistical Tools for Data Analysis

Various statistical tools has been used to passed the gathered data for statistical analysis

Model Specification:

$UR = ERC* (UX/P)$

The ERC is represented through different variables i.e x1.x2……xn which truly denote ERC

Then

UR = (x1, x2… xn) $* (UX/P)$

In UR regression, the Coefficient Xi*(UX/P) on {Xi*(UX/P) is basically displays the outcome of XI on ERC. In this model reverse regression will be used for estimation purpose as a substitute of direct regression because of measurement error in UR (Collins & Kothari, 1989). The {Xi} effect is tested through regression on the basis of following technique.

UX/P = [1/ (x1,x2, …. , xn)]$/UR$

The above stated equation shows the regression equation.

$UX/P = a0 + a1\ UR + a2\ UR*X1 + a3UR*X2 + … + an+1UR*Xn + \varepsilon$

The ERC turn to RRC (Return response coefficient) by applying reverse regression. Its means that the statistical results will react reverse.

The effect of Xi on ERC is due to the coefficient {Xi} as it's discussed earlier, so the variable {Xi} and to check the effect of Beta, firm Size, Earning Persistence and Growth, regression analysis will be used. Hypothesis 1, a negative and significant relation exists between default risk and ERC. In the set of{Xi}the measure of default risk has been used in equation. The equation after this is as under.

$$UX/P = a0 + a1UR + a2UR*DER + a3UR*BETA + a4UR*GRWTH + a5UR*EPRS + a6UR*SZ + \varepsilon$$

The default risk will show negative effect on ERC when a^2>0 while controlling ERC determinants. Hypothesis 2, Company Ownership (Director Ownership) mitigates the relationship between default risk and ERC. The following regression expression will be formed by adding the audit committee interaction with UR*DER.

$$UX/P = a0 + a1UR + a2UR*DER + a3UR*DER*\text{ DO} + a4UR*BETA + a5UR*GROWTH + a6UR*EPERS + a7UR*SIZE + \varepsilon$$

Therefore, when the sign $a\hat{}\ 3 < 0$ and significant will indicate that Company ownership (Director Ownership) (DO) mitigates the consequence of default risk on ERC.

Measurement of Variables:

Unexpected Earnings:

The unexpected earnings may be define as the EPS of current year minus previous year EPS.

Unexpected Return:

The proxy of unexpected return (UR) is Cumulative Abnormal Return (CAR) which is obtained from firms annual reports. The change between real and predictable return is termed as Abnormal return while estimation of expected return of a firm is obtain through sharp market model (1963).

Data Analysis

Descriptive Statistics

The sample size of this study consists of 250 non-financial companies listed on Pakistan Stock Exchange (PSX). The secondary data of these companies have been collected from their websites and official document issued by the State Bank of Pakistan namely the "Financial Statement Analysis". Initially there were 2000 observations but outliers were found which were dropped through the statistical tests i.e. Winsorization and Cook's Distance test and finally 1697 observations were left which were used to estimate the results.

Table 1: Descriptive Statistic of Default Risk, Company Ownership (Director Ownership) and Earning Response Coefficient.

Variable	Obs	Mean	Std. Dev	Min.	Max
UXP	1696	0.16853	1.42202	-4.4595	9.36208
Beta	1697	0.5916	0.47862	-0.1684	1.90629
SZ	1697	15.1934	1.56921	11.3189	19.2532
GRTH	1697	0.90628	0.94755	-1.8798	4.91669
EPRS	1697	2.69677	9.35632	-34.972	34.6436
CAR	1697	0.06011	0.61847	-1.1231	4.40488
DER	1697	3.27814	1.20198	-4.298	6.53683
DO	1697	0.29306	0.27181	0.00012	0.93639

The table shows that the mean value of Uxp (Unexpected Earnings to Price) is 0.16853 and standard deviation is 1.42202. Similarly, beta mean value is 0.5961 which is almost half of the market beta value of 1.0. This implies that selected companies in the sample are not financially geared substantially and the same companies have on average low level of systematic risk in comparison to the entire market. The standard deviation of beta is 0.47862 which highlights low dispersion in the distribution of beta values. The mean value of firm size is 15.1934 and standard deviation is 1.56921. Similarly, the mean value of firm growth is 0.90628 which is favorable as the market is willing to pay on average high price for the selected companies' stock due to the high growth potential. The average value of earnings persistence is 2.69677 and its standard deviation is 9.35632. The mean value of CAR is 0.06011 and its standard deviation is 0.61847.Similarly, the mean value of DER (Default Risk) is 3.27814 which is moderate in comparison to minimum and maximum values given in the table. This suggests that comparatively, the sample companies on the average have moderate exposure to the default risk. The value of 3.27814 also depicts that Pakistani Companies on the average have almost half level of debt financing than the equity financing. Finally, the mean value of DO (Directors' Ownership) is 0.29306 which indicates that on average there is 29.31% director ownership (Company Ownership) in the selected companies in comparison to the lowest and highest values of 0 and 93% respectively.

Correlation analysis:

To evaluate all the variables of the sample, correlation analysis was performed. Among all the variables in the table, the Pearson correlation coefficient is shown.

The power of linear relationship between two variables is represented as the pearson correlation. The following table shows that default risk (DR), Director Ownership (Company ownership), beta, growth (grth), size (sz), cumulative abnormal return (car) and persistence of earning (eprs) are significantly associated with the unforeseen earning to price (UX / P) ratio.

The table of correlation indicates that there is no serious issue of multicollinearity amongst all the independent variables because none of the pearson coefficient exceeds 0.7.

Table 2: Correlation Analysis

	Uxp	DO	Beta	Grth	Sz	Car	Eprs	Der
Uxp	1							
DO	0.045*	1						
Beta	0.027	-0.018	1					
Grth	-0.04	-0.035	0.028	1				
Sz	-0.056*	-0.008	0.199**	0.199	1			
Car	0.045	-0.017	0.116**	-0.0173	0.0447	1		
Eprs	-0.33**	0.059**	-0.160**	-0.091**	-0.311**	-0.13	1	
Der	0.021	-0.026	0.058	0.203**	0.105**	-.008	0.05	1

*. Correlation is significant at the 0.05 level (2-tailed)

**. Correlation is significant at the 0.01 level (2-tailed

Ordinary Least Square (OLS) Assumptions

Before performing the regression analysis, OLS assumptions have been checked. The first assumption was to test that whether data is normally distributed or not. In this regard, Wensorization and Cook's Distance test were used after which outliers were dropped and then the normality assumption was tested through the Shapiro-Wilk test. Another problem was multicollinearity which was also needed to be addressed. To check the multicollinearity, Variance Inflation Factor (VIF) test has been used which showed that there is no serious issue of multicollinearity amongst the explanatory variables as all the test values are less than critical the value of 10 (Gujrati& Porter, 2009). The VIF values are provided in the respective tables given below. In panel data analysis one of the main problems is heteroskedasticity which was tested through the Breusch-Pagan / Cook Weisberg test for heteroskedasticity. The test results show that the pertinent p-values are 0.05 which showed existence of heteroskedasticity in the data. To tackle this issue, the robust standard error was used. To check the autocorrelation, Durbin Watson test was used. As a rule of thumb, the values between 1.5 and 2.5 are relatively acceptable (Haluk & Kettaneh, 2011). There is no serious autocorrelation as test value are in the range (1.5-2.5) given below in the table of econometric models. Moreover, Hausman Test was used to select random or fixed effects model, the test results indicated that fixed effects model (FEM) is the most appropriate model which was used to run the econometrics models / equations.

Now to find out the effect of Default Risk on ERC and Moderating effect of Director Ownership (Company Ownership) in the relationship between these two variables and regression equation are as follow.

$$UXit/Pit = \alpha 0 + a1CARit + a2CAR*BETAit + a3CAR*GRTHit + a4CAR*EPRSit + a5CAR*SZit + \text{Year fixed effect} + \varepsilon it \quad (1)$$

$$UXit/Pit = \alpha 0 + a1CARit + \mathbf{a2CAR*DERit} + f(\text{control variables}) + \varepsilon it \quad (2)$$

$$UXit/Pit = \alpha 0 + a1CARit + a2CAR*\mathbf{DERit + a3CAR*DER*DOit} + f(\text{control variables}) + \varepsilon it \quad (3)$$

Equation consisted of ERC Determinants

UXit/Pit = α0 + a1CARit + a2CAR*BETAit+ a3CAR*GRTHit+ a4CAR*EPRSit+ a5CAR*SZit + Year fixed effect + εit (1)

Table 3: Dependent Variable UX/P

Pool OLS Regression DV=UX/P			Robust Pool		RE		FE		
Variables	**beta**	**P-value**	**beta**	**P-value**	**beta**	**P-value**	**beta**	**P-value**	**VIF**
Car	2.1594	0.0000	2.1594	0.0010	2.1594	0.0000	1.9078	0.0000	1.20
Carbeta	0.3644	0.0000	0.3644	0.0640	0.3644	0.0000	0.3155	0.0020	3.14
Cargrth	- 0.0959	0.0400	-0.0959	0.2070	-0.0959	0.0600	-0.0974	0.0500	2.57
Careprs	- 0.0192	0.0000	-0.0192	0.0200	-0.0192	0.0000	-0.0201	0.0010	1.15
Carsz	-0.1410	0.0000	-0.1410	0.0010	-0.1410	0.0000	-0.1221	0.0000	1.34
_cons	0.1466	0.0100	0.1466	0.0000	0.1466	0.0000	0.1469	0.0000	
R2	**0.0342**		**0.0342**		**0.0342**		**0.0337**		
Adjusted R2	0.0308								
F-value	9.9700		3.2500		59.8500		7.8100		
P-value	0.0000		0.0035		0.0000		0.0000		
Lamgre					0.0000	1.000			
Hausman test							5.74 (0.04525)		
Breusch – Pagan							2.39 (0.53)		
Shapiro-Wilk							1.66 (0.78)		
Durbin Watson							2.175		

The table above shows CAR's interaction with Beta when the Fixed Effect Model is being used. All expectations of multiple regressions are met, as can be seen from the respective test values. The result is that the CAR interaction and the Beta coefficient are positively and significantly interlinked, indicating that the reverse regression relationship between Beta and ERC is negative and significant. These findings are comparable to previous studies (Zakaria, 2013; Dhaliwal et al., 1991; Billings, 1999; and Shangguan, 2007), which have also found that Beta has a negative relationship with ERC. Similarly , the relationship between CAR's interaction and company growth is negative and important, which suggests that ERC is strongly and positively linked to company growth. Such findings are close to other related research (Zakaria, 2013; Collins and Kothari, 1989; Booth, Martikainen and Tse, 1997; Billings, 1999; Shangguan, 2007). The findings also show that the persistence of CAR and earnings are strongly and negatively linked to each other, suggesting that the persistence of earnings and ERC have a positive and meaningful relationship with each other. These findings are comparable to other similar studies (Zakaria, 2013; Collins and Kothari, 1989; Kormendi and Lipe, 1987; and Dhaliwal and Reynolds, 1994). Their relationship is also negative and important with regard to CAR and company size, which suggests that the company size has a positive and significant relationship with ERC. Billings (1999) and Vafeas (2000) are compatible with these findings. On the other hand, however, both Martikainen (1997) found that there is no association between the size of

the company and the ERC, which means that the ERC would remain the same for large and small companies. Shangguan (2007) argued, however, that the company size and the ERC have a positive relationship with each other, which means that the big company size ERC would be strong and vice versa.

Results of the ERC determinants with default risk (DER)

$$UXit/Pit = \alpha 0 + a1CARit + \mathbf{a2CAR*DRit} + f(\text{control variables}) + \varepsilon it \quad (2)$$

Table 4: Dependent Variable UX/P

Pool OLS Regression DV=UX/P			Robust Pool		RE		FE		
Variables	**beta**	**P-value**	**beta**	**P-value**	**beta**	**P-value**	**beta**	**P-value**	**VIF**
Car	0.069	0.110	0.069	0.342	0.069	0.109	0.076	0.098	1.36
Carder	0.151	0.004	0.135	0.163	0.135	0.004	0.112	0.032	1.34
Beta	0.211	0.003	0.211	0.028	0.211	0.003	0.148	0.013	1.11
Grth	-0.120	0.001	-0.120	0.001	-0.120	0.001	-0.023	0.057	1.08
Eprs	-0.054	0.000	-0.054	0.000	-0.054	0.000	-0.064	0.000	1.05
sz	-0.084	0.000	-0.084	0.000	-0.084	0.000	-0.577	0.000	1.16
Cons	1.565	0.000	1.565	0.000	1.565	0.000	9.212	0.000	
R2	**0.133**		**0.133**		**0.133**		**0.058**		
Adjusted R2	0.130								
F-value	43.270		28.170		259.600		49.990		
P-value	0.000		0.000		0.000		0.000		
Lamgre					0.000	1.000			
Hausman test							62.84(0.000)		
Breusch-pagan							1.24 (0.24)		
Swilk							1.54 (0.30)		
Durbin Watson							2.237		

The Fixed Effects Model has been used in the table above to illustrate the impact of Default Risk (DER) on ERC. Again, the test values illustrate that multiple regression assumptions are not violated. The results show that the interaction between CAR and Default Risk has a positive and significant relationship, but according to reverse regression, the relationship between Default Risk and ERC is negative and significant. The results of the determinants of the ERC (firm growth, business size and persistence of earnings) are positive and significant, with the exception of beta, for which the outcome is negative and significant. Previous studies (Zakaria, 2013;.Nasir,.2010; Shangguan,.2007;.Dhaliwal et al . , 1992; Dhaliwal and Reynold, 1995) have also found similar Default Risk (DER), ERC and ERC determinant performance. The relationship between default risk and ERC is found to be negative and important, according to the outcome, which means that the rise in default risk would cause ERC to decline. The results thus support the H1 hypothesis: default risk has a negative and significant ERC relationship.

Effect of Director Ownership (Company Ownership) on Earning Response Coefficient (ERC)

$$UXit/Pit = \alpha 0 + a1CARit + a2CAR*\mathbf{DERit + a3CAR*DER*DOit} + f(\text{control variables}) + \varepsilon it \quad (3)$$

Table 4: Dependent Variable UX/P

Pool OLS Regression DV=UX/P			Robust Pool		RE		FE		
Variables	**beta**	**P-value**	**beta**	**P-value**	**beta**	**P-value**	**beta**	**P-value**	**VIF**
Car	0.0730	0.0910	0.0730	0.3190	0.0730	0.0910	0.0746	0.1100	1.38
Cardrdo	0.1494	0.0387	0.1494	0.0618	0.1494	0.0387	0.0522	0.0379	4.10
Beta	0.2082	0.0030	0.2082	0.0310	0.2082	0.0030	0.1467	0.0319	1.11
Grth	-0.1215	0.0010	-0.1215	0.0010	-0.1215	0.0010	-0.0225	0.0580	1.08
Eprs	-0.0536	0.0000	-0.0537	0.0000	-0.0537	0.0000	-0.0642	0.0000	1.05
Sz	-0.0821	0.0000	-0.0821	0.0000	-0.0821	0.0000	-0.5786	0.0000	1.16
R2	**0.1336**		**0.1336**		**0.1336**		**0.0575**		
Adjusted R2	0.1300								
F-value	37.1900		24.0800		260.3100		42.8300		
P-value	0.0000		0.0000		0.0000		0.0000		
Lamgre					0.0000	1.0000			
Hausman test							69.41(0.000)		
Breusch-pagan							2.53 (0.71)		
Swilk							0.65 (0.81)		
Durbin Watson							2.319		

Table 4 shows the regression results of Director Ownership and ERC. The test values depict that there is no violation of assumptions of multiple regression. After statistical results the above table presents that the coefficient of interaction term of CAR and director ownership is found negative and significant which mean (referring to reverse regression) that the interaction of coefficient of CAR with director ownership has negative and significant relationship with default risk and ERC. Therefore, we cannot accept Hypothesis H2: A significant relationship exists between higher percentage of director ownership and earning response coefficient (ERC).

Conclusion

This study examined the impact of Company ownership and its effects on the relationship between default risk and earnings response coefficient, while controlling all the ERC determinants. The result of the study explore that a negative and significant association exists between beta and ERC, while other determinants of ERC i.e. growth, size and earning persistence are significantly and positively interlinked with ERC. The results also highlighted that default risk has a significant and negative impact on ERC. According to second hypothesis, the firms having greater numbers of director ownership would not decrease the negative relationship between default risk and ERC. Moreover, the agency problem mostly causes due to large director ownership because they ignore the importance and involving of minorities shareholders in important decision making which may leads to agency problem and organization become

unable to outperform in the market. This research is beneficial for those researchers who conduct their research in capital market and see the mitigating role of corporate governance variables on default risk and ERC determinants.

Recommendations and suggestions for future researchers

In future, it's need of time to pursue similar studies in emerging economies. Moreover, Researchers should include maximum enlisted firms and also increase the span of time. It's also suggestions to include more key variables of corporate governance. This study has great importance and literature contribution because such nature of study has not been conducted prior an emerging economy of Pakistan ,moreover this study is great motivation for other emerging economies to pursue similar studies in their countries that how much their capital market fluctuate and what are the reaction of investors in such uncertain environment.

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