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**Impact of Corporate Governance on
Peruvian Banks' Financial Strength**

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IMPACT OF CORPORATE GOVERNANCE ON PERUVIAN BANKS' FINANCIAL STRENGTH*

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Abstract

International evidence has shown how the lack of proper corporate governance in banks increases risk management, thereby reducing their financial strength. This paper addresses how corporate governance in Peruvian banks is related to their financial strength. The measure of corporate governance includes variables such as Board's compensations, shares concentration, transparency and market discipline. In turn, a measure of financial strength is built, including indicators of capital adequacy, asset quality, management, earnings, and liquidity. Most importantly, our results indicate that banks with higher corporate governance indices exhibit higher financial strength.

JEL Classification: G21, G28, G32, G34.

Keywords: Corporate Governance, Bank Performance, Government Policy.

* Any views expressed in this paper are the author's and do not necessarily reflect those of the Graduate Institute of Geneva or the Central Reserve Bank of Peru.

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1 INTRODUCTION

According to the Basel Committee on Banking Supervision (2016), proper corporate governance for banking organizations increases the risk management efficiency, thereby increasing the financial strength of those entities. In addition, proper practices in corporate governance are relevant, particularly for large banks, where financial difficulties resulting from corporate governance failures may potentially lead to major widespread problems in the financial system.

In the international experience, the banking financial crisis in Spain shows how deficiencies in corporate governance increase risks to financial stability. As remarked in the Financial Stability Report (FSR) of the Central Reserve Bank of Peru (BCRP, November 2014), in Spanish savings banks interest conflicts between managers and shareholders, given politicized administrations, undermined risk management, overweighting social activities and political revenues over financial business.

In the Peru, we can identify cases of poor corporate governance that affect their financial strength. Peru has a stable financial system, given the sound performance of the financial sector and the prevailing macroeconomic stability in the last two decades. However, in recent years there has been a growth of nonperforming loans that reduces both profitability and financial solvency of banks ¹ in a context of slowdown of economic activity. Those effects have been dissimilar between banks. For example, municipal banks and rural banks have underperformed compared with commercial banks in terms of profitability and assets quality. In addition, in recent years the financial regulator intervened and liquidated some banks, and others are issuing equities to maintain the financial soundness required by law.

In addition, the FSR points out corporate governance in the specific case of municipal banks as the main problem, because these entities are exposed to the political cycle and have legal issues to improve their solvency. Municipal banks, fully owned by local governments, face permanent corporate governance problems. In fact, ownership in municipal banks does not match with seeking profitability and sustainability as well as financial soundness. For example, part of the members of the board of directors and managers are appointed directly by local authorities, who do not necessarily

¹Financial institutions that can perform financial intermediation (lend money and receive deposits) and are regulated by the Superintendency of Banks, Insurance Companies, and Private Pension Funds (SBS), the home financial supervisor. They are grouped into commercial banks, financial firms, municipal banks, and rural banks. Each group of banks has different rules of constituency and capabilities.

seek profitability, but keeping office and other political perquisites. In the case of rural banks, small banks oriented to rural areas have experienced bad practices of corporate governance, thereby producing mismanagement .

How could bad practices of corporate governance be detrimental to a bank's performance? Financial regulators and researchers have been discussing the effects of corporate governance on performance of nonfinancial firms and banks. For example, Macy and O'Hara (2003) and Hopt (2013) argue that banks have unique problems for managers and regulators and also for shareholders and depositors, which made banks very different from nonfinancial firms. In this context, corporate governance not only should protect shareholders' interest (Anglo-American model), but also focus on other groups of interest (stakeholders) like depositors and financial regulators (Franco-German model). In fact, their duty should be maximizing the value of the firm and, also, ensuring both banks' soundness and safety. They point out the importance of corporate governance of banks on financial stability, and the role of banks on the payment system and the interest of the public as depositors.

On the other hand, banks face moral hazard problems, because the managers have the incentive to maximize benefits, risking not only equity, but deposits and debt by granting loans to risky projects. For example, the crisis faced by a lot of municipal banks during the Spanish crisis in recent years has shown vulnerabilities, given lack of supervision and deficiencies in corporate governance that are detrimental to performance and sustainability in the long run.

About the risk-taking behavior, Laeven and Levine (2009) evaluated the appetite for risk in banks based on the ownership structure, and national bank regulations. They studied how corporate governance in a bank shapes its risk-taking behavior. They found that under the same regulatory framework, a higher power of shareholder in the structure of corporate governance leads to the bank taking more risk. Similarly, Aebi *et al.* (2012) researched the role of the presence of a chief risk officer and corporate governance related to risk have positive effects on banks' performance in the recent financial crisis 2007/2008. They proved that flaws in corporate governance, especially in risk management, played an important role in banks' performance in episodes of financial crisis.

Given this previous background, Peruvian banks with lower standards of corporate governance (measured by the corporate governance index) weaken risk management. As a consequence, it has a direct and strong influence on banks' performance (measured by the financial strength index).

The rest of the paper is divided into the following parts. The next section

presents data and summary statistics. The third section shows the model. The fourth section shows some empirical results. The final part contains the concluding remarks.

2 DATA AND SUMMARY STATISTICS

The Financial Analysis Department of the BCRP makes a report monthly to the Board of Directors about financial strengths of banks over time and between banks. In this report, the main variable is the financial strength index (FSI), which is the aggregation of five indicators: capital adequacy, asset quality, management, earnings, and liquidity. The construction of the FSI is as follows.

2.1 FINANCIAL STRENGTH INDEX

The FSI is made for Peruvian banks² to assess their relative financial strength. This index summarizes the financial position of an entity by evaluating indicators of capital adequacy, asset quality, management, earnings, and liquidity. The construction of the index has three steps: i) the selection of financial indicators; ii) the estimation of thresholds in a statistical distribution; and iii) the aggregation of different categories into a single index.

2.1.1 Financial indicators

The financial indicators used in each of the mentioned categories have been chosen from the proposed indicators for the IMF³ and distinguish differences in the strength of a financial institution. One single indicator is used for each category.

2.1.2 Estimation of thresholds

The estimation of thresholds is obtained from the quintiles of the historical distribution of financial ratios of financial institutions that have operated continuously since 2001. The quintiles⁴ provide, for each indicator, the critical points that define the degree of financial soundness of each institution. Thus, the thresholds for banks are estimated based on the quintiles of the

²This methodology was published in the FSR of the BCRP (November 2015).

³IMF, Financial Soundness Indicators, Compilation Guide, 2006.

⁴Statistical theory defines a quintile as a fifth of an orderly distribution of low to high based on some characteristic of the distribution.

Table 1: Indicators used in the FSI

| Risk category | Indicators |
|------------------|---|
| Capital adequacy | Global capital ratio: Effective equity as percentage of the total assets weighted by risk (credit, market, and operational) |
| Assets quality | Nonperforming loans ratio: defined as nonperforming loans as a percentage of total loans. |
| Management | Ratio of annualized operating expenses as percentage of average assets. |
| Earnings | ROA: Return on average assets. |
| Liquidity | Regulatory liquidity ratio: liquid assets over current liabilities, established by the SBS. |

joint distribution ratios of 9 banks, 6 financial firms, 13 municipal banks, and 10 rural banks that have been operating continuously since 2001.

2.1.3 Aggregation of risk categories

The aggregation of the five indicators for the FSI is performed as follows: The values of financial ratios for different periods are classified according to thresholds or tipping points that are used as a benchmark⁵. Each ratio is mapped into an integer in the set $\{1, 2, 3, 4, 5\}$; where the number 5 is assigned when the ratio recorded values reflect the greatest financial strength; and number 1 when it represents the lowest financial strength. In the following table, the thresholds are represented by Q1, Q2, Q3, and Q4, accordingly reflecting from the best index to the worst index. If the classification of a financial indicator, such as the nonperforming loans (NPL) ratio is greater or equal to the value of Q2 and lower than Q3, it is assigned a score of 3, and proceeding with the rest of the selected financial indicators.

It is considered that the five categories are equally important in determining the financial position of entities; accordingly, they are assigned the same weight (1/5) for aggregation and calculation of the FSI.

⁵The benchmark remains fixed over time.

Table 2: Ranking quintile of financial ratios and financial strength

| Value of financial ratios | Financial strength indicator |
|--|------------------------------|
| Less than Q1 | 5 |
| Greater than or equal to Q1 and less than Q2 | 4 |
| Greater than or equal to Q2 and less than Q3 | 3 |
| Greater than or equal to Q3 and less than Q4 | 2 |
| Greater than or equal to Q4 | 1 |

2.2 CORPORATE GOVERNANCE INDEX

A corporate governance index (CGI) is constructed based on three categories: (i) Board's compensations, (ii) shares concentration, and (iii) transparency and market discipline.

2.2.1 Board's compensations

All banks in Peru (except Azteca and Mitsui) have a Board of Directors. However, there are huge differences in the compensation among them. The largest banks tend to compensate more than small banks. In addition, director professionalism is quite dissimilar. For example, in some municipal banks, Directors respond to the Mayor or to the Church, while in small private banks they are not independent and usually respond to the major shareholder. In this paper, a proxy of the quality of the Board of Directors is its annual payment. As a variable, I use the percentile range in which each bank is paying the Board compared with the financial system. For example, the payment of the Banco de Credito's Board is the highest, so its location in the percentile range is 0.99.

In a competitive market, institutions with better compensation systems are able to attract the most competitive directors. For Filatotchev and Allcock (2010), principal-agent models show that a structure of compensation based on performance is used to align partially the incentives of managers and shareholders, plus other characteristics of the environment such as long-term incentives and perquisites.

2.2.2 Shares concentration

For Laeven and Levine (2011), the grade of concentration of shares captures both the incentives of owners toward risk and its influence in it. Caprio, Laeven, and Levine (2007) classified a bank as having a large owner if the shareholder has direct and indirect voting rights that sum up 10% or more.

Unlike them, in this paper a bank is not widely held when a single shareholder, directly or indirectly, has more than 50% of the shares, given the high concentration of shares in the vast majority of banks.

2.2.3 Transparency and market discipline

Briano and Saavedra (2015) show that profits in corporate Latin American firms are higher when there is transparency in the organization. In a similar way, Bushnam *et al.* (2004) define transparency as the level of divulgence about specific information for both the public and regulators, so it is important in the allocation of resources. Hence, there is a direct relationship between good practices in corporate governance and transparency.

Transparency is the ability of shareholders, regulators, debtholders, and depositors to get information such as financial statements, management reports, corporate governance reports, and financial indicators. The approach used consists in verifying if a bank sends a wide range of such reports to the Securities Market Supervisor and to the Lima Stock Exchange.

Table 3: Indicators used in the CGI

| Risk category | Indicators | Weight |
|-------------------------------------|---|--------|
| Board's compensations. | Annual payment to the Board of Directors (Percentile rank between banks). | 25% |
| Concentration of shares. | Dummy variable: 0 if there is a single major shareholder who owns more than 50% of shares, 1 otherwise. | 25% |
| Transparency and market discipline. | 1 if bank reports information to the Securities Market Supervisor and 0 otherwise. | 25% |
| | 1 if bank reports information to the Lima Stock Exchange and 0 otherwise. | 25% |

The three categories are important for corporate governance. In the final CGI, transparency and market discipline are weighted 50%, while the two other categories are weighted 25% each.

3 MODEL

To determine the importance of corporate governance on individual financial strength, a Tobit model is used because the FSI has a lower and upper value. The equation is as follows:

Table 4: Descriptive statistics. The table shows the mean, standard deviation, minimum, and maximum values of the following variables: financial strength index (FSI), return on assets (ROA), nonperforming loans (NPL), corporate governance index (CGI), market share in the loan market (MKS), and deposits as proportion of assets (DEP). All values from the 47 bank-year observations for Peruvian banks in 2014. Source: Balance Sheets and BCRP.

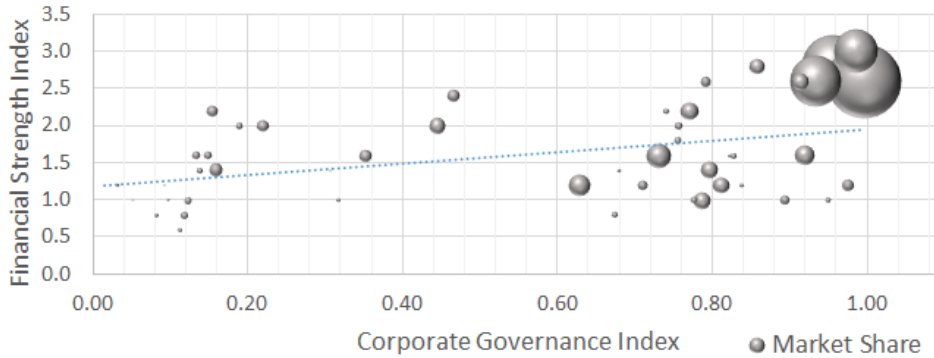
| Variable | Obs | Mean | Std. Dev. | Min | Max |
|----------|-----|---------|-----------|---------|---------|
| FSI | 47 | 1.6043 | 0.6318 | 0.6000 | 3.0000 |
| ROA | 47 | 0.7610 | 2.1692 | -5.4928 | 4.9850 |
| NPL | 47 | 7.7589 | 4.8726 | 0.0000 | 26.7218 |
| CGI | 47 | 0.5526 | 0.3378 | 0.0305 | 0.9948 |
| MKS | 47 | 2.1274 | 5.5463 | 0.0193 | 30.0714 |
| DEP | 47 | 63.0691 | 22.1294 | 0.0000 | 88.1219 |

$$FSI_i = \beta_0 CGI_i + \beta_1 MKS_i + \beta_2 DEP_i + \epsilon_i \quad (1)$$

Where β_0 , β_1 , and β_2 are parameters of the model, and ϵ_i is the *i.i.d.* perturbation term.

The independent variable will be the CGI, while the dependent variable is the FSI.

Figure 1: Financial strength index and corporate governance index



Data for 47 banks in December 2014 are available, which covers 90% of total loans in the country.

In addition to the Tobit model of the FSI, ordinary least-squares re-

gressions on the ROA and NPL, as alternatives variables to measure banks financial strength, are made.

The control variables are based on Aebi *et al.* (2012) and Love and Rachinsky (2015). The second variable is the market share on the loan markets (MKS), measured as the percentage in the loan credit market in 2014, which is expected to have a positive relationship. The third variable is the ratio of deposits to total assets (DEP) and according to Aebi *et al.* (2012) it is expected that a higher ratio of deposits would lead toward better profits, hence to higher financial strength.

4 RESULTS

As shown in Table 5, banks with higher values of CGI (Models 1, 2, and 3) tend to have higher FSI. In the model, market share is used as a control variable and given the results, small banks are associated with lower FSI. Examining individual coefficients (Model 3), both CGI and DEP have a level of significance below 5% in the Tobit model. The influence of deposits is not statistically significant.

Table 5: Regressions of financial performance indicators on CGI. The table reports the results from OLS regressions of financial performance indicators on the corporate governance index and control variables. *t*-statistics are reported in parentheses.

| VARIABLES | FSI Model 1 | FSI Model 2 | FSI 1/ Model 3 | ROA Model 4 | ROA Model 5 | NPL Model 6 | NPL Model 7 |
|--------------|---------------------|-----------------------|-----------------------|--------------------|---------------------|----------------------|----------------------|
| CGI | 0.759*** (0.253) | 0.618** (0.300) | 0.618** (0.284) | 2.275** (0.865) | 2.274* (1.230) | -8.439*** (1.918) | -9.528*** (2.703) |
| MKS | | 0.0441*** (0.0145) | 0.0441*** (0.0151) | | 0.0286 (0.0290) | | -0.0401 (0.0632) |
| DEP | | 0.00441 (0.00381) | 0.00441 (0.00399) | | 0.00568 (0.0222) | | -0.0422 (0.0266) |
| Constant | 1.185*** (0.13) | 0.891** (0.340) | 0.891** (0.358) | -0.496 (0.619) | -0.915 (2.008) | 12.42*** (1.432) | 15.77*** (2.951) |
| Observations | 47 | 47 | 47 | 47 | 47 | 47 | 47 |
| R-squared | 0.165 | 0.332 | 0.213 2/ | 0.126 | 0.134 | 0.342 | 0.375 |

*** p<0.01, ** p<0.05, * p<0.1

1/ Tobit model.

2/ Pseudo R-squared.

There is a direct relationship between corporate governance and financial strength. Banks that have high standards of corporate governance tend to be sounder and stronger according to the FSI. This result is maintained even if

indexes of profitability (Models 4 and 5) or NPL (Models 6 and 7) are used instead of the FSI. All of the models are globally significant.

5 CONCLUDING REMARKS

There is a significant relationship between corporate governance and financial strength in Peruvian banks. In general, banks that show higher standards of corporate governance exhibit better results and are financially stronger regarding the size of the company or size of deposits. This result is maintained not only in the case where the FSI is the indicator of performance, but also when NPL or ROA are used instead.

In addition, corporate governance is important because, in the case of banks, the interest of debtholders and government agencies should be considered in addition to the interest of shareholders. For example, Macey and O'Hara (2003) encourage broader duties on directors to consider the impact of their decisions on the safety and soundness of the entity. Even in a context of bankruptcy, directors should consider first the interest of depositors and debt holders over shareholders.

Therefore, financial regulators should focus on banks with lower corporate governance quality and evaluate political measures to improve them. By doing that, banks would be sounder and more sustainable over time, even in events of financial crisis. For example, regulation should not only focus on capital requirements, but also minimal standards of corporate governance practices.

In the case of municipal banks, the current law reduces incentives for the entry of new shareholders, and the political process has a bad influence on the corporate governance and quality of management. In this context, a legal change should be evaluated. For example, the board of directors should be more independent of the council of local governments and those that do not meet the requirements of corporate governance would be forced to sell their shares in competitive auctions to qualified buyers (for example, banks with high capital and adequate corporate governance standards).

Finally, there is room to improve the methodology for the measure of corporate governance because most of the banks do not report indicators about practice of corporate governance. The financial regulator should require standardized reports about governance. For example, in Spain the Spencer Stuart Board's Index is used to qualify the Board of Directors of banks. A similar index could be used in the Peruvian case. This scenario would bring us a better measure of the corporate governance of banks.

6 REFERENCES

- Aebi, V., Sabato, G, Schmid, M., 2012. Risk Management, Corporate Governance, and Bank Performance in the Financial Crisis. *Journal of Banking & Finance* (36) 3213–3226.
- Bank for International Settlements, 2016. Enhancing Corporate Governance for Banking Organisations. Consultative Document of Basel Committee on Banking Supervision.
- Briano, G. and Saavedra, M., 2015. La Composición del Consejo de Administración y la Estructura Accionaria como Factores Explicativos de la Transparencia en el Gobierno Corporativo en Latinoamérica: Evidencia en Empresas Cotizadas de Argentina, Brasil, Chile y México. *Estudios Gerenciales* 31 (2015) 275–286.
- Caprio, G., Laeven, L. and Levine, R., 2007. Governance and Bank Valuation. *Journal of Financial Intermediation*, vol. 16(4), 584–617.
- Central Reserve Bank of Peru. Financial Stability Report. November 2014.
- Central Reserve Bank of Peru. Financial Stability Report. November 2015.
- Filatotchev, I. and Allcock, D., 2010. Corporate Governance and Executive Remuneration: A Contingency Framework. *Academy of Management Perspectives*.
- Hopt, K., 2013. Better Governance of Financial Institutions. ECGI Working Paper Series in Law.
- International Monetary Fund, 2006. Financial Soundness Indicators, Compilation Guide.
- Macey, J. and O’Hara, M., 2003. The Corporate Governance of Banks. *Federal Reserve Bank of New York Economic Policy Review* / April 2003.
- Laeven, L. and Levine, R., 2012. Risk Management, Corporate Governance, and Bank Performance in the Financial Crisis. *Journal of Banking & Finance* 36 (2012) 3213–3226.

- López-Iturriaga, F., García-Meca, E., and Tejerina-Gaite, F., 2015. Institutional Directors and Board Compensation: Spanish Evidence. *BRQ Business Research Quarterly* (2015) 18, 161–173.
- Love, I., Rachinsky, A., 2015. Corporate Governance and Bank Performance in Emerging Markets: Evidence from Russia and Ukraine. Draft.