Country Governance, Market Concentration and Financial Market Dynamics for Banks Stability in Pakistan

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Received: May 1, 2019 Accepted: June 1, 2019 Online Published: July 9, 2019

doi:10.5430/rwe.v10n2p136 URL: https://doi.org/10.5430/rwe.v10n2p136

Abstract

Considering the country governance, market concentration and financial market dynamics are key explanatory indicators, this study has examined the stability trends in commercial banks of Pakistan. Overall sample of 28 banks is considered, adding both conventional and Islamic banks into consideration for the panel regression models like fixed effect and random effect. Findings for overall sample indicates that both stability measures in the form of z-score ROA and ROE are significantly and negatively affected by poor control over corruption, regulatory quality, market concentration, financial market development and increasing non-performing loans. For conventional banking, key determinants of financial stability are control over corruption, political instability, market structure and credit risk. For Islamic banking firms, corruption and government effectiveness, capital adequacy ratio, market structure and financial market development are significant determinants, affecting Z measures of stability. However, through lending interest rate, we do not find any significant relationship with both stability measures. Study findings are very useful for country officials, risk officers, and other stakeholders in financial markets who want to explore the relationship between country governance and financial market dynamics in the economy of Pakistan. In addition, study has experienced various limitations like non-consideration of bank-based and macroeconomic risk factors, international trends in banking and their influence on domestic banks of Pakistan, which could be reconsidered in coming research.

Keywords: country governance, market concentration, financial market dynamics, financial stability, Pakistan

1. Introduction and Background

Financial crisis of 2007-2008 in the world economy has targeted the banking sector directly and changed the way risk and stability measures are examined and evaluated by financial analysts and similar experts. Growing body of literature has been presented in recent years, covering the title of banking sector stability and its various determinants through bank-based and regional economic evaluation. However, analyzing the impact of macroeconomic factors like governance in the country and its impact on financial stability of the banks is yet missing part of the literature. The reason is that research work are primary working on the idea of risk factors, shadow banking, banking sector growth and their impact on the stability measures, while putting less attention towards the macro-factors like country governance. The factor of country governance implies a combination of various policies, procedures, internal structure of the government, overall control of violence and corruption, providing the people with more opportunity to openly participate in political and other legal activities with the freedom of speech. Due to macro in nature, country governance has its significant influence on banking firms like other sectors in the economy. In recent time, it is observed that developed economies have strong governance structure which in return positively influencing on the financial market as well. This case is not very much similar when studying the relationship between country governance and banking sector in developing and poor economies. From the context of market structure and banking sector, literature work has provided some reasonable justification for the relationship between the both. Their interaction defines the financial condition of the banking sector as it is a major influencing factor which can cause the banking sector fragility. While financial market dynamics also play their significant role in defining the banks stability and performance. This study has observed the factor of market concentration, financial market dynamics and country governance to analyze their effect on banking sector stability in the region of Pakistan. To the best of authors'

findings, this is a very first attempt to integrate the stated explanatory variable for the bank's stability through Z score. The rest of the study covers literature context under section two, description of variables in section three, methods and sample under section four. In addition, section five presents empirical findings and discussion of the results. Last section covers conclusions, practical implications and limitations of the study.

2. Literature Context

Literature context on the relationship between country governance and bank performance through stability is limited. In this regard, research work conducted by Ho, Lin, and Tsai (2016) investigate the impact of country governance on 113 banking firms, owned by the government during the time of 1996-2007 in 39 economies. Findings of the authors show that after the privatization, privatized banks have outperformed non-privatized banking firms, known as privatized effect which is greater in developing economies. At second, country governance, privatization and bank performance are associated to each other. It is observed that those countries having good governance structure can lower the political intervention through putting the factor of residual ownership into account. additionally, literature work also supports the argument that factor of country governance positively impact on banking firms with lower degree of corruption, better law and order situation, more quality of regulation and good level of government effectiveness (Boehmer, Nash, & Netter, 2005; D'Souza, Megginson, & Nash, 2005; Shen, Hasan, & Lin, 2014). Moreover, some other studies have explored the bank performance and country governance (Ho et al., 2016; Kaufmann, Kraay, & Mastruzzi, 2008; Shen, Shuai, Jiao, Tan, & Song, 2017). These studies specify that performance gap is lower in the countries where low corruption is prevailed, and higher in those states where corruption is a major issue. Besides, overall country environment like political and economic factors are significant determinant of government owned banking firms. other studies have examined the fact that countries with the political stability, quality of governance through regulatory assurance, effectiveness of the government and degree of corruption have their positive influence on bank performance (Boubakri, Cosset, Fischer, & Guedhami, 2005; Shen et al., 2014; Chidoko and Mashavira, 2014; Abiola and Olausi, 2014; Krishnan and Kumaran, 2015; Abedin and Dawan, 2016; Ekpete and Iwedi, 2017; Nazal, 2017; Adusei, 2018).

In addition, market concentration is another important indicator to define the bank sector stability in financial terms. Shim (2019) examines the effect of loan portfolio, market concentration on the bank's financial stability. He has investigated the effect of loan diversification and concentration factor in banking market. Findings of the study explains that factor of market concentration is negatively associated to financial strength of the banks. additionally, those banking firms which are operating in more diversified situation and highly concentrated markets are more stable, comparatively to those which are dealing under less concentrated market. Some of the other studies like have provided their limited contribution in the literature for market concentration and financial stability in banking sector (Millar & Quick, 1993; Nier, 2005; Uhde & Heimeshoff, 2009; Syadullah, 2018; Elkhayat and ElBannan, 2018; Ghosh, et.al.2018; Cheng, et.al. 2018; Liu and Yin, 2018; Omodero and Ogbonnaya, 2018; Hallunovi and Berdo, 2018).

Besides, literature context of financial market development (FMD) and its various dynamics are also examined in banking sector. For example, (Vithessonthi, 2014) has investigated FMD and bank risk factors from the context of Thailand during 1990 to 2012 with annual observations. Authors claim that stock market development has its positive influence on capitalization ratio of banking firms, but negative association with bank's systematic risk. In addition, development in banking sector has its significant and negative influence on capital ratio but positive linkage to bank's beta. Vithessonthi and Tongurai (2016) focus on FMD, business cycle and risk factor of banks in South America. It is observed that FMD strengthen the banks through their capital ratio while banking sector crisis moderate the impact of FMD on bank risk. Some other studies have also explored the development in financial market, bank performance and risk dynamics in both developed and developing economies (Beck, Demirgüç-Kunt, & Levine, 2010; Demirgüç-Kunt & Huizinga, 2000; Hermes & Lensink, 2004; Kamran et al., 2016)

3. Variable Description

Table 1 provides operational description, measurement and literature source of the variables.

Table 1. Variable description and literature sources

Variable Title	Description	Literature Source
ZROA	Measures financial stability through return on assets, and standard deviation in return on assets	(Bouheni & Hasnaoui, 2017)
ZROE	Measures financial stability through return on equity, and standard deviation in return on equity	(Bouheni & Hasnaoui, 2017)
Control of corruption :CG1	Measures the use of public power for private gains/interests	(Ho et al., 2016)
Government effectiveness: CG2	Measures quality of public service/civil service and independence from political pressure with quality policy formulation and implementation	
Political stability/absence of violence: CG3	Measures likelihood that government will be overthrown by violent means/terrorism/ politically motivated violence.	
Regulatory quality: CG4	Defines the ability of the government to formulate and implement policies and regulations for social sector development	
Rule of law: CG5	Considers the extends to which individuals abide by the rules of society	
Voice and accountability: CG6	Measures the ability to which country citizen are able to participate in selecting their government with freedom of expression.	
Capital adequacy ratio: CAR	Measures the ratio of total capital to total assets in the bank over one year	(Anginer, Demirgüç-Kunt, & Mare, 2018)
Audit quality: AQ	Indicates the overall audit fee paid to the auditors in terms of their remuneration for the inspection and quality of financial statements on annual basis	(Narayanaswamy & Raghunandan, 2019)
Market concentration: M_Con	Measures through Herfindahl-Hirschman index (HHI), taking the sum of squares of percentage of total deposits across all banks *i*.	(Shim, 2019)
Market power: M_Pwr	Measures through learner index, where higher index value defines more market power and vice versa.	(Soedarmono, Machrouh, & Tarazi, 2011)
Financial market development: FMD	Considers the overall capitalization to GDP ratio in the country used for stock market growth	(Vithessonthi & Tongurai, 2016)
Non-performing loans : NPLs	Measures the bank nonperforming to gross advances ratio on annual basis	(Rajan & Dhal, 2003)
Lending interest rate : LIR	Overall interest in the economy for bank's borrowing on annual basis	(Marotta, 2009)

4. Sample and Methodology

To represent the financial sector, this study has observed a sample of 28 commercial banks in Pakistan during the time of 2006-2016 with annual observations. From overall population of 30 commercial banks, selected sample represents 93 percent approximately. Two banking firms are dropped from the sample due to their missing observations in the sample period. For the analysis purpose, both fixed and random effect panel models are applied, and their comparison is conducted through HM test, keeping financial stability as main dependent variables and country governance, market concentration and financial market dynamics as major explanatory variables. For better

understanding, following equations presents the comprehensive view of fixed and random effect being applied on collected data of sample banking firms. Regression equation 1 to 4 represents fixed and random effect for overall banking firms, 5-8 for conventional banks stability and 9-12 for FS in Islamic banks.

$$\mathbb{Z}\,\mathrm{ROA(overall\_banks)} = \mathbb{C} + \beta_1 CG_1 + \beta_2 CG_2 + \beta_3 CG_3 + \beta CG_4 + \beta_5 CG_5 + \beta_6 CG_6 + \beta_7 CAR_7 + \beta_8 AQ_8 + \beta_9 M\_Con_9 + \beta_{10} M\_pwr_{10} + \beta_{11} FMD_{11} + \beta_{12} NPLs_{12} + \beta_{13} LIR_{13} + \partial_2 Bnk2_{2it} \sim \partial_{28} Bank28_{28it} + \varepsilon .....[Equation:1]$$

$$\mathbb{Z}\,\mathrm{ROA(overall\_banks)} = \mathbb{C} + \beta_1 CG_1 + \beta_2 CG_2 + \beta_3 CG_3 + \beta CG_4 + \beta_5 CG_5 + \beta_6 CG_6 + \beta_7 CAR_7 + \beta_8 AQ_8 + \beta_9 M\_Con_9 + \beta_{10} M\_pwr_{10} + \beta_{11} FMD_{11} + \beta_{12} NPLs_{12} + \beta_{13} LIR_{13} + U_i + W_{ij} ....[Equation:2]$$

$$\mathbb{Z}\,\mathrm{ROE(overall\_banks)} = \mathbb{C} + \beta_1 CG_1 + \beta_2 CG_2 + \beta_3 CG_3 + \beta CG_4 + \beta_5 CG_5 + \beta_6 CG_6 + \beta_7 CAR_7 + \beta_8 AQ_8 + \beta_9 M\_Con_9 + \beta_{10} M\_pwr_{10} + \beta_{11} FMD_{11} + \beta_{12} NPLs_{12} + \beta_{13} LIR_{13} + \partial_2 Bnk2_{2it} \sim \partial_{28} Bank28_{28it} + \varepsilon .....[Equation:3]$$

$$\mathbb{Z}\,\mathrm{ROE(overall\_banks)} = \mathbb{C} + \beta_1 CG_1 + \beta_2 CG_2 + \beta_3 CG_3 + \beta CG_4 + \beta_5 CG_5 + \beta_6 CG_6 + \beta_7 CAR_7 + \beta_8 AQ_8 + \beta_9 M\_Con_9 + \beta_{10} M\_pwr_{10} + \beta_{11} FMD_{11} + \beta_{12} NPLs_{12} + \beta_{13} LIR_{13} + U_i + W_{ij} ....[Equation:4]$$

$$\mathbb{Z}\,\mathrm{ROA(Commercial\_banks)} = \mathbb{C} + \beta_1 CG_1 + \beta_2 CG_2 + \beta_3 CG_3 + \beta CG_4 + \beta_5 CG_5 + \beta_6 CG_6 + \beta_7 CAR_7 + \beta_8 AQ_8 + \beta_9 M\_Con_9 + \beta_{10} M\_pwr_{10} + \beta_{11} FMD_{11} + \beta_{12} NPLs_{12} + \beta_{13} LIR_{13} + \partial_2 Bnk2_{2it} \sim \partial_{28} Bank28_{28it} + \varepsilon .....[Equation:5]$$

$$\mathbb{Z}\,\mathrm{ROA(Commercial\_banks)} = \mathbb{C} + \beta_1 CG_1 + \beta_2 CG_2 + \beta_3 CG_3 + \beta CG_4 + \beta_5 CG_5 + \beta_6 CG_6 + \beta_7 CAR_7 + \beta_8 AQ_8 + \beta_9 M\_Con_9 + \beta_{10} M\_pwr_{10} + \beta_{11} FMD_{11} + \beta_{12} NPLs_{12} + \beta_{13} LIR_{13} + U_i + W_{ij} ....[Equation:6]$$

$$\mathbb{Z}\,\mathrm{ROE(Commercial\_banks)} = \mathbb{C} + \beta_1 CG_1 + \beta_2 CG_2 + \beta_3 CG_3 + \beta CG_4 + \beta_5 CG_5 + \beta_6 CG_6 + \beta_7 CAR_7 + \beta_8 AQ_8 + \beta_9 M\_Con_9 + \beta_{10} M\_pwr_{10} + \beta_{11} FMD_{11} + \beta_{12} NPLs_{12} + \beta_{13} LIR_{13} + \partial_2 Bnk2_{2it} \sim \partial_{28} Bank28_{28it} + \varepsilon .....[Equation:7]$$

$$\mathbb{Z}\,\mathrm{ROE(Commercial\_banks)} = \mathbb{C} + \beta_1 CG_1 + \beta_2 CG_2 + \beta_3 CG_3 + \beta CG_4 + \beta_5 CG_5 + \beta_6 CG_6 + \beta_7 CAR_7 + \beta_8 AQ_8 + \beta_9 M\_Con_9 + \beta_{10} M\_pwr_{10} + \beta_{11} FMD_{11} + \beta_{12} NPLs_{12} + \beta_{13} LIR_{13} + U_i + W_{ij} ....[Equation:8]$$

$$\mathbb{Z}\,\mathrm{ROA(Islamic\_banks)} = \mathbb{C} + \beta_1 CG_1 + \beta_2 CG_2 + \beta_3 CG_3 + \beta CG_4 + \beta_5 CG_5 + \beta_6 CG_6 + \beta_7 CAR_7 + \beta_8 AQ_8 + \beta_9 M\_Con_9 + \beta_{10} M\_pwr_{10} + \beta_{11} FMD_{11} + \beta_{12} NPLs_{12} + \beta_{13} LIR_{13} + \partial_2 Bnk2_{2it} \sim \partial_{28} Bank28_{28it} + \varepsilon .....[Equation:9]$$

$$\mathbb{Z}\,\mathrm{ROA(Islamic\_banks)} = \mathbb{C} + \beta_1 CG_1 + \beta_2 CG_2 + \beta_3 CG_3 + \beta CG_4 + \beta_5 CG_5 + \beta_6 CG_6 + \beta_7 CAR_7 + \beta_8 AQ_8 + \beta_9 M\_Con_9 + \beta_{10} M\_pwr_{10} + \beta_{11} FMD_{11} + \beta_{12} NPLs_{12} + \beta_{13} LIR_{13} + U_i + W_{ij} ....[Equation:10]$$

$$\mathbb{Z}\,\text{ROE(Islamic\_banks)} = \mathbb{C} + \beta_1 CG_1 + \beta_2 CG_2 + \beta_3 CG_3 + \beta CG_4 + \beta_5 CG_5 + \beta_6 CG_6 + \beta_7 CAR_7 + \beta_8 AQ_8 + \beta_9 M\_Con_9 + \beta_{10} M\_pwr_{10} + \beta_{11} FMD_{11} + \beta_{12} NPLs_{12} + \beta_{13} LIR_{13} + \partial_2 Bnk2_{2it} \sim \partial_{28} Bank28_{28it} + \varepsilon .....[Equation:11]$$

$$\mathbb{Z}\,\text{ROE(Islamic\_banks)} = \mathbb{C} + \beta_1 CG_1 + \beta_2 CG_2 + \beta_3 CG_3 + \beta CG_4 + \beta_5 CG_5 + \beta_6 CG_6 + \beta_7 CAR_7 + \beta_8 AQ_8 + \beta_9 M\_Con_9 + \beta_{10} M\_pwr_{10} + \beta_{11} FMD_{11} + \beta_{12} NPLs_{12} + \beta_{13} LIR_{13} + U_i + W_{ij} ....[Equation:12]$$

5. Results and Discussion

Descriptive facts are presented under the title of Table 2 with mean score, deviation from the mean and range through minimum and maximum values. For ZROA and ZROE, average trends are 2.18 and 1.62 with deviation of 2.82 and 1.90 respectively. for county governance, six indicators ranging from CLG1 to CLG6 are added in the study and all are presenting negative trends in the mean score. While highest negative mean score is linked to CLG2; 2.592 with the deviation of .122 accordingly. For capital CAR, average trend in banking sector of Pakistan is 11.95, indicating an above average trend defined by the stated bank of Pakistan which is 10 percent. For audit quality, log of annual audit fee is observed with the mean value of 7.892.

Table 2. Descriptive statistics

VARIABLE	OBS	MEAN	STD.DEV.	MIN	MAX
ZROA	276	2.188	2.829	-2.82	11.17
ZROE	276	1.662	1.907	-3.02	6.89
CG1	280	-.913	.126	-1.87	-.85
CG2	253	-2.691	.142	-2.41	-2.39
CG3	253	-.981	.197	-.81	-.46
CG4	252	-.863	.063	-.97	-.76
CG5	252	-.617	.067	-.712	-.504
CG6	252	-.854	.07	-.975	-.739
CAR	276	11.95	10.098	-4.1	62.4
AQ	255	7.892	.697	2.74	8.19
M_Pwr	277	1.163	.253	-.88	4.322
M_Con	263	31.732	9.405	-1.27	24.68
FMD	257	18.048	2.742	-5.49	21.23
NPLS	280	12.082	2.565	7.442	16.207
DIR	280	7.05	1.239	4.834	8.681

Table 3 presents the regression findings for country governance, market concentration and financial market dynamics to measure their effect on financial stability in banking sector of Pakistan. It is found that low control over corruption (CG1) indicates a significant and negative influence on both stability measures under fixed and random effect. It means that at present, Pakistan is facing the issue of heavy corruption in the economy which in return adversely affecting the banking sector stability. Through CG4, it is observed that regulatory quality or CG4 is also adversely and negatively affecting the bank's stability in an adverse. It expresses that Pakistan is facing low score in regulatory quality which is negatively and significantly affecting financial stability of the banks. While all other indicators of country governance have shown their insignificant influence on the FS either through ZROA or through ZROE. The factor of market power shows its significant and positive influence on banking sector, indicates that more level of market power is leading towards sound banking system in Pakistan. While market structure coefficients are found to

be significantly negative for banking sector stability under both fixed and random effect, taking the whole sample of commercial banks of Pakistan. in addition, financial market development seems to be negatively and significantly affecting the whole banking sector when the stability is reflected in the form of ZROA for both fixed effect and random effect findings. Additionally, for ZROE effect of FMD is negatively insignificant under full sample. Currently banking sector is facing higher level of credit risk in the form of non-performing loans. This increasing risk and poor asset quality shows negative and significant influence on both stability measures. As per explained variation, highest power is linked to random effect model for ZROA with the R-square value of 51.7 percent respectively. In addition, Hausman test reflects the favor for null hypothesis as p-value is insignificant. It means that while comparing the fixed effect and random effect for ZROA, random effect is more appropriate. For ZROE, findings are in favor for the fixed effect with the significant chi-square findings at 5 percent.

Table 3. Regression findings overall banking

VARIABLES	(ZROA) fixed effect	(ZROA) random effect	(ZROE) fixed effect	(ZROE) random effect
CG1	-4.820*	-3.631***	-9.216**	-8.935**
	(2.638)	(0.902)	(4.623)	(4.533)
CG2	-2.0520	-4.0520*	-4.377	-4.200
	(4.320)	(2.334)	(.9084)	(6.028)
CG3	-5.469	5.469	-9.803**	-9.811**
	(2.490)	(4.723)	(4.530)	(4.491)
CG4	-1.460***	-1.460***	-2.485***	-2.211***
	(.223)	(.566)	(0.940)	(.189)
CG5	-0.924	-0.924	-6.854	-6.544
	(5.130)	(7.487)	(7.197)	(7.128)
CG6	-1.861	-1.861	1.966	1.698
	(6.842)	(8.801)	(8.450)	(8.373)
CAR	-0.0186	-0.0186	-0.0212	-0.0236*
	(0.0210)	(0.0146)	(0.0142)	(0.0140)
AQ	0.153	0.153	0.0471	0.0822
	(0.152)	(0.206)	(0.205)	(0.200)
M_Pwr	2.275***	4.275**	2.1393**	3.118***
	(0.658)	(0.534)	(0.518)	(0.511)
M_Con	-0.00894**	-0.00894***	-0.0100***	-0.0101***
	(0.00389)	(0.00240)	(0.00235)	(0.00231)
FMD	-0.00167**	-0.00167*	-0.000872	-0.000922
	(0.000780)	(0.000961)	(0.000928)	(0.000917)
NPLs	-0.377***	-0.347**	-0.245**	-0.248*
	(0.104)	(0.157)	(0.051)	(0.149)
DIR	0.126	0.126	0.684	0.668
	(0.515)	(0.711)	(0.683)	(0.676)
Constant	1.511	1.511	-5.354	-5.151
	(12.77)	(16.92)	(16.22)	(16.10)
Observations	216	216	216	216

Number of bankid	28	28	28	23
R-squared	0.415	0.517	0.301	0.439

Hausman (1978) specification test (ZROA)	Coef.
Chi-square test	6.636
P-value	.881
Hausman (1978) specification test (ZROE)	Coef.
Chi-square test value	116.047
P-value	.015**

Table 4 covers the panel regression findings for conventional banking with a sample of 23 banks in the economy of Pakistan. For conventional banks, again country governance through control of corruption of CG1 indicates significantly negative influence on both stability measures under fixed effect and random effect. It means that poor control over corruption is not only the issue in overall banking, but specifically conventional banking firms are also facing the same issue. However, due to low political stability and absence of violence in Pakistan (CG3), significantly negative influence on ZROA and ZROE is observed for both fixed and random effect panel models. All other governance factors are found to be insignificant determinants of financial stability for conventional banks in Pakistan. Through CAR, ZROE is found to be significantly and negatively affected with the coefficients of -.0236 and -.0240. It means that excessive capital reserve is not a good sign for stable banking trends. The factor of market structure shows its adverse influence on both stability measures of conventional banks, but FMD is found to be insignificant under the sample of 23 conventional banks. Regression findings through NPLs reflect that higher credit risk is the key issue of conventional banking, adversely affecting the Z score of stability. For both stability measures, HM test favors the null hypotheses means that random effect results are more suitable, comparatively to fixed effect.

Table 4. Regression findings (Conventional banking)

VARIABLES	(ZROA) fixed effect	(ZROA) random effect	(ZROE) Fixed effect	(ZROE) random effect
CG1	-4.820***	-9.216***	-8.935***	-10.74***
	(0.902)	(3.623)	(4.533)	(5.642)
CG2	0.0520	-4.377	-4.200	-5.337
	(6.334)	(6.084)	(6.028)	(6.137)
CG3	-5.469***	-8.803**	-9.811**	-10.61**
	(3.723)	(4.530)	(4.491)	(4.602)
CG4	-1.460	-2.485	-2.211	-3.540
	(11.56)	(11.09)	(11.00)	(11.08)
CG5	-0.924	-6.854	-6.544	-8.510
	(7.487)	(7.197)	(7.128)	(7.246)
CG6	-1.861	1.966	1.698	3.024
	(8.801)	(8.450)	(8.373)	(8.471)
CAR	-0.0186	-0.0212	-0.0236*	-0.0240*
	(0.0146)	(0.0142)	(0.0140)	(0.0141)
AQ	0.153	0.0471	0.0822	0.0407
	(0.206)	(0.205)	(0.200)	(0.203)
M_Pwr	0.00275	-0.00139	-0.00118	0.00811
	(0.00534)	(0.00518)	(0.00511)	(0.00661)

M_Con	-0.00894***	-0.0100***	-0.0106***	-0.0100***
	(0.00240)	(0.00235)	(0.00231)	(0.00233)
FMD	-0.01671	-0.000872	-0.000922	-0.00111
	(0.000961)	(0.000928)	(0.000917)	(0.000974)
NPLs	-1.377**	-2.245**	-0.248*	-0.228**
	(0.157)	(0.951)	(0.149)	(0.052)
DIR	0.126	0.684	0.668	0.866
	(0.711)	(0.683)	(0.676)	(0.690)
Constant	1.511	-5.354	-5.151	-8.200
	(16.92)	(16.22)	(16.10)	(16.30)
Observations	216	216	216	209
Number of bankid	23	23	23	23
R-squared	0.412	0.301	0.463	0.593

Hausman (1978) specification test (ZROA)

	Coef.
Chi-square test value	10.687
P-value	.556

Hausman (1978) specification test (ZROE)

	Coef.
Chi-square test value	2.089
P-value	.999

Findings for five Islamic banking firms are presented under Table 5. It is observed that corruption issue or CG1 is similar issue for Islamic banks like the one for conventional banks. Both stability measures show their negative and significant coefficient under fixed effect and random effect. While all other measures of country governance are found to be insignificant for Islamic bank's stability. Through CAR, it is observed that ZROA and ZROE are positively and significant associated. The reason that Islamic banking firms are also keeping the capital reserves to deal with uneven financial conditions, but the level of such capital is not very much high. This moderate level of capital reserve shows its positive impact on ZROA and ZROE. Additionally, it is observed that significant attention is required towards financial market development due to its adverse influence on Islamic banks of Pakistan. While NPLs are found to be insignificant indicator of instability in Shariah bases banking system. For HM test, insignificant chi-square output reflects the favor for null hypotheses (random effect).

Table 5. Regression findings (Islamic banking)

VARIABLES	(ZROA) fixed effect	(ZROA) random effect	(ZROE) fixed effect	(ZROE) random effect
CG1	-10.45**	-5.972***	-10.72***	-6.690***
	(5.015)	(1.038)	(4.800)	(1.15)
CG2	-1.546*	-3.1782**	-5.078*	3.537**
	(.846)	(1.28)	(2.971)	(1.003)
CG3	-8.175	-5.289	6.826	-2.953
	(10.12)	(17.74)	(9.122)	(13.41)

CG4	-0.120	5.747	6.484	7.697
	(10.08)	(18.51)	(9.084)	(13.99)
CG5	3.047	-6.691	2.159	7.124
	(11.20)	(19.83)	(10.09)	(14.99)
CG6	5.105	6.026	4.348	2.935
	(10.00)	(18.61)	(9.013)	(14.07)
CAR	0.123***	0.0662*	2.0103***	1.00621**
	(0.0233)	(0.0352)	(0.0210)	(0.0266)
AQ	-0.926	1.548***	-0.708	0.565**
	(0.969)	(0.353)	(0.873)	(0.267)
M_Pwr	0.00793*	0.0114**	0.00288	0.0128***
	(0.00452)	(0.00550)	(0.00408)	(0.00416)
M_Con	0.0764***	0.0347***	1.0143**	0.00292
	(0.0118)	(0.00982)	(0.0106)	(0.00742)
FMD	-0.0260***	-0.0331***	-0.00983**	-0.0204***
	(0.00470)	(0.00527)	(0.00424)	(0.00399)
NPLs	0.00705	-0.136	0.0162	0.145
	(0.379)	(0.674)	(0.342)	(0.509)
DIR	-0.289	-0.403	1.025	-0.00490
	(1.093)	(1.966)	(0.985)	(1.486)
Constant	15.86	8.663	11.57	18.85
	(20.11)	(35.78)	(18.12)	(27.04)
Observations	34	34	34	34
R-squared	0.880	0.712	0.634	0.629
Number of bankid	5	5	5	5

Hausman (1978) specification test (ZROA)

	Coef.
Chi-square test value	8.697
P-value	.676

Hausman (1978) specification test (ZROE)

	Coef.
Chi-square test value	4.089
P-value	.859

6. Conclusions and Recommendations

This study has examined the factors of country governance, market concentration and dynamics of financial market development in Pakistan to examine their influence on banking sector stability. Overall findings are divided into three sub-categories; overall banks, conventional banks and Islamic banks. For stability, two measures under the title of ZROA and ZROE are calculated. For overall sample of banks, key determinants of banking sector stability are poor control over corruption, regulatory quality, market power, market structure and non-performing loans due to their significant influence on both stability measures. For conventional banking firms, stability is affected by poor control over corruption, political instability and violence, market structure and NPLs. For Islamic banking, key factors to disturb the bank's stability are corruption in the country, and government ineffectiveness. But the effect of CAR, market power and market structure on ZROA and ZROE is significantly positive. However, it is observed that

poor financial market development indicates its negative effect on Islamic banking industry which needs serious attention. Additionally, due to strict Shariah compliance, Islamic banks have no problem of increasing NPLs and low asset quality. Findings of the study have provided a comprehensive outlook for both conventional and Islamic banks which are further observed by the policy makers, country officials, and key stakeholders in financial markets. It is found that Islamic banks are less vulnerable towards the credit risk, and political instability in Pakistan. More banking sector stability can be observed through better governance, significant control over corruption, better regulatory quality, political stability and financial market development tools. Moreover, study findings are useful for the students of finance, banking and risk management in their research projects and better understanding of latest trends in banking sector of Pakistan. In addition, study has experienced various limitations like non-consideration of bank-based and macroeconomic risk factors, international trends in banking and their influence on domestic banks of Pakistan, which could be reconsidered in coming research.

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