

COMPARATIVE ANALYSIS OF FINANCIAL SYSTEMS IN CONTEXT OF GLOBAL FINANCIAL CRISIS

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ABSTRACT

Purpose: This study is aimed at analysing the relative effect of global financial crisis across diverse category countries.

Methodology/Sampling: The top 50 countries of world are selected and categorized on the basis of financial structure and economic development level. The empirical analysis is based on panel data methodology and appropriate dummies are inserted to capture overall as well as relative effect of crisis.

Findings: The study finds a substantial overall effect of crisis on economic progression of sample countries. The significance divergence for different categories is, however, not observed.

Conclusion: The traditional dichotomy of financial systems doesn't matter much in modern, globalized world. The inter linkages and interdependencies among intermediaries and markets exists across globe that contributed in rapid propagation of shocks.

Practical Implications: The results of study can facilitate in better and systematic choice of financial system instead of a random one.

KeyWords: *Financial System, Economic Development, Global Financial Crisis, Panel Data*

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1. INTRODUCTION

The presence of established and developed financial system ever played a leading role in economic growth of countries. It facilitates transfer and allocation of resources to maximum possible level and thereby enhances the overall well-being of individuals. The developed financial system provides required capital, facilitates financial innovation, and assists in achieving greater productivity and economic advancement (Thakor, 1996). An effective financial system is essential and significant contributor to financial stability of a country. It smoothen economic transactions, allocate capital efficiently, and construct investors' supportive environment (Arshad & Khan, 2007; Klemkosky, 2013). The intermediaries and markets are principal components of a financial system. The financial intermediaries assist saving surplus and deficient units in transfer, proper allocation, and effectual deployment of national resources (Allen & Santomero, 2001). Their presence can also facilitate in seeking relative advantage through economies of scale, dissemination of low cost information, and minimization of transaction overheads (Benston & Smith, 1976). The informational advantages of intermediation activities were proposed by Leland and Pyle (1977) while their role as delegated monitors was highlighted by Diamond (1984).

The financial intermediaries have a historical background and banks existed far before the establishment of markets. Siddiqui (2003) argued that banks existed from the times of recognizing money as medium of exchange. The banks facilitated to fulfill financing requirements of enterprises along with other services. As the time progressed and economic activities expanded, it was realized that banks alone cannot bridge the growing financing requirements. The markets were, therefore, created where numerous opportunities of financing and investments for individuals and enterprises are present. The financial markets got significant importance and shown tremendous growth in last few decades that transformed the financial systems dramatically (Allen & Santomero, 1998). The creation of markets also induced banks to review and reconsider their traditional role of deposits and lending. It also helped to overcome the reputational issues, as banks were largely extending loans to the borrowers of good reputation only (Thakor, 1996). The banks and markets became stronger with the progression of time and economies started relying upon these strongly.

The relative importance of intermediaries and markets has been examined critically from last many decades. The overall debate in this area is related to two major schools of thoughts. The one approach, most common in 19th century, advocated for leading role of banks in economies. This has been referred as bank based view and it highlighted the supremacy and importance of banks. The banks were assigned much weight and assumed to be the major contributors in operations and management of countries. The positive and significant contribution of banks has been supported by Schumpeter (1911/1934), Diamond and Dybvig (1983), Diamond (1984), Stiglitz (1985), Bencivenga and Smith (1991), Modigliani and Perotti (2000), Chakraborty and Ray (2006), Bertocco (2008), Tabb (2010). The second school of thought is basically the modern view and is referred to as market based view. This view highlighted the importance and viability of markets in economy. It also criticized bank financing for being expensive and advocated for dominance of markets. Its role in mobilization of savings, involvement of large number individuals, and serving as alternate of bank financing has been highlighted. The major contributors in this domain were Rajan (1992), Allen (1993), Greenwood and Smith (1997), Rajan and Zingales (1998), Shen and Huang (2003). There is, however, another group of researchers and economists who

proposed for irrelevance of financial structure. They instead suggested for better financial services and creation of conducive legal environment for overall improvements. The advocates of these include Merton and Bodie(1995), Boyd and Smith (1998), La Porta, Lopez-de-Silanes, Shleifer, and Vishny(1998, 2000).

The debate of comparative financial systems is very old and dated back to the study of Bagehot (1873). It, however, started systematically with study of Goldsmith (1969). The initial debate in this area focused four developed countries of the world and was backed up by two broader models. The German model apportioned higher weight age to intermediaries while U.S. model to financial markets (Allen & Gale, 1995). The broader cross country studies in this domain were initiated by Demirguç-Kunt and Levine (1999), Levine (2002). The number of researchers including Allen and Gale (2000), Beck and Levine (2004), Chakraborty and Ray (2006), Solo (2013), Apergis, Artakis, and Kyriazis (2015) contributed in this debate. It has been attempted mainly in previous studies to relatively examine the effect of financial structure on economic growth of countries. The present study is an attempt to contribute in this discussion through relative analysis of financial systems in context of global financial crisis. The crisis started from U.S. with the burst of housing bubble and collapse of some major financial institutions in last quarter of 2007. It got momentum and rapidly transmitted across developed and developing countries of the world (Bahiti, Shkurti, & Babasuli, 2011). The financial institutions collapsed and stock markets crashed in many countries and its affects were spread to the real economy (Silipo, 2011). The effect was so severe that it was felt everywhere and even at individual level. This crisis has been referred as the largest and deepest crisis after the great depression (Moroianu & Belingher, 2011).

The relative examination of sample countries in backdrop of global financial crisis is the focus of current study. In order to study the phenomenon, the countries are initially placed into different categories. The basis of categorization is the structure of financial system and level of economic development. The classification of development level is adopted from an official publication while a structure index is constructed to categorize the countries on the basis of their financial structure. The indicators used by researchers in past are adopted for formulation of index. It places the sample countries to bank or market based categories. The classification is not absolute but relative, as none of world country is entirely bank or market based now. After categorization of countries, the overall as well as relative effect of crisis across different category countries is analyzed. The data of 2005-2012 is extracted from official reliable sources and panel data methodology is applied for empirical analysis. The insertion of appropriate dummy and interactive dummy variables in regression model enables in capturing overall as well as relative effect of crisis. The results show a significant negative effect of crisis in sample economies. The significant differential effect across different category countries is, however, not found. The results of study are expected to benefice those who want to examine the performance and behaviour of financial systems in crises situation. Chakraborty and Ray (2006) pointed out that the focus of large number developing countries started averting towards market based system, without having a proper working on relative merits of each. The results of study can, therefore, facilitate in better and systematic choice of financial system instead of a random one.

The overall paper is organized into five major sections. The first section offers a brief introduction of study. The literature relevant to financial structure, crisis, and economic growth is summarized in section 2. The third section is related to methodology, model, and description of study sample. The results and discussion are given in section 4 section while

section 5 offers key conclusions and recommendation of the study. It further proposes some future research areas.

2. LITERATURE REVIEW

The financial system and development usually play a leading role in entire process of boosting production and growth level. This phenomenon has widely been discussed in theoretical and empirical literature. Schumpeter (1911/1934) generated an earlier discussion in this area by highlighting banking systems' contribution in innovation and economic growth. Robinson (1952), however, referred the financial development as an outcome of economic growth. Goldsmith (1969) significantly contributed in this discussion after which number of researchers and economists attempted to analyse this association in last few decades. The positive association has been found by many researchers (King & Levine, 1993; Levine & Zervos, 1998; Beck & Levine, 2004; Deidda & Fattouh, 2008; Rabiul, 2010; Law & Singh, 2014; Gokmenoglu, Amin, & Taspinar, 2015). There are, however, researchers who documented a negative, very weak, or insignificant relationship between financial development and economic growth (Ram, 1999; Naceur & Ghazouani, 2007; Menyah, Nazlioglu, & Wolde-Rufael, 2014).

It has also been attempted in different studies to examine the effect of financial structure on growth pattern of economies. The various components of financial structure were considered and on this basis, the countries were relatively placed to bank based and market based categories. The overall findings in this area can be classified to three major domains. The first is relevant to advocates of bank based systems who supported for positive and dominant role of banks in financing enterprises and economic growth (Tadesse, 2002; Hondroyiannis, Lolos, & Papapetrou, 2005; HAO, 2006; Chakraborty & Ray, 2006; Uzunkaya, 2012; Sahoo, 2014). The second domain of this discussion is related to the findings of researchers who highlighted the supremacy and dominance of markets over the banking system. The major contributions in this area were made by Rajan and Zingales (1998), Caporale, Howells, and Soliman (2004), Yeh, Huang, and Lin (2013), Deltuvaite and Sineviciene (2014), Nyasha and Odhiambo (2015). The third aspect of this discussion is associated with studies, proposing irrelevance of financial structure. They instead supported for coexistence of both markets and banks, provision of financial services, and strengthening of legal system in promoting economic growth (Levine, 2002; Beck & Levine, 2002; Wang & Ma, 2009; Song & Thakor, 2010; Lee, 2012; Solo, 2013; Dima, Dinca, & Spulbar, 2014; Apergis, Artikis, & Kyriazis, 2015).

The discussion on association of financial development and financial structure to economic growth is yet inconclusive. The present study is a comprehensive attempt to study the comparative financial systems in context of global financial crisis. The crisis started from U.S. and spread globally through different channels. The role of financial channel remained relatively more pronounced (Chudik & Fratzscher, 2011; Fry-McKibbin, Hsiao, & Tang, 2014; Fink & Schüler, 2015). The crisis negatively affected the economic progression of many countries (Raz, Indra, Artikasih, & Citra, 2012; Ksantini & Boujelbene, 2014; Cevik, Dibooglu, & Kenc, 2016). The crisis effected almost every country of the world. There are, however, some researchers who documented differential effect across countries of different development level (Lartey & Farka, 2011; Ashraf, Kayani, & Rafiq, 2012). Similarly, it has been attempted by some researchers to comparatively analyze the effect of crisis across countries of dissimilar financial structure (Bahiti, Shkurti, & Babasuli, 2011; Cardarelli, Elekdag, & Lall, 2011; Allen, Gu, & Kowalewski, 2012). The studies on relative effect of crisis across countries of different financial structure and development level are not much

broader and a widespread study in this area is required. It is attempted in this study to comprehensively examine this phenomenon by selecting a broader set of countries and addressing both the aspects of financial structure and development in parallel.

3. METHODOLOGY

3.1 Classification Strategy

The study intends to relatively examine the financial systems in milieu of global financial crisis. The analysis of sample countries on the basis of financial structure and development level is focused in current research. The developed and underdeveloped categorization of countries is adopted from the official publication of International Monetary Fund (2013). In order to relatively place the countries into bank and market based categories, an index of financial structure is constructed. The index is framed by following studies of Demirgüç-Kunt and Levine (1999), Levine (2002) and using size, activity, and efficiency indicators of each market and banking side. The market to bank ratio of indicators is determined for each country and then averaged separately for developed and under developed categories. The classification index is based on mean removed average of indicators.

3.2 Empirical Model

The panel data methodology is applied to examine the impact of global financial crisis on economic growth of sample economies. This technique is commonly applied when multiple cross sections are to be examined over various time periods. This approach is advantageous as it can address wide-ranging issues and handle multifaceted problems. It can also assist in resolving the complications associated with omitted variables, multicollinearity, and improves supremacy of test (Brooks, 2008). As proposed by Asteriou and Hall (2007), following is the basic mathematical expression of panel data model:

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

The study is intended to initially examine the effect of global financial crisis on economic growth of sample economies, for which following panel regression model is applied:

$$GDPG_{it} = \alpha_0 + \alpha_1 FD_{it} + \alpha_2 FDI_{it} + \alpha_3 GC_{it} + \alpha_4 GFCF_{it} + \alpha_5 GDS_{it} + \alpha_6 OPEN_{it} + \alpha_7 IR_{it} + \alpha_8 PG_{it} + \alpha_9 D1_{it} \text{-----(ii)}$$

The dependent variable in regression model is the GDP per capita growth rate and is used as proxy of economic growth. The macroeconomic variables, having direct or indirect impact on economic growth, are used as repressors. The dummy variable 'D1' is inserted in regression model to capture the effect of crisis on economic growth of sample economies. It takes unity value during crisis period of 2008-09, and '0' otherwise. The further relative analysis of bank and market based financial systems is preceded with the inclusion of interaction term 'BB'. It now takes unity value for bank based countries, and '0' for others. The regression model then takes the following form:

$$GDPG_{it} = \alpha_0 + \alpha_1 FD_{it} + \alpha_2 FDI_{it} + \alpha_3 GC_{it} + \alpha_4 GFCF_{it} + \alpha_5 GDS_{it} + \alpha_6 OPEN_{it} + \alpha_7 IR_{it} + \alpha_8 PG_{it} + \alpha_9 D1_{it} + \alpha_{10} D1_{it} * BB_{it} \text{----- (iii)}$$

The study also covers spectrum of cross country comparison on the basis of their differing economic development level. The sample countries in this context are classified into developed and underdeveloped categories. The empirical analysis is based on following regression model:

$$\text{GDPG}_{it} = \beta_0 + \beta_1 \text{FD}_{it} + \beta_2 \text{FDI}_{it} + \beta_3 \text{GC}_{it} + \beta_4 \text{GFCF}_{it} + \beta_5 \text{GDS}_{it} + \beta_6 \text{OPEN}_{it} + \beta_7 \text{IR}_{it} + \beta_8 \text{PG}_{it} + \beta_9 \text{D1}_{it} + \beta_{10} \text{D1} * \text{D}_{it} + \epsilon_{it} \quad (\text{iv})$$

The purpose of interaction term 'D1*D' is to capture relative effect of crisis across developed and underdeveloped categories. The interactive dummy 'D' takes value of '1' for developed countries while '0' for others. The further breakdowns carried out within bank and market based systems for detailed investigation. The analysis of developed and underdeveloped categories for each system is made separately and regression models takes following forms:

$$\text{GDPG}_{it} = \beta_0 + \beta_1 \text{FD}_{it} + \beta_2 \text{FDI}_{it} + \beta_3 \text{GC}_{it} + \beta_4 \text{GFCF}_{it} + \beta_5 \text{GDS}_{it} + \beta_6 \text{OPEN}_{it} + \beta_7 \text{IR}_{it} + \beta_8 \text{PG}_{it} + \beta_9 \text{D1}_{it} + \beta_{10} \text{D1} * \text{DBB}_{it} + \epsilon_{it} \quad (\text{v})$$

$$\text{GDPG}_{it} = \beta_0 + \beta_1 \text{FD}_{it} + \beta_2 \text{FDI}_{it} + \beta_3 \text{GC}_{it} + \beta_4 \text{GFCF}_{it} + \beta_5 \text{GDS}_{it} + \beta_6 \text{OPEN}_{it} + \beta_7 \text{IR}_{it} + \beta_8 \text{PG}_{it} + \beta_9 \text{D1}_{it} + \beta_{10} \text{D1} * \text{DMB}_{it} + \epsilon_{it} \quad (\text{vi})$$

The interaction terms 'D1*DBB' and 'D1*DMB' are used to capture the relative effect of crisis across countries of varying economic development level, on the basis of their bank and market oriented structure, respectively. The interactive dummies 'DBB' and 'DMB' takes value of '1' for developed category of bank and market based countries, respectively; while '0' for corresponding underdeveloped categories.

3.3 Sample and Data

The population of study comprises of world countries while sample of 50 countries is selected on the basis of GDP. The countries belonging to OPEC are not included in the sample for fair representation and overcoming potential biases. It is expected that selected sample will truly represent the characteristics of whole population as these countries hold major proportion of world GDP. The data of 2005-2012 is gathered for analytical purposes and winsorized to reduce the effect of outliers. The data of classification and macroeconomic variables is extracted from world databank, international financial statistics, and related sources.

4. RESULTS AND DISCUSSION

The countries are initially segregated on the basis of their stage of economic development. The structure index is then constructed by using indicators of size, activity, and efficiency. The categorization scheme relatively places sample countries into bank and market based grouping. The countries with above mean values in each category are classified as market based while those of below mean value as bank based. The list of categorized countries is at Appendix 1. United States has extreme index value in category of developed countries and is, therefore, excluded from classification scheme. Similarly, the role of banks ever remained crucial in Pakistan and India. The last few years, however, witnessed a remarkable growth of stock markets in both countries. In order to avoid abnormalities, these countries are not included in classification scheme and traditional structure pattern is followed.

The countries, after placing into relevant categories, are analyzed in the context of financial crisis. The descriptive statistics are examined to ensure the normal distribution of data. The choice of appropriate model is then made through likelihood ratio and Hausman tests. The descriptive statistics reports that data is normally distributed without having any issue of outliers. Additionally, fixed effect model is found to be most appropriate for this data set. This similar trend is observed for all regression models of the study. The results of descriptive statistics and model selection are not reported here. The main variable of interest in each regression model is the dummy variable and associated interaction terms. The results of panel regression for bank and market based countries are summarized in Table 1.

Table 1: Effect of Global Financial Crisis on Bank and Market Based Countries

Dependent Variable: GDPG			
	(1)	(2)	(3)
Intercept	1.167 (4.908)	1.078 (4.896)	1.218 (4.918)
FD	0.021** (0.008)	0.020** (0.008)	0.021** (0.008)
FDI	0.113*** (0.039)	0.110*** (0.039)	0.114*** (0.039)
GC	-0.717*** (0.183)	-0.713*** (0.183)	-0.719*** (0.183)
GFCF	0.393*** (0.072)	0.392*** (0.071)	0.395*** (0.072)
GDS	0.107 (0.081)	0.110 (0.081)	0.106 (0.082)
OPEN	0.001 (0.017)	0.001 (0.017)	0.0003 (0.017)
IR	0.083 (0.084)	0.086 (0.084)	0.085 (0.084)
PG	-1.470** (0.595)	-1.459** (0.594)	-1.499** (0.605)
D1	-3.629*** (0.270)	-4.103*** (0.394)	-3.707*** (0.384)
D1*BB		0.843 (0.511)	
D1*D			0.148 (0.521)
Adjusted R-squared	0.63	0.63	0.63
Durbin-Watson stat	1.96	1.95	1.96
*, **, *** indicates significance at 10%, 5% and 1% levels, respectively and the values in parenthesis shows standard errors.			

The results suggest that financial development, foreign direct investment, and gross fixed capital formation significantly positively influences the economic growth of sample countries. The positive effect of financial development is backed up by theories of Bagehot (1873), and Schumpeter (1911/1934) and is in line with findings of King and Levine (1993), Levine and Zervos (1998), Beck and Levine (2004), Deidda and Fattouh (2008), Rabiul (2010), Law and Singh (2014), Sehrawat and Giri (2015). The positive effect foreign direct investment is supported by technological spillover view of Borensztein, DeGregorio, and Lee (1998) and is consistent with empirical findings of Katircioglu and Naraliyeva (2006), Raz, Indra, Artikasih, and Citra (2012). Similarly, positive impact of gross fixed capital formation is harmonized with model of Harrod (1939) and Domar (1946), jointly called Harrod-Domar

growth model. These are similar to the findings of Hassan, Sanchez, and Yu (2011), Ali, Chaudhry, and Farooq (2012), Uneze (2013). The effect of government consumption and population growth is, however, negative and significant. The negative effect of government consumption is supported by income accounting perspective and pro-free market view (Landau, 1983). Hassan, Sanchez, and Yu (2011), Ngare, Nyamongo, and Misati (2014) also noted the similar evidences. The negative effect of population growth is supported by Malthusian theory of population, and growth model of Coale and Hoover (1958). The similar effect has been documented in previous findings of HAO (2006), Ksantini and Boujelbène (2014).

The significant and negative coefficient of dummy variable shows that crisis has negatively affected the economic growth of sample countries. The negative effect of crisis on economic growth is supported by bank run theory, debt deflation theory, and financial fragility hypothesis (Fisher, 1933; Minsky, 1977; Diamond & Dybvig, 1983; Wolfson, 2002). The similar negative effect across different countries has been documented earlier by Raz, Indra, Artikasih, and Citra (2012), Long, Li, Wang, and Cheng (2012), Ksantini and Boujelbène (2014), Poshakwale and Ganguly (2015). The interaction term 'D1*BB' which is used to capture the relative effect of crisis in different financial structure countries, is found positive and insignificant. This shows that the effect doesn't differ across bank and market based countries. Similar is the case for interaction term 'D1*D' which is used for comparative analysis of countries on the basis of economic development level. The results again indicate that the differential effect is not present for developed and underdeveloped category countries. In order to investigate the phenomenon in-depth, developed and underdeveloped countries of each bank and market based categories are analysed separately. The results of this section for bank based category are summarized in Table 2 below:

Table .2: Effect of Crisis on Developed and Underdeveloped Bank Based Countries

Dependent Variable: GDPG		
	(1)	(2)
Intercept	3.598 (6.461)	3.810 (6.489)
FD	0.019 (0.012)	0.018 (0.012)
FDI	0.069 (0.048)	0.071 (0.048)
GC	-0.757 ^{***} (0.227)	-0.764 ^{***} (0.228)
GFCF	0.669 ^{***} (0.093)	0.674 ^{***} (0.094)
GDS	-0.153 (0.112)	-0.157 (0.112)
OPEN	-0.006 (0.026)	-0.006 (0.026)
IR	0.132 (0.107)	0.136 (0.107)
PG	-2.510 ^{***} (0.823)	-2.573 ^{***} (0.835)
D1	-3.545 ^{***} (0.365)	-3.715 ^{***} (0.507)
D1*DBB		0.341 (0.702)
Adjusted R-squared	0.62	0.62
Durbin-Watson stat	1.91	1.91
*, **, *** indicates significance at 10%, 5% and 1% levels, respectively and the values in parenthesis shows standard errors.		

The results are almost similar to those reported in Table 1, except that the effect of financial development and foreign direct investment becomes insignificant now. The negative and significant effect of crisis is observed in sample bank based countries. The differential effect across developed and underdeveloped category countries is, however, not found. The similar analysis is performed for market based category and its results are presented in Table 3.

Table. 3: Effect of Crisis on Developed and Underdeveloped Market Based Countries

Dependent Variable: GDPG		
	(1)	(2)
Intercept	0.972 (7.891)	0.843 (7.917)
FD	0.031 ^{***} (0.011)	0.031 ^{***} (0.011)
FDI	0.185 ^{***} (0.069)	0.188 ^{***} (0.069)
GC	-0.573 [*] (0.316)	-0.560 [*] (0.318)
GFCF	-0.035 (0.119)	-0.036 (0.119)
GDS	0.321 ^{**} (0.127)	0.322 ^{**} (0.127)
OPEN	-0.014 (0.026)	-0.015 (0.026)
IR	0.138 (0.132)	0.151 (0.135)
PG	-0.908 (1.079)	-1.007 (1.102)
D1	-3.816 ^{***} (0.388)	-4.010 ^{***} (0.565)
D1*DMB		0.350 (0.742)
Adjusted R-squared	0.69	0.69
Durbin-Watson stat	2.16	2.16
*, **, *** indicates significance at 10%, 5% and 1% levels, respectively and the values in parenthesis shows standard errors.		

The results are again similar to those reported in Table 1, with two exceptions. One is the effect of gross domestic savings which becomes significant while other is of population growth that appears to be insignificant now. The overall negative effect of crisis is again found, without having a differential effect across developed and underdeveloped categories.

The results of analysis from different perspectives suggest that the global financial crisis negatively affected the sample economies. The effect, however, didn't significantly differ across countries of diverse financial structure and development level. The results show that the structure of financial system doesn't matter much in modern and globally integrated world.

5. CONCLUSION

In this study, the comparative financial systems are observed in terms of effect of global financial crisis. The top 50 countries of world are selected for study and are categorized on the basis of financial structure and economic development level. The structure

index is formulated by using the indicators applied by researchers in past. The indexation scheme relatively places the sample countries into bank and market based categories. The data is collected from reliable sources and analysed empirically by using panel data methodology. The dummy and interactive dummy variables are inserted in panel regression model to capture overall as well as relative effect of crisis. The comparative effect is initially examined across countries of distinct financial structure and with different level of economic development. It then further extended to developed and underdeveloped categories of each bank and market based country, separately. The overall results show a negative and significant effect of global financial crisis on economic growth of sample economies in each category. The significant differential effect across the categories is, however, not observed.

The results of study, therefore, suggests that the structure of financial system and stage of economic development is not much relevant for comparing the financial systems in contemporary, integrated, and globalized world. The similar results regarding irrelevance of financial structure for economic growth were earlier proposed by Levine (2002), Beck and Levine (2002), Ergungor (2008), Solo (2013). The study suggests for strengthening of both banks and markets to achieve rapid sustainable growth. Their coexistence can enable to cope with crisis more effectively. It should, therefore, be attempted to improve overall financial system and strengthen internal systems. The study can be extended in future though stock markets and firm level analysis for further comprehensive and conclusive evidences.

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APPENDIX A
Classification of Bank Based and Market Based Countries

S. No.	Name of the Country	S. No.	Name of the Country
Developed and Bank Based Countries			
1.	Austria	2.	Belgium
3.	Czech Republic	4.	France
5.	Germany	6.	Greece
7.	Ireland	8.	Israel
9.	Italy	10.	Japan
11.	New Zealand	12.	Norway
13.	Portugal	14.	Spain
Underdeveloped and Bank Based Countries			
1.	Argentina	2.	Bangladesh
3.	Colombia	4.	Egypt, Arab Rep.
5.	Hungary	6.	India
7.	Indonesia	8.	Kazakhstan
9.	Pakistan	10.	Poland
11.	Romania	12.	Thailand
13.	Ukraine	14.	Vietnam
Developed and Market Based Countries			
1.	Australia	2.	Canada
3.	Denmark	4.	Finland
5.	Hong Kong SAR, China	6.	Korea, Rep.
7.	Netherlands	8.	Singapore
9.	Sweden	10.	Switzerland
11.	United Kingdom	12.	United States
Underdeveloped and Market Based Countries			
1.	Brazil	2.	Chile
3.	China	4.	Malaysia
5.	Mexico	6.	Peru
7.	Philippines	8.	Russian Federation
9.	South Africa	10.	Turkey

(Source: Global Financial Development Database, and author's own calculations)