Impact of Ownership, Competition, and Governance on Efficiency of Banking Sector in Pakistan

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Abstract: - Financial sector of Pakistan undergoes massive reforms in the 90s. The primary aim of reforms is to privatized state-owned institutions, abolish entry barriers for new players, which consequently increase the efficiency of the whole system. This study uses an unbalanced panel of 21 commercial banks listed at Pakistan stock exchange over the period of 2000 to 2017 from Bankscope and Bloomberg. This research aims to measure the effect of ownership, competition and, governance on banks efficiency. A graphical representation shows an increasing trend in both foreign ownership and efficiency over the sample period. I found a higher efficiency of private banks in comparison to state-owned counterparts. The empirical analysis suggests that an increase in foreign ownership and institutional ownership impact positively on all measures of efficiency. The relationship between competition and efficiency supports "competition-efficiency hypothesis" and proposed regulatory measures to deregulate the market further. Additionally, banks who score high on governance measures tend to be more efficient than those with low governance scores. These findings imply that there is a need to regulate the bigger banks and ease the market entry for foreign and institutional owners to promote governance practice and hence efficiency.

Key-Words: - Bank, Ownership Structure, Competition, Governance, Efficiency, Data Envelopment analysis.

1 Introduction

A wide range of developed, emerging and transition economies have reformed their financial system over the past two decades, with the aim of efficiency, better allocation of resources to different sectors and increase competitiveness. An efficient financial framework and the reformed legal system play a vital role to improve economic growth in developing markets (Beck, Demirguc, Kunt, & Maksimovic, 2005; King & Levine, 1993), while inefficiency and poor legal and financial infrastructure may lead to stagnation (Cull & Xu, 2005). Thus a robust and efficient financial and legal system is needed for a developing country like Pakistan whose economic growth is muddling for past two decades. An efficient financial structure can help allocated limited financial resources optimally.

The banking sector of Pakistan undergoes a different phase since its inception in 1947 to a recent period. The first two decades involve the development of institutions from scratch by the government and the private sector. The next phase marked the nationalization of the privately owned institutions and experimenting with interest-free banking. Government-owned institutions are usually notorious for their inefficiency (Allen N. Berger, Hasan, & Klapper, 2004; Rafael, Florencio, &

Andrei, 2002), leads to reforms (the 1990s) in the form of privatization, restructuring, financial liberalization, licensing to private banks and improved supervision. This globalization affected the overall ownership structure, enhance competition, and institutional and regularity improvements which lead to overall efficiency of banking sector. The ownership structure gave birth to agency problem because largely dispersed shareholders often suffer the incomplete and asymmetric information dilemma.

First contribution of this research is to test the efficiency of banking sector using four different efficiency ratio (efficiency score calculated using "data envelopment analysis", asset efficiency ratio, cost efficiency ratio, and overhead cost efficiency) under the influence of foreign and institutional ownership. Using a dummy variable approach, I showed higher efficiency of private banks then state-owned banks. Private Banks tend to have highly productive assets, lower overhead, and overall cost. To supplement results, I also used real data of foreign and institutional ownership to show the similar results. Quantile analysis shows a monotonic increase in efficiency from low foreign or institutional ownership subgroup to high foreign or institutional ownership group. Graphical representation shows that foreign ownership jumped from 1.85 percent to 7.19 percent in sample period

while efficiency from 0.59 to 0.68. This highly correlated trend between ownership and efficiency can be an outcome of foreign inverters involvement.

The second contribution deals with testing of competition and efficiency. Providing an equal playing field is a big challenge for regulators in emerging countries where a small number of banks have high power to dictate their terms. A very high five-firm concentration ratio (CR-5) of around 60 percent indicates the presence of highly concentrated banking system. The empirical analysis supports the "competition-efficiency hypothesis" which suggests a higher efficiency of the competitive banking system as they banks specialize themselves in specific products and services and do not fight with competitors over customers. The competition also seems to decrease overall and overhead costs and contributes to the overall stability and efficiency of institutions.

Among other contributions include the use of a variety of efficiency proxies together, as previous research relied either on efficiency ratios or DEA based efficiency scores only. The inclusion of both dummy variables approaches and real ownership data is another addition. While previously different governance proxies were used individually (e.g., board structure, reporting standards, etc.) this research used a governance score from Bloomberg which includes numerous measures of shareholders rights and management practices. To the best of my knowledge this is first of its kind to considers Pakistan's banking industry.

Finally, this study links efficiency with overall governance. For this purpose, a governance score is formed using shareholders rights, management commitment towards corporate governance and management attitude towards corporate social responsibility practices. Perhaps not surprisingly, there is a positive relation of corporate governance score with DEA efficiency score and asset productivity. Regarding cost efficiency, an increase in corporate governance score tends to decrease overhead expense ratio and overall cost ratio. I also show that governance score increase from low institutional or foreign ownership quantile to high institutional or foreign ownership quantile. Furthermore, private banks score highly on governance indicators. To sum up the debates, it is implied that foreign and institutional ownership boosts the overall corporate governance of institutions which subsequently improves the efficiency by increasing productivity and cutting costs.

The rest of the text is organized as under. Section 2 collects literature around the efficiency and its determinants to formulate a testable hypothesis. Section 3 introduce the key explanatory variables and their calculation methods and sources. Section 4 shed light on Data Envelopment analysis (DEA) to calculate efficiency score. Section 5 reports the results of empirical analysis that includes descriptive statistics of sample, correlation matrix, and regression analysis. Section 6 concludes the text followed by references.

2 Literature Review

The debate on efficiency is traced back to 1950s when Farrell (1957) decomposed the efficiency into technical and allocative efficiency. Technical efficiency can be measured by (i) an input-oriented process, which focuses on reducing inputs to produce the same level of outputs and (ii) an output-oriented method which aims to maximize outputs from a given set of inputs. The firm is also said allocative efficient if it can choose the right mix of inputs, given their market prices, which produces a given output at a minimum cost (or maximum profit). Berger (1995) divides the efficiency hypothesis into X-efficiency and scale efficiency. The former advocates increased profitability under reduced costs while the latter assumes higher profitability for bigger banks as they can use their market power to dictate the market.

2.1 Ownership and Efficiency

Previous literature on relationship of ownership and efficiency is contradictory. In developed countries, foreign banks tend to perform poorly (Berger, DeYoung, Genay, & Udell, 2000; Sathye, 2001) primarily due to limited knowledge of local market (Berger et al., 2000; Kosmidou, Pasiouras, Doumpos, & Zopounidis, 2004). The better performance of domestic banks is in line with home biased in developing countries. However, in emerging markets, foreign banks show higher profitability and efficiency compared to domestic banks (Berger, Klapper, & Turk-Ariss, 2009; Grigorian & Manole, 2006). A recent study involving 70 countries from developed and developing world found a better performance of domestic banks in four countries, better performance of foreign banks in 11 countries and insignificant results for the rest of sample (Chen & Liao, 2011). Studies in China (Yin, Yang, & Mehran, 2013), Europe (Fries & Taci, 2005), and 28 developing countries (Berger et al., 2004) found state-owned banks to be less efficient than private banks or foreign banks.

2.2 Competition and Efficiency

Numerous hypothesis aims to capture the relationship between competition and efficiency. Competition-inefficiency hypothesis proposed a lower efficiency of competitive markets because of customer switching (Boot & Schmeits, 2006) and low information sharing among banks (Chan, Greenbaum, & Thakor, 1986). On the contrary, the competition-efficiency hypothesis suggests an increased efficiency of banks by specializing in specific products and lower the cost of services. The quite-life hypothesis suggests that managers of monopolistic firms do not feel any competitive pressure and hence neglect the proper cost management which decreases their efficiency. Empirically, both negative (Pruteanu-Podpiera, Weill, & Schobert, 2008; Tan & Floros, 2018) and positive (Casu & Girardone, 2009) relationship between competition and efficiency are widely documented in different markets.

2.3 Corporate Governance and Efficiency
The study of corporate governance and efficiency of banking sector is relatively new and face shortage of empirical studies. Usually, it is believed that banks who implement pragmatic corporate governance approach tend to be more efficient compared to

4. Methodology
Traditionally the efficiency studies were confined to only the ratio analysis which can mislead easily under the pressure of outliers. Hence mathematicians developed better and sophisticated methods. Such as stochastic frontier analysis (Aigner, Lovell, & Schmidt, 1977; Meeusen & van Den Broeck, 1977) and Data Envelopment Analysis (Charnes, Cooper, & Rhodes, 1978). The basic difference between the two is that the former incorporates parametric while later non-parametric techniques. This research uses multi-input and multi-output production based DEA methododoly that is widely accepted in economic studies to estimate the production frontiers.

The initial version of DEA assumes a constant return to scale, but Banker, Charnes, and Cooper (1984) suggested a variable return to scale model because banks may exhibit increasing or decreasing return to scale as they may not be operating at optimal scale due to imperfect competition, or limitations on finance. DEA may not necessarily form a "production frontier," but rather lead to a "best-practice frontier" (Cook, Tone, & Zhu, 2014).

The DEA uses linear programming to maximize the efficiency of banks or any other entity. Efficiency is calculated as a fraction of weighted

those who neglect the importance of corporate governance framework (Caprio, Laeven, & Levine, 2007; Tanna, Pasiouras, & Nnadi, 2011).

3 Data Collection and Sources
This research focuses on determinants of efficiency in the banking sector of Pakistan from 2000 to 2017. The primary data source is BankScope to extract bank-specific financial variables for the calculation of efficiency proxies (asset efficiency, cost efficiency, overhead efficiency, and efficiency score), competition (five-firm concentration ratio and market share), and bank controls (size, equity, leverage, tangibility, and loans). The secondary data source is Bloomberg which provides ownership (foreign and institutional ownership) and governance (governance score is calculated from management, shareholder's rights, and CSR policies) information. After filtering and cleaning data to include only banks listed on Pakistan Stock Exchange (PSX) we are left with 21 commercial banks including four state-owned banks. A full list of variables and their calculation is provided in Table 1.

outputs to weighted inputs. DEA model allows varying between inputs and outputs to maximize the efficiency scores. Efficiency scores are restricted in the range of 0 to 1. Following linear model is employed to calculate efficiency scores;

$$Maximize \ \ E = \sum_{i=1}^{n} u_i y_i \qquad (1)$$

$$Subject \ to: \sum_{j=1}^{m} v_j x_j = 1 \qquad (2)$$

$$\sum_{i=1}^{n} u_i y_i - \sum_{j=1}^{m} v_j x_j \leq 0 \qquad (3)$$

$$u_i \geq 0, v_i \geq 0 \qquad (4)$$

"E" is the efficiency of the bank with "n" output coefficient (u_i) and "n" output weighting coefficients (y_i). Similarly, "v_i" and "x_i" denote the input coefficients and input weighting coefficients respectively. Inputs include personal expenses, interest expense and fixed assets of banks while outputs comprise of total loans and other earning assets. Equation 1 estimates the efficiency scores while equation 2 eliminates the non-linearity by removing inputs from objective function. Equation 3 ensures that the outputs must not exceed the inputs.

This paper will run a multivariate analysis on panel date with following model specification:

Efficiency = α + β1 ownership + β2 Competition + β3 Governance + β2 bank control + error (5)

Four different models will be used, each with different efficiency measure (DEA- efficiency score, asset efficiency, cost efficiency and overhead efficiency) with the same set of independent variables.

5 Empirical Analysis

Empirical analysis consists of descriptive statistics, and panel data regression analysis for the considered sample.

5.1 Descriptive Statistics

Table 2 describes the fundamental characteristics of the sample under three different ownership categories. Firstly, the sample is divided into five subgroups based on a percentage of foreign ownership (FO), whereas the FO1 represents firms with the foreign institutional ownership of 0.12 percent and FO5 with 74.17 percent. Perhaps not surprisingly, the firms with high (low) foreign ownership also have high institutional ownership of 14.95 (8.35) percent. Pakistan's banking sector is highly concentrated, and the top five firms hold about 67 percent of the total banking industry share as shown by concentration ratio. Note that the governance score of 40.24 in low foreign ownership quantile (FO1) increase monotonically towards high foreign ownership quantile (FO5) and attains a value of 45.91, which implies banks follow high governance standards with a high proportion of foreign owners. Size, leverage, tangibility, and loans do not show noticeable variations instead provides a mixed trend. Banks with high foreign ownership tend to issue more loans compared to banks with low foreign ownership. Lastly, regarding efficiency measures, the banks with higher foreign ownership show distinctly higher values in all cases. The efficiency score (asset efficiency) is 0.51 (3.29) in low foreign ownership groups which rose to 0.66 (6.22 percent) in the high foreign ownership group. Consistently, the overhead efficiency (cost efficiency) is 93.33 percent (81.89 percent) in low foreign ownership and 42.13 percent (48.83 percent) in the high foreign ownership group. Overhead efficiency and cost efficiency are inverse measures, and a low percentage represents higher efficiency in managing these costs.

The second set of comparison is made between state-owned private banks. Private Banks have attracted a higher percentage of foreign (institutional) investors compared to their state-owned counterparts. Private Banks also show a

higher governance score of 44.07 compared to 36.60 in state-owned banks. About banks characteristics, private banks are more equity financed, highly levered, use a higher proportion of tangible assets and manage to lend more money to earn interest. As expected the private banks are more efficient on all four measures of efficiency while the state-owned banks are less efficient.

In a third contrast, all the banks are divided into quantile based on percentage institutional ownership. IO1 denotes banks with low institutional ownership (0.14 percent) that increase monotonically towards IO5 (46.88 percent). Higher (lower) institutional ownership is linked with higher (lower) foreign ownership. The banks with higher institutional ownership have a higher market share of 11 percent compared to only 2.70 percent in low institutional ownership quantile. Higher governance score with increasing institutional ownership shows the effect of expertise and interest that established institutions bring with investment. Tangibility and loans also increase with increasing institutional investment. Efficiency score (asset efficiency) also increase from 0.42 (1.39 percent) in low institutional ownership quantile to 0.60 (6.92 percent) in the high institutional investment group. Consistently cost, and overhead efficiency measures show a decreasing (higher efficiency) trend from low institutional ownership to higher institutional ownership.

To sum-up the Table 1, it is determined that banks with higher foreign ownership (institutional ownership) are more efficient and better governed compared to banks with lower foreign ownership (institutional ownership). Additionally, the privately owned banks are more efficient and score highly on governance indicators compared to state-owned banks, possible due to higher institutional and foreign stake.

5.2 Pearson correlation matrix

Table 3 reports correlation coefficients of key explanatory variables. Foreign and institutional ownership are positively and significantly related to efficiency score and asset efficiency while significantly negative with cost and overhead efficiency. This suggests the higher the proportions of foreign or institutional investment, the higher the efficiency and asset productively and lower the cost and overhead expenses which is in line with descriptive statistics results. Note that all the efficiency measures are highly correlated with each other hinds that they measure the same thing. Bank controls have very low or insignificant correlations

coefficients with each other are lowering the chance of any multicollinearity in regression analysis. Governance is positively related to both ownership types.

5.3 Regression Analysis

Table 5 reports panel data regression results to supplement the descriptive statistics and correlation coefficients. Foreign ownership is positively related to efficiency score and asset efficiency with coefficients of 0.04 and 0.09 respectively. In other words, a one percent increase in foreign ownership leads to 0.04 percent increase in efficiency and 0.09 percent increase in asset efficiency. A negative coefficient of foreign ownership with cost efficiency (-0.49) and overhead efficiency (-0.45) suggests a 0.49% decrease in overall cost and 0.45% reduction in overhead costs with one percent increase in foreign ownership. Table 5 also reports a positive relation efficiency score and asset efficiency with percentage institutional ownership. On average a one percent increase in institutional ownerships enhance overall efficiency score by 0.03 percent and asset efficiency by 0.11 percent while a decline of 0.10 percent in overall cost and 0.23 percent in overhead cost.
In a nutshell, the increase in foreign and institutional ownership is a significantly related decrease in overhead and overall costs, and increase in asset productivity and overall efficiency.

Efficiency score calculated using DEA shows that state-owned banks are 1.77 percent less efficient than their privately owned counterparts. State-owned bank's assets are also 0.65 percent less productive than private banks. State-owned banks are also less efficient regarding expenses as shown by cost efficiency and overhead efficiency. Regression coefficient suggests a 0.87 percent higher overall cost and 0.91 percent higher overhead expenses.

The competition also plays a vital role in determining the efficiency of the financial sector. In line with competition-efficiency hypothesis, I show that lower competition (high concentration) impact negatively on efficiency, which suggests easiness of managers in monopolistic markets as there is no threat of existing competitors and new entrants. However, the relative market power of the bank (market share) does not play a significant role in determining efficiency. Therefore, market concentration should be more valued rather than size of organization.

Another critical determinant of efficiency if governance of banks. It is assumed that foreign owners and institutional owners bring better governing and monitoring policies, which cut the unnecessary costs and improves profits. Regression results are aligned with an assumption as a unit increase in governance score improves the efficiency score by 1.11 and assets productivity by 0.13 percent while decrease the overhead cost by 2.35 percent and overall cost by 2.26 percent. Bank specific variables show mixed results as bigger banks have higher efficiency score and asset productivity and lower overhead costs but the overall cost is insignificant. The overhead costs and cost efficiency seems to decrease with higher equity finance and increase with increasing tangible assets. The loan ratio tends to increase efficiency scores and asset efficiency. Note that, the regression models are significant with higher F-statistics and explain a relatively high portion of variations in efficiency.

6 Conclusion

Pakistan's financial industry undertakes massive reforms in 90s, by privatization of existing state-owned banks with an aim to increase competition, invite foreign owners by easing entry barriers which will improve the performance and efficiency of whole industry. The objective of this study is to find weather these reforms have impact on improving the efficiency.

The ownership plays a significant role in improving the efficiency and decreasing the cost because foreign and institutional investors brings latest techniques of production and governance. Additionally the private banks also have higher efficiency than state-owned banks for the same reasons. I also finds support for "competition-efficiency hypothesis" and recommends a regularization of highly concentrated Pakistani banking industry in which the top 3 banks holds more than 50 percent of market capitalization collectively while about 20 percent individually. Lastly, corporate governance is another important channel which can improve the efficiency.

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Table 1: Variables and Definitions

	Variable	Calculation
Efficiency	Assets efficiency (AE)	[(Interest Income + Trading Profit + Investment Income - Interest Expense) * 100] / Average Earning Assets A higher percentage return of income generated from earning assets demonstrates a higher earning assets efficiency.
	Cost efficiency (CE)	(Operating Expenses / ((Net Interest Income + Commissions & Fees Earned + Other Operating Income (Losses) + Trading Account Profits (Losses) + Gain/Loss on Investments/Loans + Other Income (Loss) - Commissions & Fees Paid) + Taxable Equivalent Adjustment or Net Revenue - Net of Commissions Paid) * 100 The efficiency ratio measures costs compared to revenues and a lower ratio shows higher efficiency of a bank.
	Overhead efficiency (OHE)	(Net Non-Interest Expense / Net Interest Income) * 100 A lower value indicates an overall higher Overhead efficiency ratio.
	Efficiency Score (ES)	Efficiency score is calculated following Data Envelopment Analysis (DEA) and explained in equation 1 through 4. The lower bond is 0 with the lowest efficiency while the highest value of 1 shows the perfectly efficient bank.
Ownership	Foreign Ownership (FO)	Percentage of shares held by foreign investors
	Institutional ownership (IO)	Percentage of shares held by institutional investors
	State	State is a dummy variable which attains a value of "1" when a bank is owned by state and 0 otherwise.
Competition	Concentration (CR-5)	The proportion of the five largest banks asset to total banks assets. A higher value suggests highly concentrated and monopolistic arrangements in which few firms are controlling the whole industry.
	Market share (MS)	The relative percentage of each banks asset to total market. A higher value suggests more power to a bank.
Governance	Governance Score (GOV)	Management score + Shareholders score + CSR strategy score • Management score: Management's commitment and effectiveness towards following best practice corporate governance principles. • Shareholder's score: Company's effectiveness towards equal treatment of shareholders and the use of anti-takeover devices. • CSR strategy score: Company's practices to communicate that it integrates the economic, social and environmental dimensions into its day-to-day decision-making processes.
Bank controls	Size	Logarithmic value of total assets
	Equity	The proportion of total equity to total assets
	Leverage (LEV)	The proportion of total debt to total asset
	Tangibility (TANG)	The proportion of fixed assets (plant, property, and equipment) to total assets
	Loans	The proportion of total loans to total assets

Table 2: Descriptive Statistics

Variable	Foreign ownership (FO)					Private Vs. State		Institutional ownership (IO)				
	FO1	FO2	FO3	FO4	FO5	Private	State	IO1	IO2	IO3	IO4	IO5
Foreign Ownership	0.125	0.803	3.808	15.428	74.176	25.3702	2.4015	5.200	3.000	26.333	30.887	12.657
Institutional Ownership	8.357	11.775	8.757	4.113	14.957	13.4373	6.5250	0.140	0.962	4.714	11.313	46.885
Concentration (CR-5)	0.663	0.671	0.679	0.673	0.674	0.7015	0.7015	0.618	0.616	0.615	0.617	0.616
Market share	0.054	0.042	0.088	0.046	0.052	0.0575	0.0963	0.027	0.047	0.050	0.077	0.110
Governance score	40.242	40.740	33.920	33.920	45.913	44.0764	36.600	12.037	32.257	40.352	39.279	42.109
Size	12.464	11.911	12.630	11.656	12.373	12.043	12.449	12.562	13.041	13.072	13.491	13.937
Equity	0.074	0.073	0.083	0.190	0.077	0.1523	0.0884	0.101	0.098	0.073	0.077	0.102
Leverage	0.782	0.717	0.719	0.533	0.693	0.9935	0.7622	0.631	0.678	0.710	0.730	0.720
Tangibility	0.024	0.029	0.023	0.017	0.027	0.0295	0.0182	0.016	0.022	0.022	0.024	0.026
Loans	0.516	0.535	0.452	0.330	0.528	0.7039	0.4786	0.332	0.359	0.428	0.417	0.383
Efficiency score	0.501	0.592	0.563	0.610	0.662	0.6350	0.4824	0.412	0.479	0.527	0.583	0.601
Overhead efficiency	93.337	75.841	57.687	48.735	42.132	49.4503	65.7912	67.554	53.848	77.106	66.480	46.985
Assets efficiency	3.294	4.674	4.461	5.123	6.227	4.8834	2.1926	1.379	3.911	3.155	4.318	6.926
Cost efficiency	81.891	62.859	61.020	54.255	48.832	76.3484	59.2576	88.156	64.413	68.593	42.550	41.771
N	59	49	49	44	47	306	72	43	44	39	34	34

Figure 1: Proportion of Foreign Ownership over the sample period
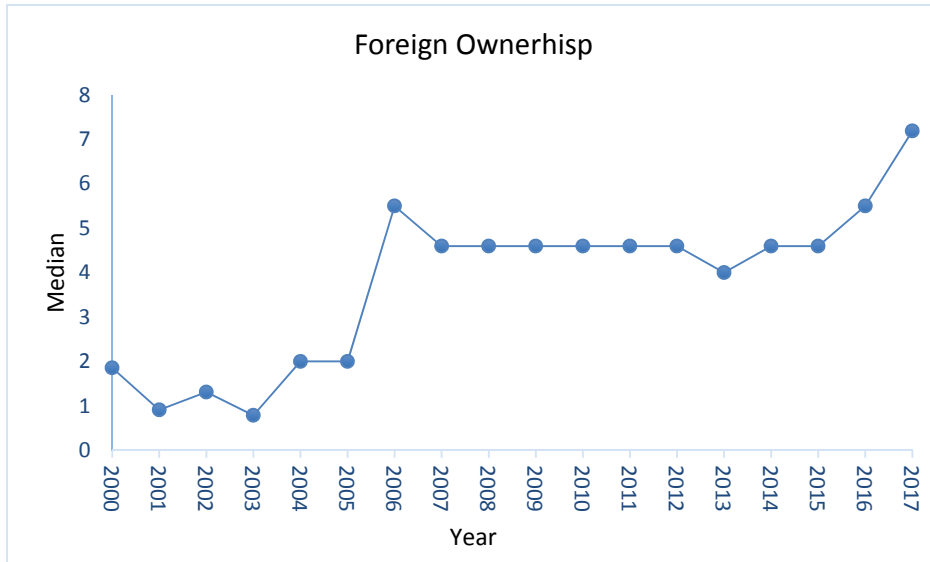

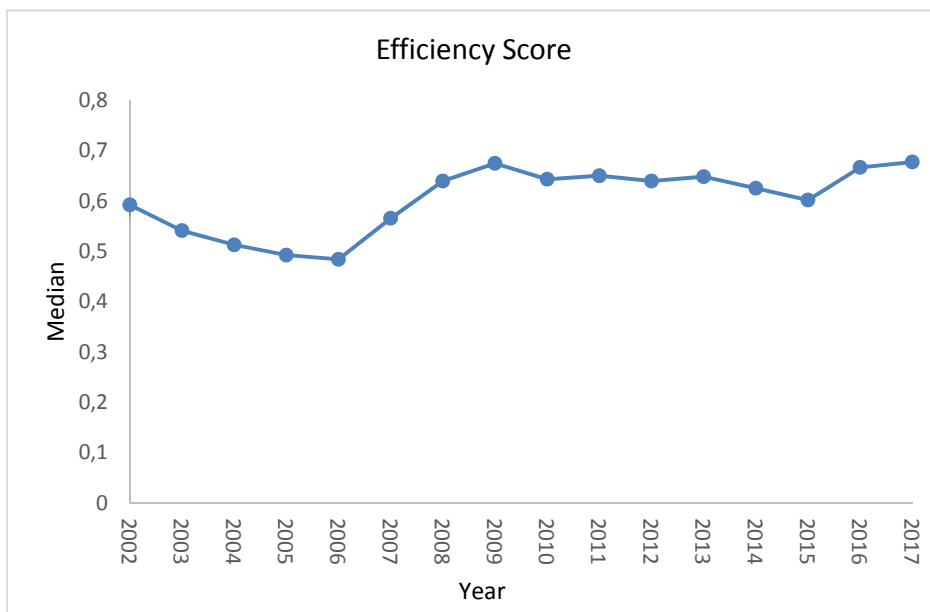Figure 2: Proportion of efficiency score over the sample period

212

Table 3: Pearson Correlation matrix

	Foreign ownership	Institutional ownership	CR-5	Market share	Governance	size	Equity	Leverage	Tangibility	loans	Efficiency score	Overhead efficiency	Asset efficiency
Institutional ownership	0.20	1											
CR-5	-0.01**	0.07***	1										
Market share	-0.06	0.56***	0.29***	1									
Governance	0.37**	0.09***	-0.14***	-0.09**	1								
Size	0.03	0.39***	-0.38***	0.51***	-0.11	1							
Equity	-0.01	-0.01	-0.08	-0.26***	0.14	-0.50***	1						
Leverage	-0.07	0.09	0.02	0.25***	-0.12	0.43***	-0.55****	1					
Tangibility	0.04	-0.01	-0.15***	-0.14**	0.26**	-0.25**	0.18***	-0.09	1				
Loan	0.08	-0.02	0.15**	0.07**	0.02	0.03	0.42***	0.50***	0.15***	1			
Efficiency score	0.02***	0.08***	-0.23***	-0.20***	0.01**	-0.24***	0.25***	-0.16**	-0.43***	0.32***	1		
Overhead efficiency	-0.02***	-0.17**	0.06*	-0.11**	-0.06**	0.23***	-0.16***	-0.34***	0.32***	-0.21***	-0.15***	1	
Asset efficiency	0.02***	0.07**	-0.03**	0.15**	0.12	-0.07	0.46***	0.20***	-0.18***	0.37***	0.14**	-0.05**	1
Cost efficiency	-0.11***	-0.13***	0.05	-0.24***	-0.01**	0.34***	-0.03	-0.08	0.34***	-0.17***	-0.51***	0.01***	-0.49***

***, **, and * denote statistical significance at the 1, 5, and 10 % levels, respectively.

Table 4: Multivariate regression analysis

Variables	Efficiency Score	Assets efficiency	Cost efficiency	Overhead efficiency
Intercept	0.30**	0.48***	-0.42**	-0.49***
	(1.89)	(6.28)	(-2.11)	(-3.24)
Foreign ownership	0.04***	0.09***	-0.49**	-0.45***
	(2.99)	(4.88)	(-2.02)	(-2.30)
Institutional ownership	0.03***	0.11***	-0.10***	-0.23***
	(6.71)	(4.06)	(3.10)	(-2.44)
State	-1.77**	-0.65***	0.87***	0.91***
	(-2.11)	(-4.95)	(2.66)	(3.46)
Concentration	-0.25***	-0.28***	0.41***	0.90***
	(-3.45)	(-3.93)	(3.66)	4.63
Market share	0.01*	0.02***	-0.03	-0.46***
	(1.91)	(2.97)	(-1.06)	(-3.09)
Governance	1.11***	0.13***	-2.26***	-2.35***
	(5.92)	(4.07)	(-4.44)	(-3.58)
Size	1.69***	0.53***	0.21	0.31***
	(3.12)	(5.96)	(1.68)	(3.04)
Equity	0.22	1.27	-0.46**	-0.67***
	(1.41)	(0.59)	(-2.04)	(-2.61)
Leverage	0.67**	1.26	-0.30	-0.66
	(2.01)	(0.59)	(-0.56)	(-1.41)
Tangibility	-0.50	-3.48***	1.15***	0.31***
	(1.22)	(-5.75)	(2.57)	(2.62)
Loans	1.50***	1.91***	-0.13	1.56
	(3.71)	(2.52)	(-1.30)	(0.62)
Root MSE	0.21	0.11	0.14	0.23
F- Statistics	26.32	74.56	23.82	68.25
R^2	0.66	0.89	0.72	0.71
Adjusted R^2	0.62	0.80	0.65	0.66
N	378	378	378	378

***, **, and * denote statistical significance at the 1, 5, and 10 % levels, respectively.