

Does Financial Liberalization Stimulate Business Growth?

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Abstract

The present study attempts to identify the impact of financial liberalization on non-financial Pakistani firms' growth. Since Pakistan is one of those few developing countries where financial reforms were implemented successfully in the 1990s, and a large portion of public sector financial institutions were transferred to private ownership. For the empirical investigation, a data set of 515 firms listed on the Pakistan Stock Exchange (PSX) is used. The results indicate that the financial development of the country is negatively associated with firms' growth. Equity finance is found as an important source of raising finance for firms in Pakistan. Economic development also played a crucial role to boost local business.

Keywords: Financial Reforms, PSX, Equity Finance, Economic Development, Pakistan

JEL Codes: G1, G18, G32, O1

1. Introduction

Pakistan adopted financial reforms in the 1990s successfully; as a result, a remarkable part of the public sector's financial institutions (FIs) was transferred to private ownership. The public sector dominance generated inefficiencies in the banking sector. So, the purpose of these reforms was to remove such inefficiencies and enhance economic growth (Haque, 1997; Faruqi, 2007). The privatized FIs showed a better performance immediately after their privatization. New private

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domestic banks proved their most efficient (Bonaccorsi Di Patti & Hardy, 2005).

Business significantly relates to a successful financial system. The firms can raise funds by internal and external sources. Major internal sources comprise retained earnings, whereas the significant external sources are associated with equity finance and loans from FIs like banks. The firm's growth can be ascertained by combining numerous factors, which are concerned not only with the characteristics of a firm, however its environment also. In addition to these characteristics, external financial sources also ascertain the firm's growth as well (Levine, 2005). The financial system is considered most prominent among external determinants of business' growth. To fulfill their financial needs, firms mostly turn on debt instead of internal sources (Galor & Zeira, 1993; White & Cestone, 2003).

The financial progress is a matter of significant attention in the determination of local business' growth. Although financial reforms allow the entry of new domestic and foreign banks in the market, the rising trend of local banks and declining of foreign banks in the case of Pakistan can be seen in Table 1. Even adopting the financial reforms and encouraging foreign investment in the financial sector the number of foreign banks declined from 21 in 1980 to 4 in 2016.

Table 1

Number of Reporting Scheduled Banks and Their Branches

Years	Local banks		Foreign banks		Total	
	Nos. of banks	Nos. of branches	Nos. of banks	Nos. of branches	Nos. of banks	Nos. of branches
1980	9	6,723	21	56	30	6,779
1985	9	6,980	23	59	32	7,039
1990	10	7,337	26	67	36	7,404
1995	25	8,200	25	73	50	8,273
2000	25	7,755	26	92	51	7,847
2005	28	7,014	17	91	45	7,105
2008	33	8,274	12	69	45	8,343
2013	31	10,913	7	29	38	10,942
2018	29	13,683	4	9	33	13,692

Source: State Bank of Pakistan, 2019

Firms' trend to use internal sources of finance in Pakistan is significantly higher as WBES (2000) reports that Pakistani firms employ more than 50% of all funds from their internal sources. Due to costly bank finance, firms turn to other financial sources such as retained earnings and equity finance, etc. In the short run, the use of internal finance is cost-free as compared to bank finance. The business and economic activities that are more dependent on bank finance get more affected by the interest rate. Notably, Pakistan is among those few countries where the interest rate spread is considerably higher as compared to developed and many developing countries.

1.1 Significance of the Study

Finance is essential in every business decision, from planning, budgeting, and cash flow management to the capital structure and controlling the associated risks and costs. The finance might not be the motivating aspect behind every business decision, but it surely has an enormous place of importance in a business. Simply, a business is unable to do anything and will not amount to much at all without money. Funding from different channels (internal & external) might affect businesses' decisions as well as returns on investments. Since a significant amount has to pay as interest in the case of bank finance, however, on the other hand, getting finance through equity is almost free of cost but not a viable way for every business. The current study will guide the most suitable channel of funding for business in Pakistan.

The rest of the study is organized as follows: section two presents an overview of financial reforms in Pakistan; the next section contains a review of literature; models and methodology are discussed in section four; section five presents empirical results; section six concludes.

2. Overview of Financial Sector Reforms in Pakistan

With the primary objective of providing capital to top priority sectors, and to ensure the depositors' capital protection, all banks including the State Bank of Pakistan (SBP) were nationalized in 1974 (Zaidi, 2005). However, the required results could not be obtained. Under the supervision and ownership of the public sector, the banking sector did not perform efficiently

(Haque, 1997) which leads to lower savings and investment, hence lower economic growth (Khan & Khan, 2007). To make the financial sector more efficient and transparent, the financial sector reforms were initiated in the late 1980s in Pakistan.

The first phase of financial reforms covers the period from 1988 to 1996. The significant steps of this phase were included the downsizing of extra staff, closing of overextended branches, privatization of state-owned banks, recovery of non-performing loans (NPLs), introduction of international accounting standards, and the initiative of the banking court (Janjua, 2004).

To enhance competition and efficiency of FIs, entry of private investors in the banking sector was encouraged in this phase. Later, in 1991 to promote private investment in opening new banks, the Nationalization Act 1974 was revised, and as the first step twenty-three banks were allowed to operate (Janjua, 2004). To facilitate existing investors, in 1995 a ban was imposed on opening new banks, and easy conditions applied to existing investors to spread the branch network more. To ensure greater security and efficiency in the payment system, the SBP launched its website and got membership in the Society for Worldwide Interbank Financial Telecommunication (SWIFT). In the first phase finally, SBP was granted full authority, and it became an autonomous body.

With the support of the IMF, World Bank, and Bank of Japan, at the start of 1997 new reforms were initiated. This is known as the second phase of financial reforms. In this phase, the partially privatized banks were completely sold out. To increase the role of SBP as a regulator, the government divided it into three sections: i- SBP as central bank ii- SBP-Banking Services Corporation (SBP-BSC) iii- National Institute of Banking and Finance (NIBAF).

The third phase of reforms was started in 2002. The major changes of this phase were included; increase in the minimum capital requirement, many mergers and acquisitions took place, permission granted to banks for establishing separate subsidiaries to work like mutual funds, venture capital, foreign exchange companies, and asset management companies, etc. Several consumer products like auto loans, credit cards, and housing finance were introduced to facilitate lower and middle-income

sectors. Later, Small and Medium Enterprises (SMEs) financing was included in this lending product group. Overtime, E-banking was improved. An early warning system known as IRAF² was also developed.

After the third phase, a tremendous improvement can be seen in the banking industry of Pakistan (see Table 2) as the share of the private sector in the total assets of the banking industry reached to 66 percent which was zero in 1990, whereas the state-owned banks' share declined to 18.6 percent in 2004 from more than 92 percent in 1990.

Table 2
Post-Privatization Structure of Banking Sector – 2004

Banks	No.	Assets		Deposits		Equity	
		Amount*	%	Amount	%	Amount	%
State-owned	4	518.8	18.6	379.3	20.1	22.5	17.2
Private	20	1840.3	66	1292.3	68.5	92.8	70.9
Foreign	13	278.4	10	198	10.5	26.7	20.4
Specialized Banks**	3	149.8	5.4	16.1	0.9	-11.1	-8.5
Total	40	2787.2	100	1885.6	100	130.9	100

* Rs. million and share in percentage

**Specialized Banks include Zarai Taraqiati Bank Limited (ZTBL), Industrial Development Bank of Pakistan (IDBP) and Punjab Provincial Co-operative Bank

Source: State Bank of Pakistan, 2005

3. Capital Market Reforms

In financial reforms, the capital market was also targeted. To move the flow of investment funds to more productive uses, several changes were made in its structure, such as to strengthen the governance, effective regulation, and supervision was taken. To increase the market strength, the government publicly offered shares of several state-owned companies like Pakistan Telecommunication Corporation (PTC), MCB Bank, Allied Bank Limited (ABL), and Hub Power Company (HUBCO) for sale.

² Institutional Risk Assessment Framework

Under the Exchange and Payment reforms, foreigners and overseas Pakistanis were permitted to trade without any prior permission in the stock exchange market. As a result, the Pakistan economy received a substantial inflow of foreign investments. Moreover, to improve the confidence of foreigners in Pakistani markets, they permit to retain the 100 percent shares of any company and permitted to take out any foreign currency amount freely, which they brought (SBP, 2005). The Corporate Law Authority (CLA) took an important step to remove the restrictions on price setting of new share issues. To broaden public participation and to promote the contribution of the Capital Issues Act, 1947 (Continuance of Control) was repealed, and Companies Rules, 1996 initiated.

Moreover, a critical step; the establishment of the Central Depository Company of Pakistan Limited (CDC) was taken in 1993; however, it started its operations in 1997. Due to the establishment of the CDC, the electronic transfer of shares became possible. The establishment of Pakistan Credit Rating Agency Limited (PACRA) and DCR-VIS³ was also an important effort to boost up the market transparency. Besides, the automation of all three stock exchange markets of Pakistan and their modified rules and regulations enhanced the investors' confidence and growth of the business activities.

4. Literature Review

The absorbing capacity to implement financial reforms is different in developing countries as compared to developed countries, perhaps due to this reason, developing countries were affected hard by the financial and economic crisis, though the effect was somewhat delayed (Gurtner, 2010). Developed countries adopted financial reforms in their true form, resultantly a well operated financial system they have. Hence, businesses rely more on financial institutes, since, various researchers such as Agarwal and Elston (2001), Bruckner (2008), Gagliardi

³ PACRA was a joint venture of IFC (International Finance Corporation), IBCA (International Bank Credit Analysis) limited England and the Lahore Stock Exchange, whereas DCR-VIS is an establishment by Duff & Phelps Credit Rating Company and the Vital Information Services.

(2009) consider the local banking sector development as a crucial determinant in firms' growth, and also it is a cause of a reduction in agency cost and increase the firms' access to bank loans that pave the way of firms' overall performance. The industrial revolution played a very important role in the development of the United Kingdom. Hicks (1969) linked this development to the British financial sector development including the structural changes of the Bank of England and the development of the London stock market. Similarly, Beck (2013) views the same for Germany; Beck argued that universal banks played an important role in financing infrastructure and industrialization of Germany in the 19th century. Other researchers such as Carlin and Mayer (2003) also considered the structure of the financial system of a country as a prominent cause of growth & investment of the industrial sector resultantly economic growth.

In concentrated banking markets, new firms face greater difficulty to get credit; more powerful banks create hurdles for new entrants to protect the sale and profitability of their existing clients. Banks provide loans to aged and mature firms on a priority basis (Zarutskie, 2006; Cetorelli & Strahan, 2006). On the other hand, financial institutions that provide them with their required capital, pave the way for them to bring innovation in their products and productivity growth. Banking competition and better institutions have a positive impact on the firms' growth and their entry into the industry (Pellenyi & Borko, 2009; Guiso, Sapienza, & Zingales, 2004). Industries more reliant on external finance rapidly grow in economies having a more developed financial system (Rajan & Zingales, 1998).

The financial development decreases the cost of using external finance and plays a significant role to decide to initiate an investment project or not. The unavailability of funds from FIs or with higher interest rate influence the firms' investment pattern and decisions (Rajan & Zingales, 1998). The quantity and kinds of investments are different in economies with weak financial markets as compared to developed economies. In less developed economies, firms prefer to invest in safer and short-term projects (Almeida, Campello, & Weisbach, 2011).

Foreign banks provide loans on a purely economical basis, but not on the relationship or political grounds. However, small and younger firms do not fully benefit from foreign banks and their entry into the local market (Giannetti & Ongena, 2009; Imran, Usman, & Qayyum, 2013). In developing economies, there are small banking markets, higher government interference, and a larger share of state-owned banks; as a result, businesses face more problems to obtain financing (Beck, Demirguc-Kunt, & Maksimovic, 2004; Beck, Demirguc-Kunt, & Maksimovic, 2006).

Researchers like Saeed (2009), on the other hand, concluded that the local banks and trade credit reduce the firms' growth whereas equity finance increases the same. Banks are unable to evaluate the latest improvement in technology, so admonish the business to invest in innovative projects. The firms that rely more on other sources of finance than banks are more developed and having many patents, thus, they have more ways to finance further patents. Firms using arm length financing involve highly innovative and creative activities (Atanassov, Nanda, & Seru, 2007). The stock market development has a significant and negative relationship with firms' debt levels relative to their equity placement (Agarwal & Mohtadi, 2004).

5. Model and Methodology

5.1 Model

In light of theory and previous studies such as Delmar, Davidsson, and Gartner (2003), Carrizosa (2006), and Delmar (2006), the current study used the following model:

$$FG_{it} = \beta_0 + \beta_1 Equity_{it} + \beta_2 TA_{it} + \beta_3 FD_t + \beta_4 EFD_{it} + \beta_5 FD_t * EFD_{it} + \beta_6 EDC_t + \mu_{it} \quad (1)$$

Where

FG - Firm's growth

Equity - Shareholder's equity

TA - Total assets

FD - Financial development

EFD - External financial dependence

EDC - Economic development of the country
 The following two indicators measure financial development:

FD1-Private Credit/GDP

FD2-Average Market Capitalization/GDP

The subscripts *i* and *t* denote individual firm and time respectively.

To avoid prospective multicollinearity, both indicators of financial development are used in two separate regressions. The description and sources of the variables can be seen in Table 3.

Table 3

Description and Sources of Variables

Variables	Description	Sources
FG	Natural logarithm of the firm's annual real sales	BSA
Equity	Natural logarithm of ordinary share capital	BSA
TA	Natural logarithm of total assets	BSA
FD1	The ratio of a private loan to GDP	SBP
FD2	The ratio of market capitalization to GDP	WDI
EFD	An index based on Rajan and Zingales (1998)	Authors' calculations
EDC	Natural logarithm of average GDP per capita	WDI

BSA- balance sheet analysis of joint-stock companies listed on Pakistan stock exchange published by SBP.

WDI- World Development Indicators

5.2 Ordinary Least Squares (OLS)

OLS regression has unique advantages over others, such as in the case of the adequate long time dimension to the panel, it is possible to estimate a separate OLS regression for each group (firm). However, if the number of firms (cross-sectional dimension) is small, then a single regression with interactions between *x* and the group dummy variables *D* could be estimated. OLS regression assumes constant intercept and slopes despite firm types. For simplicity consider the following bi-variate regression equation,

$$y_{it} = \beta_0 + \beta_1 x_{it} + \mu_{it}$$

Where β_0 is intercept, β_I is slope and μ_{it} is the error term,

The T observations for individual i can be summarized as

$$y_i = \begin{bmatrix} y_{i1} \\ \vdots \\ y_{iT} \end{bmatrix}_{T \times 1} \quad X_i = \begin{bmatrix} x_{it} \\ \vdots \\ x_{iT} \end{bmatrix}_{T \times K} \quad u_i = \begin{bmatrix} u_{i1} \\ \vdots \\ u_{iT} \end{bmatrix}_{T \times 1}$$

β of the equation can be defined as

$$\beta_{OLS} = (X'X)^{-1} X'Y$$

To expand it we get

$$\hat{\beta}_{OLS} = \frac{\sum_{i=1}^N \sum_{t=1}^T (x_{it} - \bar{x}_i)(y_{it} - \bar{y}_i)}{\sum_{i=1}^N \sum_{t=1}^T (x_{it} - \bar{x}_i)^2}$$

$i = 1, 2, \dots, N$ and $t = 1984, \dots, 2017$

Where

x_{it} = k-dimensional vector of explanatory variables excluding constant term in the model

\bar{x}_i = average of x_i

y_{it} = dependent variable in the model

\bar{y}_i = average of y_i

5.3 Fixed Effects Approach

The estimator $\hat{\phi}_{LSDV} = [\hat{\beta}_{LSDV} \hat{\gamma}_{LSDV}]$ is generally not consistent as the number of parameters goes to infinity as $N \rightarrow \infty$. From the numerical identity with the FE estimator, the $\hat{\beta}_{LSDV}$ is consistent while $\hat{\gamma}_{LSDV}$ is inconsistent. The advantages of the FE estimator are that it can allow the individual-and/or time-specific effects to be correlated with explanatory variables. Neither does it require an investigator to model their correlation patterns.

Equation 1 can be written in FEM or LSDV as

$$FG_{it} = \psi_1 D_1 + \psi_2 D_2 + \dots + \psi_N D_N + \beta_1 Equity_{it} + \beta_2 TA_{it} + \beta_3 FD_t + \beta_4 EFD_{it} + \beta_5 FD_t * EFD_{it} + \beta_6 EDC_{it} + \mu_{it} \quad (2)$$

Where D_1 to D_N are dummy variables to estimate the individual intercept for each cross-section (firm).

5.4 Random Effects Approach

The REM is an appropriate specification if we draw ‘ N ’ individuals randomly from a large population. The advantages of the REM specification are: (a) The number of parameters stays constant when the sample size increases. (b) It allows the derivation of efficient estimators that make use of both within and between (group) variation. (c) It allows the estimation of the impact of time-invariant variables (Hsiao, 2007).

The baseline equation (Eq. 1) can be shaped into the below equation for the REM approach:

$$FG_{it} = \beta_0 + \beta_1 Equity_{it} + \beta_2 TA_{it} + \beta_3 FD_t + \beta_4 EFD_{it} + \beta_5 FD_t * EFD_{it} + \beta_6 EDC_t + w_{it} \quad (3)$$

where w_{it} is a random error term with a mean value of zero and equal to $\varepsilon_i + \mu_{it}$

ε_i is an individual-specific effect and μ_{it} is an idiosyncratic error term.

5.5 Hausman Test

The Hausman specification test (1978) is the standard test to check whether the FEM or REM approach is appropriate for concerned data. The test can be executed by comparing $\hat{\beta}_{RE}$ and $\hat{\beta}_{FE}$ for a subset of coefficients of time-varying variables. The Hausman test is based on the following Wald statistic.

$$H = (\hat{\beta}_{FE} - \hat{\beta}_{RE})' [\hat{W}\hat{\beta}_{FE} - \hat{W}\hat{\beta}_{RE}]^{-1} (\hat{\beta}_{FE} - \hat{\beta}_{RE}) \sim \chi^2_p$$

where p is the number of time-varying regressors. The Hausman test is a type of Wald χ^2 -test with $k-1$ degrees of freedom (where k = the number of parameters) on the difference matrix between the variance-covariance of the FEM with that of the REM (Yaffee, 2005).

5.6 Data

Annual data of non-financial Pakistani firms listed on KSE from 1984 to 2017 is used for econometrical analysis. The firm-level data is obtained from the State Bank of Pakistan (SBP), whereas the data of macroeconomic variables is derived from World Development Indicators (WDI) and various issues of annual reports of SBP.

A principal deficiency in obtaining data from listed firms in Pakistan is that the data is inadequately available and not reliable for some firms. So, in the current study, firms that have data less than five years were skipped from the panel. Furthermore, the remaining firms' data also ranges from 5 to 34 years. Thus, an unbalanced panel of 515 firms is available for analytical purposes.

6. Results and Discussion

To find the impact of financial liberalization on firms' growth, the present study used OLS, and FEM or REM based on the Hausman test.

6.1 Correlation Results

Table 4 presented the correlation matrices of the variables. Among dependent variables, the FD1 and FD2 show a higher correlation (> 0.50) between them. This can be a cause of multicollinearity in the analysis. However, the use of these variables in two alternative equations can prevent any serious effects like multicollinearity on the analysis.

Table 4
Correlation Matrices of Variables

	FG	Equity	TA	EFD	FD1	FD2	EDC
FG	1.000						
Equity	0.723	1.000					
TA	0.855	0.444	1.000				
EFD	0.006	-0.012	0.004	1.000			
FD1	0.084	0.090	0.116	0.017	1.000		
FD2	0.244	0.282	0.311	0.020	0.627	1.000	
EDC	0.308	0.364	0.394	0.005	0.421	0.380	1.000

6.2 Hausman Test Results

Table 5 reports the results based on the Hausman test. The null hypothesis: the random effect is consistent and efficient is rejected. So, the fixed-effect approach is used.

Table 5
Results based on Hausman Test

Equation	χ^2 - Stat	Prob.	Decision	Suitable Approach
With FD1	45.429	0	H ₀ Rejected	FEM
With FD2	49.742	0	H ₀ Rejected	FEM

H₀: the REM is consistent and efficient, and FEM is consistent but inefficient

FEM – Fixed Effect Model

6.3 OLS and FEM Approach Results

Table 6 presents the results of estimating equation (1) twice, with FD1 and then by replacing it with FD2.

Results from used methodologies indicate that equity finance is an essential source of raising funds for local businesses. In countries with fragile legal and institutional structures, like Pakistan, equity finance proved as a more important source for increasing funding. The results are in-line with Traditional Trade-off Theory under the fairly rough assumption that specific firms have very different capital structure value adding-optima. Hence, Pakistani firms prefer to have a capital structure with a higher dependency on equity finance.

Table 6
Results Based on OLS and FE Approach for Pooled Sample

Variables	Eq-1 (With FD1)		Eq-2 (With FD2)	
	OLS	FEM	OLS	FEM
Equity	0.032*	0.043*	0.033*	0.045*
	(-5.162)	(-7.444)	(-5.164)	(-7.441)
TA	0.928*	0.799*	0.923*	0.801*
	(-132.92)	(-93.612)	(-132.88)	(-93.607)
FD1	-0.959*	-0.887*	-	-
	(-7.319)	(-9.812)	-	-
EFD	0	-0.002***	0	-0.012
	(-0.138)	(-1.917)	(-0.133)	(-1.114)
FD1*EFD	0.001	0.010***	-	-
	(-0.174)	(-1.927)	-	-
FD2	-	-	-0.001*	0
	-	-	(-4.156)	(-1.548)
FD2*EFD	-	-	0	0
	-	-	(-0.513)	(-0.573)
EDC	0.059**	0.217*	0.060**	0.215*
	(-2.633)	(-10.618)	(-2.628)	(-10.622)
Constant	-0.007	-0.812	-0.007	-0.815
	(-0.025)	(-3.916)	(-0.026)	(-3.920)
	R²	R²	R²	R²
	0.902	0.968	0.903	0.969
	F-Stat	F-Stat	F-Stat	F-Stat
	6579.235	473.970	3214.39	491.596
	DW-Stat	DW-Stat	DW-Stat	DW-Stat
	0.515	0.899	0.518	0.892

In parenthesis t-statistics, values are given

*, ** and *** are statistically significant at 1, 5 and 10 % respectively

Total assets which include cash, machinery, building, inventory and even patents & copyright, etc. are positively associated with the growth of all firms. Despite being collateral, these asset items play a vital role in firms' operations and profitability themselves and hence growth. Both indicators of financial development showed a negative impact on firms' growth. It is not surprising because large firms have several other options of raising capital besides bank loans, e.g. corporate bonds, certificates of deposits

(CD), debentures, equity, the sale of old or depreciated assets, lease and the trade credit by suppliers, etc. Results also show that external financial dependency has no significant impact. In Pakistan firms fulfill their financial needs from internal sources; as their dependency on external finance increases, the growth diminishes. The interaction variable of external financial dependence and financial development also shows the same results as financial development; financial development does not associate with firms' growth even in the presence of external financial dependency. The economic development of the country has a positive impact on the growth of a local business.

7. Conclusion

The current study estimates the impact of financial liberalization on the growth of non-financial Pakistani firms. For empirical analysis, we utilize a cross-firm panel data set of 515 firms listed on KSE, spanning the period 1984 to 2017. Due to the complexity and unreliability of some firms' data, the study omitted the data for many firms from the sample, so the data set of 515 remaining firms is used. For the econometric investigation, this study uses OLS and FEM. The results indicate that Pakistani firms mainly rely on internal sources of finance such as shareholder's equity, on the other hand, total assets of the firm and economic prosperity of the country are crucial factors in the local business growth, notably financial development has a negative association with the firms' growth. The results are in line with Seidman (2004), Carrizosa (2006), Audretsch and Keilbach (2007), and Bei and Wijewardanab (2012).

Although the financial liberalization process seems pleasant, however, it works better in the presence of developed institutions, a robust legal system, protected property rights, and finally the governing body in its proper structure. In an under-developed financial and legal system, firms are forced to turn alternative sources of finance other than banks.

In light of the above discussion, we can recommend some policies like the analysis shows that Pakistani firms rely largely on equity finance. It is surprising that, though the Pakistani stock market is not highly developed firms rely on this channel, the

reason seems that bank finance is costly here; a recent increase in the lending rate by the central bank may fuel the lower bank dependency. Hence, considering the scenario authorities should reduce the lending rate or take steps to improve the secondary market. The KSE-100 index has decreased by more than 6% since the beginning of 2019; frequently such decreases may lose the trust of investors that would pave the way of lower provision of equity finance too. Pakistan stock market has evidenced great fluctuations, that should be monitored properly and a sudden decline in the indices should not be allowed. The government should also focus on the minimization of interest rate spread.

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