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Bank Dependence, Crisis and Financial Performance of Firms in Pakistan

ABSTRACT

The availability and choice of suitable financing source ever remained a challenging issue for financial managers of corporate enterprises. The decision also considerably influenced the performance of firms in past, especially during credit contraction and financial panic periods. The phenomenon is empirically examined in this study through relative performance analysis of non-financial firms in context of global financial crisis. The sample is selected from different sectors and firms are segregated on the basis of their bank financing level. The data of firm level financial variables were extracted from annual reports and analyzed by using panel data technique. The overall and relative effect of crisis is captured by inserting appropriate dummy variable and interaction terms. The study finds a significant effect of crisis on financial performance of sample firms in Pakistan. It is further noted that firms with lower level of bank financing performed relatively better than those having higher proportion of such financing. The research findings supports

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for a balanced financing approach to enhance resilience of firms in crisis conditions.

Key Words: *Bank Dependence, Global Financial Crisis, Financial Performance, Panel Data, Dummy Variable*

Introduction

The finance is considered as an important component of business enterprises. It plays a leading role in smooth-functioning of business activities. It also helps in start, expansion, up gradation, and running of business projects. The achievement of firms' strategic objectives can be very difficult in absence of proper availability and deployment of funds. The firms can either use debt or equity, or a combination of both to fulfill their financing requirements. The financial managers not only concern with acquisition of finance but also about its source and associated terms. In making a choice among the alternatives, they usually prefer to seek finances from most suitable source on favorable terms. The role and design of financial system in this context can also be crucial. The suitable and reliable financing source can facilitate in growth and expansion of firms. The selection of suitable financing combination and source always remained a challenging matter for financial managers of corporate enterprises. The intermediaries and financial markets can facilitate the financing requirements of firms. The relative attractiveness of each source for firms and economic growth of countries has been discussed by researchers in past (Allen & Gale, 2000; Levine, 2002; Demirguç-Kunt & Maksimovic, 2002).

The financial intermediaries have a historical background of servicing the financial requirements of

individuals and enterprises. The intermediaries came into existence immediately after the recognition of money as medium of exchange (Siddiqui, 2003). They always played a leading role in effectual deployment and utilization of national resources (Allen & Santomero, 2001). In addition of facilitating the financing requirements, the banks also assist in selection, management, and monitoring of projects. The banking relationship also facilitate the firms in minimizing monitoring costs and free riding concerns (Diamond, 1984). The supremacy of bank financing for its better corporate control mechanism was advocated by Stiglitz (1985) while its role in financing innovative activities by Stulz (2000).The financing from banks can further be helpful in dissemination of positive signals about borrowing firms. The share price of a borrowing firm positively react to public announcement of its new bank credit or even extension and renewal in its existing bank loan (James, 1987). It is considered as a vote of confidence on firms' financial matters by an informed party. The established and closer banking relationship can enable the firms to secure more borrowing, reduce moral hazard, and agency problems (Thakor, 1996; Chakraborty & Ray, 2006). It also enhances their access to credit, reduce informational asymmetry issues, and improve overall financial performance (Castelli, Dwyer, & Hasan, 2012).

There are, however, certain researchers and economists who criticized the bank financing. In one such study, Rajan (1992) criticized bank financing for being expensive. Its excessive positioning has also been criticized in context of historical banking panics and resultant transmission to real sector. In case of banking distress, the bank dominant economies remain more vulnerable to external shocks (Shen & Huang, 2003). The banking panic and its negative

consequences for performance of firms were also found in global financial crisis period. Frenkel and Rapetti (2009) attributed the effects of global financial crisis similar to those designated in Minsky's theory of financial crisis. Silipo (2011), on the other hand, argued for its resemblance with financial instability hypothesis. The hypothesis stated that investors can be willing to assume excessive risk while banks to extend its lending for enterprises, in economic growth periods. The borrowing ratios can sometimes exceed the income level required to pay off its obligations timely (Fisher, 1933; Minsky, 1977). The banks can respond to this situation by imposing credit restrictions and reducing its lending proportions. This contraction of credit can negatively affect the activities of bank dependent firms and overall economy. The nearly similar situation was observed around the global financial crisis period.

The wide-ranging appraising and criticizing arguments on bank financing motivated us for empirical investigation of phenomenon. The current study is addressing this issue through relative performance analysis of firms in background of global financial crisis. The analysis of overall and relative effect of crisis on firms' financial performance in Pakistan is the prime objective of study. The relative analysis is based on comparison of firms having different bank financing proportions. The hypotheses of study are developed by assuming a significant and differential effect of the crisis on performance of non-financial firms. The study is based on a sample of 263 non-financial firms, placed in different categories while panel regression model is applied for empirical analysis. The results indicate a better performance of firms with lesser bank financing percentage than those having higher bank dependency trend. The study contributes

to existing literature in two broader ways. Firstly, this is first comprehensive study that examined the effect of global financial crisis on performance of firms in Pakistan. The existing studies in this area were limited in scope. Secondly, the study analyzed the firms relatively that was not earlier addressed in the country. The findings of study are relevant for firm officials and monetary authorities. It can facilitate the officials of firms in devising better, balanced, and vibrant financing policies that could be sustainable in both normal and crisis situations.

The remaining portion of paper is organized into four sections. Section 2 summarizes the findings of previous studies. The classification strategy, empirical model, description of variables, sample, and data is in section 3. The empirical results are discussed in section 4 while conclusion, policy implications, and future research possibilities are presented for readers in section 5.

Literature Review

The role of financial system in encouraging savings, promoting investment, and enhancing economic growth of countries ever remained important and critical. Schumpeter (1911/1934), as an earlier contributor, highlighted the significance of banking system in technological advancement and economic progression of countries. The positive role of banking and overall financial development in growth momentum of countries have also been emphasized by some other researchers and economists (King & Levine, 1993; Levine & Zervos, 1998; Arestis, Demetriades, & Luintel, 2001; Beck & Levine, 2004; Deidda & Fattouh, 2008; Rabiul, 2010; Anwar & Nguyen, 2011; Jalil & Feridun, 2011; Law &

Singh, 2014; Arac & Ozcan, 2014; Gokmenoglu, Amin, & Taspinar, 2015). The financing requirements of firms can be facilitated more effectively in developed financial systems. Its presence and effective functioning can also help firms to secure better growth pace that may be difficult to achieve in absence of such developed systems. The last few decades witnessed a remarkable growth of financial systems globally (Beck, Degryse, & Kneer, 2014).

The firms generally use a mix of debt and equity in its capital structure. The firms can obtain debt from banks or through issuance of bonds in capital markets. The banks and other institutions provide numerous other services to firms and overall economy. The firms were traditionally relying upon financial institutions for financing their requirements. It was however; felt that banks alone cannot fulfil the requirements of corporate sector. These institutions typically facilitate the borrowing requirements of reputed borrowers only. It was also recognized that non-availability of alternative financing options can negatively affect the investment and overall economic growth in credit crunch situations (Thakor, 1996). The closer bank-firm association can enhance its potential to secure more capital. This situation, however, benefices more to banks in shape of higher interest earnings (Weinstein & Yafeh, 1998). The potential of banks to serve and facilitate its client firms in financial panic periods is a reason of preferring bank financing over other sources (Bolton & Freixas, 2000).The importance of banking relationship for performance of firms has also been highlighted by Sultan, Qing, and Abid (2016). Limpaphayom and Polwitoon (2004), however, earlier concluded that excessive deployment of bank financing can end up with unfavorable investment decisions. Similarly,

firms with closer banking association can suffer more during the banking panic periods.

The relevance of banking relationship can be determined by examining the effect of banking panicon client firms. The researchers in past have attempted to empirically examine this phenomenon. The effect of banking shocks on performance of bank dependent firms has been documented in some previous studies (Slovin, Sushka, & Polonchek, 1993; Kang & Stulz, 2000; Akiyoshi & Kobayashi, 2010; Chava & Purnanandam, 2011). This was found to be more prominent in firms, depending solely on banks for external financing. These firms can find it difficult to approach the alternative sources immediately and on reasonable terms. The switching from troubled to non-troubled banks, wherever possible, significantly improve the performance of borrowing firms (Tsuruta, 2014).The credit shocks in majority of cases contributed significantly in creation of production gaps (Liu & Minford, 2014).The panic in banking sector can also transmit to real sector and affect the growth rate of economy. The effect of banking crisis upon economic growth of countries have earlier been found by Ashcraft (2005), Rondorf (2012), Fernández, González, and Suárez (2013).

The shrinkage of banking credit during crisis period negatively affected the performance of bank dependent firms and thereby contributed in strengthening and spread of crisis (Iacoviello, 2015). The bank lending to corporate sector was substantially declined during the global financial crisis period and the firms were also enforced to sacrifice profitable investment opportunities (Ivashina & Scharfstein, 2010; Campello, Graham, & Harvey, 2010; Cotugno, Monferrà, & Sampagnaro, 2013; Diana & Carmen, 2014;

Spatareanu, Manole, & Kabiri, 2017). This has played a prominent role in propagation of shocks (Chor & Manova, 2012).The industrial growth declined sharply during crisis period and it remained more pronounced in industries that were relying heavily on external finance and trade credit (Moore & Mirzaei, 2016). The non-financial firms of different countries, especially those relying upon external financing, were affected negatively by the crisis. Wu (2012), Akbar, Shafiq ur Rehman, and Ormord (2013), Gaiotti (2013) also observed the negative effect of credit reduction on financing and investment strategies of firms during the global financial crisis period. The firms with established financing association and ability to identify and avail alternative opportunities coped with crisis more effectively (Coulibaly, Sapriza, & Zlate, 2013; Dewally & Shao, 2014; Spatareanu, Manole, & Kabiri, 2017). On the other side, firms failing to approach alternate sources remained more problematic in crisis period.

The global financial crisis severely affected most of world countries, including those belonging to emerging and low income group. Similar to other developing countries, Pakistan also faced a problematic situation during crisis period. The shocks, however, were largely absorbed by the banking sector (Usman, 2010). The studies related to impact of global financial crisis on performance of firms in Pakistan are very few and not much broader in scope. Channar and Ram (2011) examined the textile sector of Pakistan in backdrop of crisis and found a considerable decline in availability of finances as well as performance of firms. The similar negative effect was also reported by Shahzad, Ali, Ahmad, and Ali (2015). These studies are related to only one sector and also reported the overall effect of crisis. Additionally, majority of firms in Pakistan prefer banks over

other sources to bridge their financing requirements. It is evident from the survey of previous studies that banking and financial crisis create more trouble for higher bank dependent firms. The systematic investigation of this phenomenon in Pakistan, especially in context of global financial crisis, is missing. It is attempted in the study to address this key area.

Methodology

Classification Stratagem

The classification of firms is based on their bank financing level. The data of finances secured from banks are extracted from annual reports and then scaled as proportion of total liabilities. The data are firstly averaged for each firm separately after which sample average is computed. The individual firms are then compared with sample average to place each in suitable category. The firms with above average bank financing proportion are placed in category of high bank dependence while those with below average to low bank finance category. For further in-depth analysis, the sample firms are broken down to four categories. The firms with bank financing proportion of above 75% are placed in category A while those of 51%-75% are positioned in category B. Similarly, the firms with bank financing percentages of 26%-50%are placed in C category. The firms with bank financing ratio of 25% and less are placed in category D. This detailed segmentation is expected to generate more comprehensive, valuable, and reliable findings.

Empirical Strategy

The study intends to examine financial performance of firms within framework of global financial crisis. It is attempted in research to observe performance pattern of several firms over multiple years, so panel data methodology is applied for empirical analysis. The following is mathematical expression of basic panel regression model, proposed by Asteriou and Hall (2007):

$Y_{it} = \alpha+\beta X_{it}+\mu_{it}$ ----------(i)

Y_{it} represents the dependent variable of study while X_{it} symbolizes the set of explanatory variables. The model is advantageous because of its capacity to handle wide-ranging complex problems, overcoming issues of omitted variables and multi collinearity, and enhancing test's power (Brooks, 2008). The handling of dummy variables is another beauty of the panel regression technique. The choice of appropriate model in panel data base upon likelihood ratio and Hausman tests. The model used to capture the effect of crisis on performance of firms takes following form:

$$ROA_{it}=\beta_0+\beta_1 QUICK_{it}+\beta_2 TURNOVER_{it}+\beta_3 LEVERAGE_{it}+\beta_4 TANGIBILITY_{it}+\beta_5 SIZE_{it}+\beta_6 AGE_{it}+\beta_7 FINANCING_{it}+\beta_8 GROWTH+\beta_9 INFR+\beta_{10} GFC+\varepsilon_{it} \text{-------(ii)}$$

The further analysis is preceded from relative perspective, for which following regressions models are applied:

$$ROA_{it}=\beta_0+\beta_1 QUICK_{it}+\beta_2 TURNOVER_{it}+\beta_3 LEVERAGE_{it}+\beta_4 TANGIBILITY_{it}+\beta_5 SIZE_{it}+\beta_6 AGE_{it}+\beta_7 FINANCING_{it}+\beta_8 GROWTH+\beta_9 INFR+\beta_{10} GFC+\beta_{11} GFC*LOW+\varepsilon_{it} \text{----------(iii)}$$

$$ROA_{it} = \beta_0+\beta_1 QUICK_{it}+\beta_2 TURNOVER_{it}+\beta_3 LEVERAGE_{it}+\beta_4 TANGIBILITY_{it} +\beta_5 SIZE_{it}+ \beta_6 AGE_{it}+ \beta_7 FINANCING_{it}+\beta_8 GROWTH+\beta_9 INFR+\beta_{10} GFC+\beta_{11} GFC*B + \beta_{12} GFC*C+\beta_{13} GFC*D+\varepsilon_{it} \text{----------(iv)}$$

Description of Variables

Return on assets (ROA) is the dependent variable of regression model while some other variables/ratios are used as regressors. The studies of Fok, Chang, and Lee (2004), Castelli, Dwyer, and Hasan (2012), Thanh and Ha (2013), Ameer (2014), Serrasqueiro, Nunes, and da Silva (2016) are followed for this purpose. The quick ratio (QUICK) in regressors is used for liquidity position of firms. Its relationship with profitability is ambiguous. This ratio reflects the ability of enterprises to meet timely obligations and thus can be beneficial for firms. Contrary to this positive aspect, the low return on highly liquid assets can negatively affect the profitability. Similar is the case of inventory turnover ratio (TURNOVER). The excessive stock can indicate the poor sales and lower profitability of firm but at the same time, the situation of shortage may also effect it negatively in the long run. The effect of liability to equity ratio (LEVERAGE) and fixed assets to total assets ratio (TANGIBILITY) is also subject to empirical investigation. The size of firms (SIZE) and their age (AGE) are measured by taking natural log of total assets and of time period of firms' operations, respectively. The size can have positive impact on performance of firms through scale economies but it may also work in reverse direction. Similar is the case regarding effect of firms' age on their financial performance. The bank financing to liabilities percentage (FINANCING) is used to analyze the bank

dependency level of sample firms. The client firms can got facilitation from banks in crisis periods but higher interest costs and restrictive covenants can have a negative effect on their profitability.

The macroeconomic variables of GDP per capita growth rate (GROWTH) and inflation rate (INFR) are also used to control the effect of external factors. The former is expected to positively contribute in profitability of firms while for later, the effect is vague in literature and needs empirical investigation. The dummy variable 'GFC' in regression model is to observe the consequences of crisis for performance of non-financial firms in Pakistan. This variable is assigned the value of '1' for period of crisis and '0', otherwise. Some researchers in past identified and proposed 2008-09 as crisis enormity period (Usman, 2010; Ali & Afzal, 2012; Frankel&Saravelos, 2012; Dimitriou, Kenourgios, & Simos, 2013; Luchtenberg & Vu, 2015; Bhimjee, Ramos, & Dias, 2016). The similar time period of crisis is selected in this study and interaction terms are added to capture relative effect of crisis across different category firms. 'HIGH' and 'A' are not included in regression model to avoid dummy variable trap. These are treated as reference categories. Each category is assigned a unity value for firms belonging to that particular group and '0' for others in the sample. The robustness of results is checked by applying dynamic generalized methods of moments (GMM) estimation proposed by Arellano and Bond (1991).

Sample, Data, and Descriptive Statistics

The firms listed on Pakistan Stock Exchange (formerly Karachi Stock Exchange) constitute population of the study. The random sample of 263 non-financial firms from different

sectors is selected. The availability of consistent data is taken into consideration while finalizing the sample. The study utilized panel data which consisted of time series and cross-sections and covered the period of 2005 to 2012. The data set covered equal time span of 3 years each for pre-crisis and post-crisis periods. The data of firm level variables were extracted from annual reports of sample firms while of macroeconomic variables from world databank. The collected data is winsorized to reduce the effect of outliers. The descriptive statistics of firm level variables used in panel regression are summarized in Table 1.

Table 1: Summary Statistics of Variables used in Panel Regression Model

	Mean	Median	Max.	Min.	Std. Dev.	Obs.
ROA	0.04288	0.03028	0.23814	-0.10892	0.08651	2104
QUICK	0.77171	0.54484	2.76018	0.16576	0.64628	2104
TURNOVER	7.13770	4.69914	27.1362	1.01771	6.63404	2104
LEVERAGE	1.85666	1.52967	6.25230	-1.55105	1.76992	2104
TANGIBILITY	0.46659	0.47272	0.82469	0.08117	0.21573	2104
SIZE	14.6490	14.5420	17.2322	12.4344	1.33256	2104
AGE	3.39640	3.36730	5.02388	0.69315	0.47113	2104
FINANCING	0.44637	0.48954	3.98844	0.00000	0.29439	2104

In summary statistics, SIZE reflects the highest mean value while largest dispersion is for inventory turnover. The statistics of variables don't portray any abnormality in data and it depicts that data is normally distributed.

Empirical Results and Discussions

The empirical analysis is started with the application of panel regression model. The dependent variable in regression model is return of assets (ROA) while all other variables are used as regressors. The results of common, fixed, and random effect models are computed and summarized in Table 2.

Table 2: Results of Common, Fixed, and Random Effect Models

Variable	(1)	(2)	(3)
C	-0.162*** (0.025)	0.037 (0.101)	-0.115***(0.042)
QUICK	0.029*** (0.003)	0.026*** (0.004)	0.027*** (0.004)
TURNOVER	0.0012***(0.0003)	0.0019*** (0.0004)	0.0017***
LEVERAGE	-0.008*** (0.001)	-0.005*** (0.001)	-0.006*** (0.001)
TANGIBILITY	-0.080*** (0.009)	-0.146*** (0.016)	-0.112*** (0.012)
SIZE	0.013*** (0.001)	0.007 (0.005)	0.011*** (0.002)
AGE	0.011** (0.004)	-0.012 (0.020)	0.008 (0.007)
FINANCING	-0.025*** (0.006)	-0.035*** (0.009)	-0.029*** (0.008)
GROWTH	0.546*** (0.121)	0.384*** (0.148)	0.525*** (0.101)
INFR	0.055 (0.060)	0.006 (0.055)	0.044 (0.047)
Adjusted R-squared	0.29	0.59	0.18
Durbin-Watson stat	1.01	1.78	1.57
*, **, *** indicates significance at 10%, 5% and 1% levels, respectively and the			

The model 1 reports the results of common effect model while models 2 and 3 are for fixed and random effects, respectively. The DW is 1.01 in common effect which shows the issue of autocorrelation. The results of fixed and random effect models are almost same. For selection of appropriate model, likelihood test ratio is initially applied to make a choice from amongst common and fixed effect models. The test developed by Hausman (1978) is then applied for

making a selection from fixed and random effect models. The results are in Table 3.

Table 3: Choice of Appropriate Model

Redundant Fixed Effects Test			
Effects Test	**Statistic**	**d.f.**	**Prob.**
Cross-section F	6.73	(262,1832)	0.0000
Cross-section Chi-square	1418.36	262	0.0000
Correlated Random Effects - Hausman Test			
Test Summary	**Chi-Sq.**	**Chi-Sq. d.f.**	**Prob.**
Cross-section random	19.83	9	0.0190

The values of both tests are significant which indicate that fixed effect is better applicable for this data set. The analysis is then preceded through fixed effect model and dummy is added in basic regression model to check the effect of crisis on performance of non-financial firms in Pakistan. The interaction terms are then added to check the differential effect across different categories. The results of panel regression are presented in Table 4.

Table 4: Results of Panel Regression with Dummy and Interaction Terms

Dependent Variable: ROA			
Variable	**(1)**	**(2)**	**(3)**
C	0.055 (0.100)	0.052 (0.100)	0.050 (0.100)
QUICK	0.027***(0.004)	0.027*** (0.004)	0.026*** (0.004)
TURNOVER	0.0017***(0.0004)	0.0017*** (0.0004)	0.0017*** (0.0004)
LEVERAGE	-0.005*** (0.001)	-0.005*** (0.001)	-0.005*** (0.001)
TANGIBILITY	-0.138*** (0.016)	-0.139*** (0.016)	-0.139*** (0.016)
SIZE	0.005 (0.005)	0.006 (0.005)	0.006 (0.005)
AGE	-0.019 (0.020)	-0.019 (0.020)	-0.019 (0.020)
FINANCING	-0.034*** (0.009)	-0.033*** (0.009)	-0.033*** (0.009)

GROWTH	0.451*** (0.147)	0.452*** (0.147)	0.454*** (0.147)
INFR	0.248*** (0.070)	0.248*** (0.070)	0.248*** (0.070)
GFC	-0.025*** (0.005)	-0.033*** (0.005)	-0.044*** (0.009)
GFC*LOW		0.017*** (0.006)	
GFC*B			0.013 (0.009)
GFC*C			0.026***(0.010)
GFC*D			0.030*** (0.010)
Adjusted R-	0.59	.60	.60
Durbin-Watson stat	1.76	1.76	1.76

*, **, *** indicates significance at 10%, 5% and 1% levels, respectively and the

The model 1 is used to check the overall effect of global financial crisis on performance of firms in Pakistan while relative effect across different categories in analyzed in model 2 and 3. While examining the results, the liquidity and turnover ratios are found to be positively affecting the profitability of sample non-financial firms. On the other side, the effect of leverage, tangibility, and bank financing is negative and significant. The positive effect of liquidity is consistent with findings of Zainudin (2006), Ajanthan (2013), Ismail (2016); while that for inventory turnover is supported by the study of Thanh and Ha (2013). The higher proportion of debt financing in capital structure negatively affect the profitability of firms because these firms may have to bear more interest payments and restrictive covenants. The profitable firms generally place least preference to external financing of any kind (Myers & Majluf, 1984). The similar effect has earlier been observed by Hijazi and Tariq (2006), Enqvist, Graham, and Nikkinen (2014), Vithessonthi and Tongurai (2015). The negative effect of tangibility show that improper utilization of resources can retard the financial performance of firms. The similar results were earlier documented by Muritala (2012), Vătavu (2015).The favorable

economic conditions and higher inflation rate also contribute positively to the profitability of firms.

The coefficient of crisis dummy 'GFC' is negative and significant. This shows that global financial crisis negatively affected the profitability of firms in Pakistan. In Pakistan, the studies are not much broader in this area. Channar and Ram (2011), Shahzad, Ali, Ahmad, and Ali (2015) studied the phenomenon previously and found negative effect of crisis in Pakistan. The interaction of crisis dummy with category of 'LOW' enables to capture the relative effect of crisis across high and low bank financing categories. The comparative analysis show that firms with lower bank financing proportion performed relatively better during crisis period. For further detailed investigation sub-categorization is made and sample firms are placed in four different categories, explained earlier. The results again show a similar trend. The firms with lower proportion of bank financing performed relatively better during global financial crisis period. The performance of firms belonging to category 'D' is found to be better than that of 'A'. Similar trend is observed for 'C' category firms but was insignificant for those of 'B' category. This is consistent with previous findings of Chava and Purnanandam (2011), Tsoukas (2011).The robustness of results is then examined by applying generalized methods of moments (GMM) technique and results are presented in Table 5.

Table 5: Results of GMM Estimation with Dummy and Interaction Terms

	Dependent Variable: ROA		
Variable	**(1)**	**(2)**	**(3)**
QUICK	.027***(.005)	.027***(.005)	.027*** (.005)

TURNOVER	.0003 (.0005)	.0002 (.0005)	.0002 (.0005)
LEVERAGE	-.005*** (.001)	-.005***(.001)	-.005*** (.001)
TANGIBILITY	-.097*** (.020)	-.097***(.020)	-.097*** (.020)
SIZE	.032*** (.007)	.031***(.007)	.031*** (.007)
AGE	-.054** (.023)	-.051** (.023)	-.050** (.023)
FINANCING	-.034*** (.011)	-.033***(.011)	-.032*** (.011)
GROWTH	.370** (.145)	.385***(.144)	.388*** (.144)
INFR	.271*** (.062)	.278***(.062)	.279*** (.062)
GFC	-.031*** (.004)	-.041***(.005)	-.047*** (.009)
GFC*LOW		.024***(.006)	
GFC*B			.005 (.010)
GFC*C			.027*** (.010)
GFC*D			.031*** (.010)
Observations	1841	1841	1841
Number of Firms	263	263	263

*, **, *** indicates significance at 10%, 5% and 1% levels, respectively and the

The results of GMM estimation are almost similar to those of panel regression model, with few exceptions. The coefficient of inventory turnover is insignificant now while the size and age variables turned out to be significant. The coefficients of dummy variable and interaction terms are showing a similar trend in both estimation techniques. The overall results of study are showing that higher bank financing negatively affected the profitability of firms during crisis period. The bank financing usually become costly in panic situations and firms relying heavily on this source may find it difficult to approach alternatives immediately. The deployment of costly bank financing in such a situation can retard their profitability and growth.

Conclusion

It is attempted in study to examine the overall and relative effect of global financial crisis on non-financial firms of Pakistan. To capture relative effect, the categorization of firms is made on the basis of their bank financing proportion. The firms are initially classified into two categories and then expanded to four different categories for detailed analysis. The interaction of each with crisis dummy enabled to capture relative effect across different categories. The results of analysis show a significant negative effect of global financial crisis on performance of non-financial firms in Pakistan. This indicates that Pakistan was not completely escaped from the crisis, though it affected mostly through indirect channels. Draz (2011), earlier reported that Pakistan was affected mainly from internal rather than external factors. In Pakistan, the discount rate and lending rate offered by banks increased substantially during the crisis period. The rise in lending rate became problematic for individual and commercial borrowers. This is also evident from the comparative analysis of non-financial firms. It is found that firms with lesser bank financing proportion performed relatively better during the crisis period.

The results of study are backing up the criticism of some existing studies on expensive bank financing (Rajan, 1992; Shen &Huang, 2003). The bank financing became costly in crisis duration and bank dependent firms failed to approach alternative sources immediately and on reasonable terms. It forced them to deploy costly bank financing that negatively affected their profitability, as observed in this study. The findings of study, however, don't suggest for complete stoppage of bank financing but it proposes for a more sensible approach. These findings have practical implication for firm officials and monetary authorities. It is

proposed that firm officials should not excessively rely on single source for bridging financing requirements. The attempt to approach alternative sources can help firms to survive in panic situation. It is further added that crisis cannot be avoided through adoption of much tighter monetary policy. The adoption of balanced approach, instead, can be more helpful for all concerned. The study is, however, limited to non-financial firms of Pakistan. Its further extension to cross country level can generate more comprehensive and conclusive evidences.

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