

Impact of Market Risk on Credit Risk of Subsequent Period in Manufacturing Sector of Pakistan

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Abstract *Firm's business activities are focused on profit making. The cultural, technological, organizational, financial and operational challenges followed by different risks like market or credit risks make it difficult for firms to focus on their sole aim of earning profit. Previous studies have highlighted that market risk and credit risks have a significant influence on firm's performance. However, prediction of credit risk from market risk has not been explored in Pakistan which this paper attempts by investigating the impact of market risk on credit risk of the following period. For this study, a panel data of 30 manufacturing firms was collected through random sampling technique from period 2005 to 2016. A regression model was estimated in Generalized Method of Moments and used a Hausman test to select fixed or random effects. Results of this study show that firms have 30% more current liabilities as compared to current assets and experience volatility in stock prices which increases the credit risks. However, research findings shows that firms have reasonable growth opportunities and profitability they can be used to reduce stock volatility and attain confidence of creditors in firms. The increase in leverage due to creditor's confidence in firm indicates a decrease in credit risk. Overall the study shows the significantly negative impact of market risk on credit risk of the subsequent time period which specifies market risk may foresee credit risk of the following period and gives a new understanding for investors and policymakers to curb risks in investment decisions.*

Key Words:

Market Risk,
Credit Risk,
Pakistan Stock
Exchange,
Financial
Statements

Introduction

Investors and shareholders want maximum stock returns on their investment, which itself is dependent on market risk (Gonenc & Karan, 2003). According to

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the statistics of Pakistan Stock Exchange, on average annually 12 listed companies were bankrupted during the last thirteen years. The average paid up capital of these firms was Rs.3,835 million which is a considerable amount. The bankruptcy of firms indicates that market risk alone is not enough information for investors to make investments decisions in companies, so investors have to consider the risk of default too while making their investment decisions. They are primarily concerned with maximum return on their investments, hence making them sensitive to the credibility of the firm. It has been observed that investors often hesitate to invest in a firm which has high credit risk as compared to the firm having low credit risk. They considered the market risk for investment decisions, and at the same time, they are sensitive to the probability of default. As per our knowledge, researchers have not studied this relationship in the context of Pakistan, so there is a need to carry out this study. Here questions arise, whether there is any relationship between market risk and credit risk? Are market risk and credit risk both important for stakeholders? In this study, we expect that market risk of current year contributes in the explanation of credit risk of the subsequent year.

According to the Capital Asset Pricing Model, there is a progressive relationship among reward and risk. Alternatively, firms having debts in capital structure show the mixed relationship between reward and risk. Market risk is measured by volatility in stock return. The volatility in stock return means the amount of change in stock prices. The volatility is directly affected by the sensitivity of news relating to firms (Koet al., 1995). Firms having higher volatility are considered risky firms and such firms are more sensitive to news about the firm's earnings.

On the other hand, firms having lower stock volatility are considered less risky firms and such firms are comparatively less sensitive to news about the firm's earnings. Chava and Purnanandam (2010) identified a progressive affiliation amongst stock earnings and credit risk. Abad-Gonzalez et al. (2017) indicated that an increase in the capital structure of the bank, there is an increase in profitability and restraining credit risk. In Pakistan, stock volatility has been studied with dividend and growth of assets and researches on credit risk were focused on banking sectors. The association among market threat and credit jeopardy has been ignored as per the researcher's knowledge.

The study has used a random sample of 30 manufacturing firms for the period from 2005 to 2016. The regression equation is estimated in GMM. The results highlight that the market risk of the current period has noteworthy adverse association with credit risk of following time.

The Significance of the Study

The present study is significant because firstly, it adds to the prevailing works on market menace and credit jeopardy. Secondly, the study aims to find a relationship

between market menace and credit jeopardy in the Pakistan context. Thirdly, the results provide useful information for stakeholders in assessing a firm's risks for investment decisions.

The left over sections of present paper are systematized as follows; Section two illustrates literature review and hypotheses. Section three explains the design of the research. Section four discusses the regression results. Section five gives a conclusion and recommendations for further studies.

Literature Review

Companies face a different kind of risks in business. The present study focuses on market risks and credit risks only. Bharath et al. (2008) investigated debtor's choice for bank loan and bondholders considering variation accounting quality (termed as the risk of information). The bank loans are linked with the rate of interest or mark up, maturity period and collaterals. On the other hand, equity financing is linked with the rate of interest only. The researchers argued that firms are having comparatively weak accounting quality face strict observations while issuing loans to such firms. However, in the case of equity financing accounting quality only affects interest cost. Since accounting quality has a relationship with estimating cash flows of the future period, so information risk (accounting quality) is linked with the credit risk of the firm.

The investors assume that higher risk means higher earnings. The Capital Asset Pricing Model describes the relationship between stock earnings and risks. Merton (1974) highlighted that CAPM does not contain risk caused by the probability of default. The literature shows the mixed relationship between credit risk and stock earnings. Chava and Purnanandam (2010) identified progressive association among stock earnings and credit risk. Avramov et al. (2009) illustrated that abnormal fluctuation in stock earnings contradicts with CAPM as firms do not receive an extra premium for credit jeopardy. The adverse association among stock returns and credit jeopardy indicates that firms with lower credit risk also earn a high return on stocks.

Dichev (1998) argued that credit risk (distress of firm) should have a positive relationship with stock return. However, he found negative association among credit jeopardy and return on the stock. The researcher found that companies having higher credit risk earned less than average stock returns. Likewise, Friewald et al. (2014) also found a adverse association among stock earnings and credit jeopardy. Griffin and Lemmon (2002) estimated that stock return and credit risk might be bias because of the presence of growth chances of firms. George and Hwang (2010) found that firms with smaller debts have higher credit risk in financial distress as compared to firms with higher level of debts.

The literature on credit risk and return on the stock is based on two broad opinions. The first opinion is that firms are under financial distress because they

may be not in a condition to return their financial liabilities to creditors or investors. Now under this financial distress and credit risk, companies have the capability to earn higher stock returns. This argument indicates a positive relation among credit jeopardy and stock earnings. The second opinion argues that firms with great credit jeopardy may not be in a position to earn a high return. This opinion indicates the negative relationship among variables credit risk and returns on stocks. Yousuf and Felfodi (2018) argued found negative relationship between credit risk and profitability in banking firms. Lei et al (2018) explored impact of credit risk on liquidity management. The researchers found firms with credit risk have to face strict terms and conditions, short maturity of loans or pledging conditions. Fontes et al (2018) claimed evaluation of bank assets on fair value decreases asymmetry of information. The asymmetry of information is further decreased knowing own credit risks. Ferris (2018) stressed that stock volatility and incentive of executive are adversely related to each other. When an executive pay is associated with stock prices, an executive with lucrative pay will try to reduce variation in stock prices because it will affect his take home salary. However, an executive with less attractive pay will not pay attention to firm value so cause increase in agency cost.

We expect that stock return is not appropriate to measure for market risk and gives bias results. French et al. (1986) estimated the association among stock return and instability of the stock. The researchers argued that the market menace premium has an affirmative relationship with the volatility of the stock. So we expect volatility of stock explains market risk better as compared to stock returns.

Since investors are interested in maximum profit on their investment, so firms with high stock returns fascinate such investors. But due to present market risk, investors prefer to invest for a short age of time. During one financial year, the prices of stock may increase or decrease due to investment in the firm. One drawback of this speculated investment is that it gives rise in the volatility of stock prices (market risk). High volatility in stock prices (market risk) may severely disable firms to make changes in their capital structure because the change in capital structure requires comparatively consistent cash flow. Since investors are investing only for a short period of time so there is an imbalance in cash flow of firms and firms may face the risk of default. We expect that volatility in stock prices contributes in explanation of credit risk in the following time period. The researchers have forecasted negative relationship among market risk and credit risk.

Volatility in stock prices has many drawbacks. Froot et al. (1992) argued that volatility in stock prices enhance the risk and cost of capital for firms. Likewise, Baiman and Verrecchia (1995) and Jorgensen (1998) identified market risk might lead to less investment and rise in information cost.

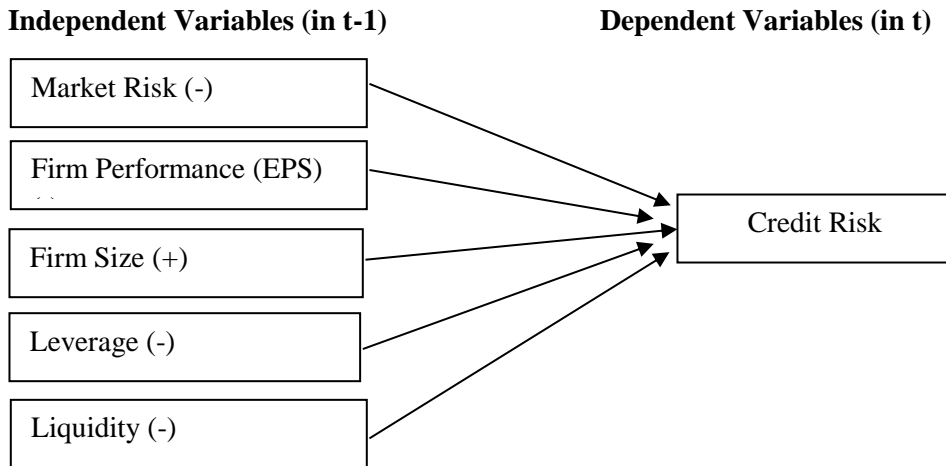
Francis et al. (1994) highlighted that when there is a huge drop in stock prices, firms have to bear the increase in legal cost. The drop in stock prices does not

continue for a more extended period. Patell (1976) identified that when firms inform investors about estimated earnings in the upcoming period, the drop in volatility of stock declines a short period of time (maybe in weeks). Abad-Gonzalez et al. (2017) studied the factors of banking soundness. The results showed that the growth of the economy, increase in interest rate, real estate prices and exchange rate had a noteworthy influence on banking soundness. The results also indicated for the need to increase the capital structure of the bank, increase in profitability and restraining credit risk.

Many studies on stock volatility have been carried out in Pakistan. Tahir (2017) found positively significant investigated association among dividend strategy and instability in stock prices. Asghar et al. (2011) found that dividend yield and stock price instability have a strong positive relationship. However, stock volatility has a sturdy adverse affiliation with the growth of assets of the firm. Nishat and Irfan (unpublished) highlighted that dividend policy (which included dividend revenue and the dividend disbursement ratio) affect stock price instability in Pakistan. Haider et al. (2017) showed the effect of macroeconomic factors volatility on stock volatility. As credit risk is concerned, researchers have focused on banking sectors. As per my knowledge, the association among market menace and credit jeopardy of manufacturing sector has been ignored. Therefore, the present study inspects the connection among market menace and credit jeopardy.

Theoretical Framework

According to the portfolio theory, at a certain level of market risk, investors want to invest capital at the maximum level of expected return which shows the market risk is a portion of expected returns (Markowitz, 1952). The shareholders, as well as investors, expect to earn a profit as much as possible on their investment. Investors and shareholders like to invest in those firms which they believe may earn the highest return in a specific age of time. Conversely, investors and shareholders disinvest from firms that they believe could not be able to earn their expected profit. This investment and disinvestment behaviour of investors gives the impression of insecure firms and as a resultantly causes volatility in the stock of firms. We expect that when firms have high stock volatility (increase in market risk) in period $t-1$, the firms will voluntarily inform forecasted earnings resultantly there is a decrease in stock volatility which causes a decrease in credit risk in a period of time t . Therefore, we expect a negative relationship among variable market risk (stock volatility) and variable credit risk.



The researchers identified firm's performance, size, leverage and liquidity have an influence on credit risks (Lim and Mali, 2018). When the enactment of the firm (which is measured in terms of earnings per share) increases in time t-1, firms pay off loans quickly and resultantly credit risk is decreased. So we expect an adverse association between earning per share and credit jeopardy. As the size of the firm increases, the firm has greater access to debts. The greater access to debts indicates more trust in the firm by investors. Therefore, we expect an affirmative association among the size and credit jeopardy. Due to the growth of the economy, firms see profitable opportunities in the market, so firms obtain more loans to benefit from growth opportunities. As leverage of firm increases, the firms increase their profitability and resultantly reduce or restrain credit risk. So we expect an adverse association of leverage with credit jeopardy. Liquidity is expected to have an adverse connection with credit jeopardy because strong liquidity means more earnings and low credit risk.

Hypothesis

Founded on an evaluation of the literature and theoretical framework following hypotheses were conceptualized:

H₁: Market risk has an adverse connection with Credit Risk.

H₂: Performance (EPS) of the firm has an adverse connection with Credit Risk.

H₃: Size has a positive relationship with Credit Risk.

H₄: Leverage of a firm has an adverse connotation with Credit Risk.

H₅: Liquidity of a firm has an adverse connection with Credit Risk.

Research Methodology

Research methodology is the procedure used to answer research questions. Present study applied one industry design and non-contrived setting. Furthermore, regression analysis was used to check the hypotheses.

Data Collection

The manufacturing sector of Pakistan is the target population in this study. Using probability sampling design, a random sample data is serene from the annual reports of 30 manufacturing firms registered on Pakistan Stock Exchange. The panel data is collected for 12 years' period starting from June 2005 to June 2016. Data collection was subject to certain conditions like companies from financial sectors are not included, only those firms are considered whose data is available for all the years.

Variables of Study and Their Measurements

Independent Variables

The independent variables of study are

Market Risk (Stock Volatility). The market risk is measured by stock volatility of the firm. In the first step, researchers estimate the monthly standard deviation of the stock value of the firm. That was then transformed into the annualized stock instability by multiplying it with the square root of an average number of trading days per annum. High stock volatility of firm means risky firm and low stock volatility of firm means comparatively safer firm.

Performance of Firm (EPS). Various ratios like return on equity, return on asset, earning per share have been used in researches to check the performance of the firm. In this regard, earnings per share (EPS) are applied to measure the performance of the firm. Earnings per share are calculated by the ratio of net profit divided by outstanding shares.

Size of Firm (SIZE). Large size firms have a more easy approach to the capital market. The study took the natural logarithm of total assets to measure size.

Leverage (LEV). The leverage of the firm is measured by the ratio of total debts to total assets.

Liquidity (LIQ). Liquidity is measured by the ratio of current assets to current liabilities.

Loss (LOSS). The loss is a pretend variable. The loss is equal to 1 if the net

income of the firm has a negative value and 0 otherwise.

Dependent Variable

Credit Risk (CR). Credit risk is the dependent variable. It is measured by using the Altman Z-Score Model.

$$Z\text{-Score} = 1.2X1 + 1.4X2 + 0.6X3 + 3.3X4 + 1.0X5$$

Where: X1 = Working Capital to Total Assets, X2 = Retained Earnings to Total Assets, X3 = Earnings before Interest and Taxes (EBIT) to Total Assets, X4 = Market Value of Equity to Total Debt, X5 = Sales to Total Assets. If the Z score is greater than 2.99, the company is considered a healthy company. If the Z score is less than 1.81, the company is considered the risky company.

Empirical Model

The model of research paper consists of six independent variables as under: -

$$CR_{i,t} = \alpha_0 + \alpha_1 MR_{i,t-1} + \alpha_2 SIZE_{i,t-1} + \alpha_3 EPS_{i,t-1} + \alpha_4 LEV_{i,t-1} + \alpha_5 LIQ_{i,t-1} + \alpha_6 LOSS + u_{i,t}$$

Where CR is a credit risk, MR is a market risk; SIZE is the size of the firm, EPS is the performance of the firm, LEV is leverage of firm, LIQ is liquidity of firm and LOSS is a dummy variable.

Data Analysis

Normality

The normally distributed variables indicated the reliability of the estimate of results. So as to exam the normality of variables, researchers used the histogram. The histogram of the dependent variable credit risk is revealed in Figure 1 and 2. The figure 1 displays that the distribution of credit risk is not normally distributed. Therefore, the researcher took the log of credit risk to transform the data into a normal distribution. Figure 2 shows the distribution of log of credit risk

Figure: 1

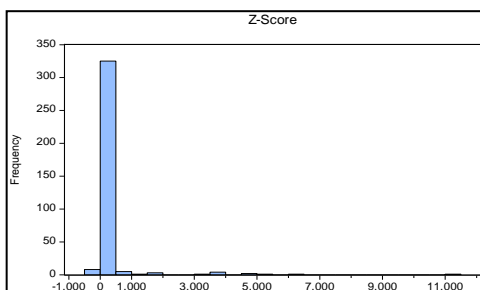


Figure: 2

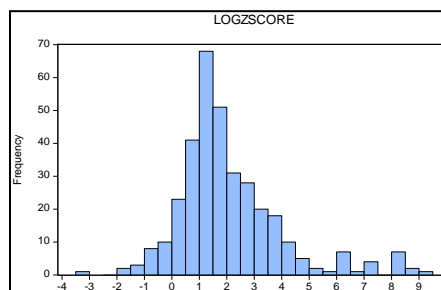


Figure 3 indicates the histogram of market risk (stock volatility). The figure 3 shows that the distribution of market risk is not normally distributed. Hence, a log of market risk is taken to transform it into a normal distribution. Figure4 shows the distribution of log of market risk.

Figure: 3

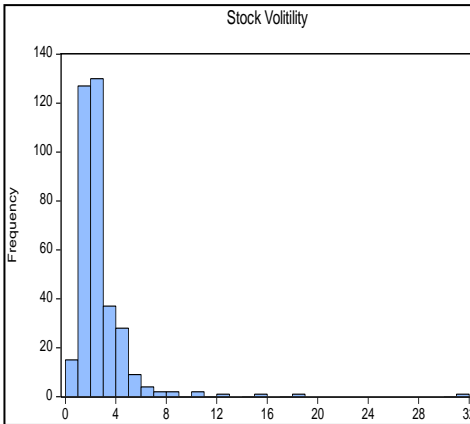
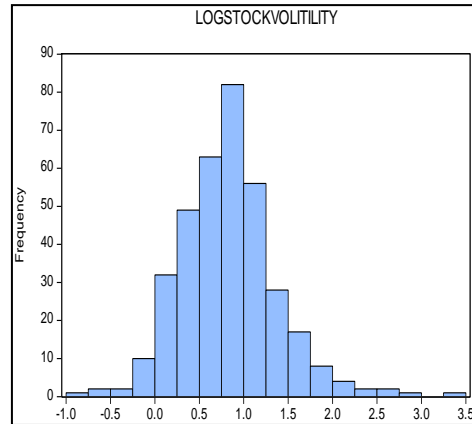
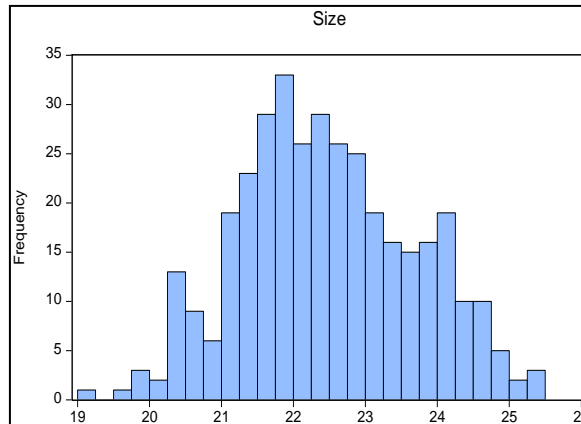


Figure: 4



The histogram of the size of the firm is presented in Figure 5, which shows that the distribution of size is normally distributed.

Figure: 5



The histogram of EPS is given below. The figure 6 shows that the distribution of EPS is not normally distributed. Therefore, a log of EPS is again taken to transform it into a normal distribution. Figure7 shows the distribution of the log of EPS.

Figure: 6

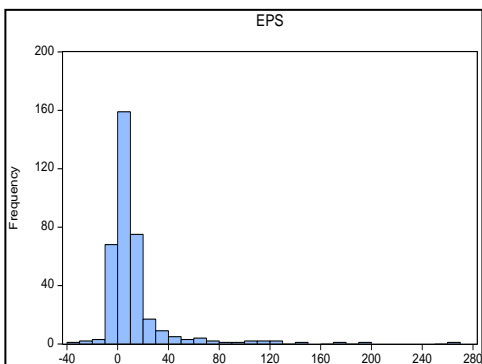
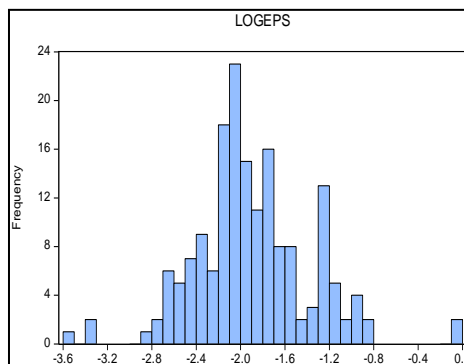


Figure: 7



Same in the case of the histogram of liquidity, the figure 8 shows that the distribution of liquidity is not normally distributed. Figure 9 indicated a normal distribution of liquidity after taking the log.

Figure: 8

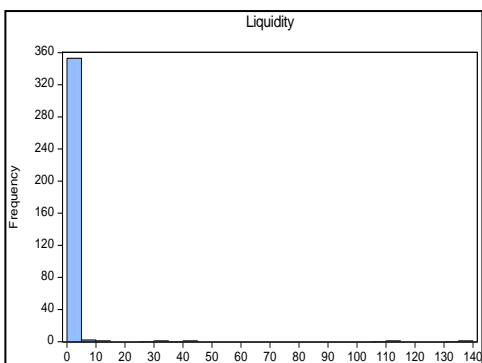
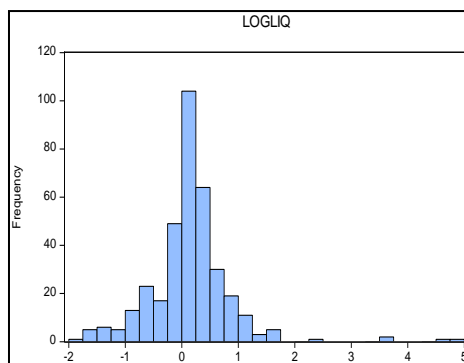


Figure: 9



Scatter Plot

The scatter plot used to check the relationship between variables. It indicates the existence or nonexistence of the linear relationship between variables and also indicates the direction of the variables as positive or negative. The homoscedasticity shows there is uniform variance in variables. If there is no fixed pattern in data, we say there is homogeneity. The scatter plots of market risk and leverage of firm show a strong negative linear relationship with credit risk as shown in figure 10 and 13. However, earnings per share show the weak negative linear relationship in figure 12. Liquidity in figure 14 shows a strong positive linear relationship with credit risk.

Results and Discussion

Descriptive Statistics

Table 1 shows descriptive statistics narrating minimum, maximum, mean and standard deviation of each variable. The first and second columns of table show measures of central tendency that is mean and median. The mean value indicates the average value of the sample variable series. The mean value of credit risk is 1.348. Since the average z score value is less than 1.81 so we can say that manufacturing firms in Pakistan are risky firms on average. The mean value of stock indicates 90% volatility in stock prices of firms in Pakistan. The negative mean values of EPS indicate firm have a loss. The negative mean value of liquidity shows on average firms face liquidity crises and on average are unable to meet their current liabilities with existing current assets. The firm has on average Rs. 478,000/- debts in the capital structure. Median is the central value of sample variable series. The table shows the highest central value is 22.981 of the size of the firm. The smallest central value is 0.018 of liquidity. The third, fourth and fifth columns show measures of dispersion that is maximum, minimum and standard deviation. CR has maximum standard deviation values 1.445. Skewness measures distribution of series of variable around its mean. If the variable has normal distribution it has skewness closer to zero. The table shows stock volatility has highest skewness value of 1.845 and EPS has smallest skewness of 0.321. Kurtosis measures flatness of distribution of variable. If the data has normal distribution, then the kurtosis value is equal to 3. The table shows entirely variables have slightly peaked distribution as compared to normal distribution.

Figure: 10

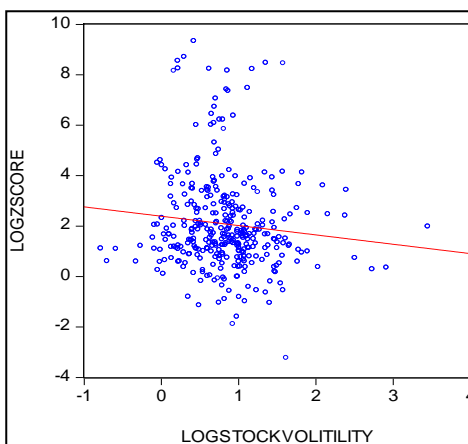


Figure: 11

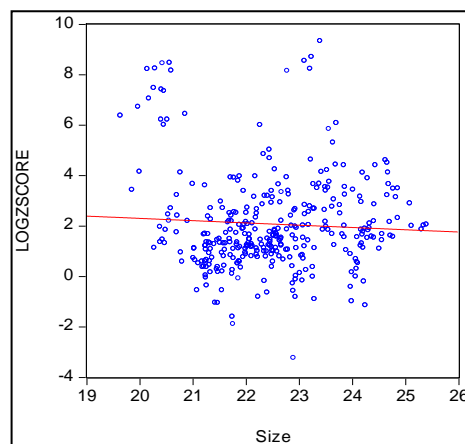


Figure: 12

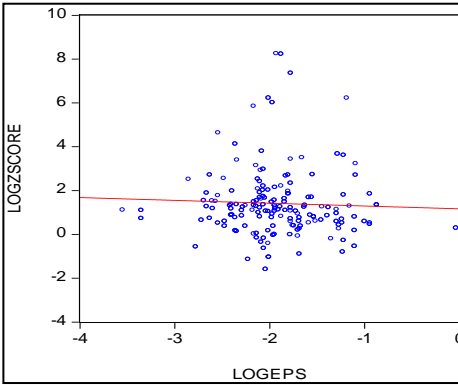


Figure: 13

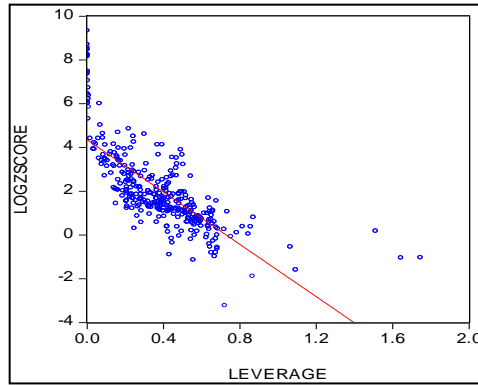


Figure: 12

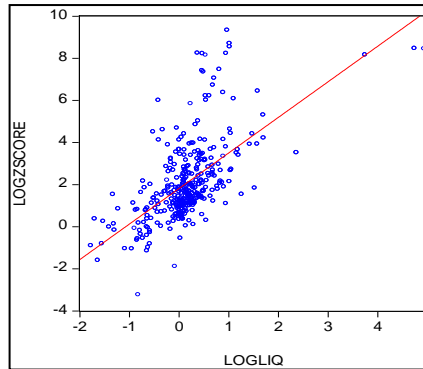


Table 1. Descriptive Statistics

	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis
CR	1.348	1.179	8.252	-1.592	1.445	1.845	8.743
MR	0.909	0.841	3.448	-0.784	0.600	0.582	5.235
SIZE	22.091	21.981	24.502	19.850	1.000	0.361	2.746
EPS	-1.908	-1.962	-0.036	-3.549	0.531	0.321	4.502
LEV	0.478	0.472	1.745	0.001	0.241	1.347	9.025
LIQ	-0.097	0.018	1.260	-1.775	0.574	-0.591	3.668
LOSS	0.329	0.000	1.000	0.000	0.471	0.727	1.528

Correlation of Variables

In order to find correlation between variables of this study, we used Pearson Correlation. The results in table 2 show expected signs. If the correlation coefficient is closer to +1 or -1, the relationship is considered strong. However, in

this study we consider strong relationship among variables if correlation coefficient is greater than 0.70. The relationship is considered moderating if it is 0.50. The relationship is considered weak if it is 0.30. The table shows leverage has strong relationship with credit risk. Earnings per share, loss and liquidity have moderate relationship with credit risk. Market risk has weak relationship with credit risk. However, the results show there is no strong correlation among independent variable hence there is no multicollinearity in sample data.

Table 2. Correlation

	CR	MR	SIZE	EPS	LEV	LIQ	LOSS
CR	1.000						
MR	0.021	1.000					
SIZE	-0.321	-0.032	1.000				
EPS	-0.050	0.295	-0.131	1.000			
LEV	-0.704	0.004	0.140	0.114	1.000		
LIQ	0.543	-0.112	-0.276	-0.087	-0.530	1.000	
LOSS	-0.472	-0.011	0.125	0.135	0.357	-0.321	1.000

Unit Root Test

The stationarity of variables was also tested to examine if the time series of data consists of a unit root (non-stationary). The null proposition is that the variable is not stationary or unit root. The alternate hypothesis is the variable is stationary. The significant level is 5%. There are many unit roots testing methods like Levin, Lin, and Chu; Im, Pesaran and Shin, ADF and PP. In this study, we have used Levin, Lin and Chu method. The statistics of the test are given Table 3. The table shows that p-value of all the variables is less than 5%, so we reject the null hypothesis which means that all of the variables of study are stationary.

Table 3. Stationarity Test (Levin, Lin and Chu)

Variable	Statistic	Prob
Market Risk	-10.2995	0.0000
Firm Performance (EPS)	-2.46936	0.0068
Size	-8.55003	0.0000
Leverage	-7.66464	0.0000
Liquidity	-6.71421	0.0000

Regression Analysis

The study focuses on exploring the relationship concerning market risk and credit risk in case of manufacturing firms of Pakistan. The study includes six independent variables which are market risk, earnings per share, size, leverage, liquidity, and loss (a dummy variable). The model is estimated at 5% level of significance. The regression equation is estimated in E view using GMM. The regression was estimated at fixed and random effects. The hypothesis of the Hausman Test is that the random effect is suitable. The results of the Hausman Test in table 4 indicate the Chi Sq. statistic is 9.16 and the p-value is 0.2413 which is insignificant. The insignificant p-value shows the random effect is not suitable for regression. So we estimated the regression equation considering fixed effects.

Table 4. Correlated Random Effects - Hausman Test

Test Cross-Section Random Effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	9.161459	7	0.2413

The results of the regression are shown in Table 5. The value of R square is 0.872, which indicates that 87% of variation occurs independent variable credit risk with variation in independent variables. The adjusted R square is 0.815 which indicates that 81.5% of variation occurs in credit risk by the independent variables. The Durbin Watson value of regression is 1.530 which indicates there is no autocorrelation present. The J statistic is 14.05 and insignificant which support that instruments of regression are valid.

Table 5. Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	15.3731	12.9445	1.1876	0.2389
MR(-1)	-14.3925	3.5876	-4.0117	0.0001
SIZE(-1)	-0.5691	0.5818	-0.9781	0.3313
EPS(-1)	-0.1691	0.1521	-1.1117	0.2700
LEV(-1)	-2.5207	0.6391	-3.9444	0.0002
LIQ(-1)	0.7008	0.2354	2.9771	0.0040
LOSS	-0.8814	0.1808	-4.8746	0.0000
MR(-1)*SIZE(-1)	0.6405	0.1608	3.9839	0.0002

R-squared	0.872963	Mean dependent var	1.23215	
Adjusted R-squared	0.815707	S.D. dependent var		1.48575
S.E. of regression	0.637822	Sum squared resid		28.884
Durbin-Watson stat	1.530725	J-statistic		14.0499
Instrument rank	40	Prob(J-statistic)		0.0503

Market risk in period t-1 reveals adverse association with credit risk in period t. The relationship is noteworthy at 5% level of significance. The coefficient of market risk is -14.39 and t statistic is -4.01. The result shows when market risk (stock volatility) is increased, the credit risk of the following period is decreased keeping all other variables constant. The results support our hypothesis that during high stock volatility, manufacturing firms in Pakistan instantly float information about their future earnings for investor and stabilize volatility resultantly credit risk is decreased. We assumed as earnings per share of a firm are increased the credit risk is decreased, therefore indicating a adverse relationship among earnings per share and credit jeopardy. Although the results showed negative relationship it is insignificant, so we are not interpreting it. Likewise, we forecasted as the size of firm increases; the firm has greater access in obtaining debts. The greater access indicates more trust in the firm. Therefore, we expected positive connection among the size of firm and credit risk. The results indicate an insignificant negative relationship between the size and credit jeopardy. However, the interaction term of market risk and the size of the firm has statistically significant and positively related to credit risk. Overall size has a affirmative connexion with credit jeopardy which supports our hypothesis regarding size.

We find statistically significant negative affiliation among leverage of firm and credit risk. The coefficient is -2.52 and t statistic is -3.94. The results suggest that an increase in leverage in t-1 causes decrease in credit risk in time t. The result supports our hypothesis. The reason may be that as leverage of firm increases it indicates the trust of investors in earnings of the firm and refers to a decrease in credit risk of the firm. Likewise, we expected that liquidity is expected to have a negative relationship with credit risk because more liquidity means more earnings and low credit risk. However, the result showed a statistically significant progressive association with credit risk. The result is contra to our hypothesis. The reason for a contradiction to our hypothesis may be that although liquidity of firms is increased in time t-1 even then, it is not enough to meet liabilities of time t. Therefore, the credit risk is increased in the subsequent period. Alternatively, the dummy variable LOSS shows a statistically significant negative relationship with

credit risk. The coefficient is -0.88 and t statistics is -4.87. The negative coefficient shows net income instead of net loss of firms.

Conclusion and Recommendations

The study estimates the impact of current period market menace on credit jeopardy of the following time period. The portfolio theory explains market risk is an integral component of higher stock return. The investors and shareholders want maximum returns on their investment which is dependent on market risk. Last thirteen years 'statistics of Pakistan Stock Exchange reveal that 12 listed companies are bankrupted annually in Pakistan. The bankruptcy of a firm indicates market risk alone is not enough information for investment; investors should also consider the risk of default. In this study, we expect that market risk at time t influences or contributes in the explanation of credit risk of following time $t+1$. A panel data of 30 manufacturing firms registered on Pakistan Stock Exchange is collected from annual financial statements for the period from 2005 to 2016. The regression model is estimated in GMM at 5% level of significance. The study confirms market risk explains credit risk of subsequent period among manufacturing firms in Pakistan. The results support our hypothesis and show the statistically significant negative relationship among market menace and credit jeopardy in the following time period. The control variables (EPS, SIZE, LEV, LIQ AND LOSS dummy) were also statistically significant except earnings per share (a proxy of the enactment of firm). Overall the model is statistically significant. Hence from an investment point of view, this study information can be beneficial for investors for making investments in Pakistani firms. The future researchers may take increase sample size, or they may include companies of other sectors. For further studies, independent variables may be enhanced or time period may be extended for more validity and reliability of results. For future researchers, it is suggested that they may use another proxy of firm performance other than EPS to check its significance in the model. It is also suggested that model may be tested with macroeconomic factors like the gross domestic product, national income, growth rate, unemployment rate.

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