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“THE IMPACT OF CORPORATE SOCIAL RESPONSIBILITY (CSR)
IN THE FINANCIAL PERFORMANCE OF PERUVIAN BANKS
IN THE PERIOD 2009-2018”

Master’s dissertation

Area of studies 38.04.08 «Finance and Credit»

Master Programme “Finance”

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Saint Petersburg - 2021

Abstract

Being socially responsible has become a necessity for the banking company and should be considered within your plan of business. It is necessary that civil society, represented in the client, be convinced that he has the possibility of rewarding or punishing a company when it observes that it deviates from the minimum standards of what is considered a good organizational practice in regarding being socially responsible. The punishment would simply consist of not consuming the product offered. The goal of the research was to analyze how the implementation of CSR policies in Peruvian banks which were, during the analysis period of this research, especially aimed at increasing levels of financial inclusion through greater access to credit, as well as greater investment in infrastructure for the provision of financial services, impacted in their financial performance and how this data can be used on an emerging economy such as Peruvian, which is characterized by being scarce, while offering lights for the incorporation of CSR information disclosure policies in various sectors of the Peruvian economy. It is hypothesized that Corporate Social Responsibility of Peruvian Banks had positively affect in their financial monthly performance in the period 2009-2018. This work will analyze the information of the 12 main Peruvian banks, which together represent more than 97% of the market share. It is expected that through the use of multiple linear regression will be estimated the effect of corporate social responsibility policies in the main financial ratio (ROE) to the Peruvian Banks in the period under analysis.

Keywords: Corporate social responsibility, Financial Inclusion, Financial performance, and Peruvian banks.

Table of Contents

| | |
|---|----|
| Abstract | 2 |
| Introduction | 4 |
| 1. Literature review | 6 |
| 2. Methodology | 19 |
| 3. Results | 25 |
| 4. Conclusions and Recommendations | 34 |
| References | 37 |
| Appendices | 42 |

Introduction

Banks around the world are one of the most regulated sectors. Their management is based on the legal and economic order due to the fact that banks manage public savings and they are carrying on the monetary policy. In consequence, to operate they must have a license from the public authority. **Peruvian Banks** are multiple operations companies, also known as universal, mixed or multi-bank banking. This meets the criteria of the unification of financial services in order that they be granted to the client through a single entity. Bank standards include various criteria: minimum capital, principles in business and insurance, money laundering, corporate governance, protection to the financial consumer, accounting and auditing principles, control, supervision and financial conglomerate, among others.

Corporate Social Responsibility (CSR) has only become important for the banking sector in the wake of the international financial crisis of 2008, since until that moment CSR had only been limited to environmental issues and was not used as an instrument to legitimize the achievement of financial goals using Business ethics. CSR can be defined as a way of doing business where the company manages its operations in harmony with the economic, social and environmental aspects, and recognizes the interests of the public with the one related: shareholders, employees, community, suppliers and customers. For CSR to be viable, success must be seen not only in terms of financial criteria, but must be based on a relationship between the company and civil society; the company represented by the organization's employees and the civil society for the satisfaction and for the interests of the company's clients, given the support that this provides to the community where it operates. The CSR of the company must adjust to its economic objectives, since a business strategy must be sustainable in the long term. In consequence, every company will be profitable to the extent that the business, which should not be understood only as an investment that should generate a return, rather as a link with the community within a business philosophy.

Peru has had an outstanding economic performance in the last 20 years (until 2018), a consequence not only from a favorable international context, since they would also have been factors determinants, the macroeconomic stability achieved and the implementation of commercial opening and promotion of private investment. In this context, it is also observed important growth and development of financial markets in Peru. The capital has increased fivefold in 10 years and

the financial system grew 4 times compared to of their placements and in the same period, deposits did so 3 times.

This favorable scenario allowed Peru to consolidate itself as a leader and pioneer in **Financial Inclusion** worldwide, positioning itself for seven consecutive years as the country with the better environment for microfinance and financial inclusion, thanks to various initiatives of public and private institutions. In this context, many of the banks improved their supply of financial services implementing social responsibility policies to promote financial inclusion, especially in the coverage and deepening of financial services, to ensure that all segments of the population are capable of access and use quality financial services, and that from this it is possible to improve well-being of all Peruvians.

Additionally, in 2014 the Peruvian government approved the National Financial Inclusion Strategy (ENIF), which encouraged banks to direct their social responsibility resources towards this objective. This is an instrument of State policy, aimed at promoting financial inclusion through the execution of coordinated actions that contribute to decentralized and inclusive economic development, with the participation of the public and private sectors, within the framework of the preservation of financial stability. It is structured under the pillars of Access, Use and Quality and seven lines of action: Savings, Payments, Financing, Insurance, Consumer Protection, Financial Education and Vulnerable Groups.

According to The World Bank, Peru has achieved excellent progress in Financial Inclusion over the last decade, but the remaining challenge is still large. A micro-finance industry has flourished, the number of access points for financial services has multiplied, and the number of debtors and accounts has grown at a strong pace. The progress reflects not only those economic conditions have been conducive for financial services, but also that Peru has been a leader in leading innovator promoting the development of financial services for its population.

The research question of this research is ***Does Corporate Social Responsibility (CSR) of Peruvian Banks affected their financial performance in the period 2009-2018?*** The primary aim of this research is to identify the effect of CSR on corporate performance of the Peruvian Banks, through the analyses of the main financial result: **ROE (Return on equity) in relation with the CSR policies**. These policies should be in link to the use of knowledge and financial experience to raise the level of banking in Peru through mechanisms of social inclusion such as financial education, financial inclusion and access to credit in Peru.

Return on equity (ROE) is a central measure of performance in the banking industry. (Moussu & Petit-Romec, 2017). The importance of ROE as a financial indicator ratio is that it shows the financial profitability of the invested capital. Which in turn allows investors to make a judgment on the management by knowing how the contributed capital is being used. In addition, ROE is closely followed by investors, as it determines the ability of a company to generate value for its shareholders, especially when compared to its cost of capital. The latter would be determined by the minimum profitability that an investor would theoretically require to assume the risk of investing in the capital of an entity. In this way, the greater the excess ROE with respect to the cost of capital, the greater the creation of value for the shareholder.

The achievement of the aforementioned aim will contribute to reach the following goals:

- 1) To know the social impact of the CSR policies and strategies that have been applied in a specific country (Perú).
- 2) To Know the importance of CSR in the financial sector for Peruvian society.
- 3) Motivate other sectors of the Peruvian economy to apply the same policies.

Finally, this research will analyze how the policies of CSR affected the financial performance of the Peruvian banks in the period 2009-2018 and will address a conclusion to this research and its results followed by recommendations of optimal measures about future CSR policies that Peruvian banks can implement.

1. Literature review

One of the best known and most widely accepted definition of CSR is by Carroll, who says that corporate social responsibility encompasses the economic, legal, ethical, and discretionary (philanthropic) expectations that society has of organizations (Lentner, Szegedi & Tatay, 2015).

To understand the essence and meaning of CSR, it is essential to understand the concept of sustainability, which would be the ability of the company to create economic value and at the same time respect the rights of those with whom it is related, it is In other words, seek social equity and also preserve the environment in the development of your business activities. Therefore, a sustainable company will be one that creates value for its shareholders, for society and the environment (Barbachan, 2017).

For the Ethos Institute (2006), corporate social responsibility “implies take actions that benefit not only investors, but also the society. These benefits can be achieved through the

application of friendly changes and technologies, preserving the environment and giving improvements to the community, among other possibilities” (Cutipa, Balazar, Merma, Cesar, & Conde, 2018).

Navarro and González (2006) have indicated that CSR presents manifestations both in its internal dimension and in its external dimension. In the inner dimension opens a way to manage change and reconcile social development with the increase in competitiveness and in the external dimension it extends to local communities and includes, in addition to the workers and shareholders, a wide range of interlocutors: business partners and suppliers, consumers, public authorities and NGOs defending the interests of local and environmental communities (Jiménez, González, & Moreno, 2018).

Bhattacharya and Sen (2001) consider that “the social responsibility of companies, that is, carried out by companies or corporations, such as inclusion of the welfare of society, and the way in the adoption of consistent policies, with expectations and social values” (Cutipa, Balazar, Merma, Cesar, & Conde, 2018).

Corporate social responsibility (CSR) became a core topic in the management and activity of banks. Being a bidirectional, permanent, updateable and universal access communication channel, the internet contributed to transform the way the organizations report social responsibility to stakeholders. (Vilar & Simão, 2015).

Before 2008, financial institutions such as the banks only applied CSR policies on environmental issues and it was not used as an instrument of business management. The 2008 international financial crisis showed the lack of transparency and ethics from the officials of the financial institutions who conducted in their processes and risk management. This situation made trust towards these institutions deteriorated, which led to a drastic change in the consideration of CSR in managing the resources of its customers. (Lentner, Szegedi & Tatay, 2015).

The financial crisis has brought about dramatic consequences for economies and societies. According to Herzig & Moon, 2013, four discourses emerge from their analysis providing insights into distinct types of corporate social responsibility (CSR) and their relationship with corporate social irresponsibility (CSI), attitudinal change and expectations of the change required to ensure a more responsible financial sector. Findings reveal tension in the discourses concerning the sector's ability to “heal itself”. Questions of accountability and of the capacity and reliability of CSR are common to all discourses.

The banks disclose on their web sites information on environmental management and socioeconomic programs. Other recurrent themes are the support to education, fight against corruption, workers' welfare, corporate ethics and the existence of codes of conduct. There are geographic patterns in the quantity and detail of the information provided, as well as in the themes mentioned. The banks located in Europe, the American continent, and Oceania, are those who disclose more information. This confirms that the disclosure of social responsibility by the banks is larger and more detailed according to the development indexes of the country where they operate. (Vilar & Simão, 2015).

Because this sector has a strong influence economically and on sustainable development, both risk management issues and stakeholder pressure drive the financial sector into a more sustainable direction. In contrast to polluting sectors, the financial sector does not affect the environment and society by direct emissions or the use of resources like other industries. (Weber, Diaz & Schwegler, 2014).

The global survey of the CFA Institute (2013) collected the opinions of 6783 respondents from 22 countries. 56 per cent identified a continuing lack of ethical culture within financial firms as the major factor contributing to the current lack of trust in the finance industry. Two-thirds of respondents said that a culture of ethics and integrity within firms needed to be reestablished, since the primary problems were not the physical failures of the market or government actions, but the culture of firms within the financial industry. (Lentner, Szegedi & Tatay, 2015).

CSR is part of a cycle through which companies generate reputation capital, manage reputational risk and improve their performance. Companies invest in social responsibility corporate, which generates a reputation capital stock that is used for a dual purpose: on the one hand, it constitutes a launching pad for future opportunities and, on the other hand, safeguards current assets, acting as a buffer against losses. Through the CSR programs give consistency to the cycle and reputational risk is managed (Lizarzaburu & Del Brio, 2016).

According to the research article published by Bolaños & Del Brío (2016), Corporate reputation in the banking sector is a key factor influencing the financial results of banks in the local financial system. The reputation rankings have a positive correlation with the size and performance of each bank according to the different bank management indicators. Having an excellent banking and corporate reputation is decisive to consolidate the results and each company. Furthermore, reputation would have a positive effect on the solvency of financial institutions.

Over the last years, a greater number of companies interested in CSR have emerged in Peru. This change has been the product of an arduous and long work of sensitization, diffusion and viralization of the concept. Thus, CSR in Peru has been channeled through a set of initiatives that seek to tackle this new value of business awareness in a practical and effective way. Initially, the organizations that began to implement CSR strategies were transnational corporations. The result was positive not only because they integrated and communicated it, but also because they began to implement it within their value chain (Barbachan, 2017).

CSR in Peru has generally been framed within the sector productive; that is, to raw material extraction companies such as mining and fishing. The development CSR has been improving over time, and companies have been including strategic plans that seek the development of all the stakeholders involved with the operation of the company. Along these lines, the Peruvian financial sector since the beginning of 2000 has begun to include within its strategic plan different CSR plans. So much so that in recent years different banks have strengthened these plans because the results of the first actions have been positives (Lizarzaburu & Del Brio, 2016).

In the research carried out by Lizarzaburu and del Brio (2016), the relationship between CSR, corporate reputation and investor confidence in the Peruvian banking sector. After a descriptive study, it was possible to identify that the Peruvian banks have improved their reputation due to their social responsibility. This improvement of reputation has been correlated with a strengthening of the value of the company, in such a way that the economic benefit that CSR represents has exceeded the costs of executing these plans (Jiménez, González, & Moreno, 2018).

Peruvian banking companies have improved their reputation in social responsibility actions, which have been mainly aimed at increasing access to financial products and services that allow improving levels of financial inclusion. This improved reputation has been correlated with a strengthening of the value of the company (Lizarzaburu & Del Brio, 2016). Financial inclusion contributes to the stable development of a financial system through various mechanisms, among which are: greater participation of the population in the financial system that generates a sustained deposit base and reduces dependence on international financial markets; as well as, the reduction of financial informality.

According with Barajas, Beck, Belhaj, Naceur, Cerra, & Qureshi (2020) Financial inclusion improves the level of business activity, allowing people with innovative ideas but with financial limitations to become entrepreneurs, as well as allowing current companies to expand

their level of operation. Likewise, they affirm that if we carry out the analysis at the aggregated level, the effects of financial inclusion can ultimately boost economic activity, contributing to poverty reduction and potentially reducing income inequalities. On the household side, the use of financial products (savings, credit, insurance, etc.) improves consumption possibilities since they smooth out the income cycles that are generated by unforeseen needs or irregularities in income flows and, therefore, it optimizes the allocation of resources and improves well-being of people.

The benefits of financial inclusion can help improve people's income-generating potential and thus reduce poverty. Digital financial services help people manage financial risk by making it easier for them to raise money; In addition, digital financial services can reduce the cost of receiving payments and help people accumulate savings and increase spending on necessities. On the other hand, for governments, shifting from cash to digital payments can reduce corruption and improve efficiency (Demirguc-Kunt, Klapper, Singer, Ansar, & Hess, 2017). Latin American countries, in general, have made significant progress in promoting financial inclusion in the last 10 years. Regulatory environments have been strengthened and access to finance has improved significantly. However, the countries of this region still have negative gaps in the inclusion of companies. (Dabla-Norris, Deng, Ivanova, Karpowicz, Unsal, VanLeemput, & Wong, 2015).

According to the definition adopted by The Superintendency of Banks, Insurance and Pension Fund Administrators of Peru (SBS) in 2006, financial inclusion in Peru can be measured along three dimensions: “**access**”, “**usage**” and “**quality**”. The available data collected comes from the banks themselves through regular reports and provide extensive information on the access to financial services, such as the availability of services points and the geographical penetration of financial infrastructure. Currently the supply-side data includes the number and location of branches, ATMs and banking agents, the number of borrowers and the number of depositors.

In the analysis period of the present research (2009-2018), **access** to financial services in Peru has expanded significantly. In **Figure 1** we can see the growth of credits and deposits as a percentage of GDP, reaching in the end of 2018, 40.56% and 38.62 respectively. Additionally, in **Figure 2** we can see the growth of consumer and mortgage credits from the system financial as a percentage of GDP, reaching at the end of 2018, 8,60% and 6,15% respectively.

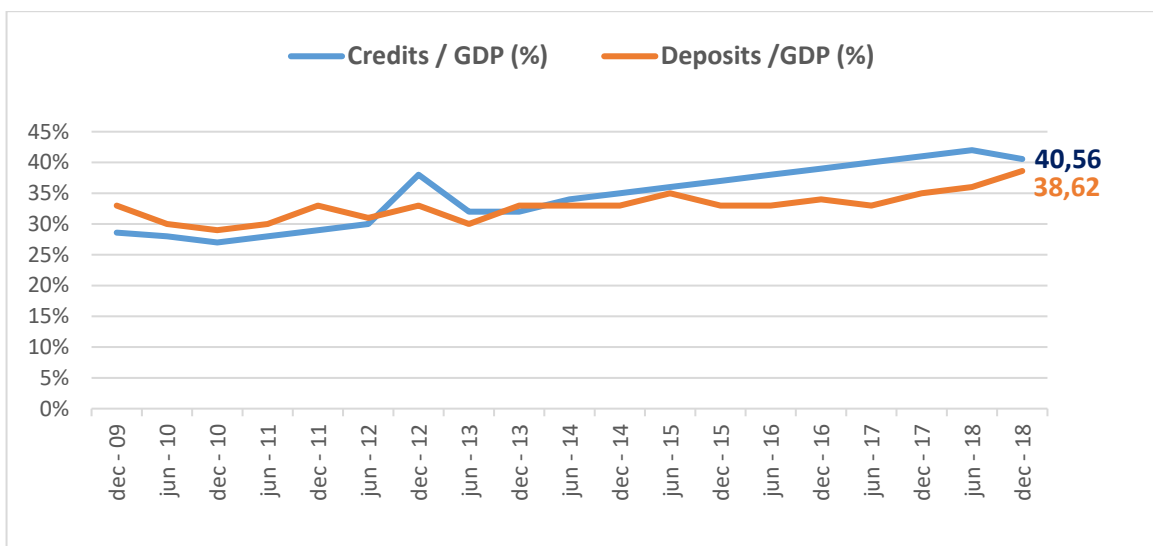


Figure 1. Credits and deposits of the financial system as percentage of GDP.

Prepared by the author.

Source: Superintendency of Banks, Insurance and Pension Fund Administrators of Peru (SBS).

Financial Inclusion indicators report of The Financial Systems, of Insurance and Pensions 2009-2018.

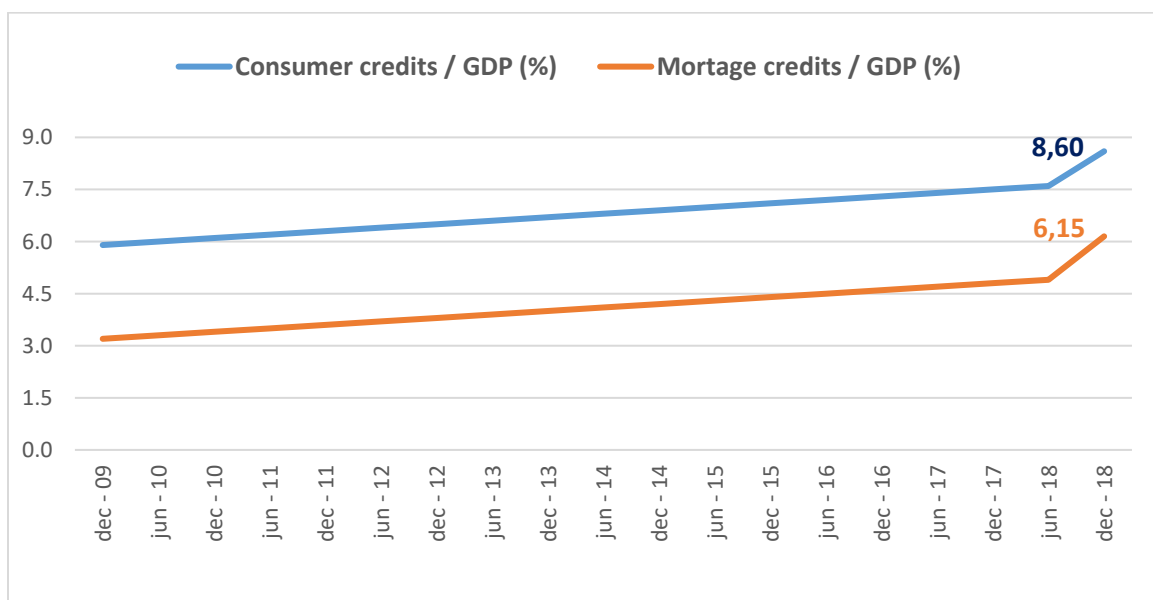


Figure 2. Consumer and mortgage credits from the system financial as a percentage of GDP.

Prepared by the author.

Source: Superintendency of Banks, Insurance and Pension Fund Administrators of Peru (SBS).

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The number of service points as offices, ATMs, correspondent tellers and others, has multiplied by 11: it went from 81 per 100,000 adult inhabitants at the end of 2008 to 917 at the end of 2018, as shown in **Figure 3**. If we geographically distribute the number of service channels per 1,000 km², there is also a significant increase, going from 9 at the end of 2008 to 133 at the end of 2018, as we can see in **Figure 4**.

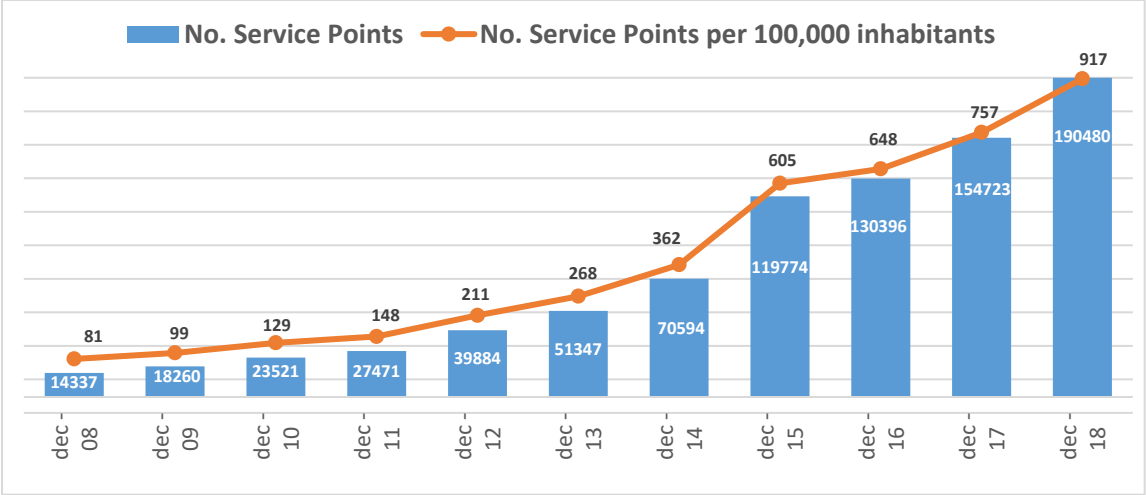


Figure 3. Total service points and total service points per 100,000 inhabitants.

Prepared by the author.

Source: Superintendency of Banks, Insurance and Pension Fund Administrators of Peru (SBS).

Financial Inclusion indicators report of The Financial Systems, of Insurance and Pensions 2009-2018

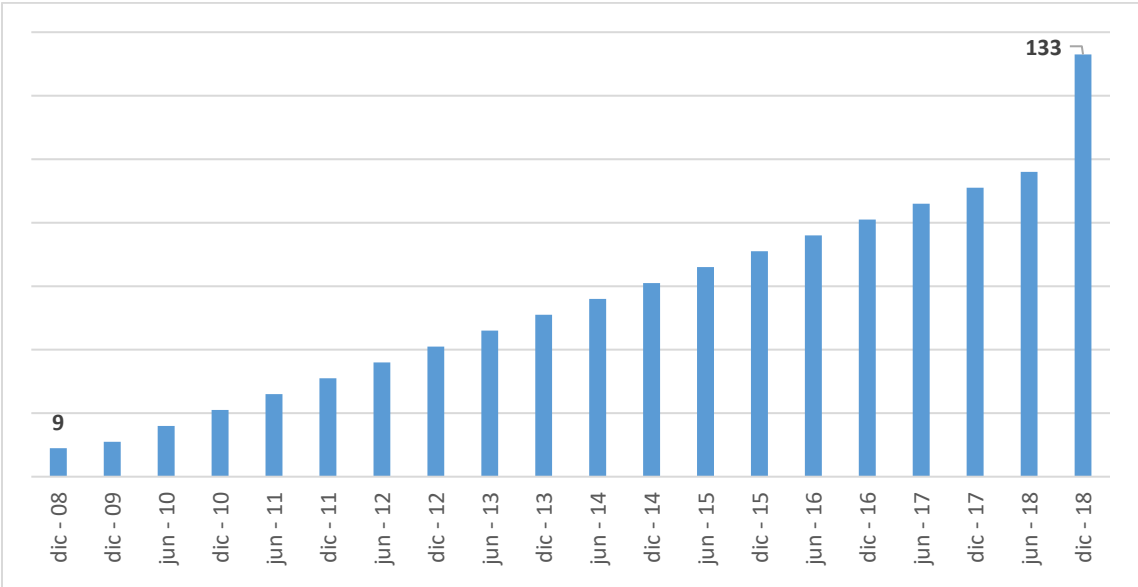


Figure 4. Total service channels per 1 000Km2.

Prepared by the author.

Source: Superintendency of Banks, Insurance and Pension Fund Administrators of Peru (SBS).

Financial Inclusion indicators report of The Financial Systems, of Insurance and Pensions 2009-2018

Disaggregated, we can see in **Figure 5** the significant increase in the number of branches, ATMs and correspondent tellers. The increase in correspondent tellers (POS) stands out, which increased from 7735 at the end of 2008 (44 per 100,000 inhabitants) to 159 042 at the end of 2018 (765 per 100,000 inhabitants), given the higher costs of maintaining offices and installing ATMs in areas of difficult geographic access. Thus, the geographic coverage of financial services has expanded. While in 2008 only 27% of all districts had access to service points, as of 2018 82% of districts have a physical presence of the financial system.

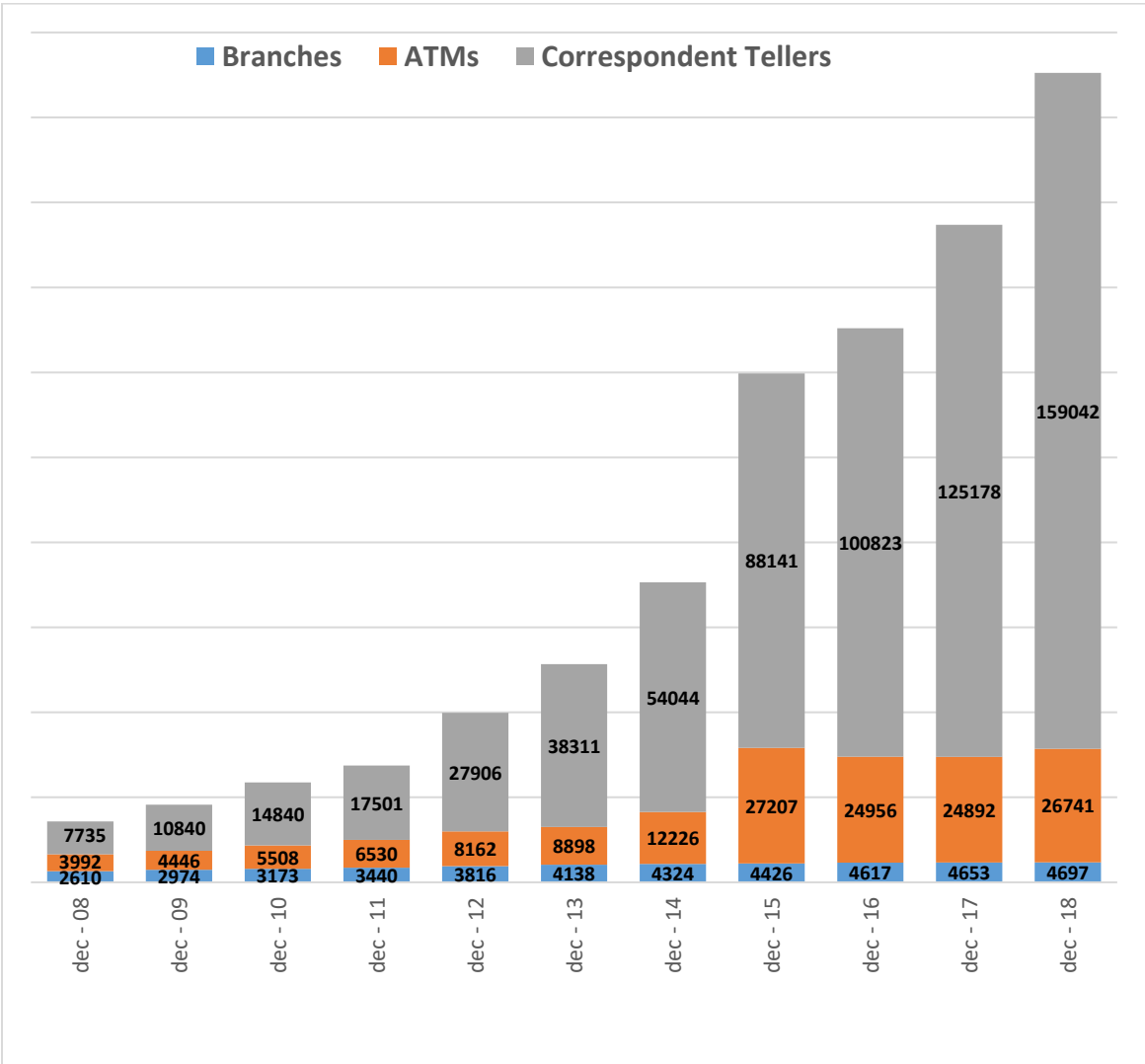


Figure 5. Number of branches, ATMs and correspondent tellers.

Prepared by the author.

Source: Superintendency of Banks, Insurance and Pension Fund Administrators of Peru (SBS).

Financial Inclusion indicators report of The Financial Systems, of Insurance and Pensions 2009-2018

If we compare with other countries in the region, we can see that in terms of financial infrastructure that Peru, with regard to the Number of offices per 100,000 adult inhabitants (**Figure 6**), is in second place with 21, only behind Brazil which has 23 and in the Number of ATMs per 100 000 adult inhabitants (**Figure 7**), Peru shares the first place with Brazil with a result of 107.

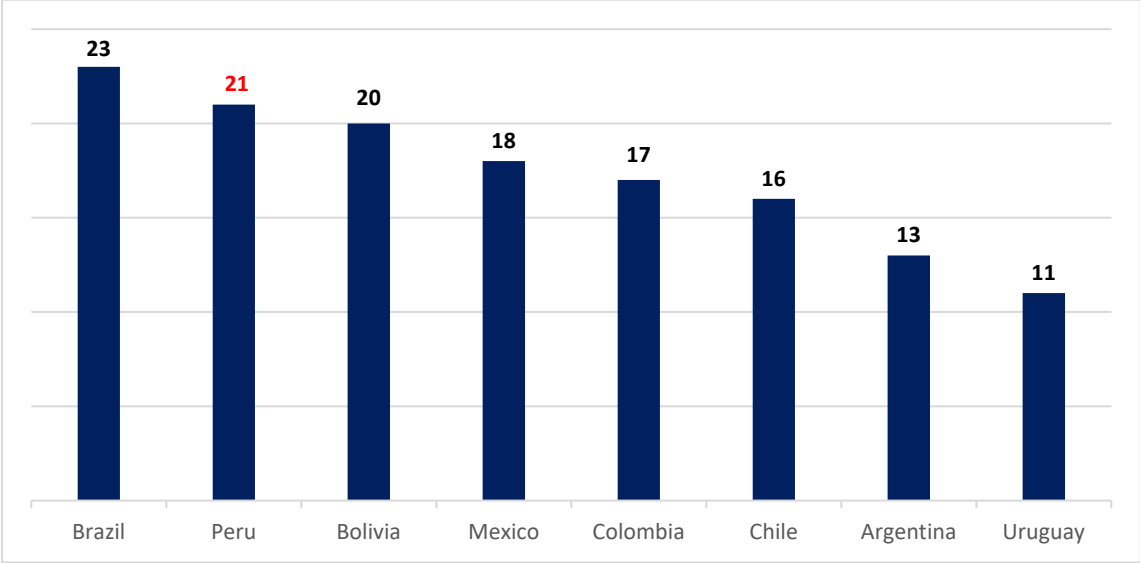


Figure 6. Number of offices per 100,000 adult inhabitants.

Prepared by the author.

Source: Superintendency of Banks, Insurance and Pension Fund Administrators of Peru (SBS). Financial Inclusion indicators report of The Financial Systems, of Insurance and Pensions 2018

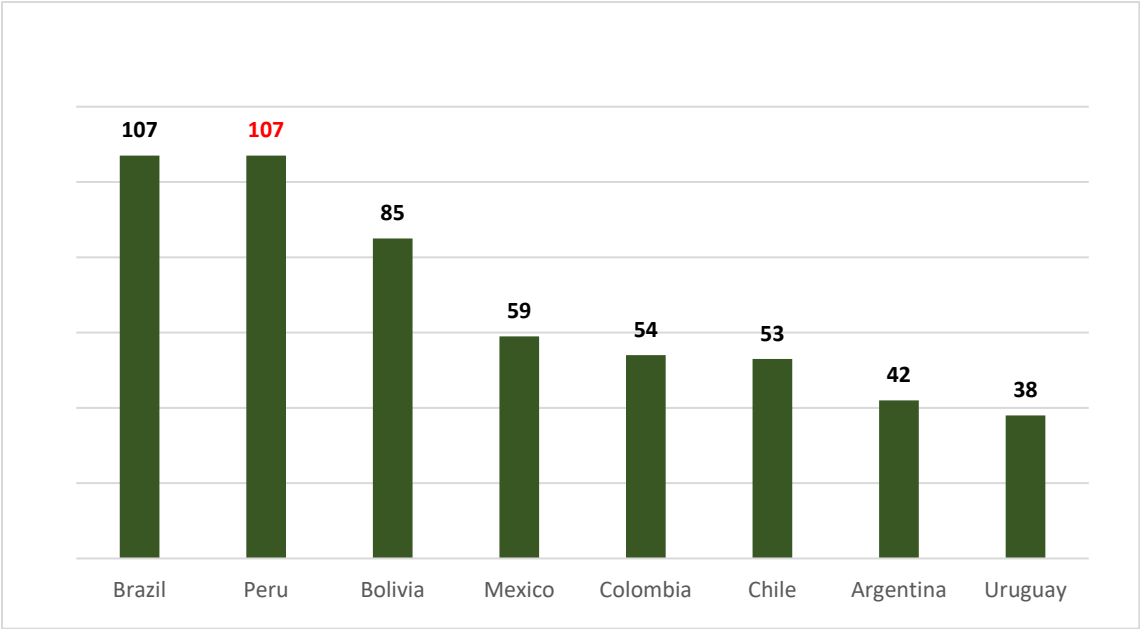


Figure 7. Number of ATMs per 100,000 adult inhabitants.

Prepared by the author.

Source: Superintendency of Banks, Insurance and Pension Fund Administrators of Peru (SBS). Financial Inclusion indicators report of The Financial Systems, of Insurance and Pensions 2018

On the demand side, the financial services **usage** has also increased. According to the SBS, the number of cardholders as a percentage of the adult population has increased in the 2009-2018 period, reaching 19.57% of the total lines approved and 14.84% of the total lines used, as we can see in **Figure 8**. Furthermore, according to information from the National Household Survey (Enaho), which has included a financial inclusion module since 2015, the percentage of the population that has deposit accounts (savings, checking and fixed-term accounts) has risen from 28, 7% in 2015 to 38.1% in 2018.

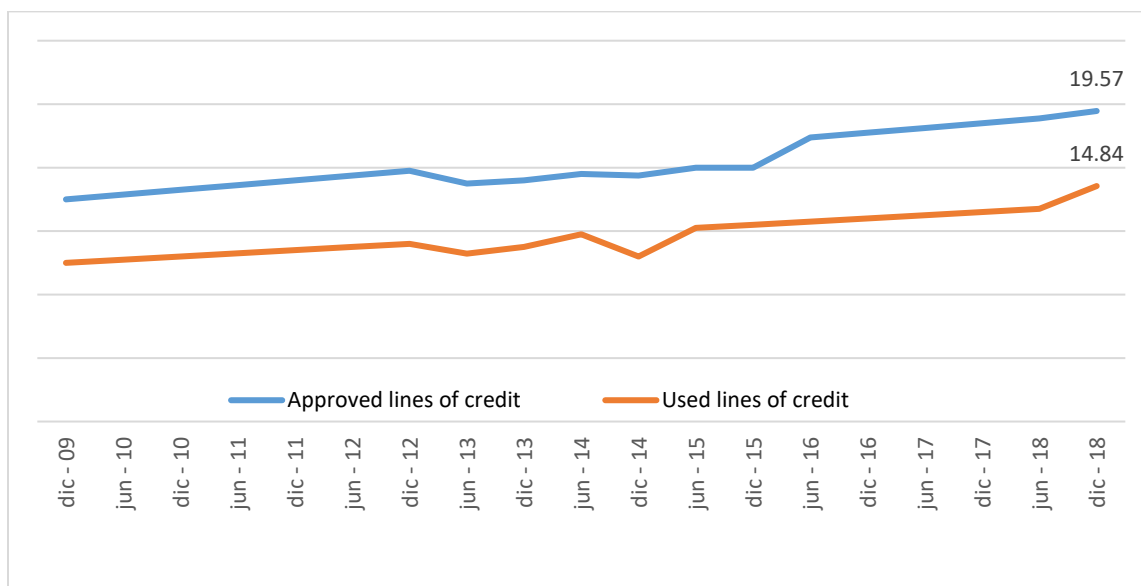


Figure 8. Number of cardholders as a percentage of the adult.

Prepared by the author.

Source: Superintendency of Banks, Insurance and Pension Fund Administrators of Peru (SBS).

Financial Inclusion indicators report of The Financial Systems, of Insurance and Pensions 2009-2018

However, financial inclusion in Peru remains low due to a history of economic and financial instability that began in the 1980s and lasted until the early 1990s. During this period, Peru was affected by high inflation rates and fell into an economic and financial crisis that resulted in the bankruptcy, intervention and liquidation of many financial institutions, affecting the general confidence in the formal financial system. According to the study on the bankarization of Peruvians, carried out by Apoyo Consultoria in August 2018, it is shown that only 41% of adults between 18 and 70 years old are clients of a bank, savings bank or financial institution, which in relative terms is a very low percentage due to the fact that developed countries reach levels of banking access of 90%.

If we compare with other countries in the region, we can see that with regard to the Number of debtors per 1,000 adult inhabitants (**Figure 9**), Peru only has 390, below Brazil (906), Uruguay (548), Chile (489) and Argentina (427). In the Number of depositors with an account in the financial system with respect to the adult population (**Figure 10**), Peru only has 42, well below Chile which leads this category with 74, and most of the rest of the countries in the region.

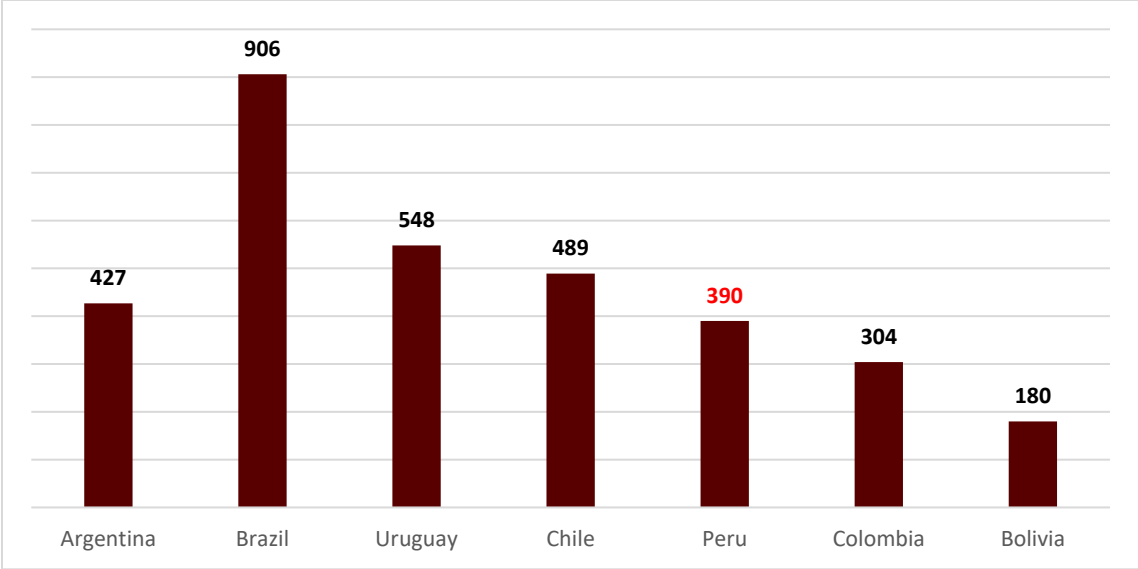


Figure 9. Number of debtors per 1,000 adult inhabitants.

Prepared by the author.

Source: Superintendency of Banks, Insurance and Pension Fund Administrators of Peru (SBS).
 Financial Inclusion indicators report of The Financial Systems, of Insurance and Pensions 2009-2018

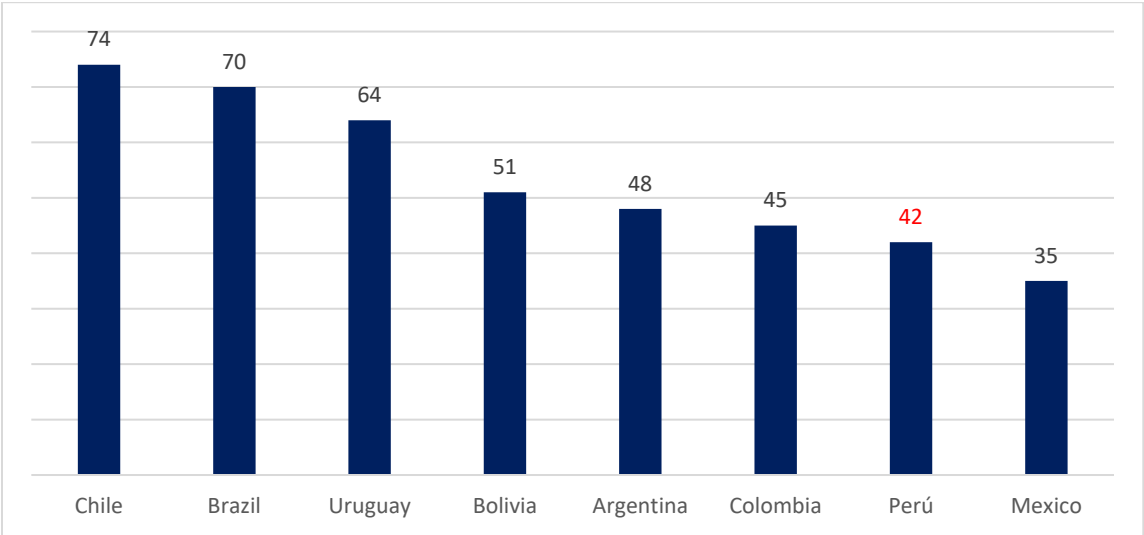


Figure 10. Number of depositors with an account in the financial system with respect to the adult population.

Prepared by the author.

Source: Superintendency of Banks, Insurance and Pension Fund Administrators of Peru (SBS).
 Financial Inclusion indicators report of The Financial Systems, of Insurance and Pensions 2009-2018

The low level of bankarization is mainly related to the high rates of informality in Peru. It is estimated that 60% of the Peruvian economy is informal and that it affects, above all, micro, small and medium-sized enterprises, which provide employment for more than 60% of the economically active population (EAP). There is a close correlation in low-banking countries with greater legal insecurity and less drive for competitiveness and competition, since low banking coincides with high levels of informality. The percentage share of micro and small business debtors with respect to total debtors has increased in the 2008-2019 period, reaching 37.16% at the end of 2018, however the percentage share of credits in micro and small businesses in relation to total credits has been decreasing in the same period, reaching 12.42% at the end of 2018, as we can see in **Figure 11**.

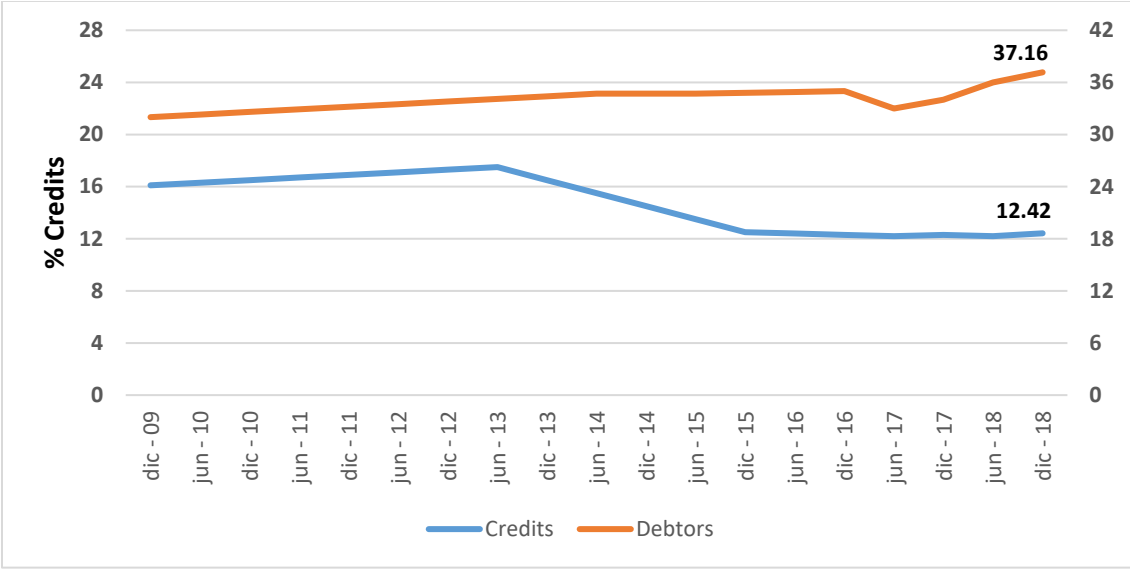


Figure 11. Participation of credits and debtors of micro and small companies in total credits and debtors (%).

Prepared by the author.

Source: Superintendency of Banks, Insurance and Pension Fund Administrators of Peru (SBS).

Financial Inclusion indicators report of The Financial Systems, of Insurance and Pensions 2009-2018

The implementation of a regulatory framework and strict prudential supervision were important to regain confidence in the financial system. Subsequently, the introduction of well-supervised microfinance institutions, as well as new regulations that allow innovations such as tiered accounts and banks agents contributed to increasing access to and use of financial services. Peru's deposit and credit levels are among the lowest in Latin America. According to the World Bank's Global Findex, on average, 53% of the region's population has an account at a financial institution.

Promoting savings and facilitating the population's access to instruments and products of Safe savings and according to your needs should be a primary objective, both on the agenda of public policies as well as by financial service providers, who by complying with this role can also find significant benefits. Thus, in the particular case of Banks, having a broad savings base favors intermediation financial and allows them to improve their liquidity risk management, since savings represent a source of funding of lower cost and greater stability, in relation to other sources. In the Peruvian case, the prevailing reality indicates that individuals make decisions in an environment of uncertainty, vulnerability to poverty and high levels of informality, as well as limited access and use of financial system services. This reality conditions the actions of individuals in relation to savings.

Another important aspect of the social responsibility policies implemented by the banks refers to the Financial Education of the Peruvian population. The Organization for Economic Cooperation and Development –OECD– define Financial Education as “the process for the which consumers or investors improve their level of understanding of financial products, concepts and risks; to through objective information, instruction and / or advice; develop skills and confidence, as well as become more aware of financial risks and opportunities; with the goal of making informed decisions, to improve your financial well-being”. Financial Education along with regulation prudential and market conduct, it is a tool important to contribute to an inclusion process responsible financier.

Likewise, it is considered the financial consumer's first line of defense. It allows the consumer to be able to act in his life financial, understanding the risks and benefits of financial products and services, making decisions adequate financial resources in turn, it is necessary to guarantee an efficient allocation of resources, in order to improve your well-being by promoting the stability of financial market and the economy as a whole.

Finally, regarding the worldwide evidence on the impact that social responsibility policies have on financial performance, in recent years a series of studies about the financial performance in have been carried out different types of investments and their impact on the financial performance of the company, showing that corporate investments in CSR have captured the attention of companies because they are directly related to higher returns for investors., Khan, Serafeim and Yoon (2016) indicate in their paper that Companies that have strong CSR ratings perform better in the future than companies with lower CSR ratings.

Currently, most companies identify CSR problems as strategically important in your capital allocation process. Companies around the world publish a large amount of information on their CSR policies, however there is no global consensus for investors as to which of the large amount of CSR topics is the one that attracts the largest investment because it has the best financial return. For example, in the paper of Vujicic (2015) the author determined the relationship between corporate social responsibility and stock market performance of US firms. The main finding of the analysis was that firms with higher social responsibility scores tend to achieve lower stock returns.

On the other hand, Kotsantonis & Bufalari (2019), state in their research that in the case of financial institutions, the investment of significant amounts of resources in CSR policies and the improvement of financial performance do not contradict each other, on the contrary, these they are directly related when driven by strong and consistent overall leadership. For the author, a greater impact on financial performance as a result of the application of CSR policies are the result of this stronger overall leadership. Consequently, companies and especially financial companies have understood that long-term value creation and financial returns. They are inextricably linked to your core purpose and how they create value for your stakeholders.

2. Methodology

The main objective of this research is to know the effect of CSR on financial performance of the Peruvian Banks. The research question of this research is ***Does Corporate Social Responsibility (CSR) of Peruvian Banks affected their financial performance in the period 2009-2018?*** In consequence, the analysis of this research is quantitative analysis.

The population is made up for the 18 banks registered in Peru: 16 bank companies, 1 state bank and 1 investment bank (**Table 1**). The sampling methods used to select a quantity of reasonable elements that allow to develop the research are two Non-probability sampling technique: Self-selection Sampling and Judgment sampling. The specification of the sampling frame used in the selection criteria corresponds to the Peruvian banks that have operated in each of the 10 periods under analysis and that together make up more than 95% of the market share.

Table 1. List of Peruvian banks registered as of December 31, 2018.

| | | |
|---|---------------------|-----------------------------|
| The Bank BCP (Banco de Crédito del Perú) | Mibanco | Santander PERU Bank |
| Scotiabank PERU | Ripley PERU Bank | Azteca PERU Bank |
| BBVA PERU | Falabella PERU Bank | Cencosud Bank |
| Interbank PERU | Banco de Comercio | ICBC PERU Bank |
| Citibank PERU | Banco Pichincha | The Nation Bank of PERU |
| Banbif PERU | GNB PERU Bank | J.P. Morgan Investment Bank |

Prepared by the author.

Source: www.sbs.gob.pe

According to the selected criteria, the sample size is of 12 elements of analysis that represent 97.7% of the market share (**Table 2**). With this representative sample, the information can be accessed in the analysis period and the researcher has the experience in the sector and the contacts in each of the banks to be analyzed, so it is very likely that the findings of that study can be generalized.

Table 2. Research sample size.

| N.º | BANK | Market Share 2018 |
|------------|--|--------------------------|
| 1 | The Bank BCP (Banco de Crédito del Perú) | 33,73 % |
| 2 | BBVA PERU | 20,09 % |
| 3 | Scotiabank PERU | 17,05 % |
| 4 | Interbank PERU | 12,05 % |
| 5 | Banbif PERU | 3,75 % |
| 6 | Mibanco | 3,69 % |
| 7 | Banco Pichincha | 2,74 % |
| 8 | Santander PERU Bank | 1,46% |
| 9 | Falabella PERU Bank | 1,13% |
| 10 | Ripley PERU Bank | 0,71% |
| 11 | Banco de Comercio | 0,54% |
| 12 | Azteca PERU Bank | 0,13% |
| | TOTAL | 97.07 % |

Prepared by the author.

Source: www.sbs.gob.pe

The banks that have not been considered in the sample are explained by the following reasons:

1. **Citibank:** In May 2015, it transferred an equity block, mainly from the consumer banking business, to Scotiabank, so since then it has not had information on The Non-Performing loan ratio (NPL).
2. **GNB Bank:** It started operations under that name in October 2013.
3. **Cencosud Bank:** It started operations in August 2012.
4. **ICBC Bank:** Started operations in February 2014.
5. **The Nation Bank of PERU:** Is the bank that represents the Peruvian State in commercial transactions in the public or private sector, either nationally or abroad. It is a member entity of the Ministry of Economy and Finance. Consequently, due to the nature of its activity, it is not appropriate to include it as part of this investigation.
6. **J.P. Morgan Investment Bank:** It corresponds to an investment bank. Consequently, due to the nature of its activity, it is not appropriate to include it as part of this investigation.

Hypotheses

The hypothesis proposed for this research work are the following:

H₀: *“The implementation of the CSR policies of Peruvian banks had a positive impact on their ROE in the 2009-2018 period”.*

H₁: *“The implementation of the CSR policies of Peruvian banks did not have a positive impact on their ROE in the 2009-2018 period.”*

Kotsantonis & Bufalari (2019) has conducted a research regarding that financial institutions that seek to implement CSR policies under general leadership tend to perform better financially. The authors note that since 2012, the Global Alliance for Banking on Values (GABV) has conducted research analyzing the impact of CSR-based banking on key economic and financial indicators. Their findings show that this impact is associated with consistent financial returns, higher growth, and a strong capital position.

Dependent variable

Return on Equity (ROE)

ROE is a central measure of performance in the banking industry. (Moussu & Petit-Romec, 2017). The importance of ROE as a financial indicator ratio is that it shows the financial profitability of the invested capital. Which in turn allows investors to make a judgment on the management by knowing how the contributed capital is being used.

In addition, ROE is closely followed by investors, as it determines the ability of a company to generate value for its shareholders, especially when compared to its cost of capital. The latter would be determined by the minimum profitability that an investor would theoretically require to assume the risk of investing in the capital of an entity. In this way, the greater the excess ROE with respect to the cost of capital, the greater the creation of value for the shareholder. For the analysis period proposed by each bank analyzed, we will capture the effect of the independent variables on ROE.

Independent variables

After determining the dependent variable, we choose the independent variables that are appropriate for our case. These include:

1) Market Share (MS) of the Bank. It corresponds to the percentage of participation of direct credits. According to the Superintendency of Banks, Insurance and Pension Fund Administrators of Peru (SBS), Direct credits represent the financing that, under any modality, companies of the financial system grant to their clients, originating the obligation of the deliver a certain amount of money. Corresponds to the sum of the current credits, restructured, refinanced, expired and in judicial collection.

2) Bank size (S). Measured by total assets according to the bank's financial statements.

total assets include available funds, loans to clients and companies, investments in securities and securities, and assets and rights that can be converted into cash or destined to remain in the company.

3) The Nonperforming loan ratio (NPL). It measures the ratio between the amount of non-performing loans up to 90 days in a bank's loan portfolio and the total loan portfolio of the bank.

The NPL is one of the most used indicators as a risk measure for a loan portfolio and is important not only for the company or financial institution, since this information will also allow the financial regulator, depending on the situation of the system, to implement policies to keep improving the quality of loan portfolios (Bolaños & Del Brío, 2016).

4) Global Capital Ratio (GCR). It reflects the grade of solvency of financial institutions, that is, the effective equity they have to face possible negative fluctuations in the economic cycle and based on the risk profile of their business.

According to the Superintendency of Banks, Insurance and Pension Fund Administrators of Peru (SBS), The Global Capital Ratio is the effective equity between the effective equity requirement for risks of credit, market and operational. The effective equity requirement for credit risk is equivalent to the assets and contingents weighted by credit risk. Until June 2009, the equity requirement was just to cover credit and market risks.

5) Operating expense ratio (OER). It is the efficiency ratio that is determined by dividing operating expenses by the bank's total financial margin.

According to the Superintendency of Banks, Insurance and Pension Fund Administrators of Peru (SBS), this indicator measures the percentage of net income that is destined to expenses in personnel, directory, services received from third parties, taxes and contributions, depreciation and amortization. Both variables refer to the value accumulated in the year. The total financial margin equals the gross financial margin, plus the income from financial services, less expenses from financial services.

6) CSR ratio. It is calculated by dividing the expenses in implementing social responsibility policies divided by the average productive assets of the Bank.

These expenses are related to improving the levels of access, use and quality of financial services to improve the financial inclusion of people and companies in Peru.

Statistical model

In the present research, we will use multiple linear regression analysis to estimate the regression line. Therefore, it will include the framework of type analysis and different parametric like the mean, standard deviation, and t-test. The effect of CSR on financial performance will be tested by the following regression model:

$$i) ROE = \beta_0 + \beta_1 MS + \beta_2 S + \beta_3 NPL + \beta_4 GCR + \beta_5 OER + \beta_6 CSR \dots + e.$$

As a result of this research, the author expects it will produce recommendations for the financial companies and from other sectors of the Peruvian economy in the application of CSR policies and how this can contribute to the social and economic development of Peruvians and, in return for that, to the sustainable development of the companies that develop them.

Essentially, the topic of Corporate Social Responsibility constitutes an interesting research material to study, because it can be applied by different types of economic sectors and companies, regardless of size or bargaining power. Furthermore, to know how Corporate Social Responsibility affects (if so) the financial performance of the Peruvian Banking sector will be an excellent first exploration study for future researchers.

Data

To obtain the data, we have public information from the websites of the Superintendency of Banks, Insurance and Pension Fund Administrators of Peru (www.sbs.gob.pe) and the Central Reserve Bank of Peru (www.bcrp.gob.pe), as well as from the financial statements and sustainability reports of the banks, which are required to publish CSR reports annually.

The author of this research has 14 years' experience in the financial sector in Perú. However, we may have some limitation in the information collected because in this sector it is difficult to access non-public information. What is more, there is a lot of information but in Spanish and it is necessary to carry out a good translation for a correct analysis of the results.

The data used for the following investigation corresponds to a Panel Data. It contains observations about different cross sections across time. We don't have time-invariant variables. Thus, it is not necessary to estimate the effects of variables whose values do not change across time.

3. Results

Preliminary Result: Period 5 years (2014-2018)

At the beginning of this research, the analysis period ranged from 2014 to 2018, the period in which the Banks made the largest expenses in social responsibility policies. For this analysis we used data from **Appendix 1**, we ran Fixed effects (FE) and Random effects (RE) regressions.

The result from Random effect regression (**Table 3**) is quite interesting, it shows that only Market Share (MS) have positive relation with banks' financial performance (ROE). In the case of CSR ratio have a negative relation with banks' financial performance (ROE). This result would not confirm our hypothesis. In consequence, CSR variable has not a statistically significant relationship with the dependent variable in the period 2014-2018.

Table 3. Random effects model 2014-2018

| Random-effects GLS regression | | Number of obs | = | 60 | | |
|--|------------------|-----------------------------------|-------|--------|----------------------|-----------|
| Group variable: BANK | | Number of groups | = | 12 | | |
| R-sq: | | Obs per group: | | | | |
| | within = 0.4617 | | min = | 5 | | |
| | between = 0.3612 | | avg = | 5.0 | | |
| | overall = 0.3513 | | max = | 5 | | |
| corr(u_i, X) = 0 (assumed) | | Wald chi2(6) | = | 217.50 | | |
| | | Prob > chi2 | = | 0.0000 | | |
| (Std. Err. adjusted for 12 clusters in BANK) | | | | | | |
| ROE | Coef. | Robust Std. Err. | z | P> z | [95% Conf. Interval] | |
| MARKET_SHARE | .5648915 | .3153854 | 1.79 | 0.073 | -.0532524 | 1.183035 |
| SIZE_TOTAL_ASSETS | -.0001106 | .0000768 | -1.44 | 0.150 | -.0002611 | .0000399 |
| NPL_RATIO | -.8298911 | .3702336 | -2.24 | 0.025 | -1.555536 | -.1042467 |
| GLOBAL_CAPITAL_RATIO | -.483165 | .5031529 | -0.96 | 0.337 | -1.469327 | .5029967 |
| OPERATION_EXPENSE_RATIO | -.2121406 | .2179946 | -0.97 | 0.330 | -.6394021 | .215121 |
| CSR_EXPENSE_RATIO | -.0255498 | .2539735 | -0.10 | 0.920 | -.5233287 | .4722292 |
| _cons | 35.22266 | 11.83756 | 2.98 | 0.003 | 12.02147 | 58.42385 |
| sigma_u | 4.9028098 | | | | | |
| sigma_e | 2.731845 | | | | | |
| rho | .76308401 | (fraction of variance due to u_i) | | | | |

By Random Effects, it is assumed that there are no statistically significant differences between individuals.

If we run Fixed effect GLS regression (**Table 4**), the result from regression confirms that only Market Share (MS) have direct relation with banks' financial performance in the period 2014-2018.

Table 4. Fixed Effects Model 2014-2018

| Fixed-effects (within) regression | | Number of obs | = | 60 | | |
|--|-----------|---|-------|--------|----------------------|-----------|
| Group variable: BANK | | Number of groups | = | 12 | | |
| R-sq: | | Obs per group: | | | | |
| within | = 0.5008 | min | = | 5 | | |
| between | = 0.5000 | avg | = | 5.0 | | |
| overall | = 0.4167 | max | = | 5 | | |
| corr(u _i , Xb) = -0.9565 | | F(6,11) | = | 51.73 | | |
| | | Prob > F | = | 0.0000 | | |
| (Std. Err. adjusted for 12 clusters in BANK) | | | | | | |
| ROE | Robust | | | | | |
| | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] | |
| MARKET_SHARE | 1.540397 | .9608151 | 1.60 | 0.137 | -.574343 | 3.655137 |
| SIZE_TOTAL_ASSETS | -.0000698 | .0000681 | -1.03 | 0.327 | -.0002197 | .0000801 |
| NPL_RATIO | -1.552086 | .6128123 | -2.53 | 0.028 | -2.900877 | -.2032954 |
| GLOBAL_CAPITAL_RATIO | -.547837 | .5173198 | -1.06 | 0.312 | -1.68645 | .5907763 |
| OPERATION_EXPENSE_RATIO | -.1608795 | .2483268 | -0.65 | 0.530 | -.7074432 | .3856842 |
| CSR_EXPENSE_RATIO | -.1845196 | .2156602 | -0.86 | 0.410 | -.6591845 | .2901454 |
| _cons | 28.44821 | 13.49458 | 2.11 | 0.059 | -1.253152 | 58.14958 |
| sigma_u | 14.760059 | | | | | |
| sigma_e | 2.731845 | | | | | |
| rho | .96687866 | (fraction of variance due to u _i) | | | | |

In the case of Fixed Effects regression, it is assumed that there is a statistically significant difference between the observations.

Second Result: Period 10 years (2009-2018)

After analyzing the results for the 2014-2018 period, we were decided to extend the time horizon from 5 to 10 years, so the new analysis period would be from 2009 to 2018. In this period an using data from **Appendix 2**, we ran fixed effect regression (FE) and the random effects regression (RE).

The result from Random effect regression (**Table 5**) shows that Market Share (MS) and CSR Ratio have positive relation with banks' financial performance (ROE). It would confirm our hypothesis that CSR ratio of Peruvian Banks have a positive impact on their ROE in the period 2009-2018. In other words, the greater the market share and the investment in social responsibility policies, the greater the ROE.

Table 5. Random effects model 2009-2018

| | | | | | | |
|--|-------------------------|---|-----------|-------|-------|----------------------|
| Random-effects GLS regression | | Number of obs = | | 120 | | |
| Group variable: BANK | | Number of groups = | | 12 | | |
| R-sq: | | Obs per group: | | | | |
| within = | 0.4698 | min = | 10 | | | |
| between = | 0.3685 | avg = | 10.0 | | | |
| overall = | 0.4013 | max = | 10 | | | |
| corr(u_i, X) = 0 (assumed) | | Wald chi2(6) = | 89.74 | | | |
| | | Prob > chi2 = | 0.0000 | | | |
| (Std. Err. adjusted for 12 clusters in BANK) | | | | | | |
| | ROE | Robust | | | | |
| | | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] |
| | MARKET_SHARE | .4702484 | .2981057 | 1.58 | 0.115 | -.1140281 1.054525 |
| | SIZE | -.0001227 | .0000732 | -1.68 | 0.094 | -.0002661 .0000208 |
| | NPL | -1.488564 | .6192668 | -2.40 | 0.016 | -2.702304 -.274823 |
| | GLOBAL_CAPITAL_RATIO | -.2101519 | .156795 | -1.34 | 0.180 | -.5174644 .0971606 |
| | OPERATION_EXPENSE_RATIO | -.3766826 | .1216661 | -3.10 | 0.002 | -.6151438 -.1382215 |
| | CSR_EXPENSE_RATIO | .2134782 | .144615 | 1.48 | 0.140 | -.0699621 .4969184 |
| | _cons | 41.92397 | 8.07691 | 5.19 | 0.000 | 26.09352 57.75442 |
| | sigma_u | 5.755973 | | | | |
| | sigma_e | 4.202107 | | | | |
| | rho | .65233164 (fraction of variance due to u_i) | | | | |

By Random Effects, it is assumed that there are no statistically significant differences between individuals.

If we run fixed effect GLS regression (**Table 6**), the result from regression confirms that Market Share (MS) and CSR ratio have direct relation with banks' financial performance. The p-value for CSR is 0.03. Hence, CSR is statistically significant at the five-percent level (p-value <0.05). In consequence, CSR variable is correlated or has a statistically significant relationship with the dependent variable in the period 2009-2018.

Table 6. Fixed Effects Model 2009-2018

| | | | | | | |
|--|----------|------------------|-----------------------------------|--------|-------|----------------------|
| Fixed-effects (within) regression | | Number of obs | = | 120 | | |
| Group variable: BANK | | Number of groups | = | 12 | | |
| R-sq: | | Obs per group: | | | | |
| within | = 0.4836 | min | = | 10 | | |
| between | = 0.3507 | avg | = | 10.0 | | |
| overall | = 0.3192 | max | = | 10 | | |
| corr(u_i, Xb) = -0.8034 | | F(6,11) | = | 6.86 | | |
| | | Prob > F | = | 0.0031 | | |
| (Std. Err. adjusted for 12 clusters in BANK) | | | | | | |
| ROE | | Coef. | Robust Std. Err. | t | P> t | [95% Conf. Interval] |
| MARKET_SHARE | | .9168932 | .6426294 | 1.43 | 0.181 | -.4975245 2.331311 |
| SIZE | | -.0001019 | .0000705 | -1.44 | 0.176 | -.0002572 .0000533 |
| NPL | | -2.110411 | .824265 | -2.56 | 0.027 | -3.924606 -.2962161 |
| GLOBAL_CAPITAL_RATIO | | -.1371699 | .1831503 | -0.75 | 0.470 | -.5402809 .2659411 |
| OPERATION_EXPENSE_RATIO | | -.3752325 | .1050659 | -3.57 | 0.004 | -.606481 -.1439839 |
| CSR_EXPENSE_RATIO | | .0803304 | .1692622 | 0.47 | 0.644 | -.2922132 .452874 |
| _cons | | 39.82636 | 7.176038 | 5.55 | 0.000 | 24.03201 55.62071 |
| sigma_u | | 9.5312936 | | | | |
| sigma_e | | 4.202107 | | | | |
| rho | | .83726108 | (fraction of variance due to u_i) | | | |

In the case of Fixed Effects regression, it is assumed that there is a statistically significant difference between the observations.

To determine which of the two models, Fixed effects (FE) or Random effects (RE), is more appropriate for the present research work, we ran the Hausman test (**Table 7**). As a result of this test, it is observed that the best model is of Random effects.

Table 7. Hausman test

| | — Coefficients — | | | sqrt(diag(V_b-V_B)) S.E. |
|--------------|------------------|-----------|---------------------|-----------------------------|
| | (b) FE | (B) RE | (b-B) Difference | |
| MARKET_SHARE | .9168932 | .4702484 | .4466448 | .7158562 |
| SIZE | -.0001019 | -.0001227 | .0000208 | 9.94e-06 |
| NPL | -2.110411 | -1.488564 | -.6218473 | .269213 |
| GLOBAL_CAP~O | -.1371699 | -.2101519 | .072982 | .0764857 |
| OPERATION_~O | -.3752325 | -.3766826 | .0014502 | .0204632 |
| CSR_EXPENS~O | .0803304 | .2134782 | -.1331478 | .0586423 |

b = consistent under Ho and Ha; obtained from xtreg
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$\text{chi2}(5) = (b-B)' [(V_b-V_B)^{-1}] (b-B)$
 = 6.26
 Prob>chi2 = 0.2815

Final Model

For the final model of the present research, we have chosen the random effects model (**Table 8**) for the period 2009-2018.

Table 8. Final Model Random Effects 2009-2018

| Random-effects GLS regression | | Number of obs = | | 120 | | |
|--|-----------|-----------------------------------|-------|--------|----------------------|-----------|
| Group variable: BANK | | Number of groups = | | 12 | | |
| R-sq: | | Obs per group: | | | | |
| within = | 0.4698 | min = | 10 | | | |
| between = | 0.3685 | avg = | 10.0 | | | |
| overall = | 0.4013 | max = | 10 | | | |
| corr(u_i, X) = 0 (assumed) | | Wald chi2(6) = | | 89.74 | | |
| | | Prob > chi2 = | | 0.0000 | | |
| (Std. Err. adjusted for 12 clusters in BANK) | | | | | | |
| ROE | Coef. | Robust Std. Err. | z | P> z | [95% Conf. Interval] | |
| MARKET_SHARE | .4702484 | .2981057 | 1.58 | 0.115 | -.1140281 | 1.054525 |
| SIZE | -.0001227 | .0000732 | -1.68 | 0.094 | -.0002661 | .0000208 |
| NPL | -1.488564 | .6192668 | -2.40 | 0.016 | -2.702304 | -.274823 |
| GLOBAL_CAPITAL_RATIO | -.2101519 | .156795 | -1.34 | 0.180 | -.5174644 | .0971606 |
| OPERATION_EXPENSE_RATIO | -.3766826 | .1216661 | -3.10 | 0.002 | -.6151438 | -.1382215 |
| CSR_EXPENSE_RATIO | .2134782 | .144615 | 1.48 | 0.140 | -.0699621 | .4969184 |
| _cons | 41.92397 | 8.07691 | 5.19 | 0.000 | 26.09352 | 57.75442 |
| sigma_u | 5.755973 | | | | | |
| sigma_e | 4.202107 | | | | | |
| rho | .65233164 | (fraction of variance due to u_i) | | | | |

Once the random effects model was chosen, autocorrelation and heteroscedasticity were evaluated (**Table 9**). With the Autocorrelation and Heteroscedasticity Test we can see that when evaluating the model by random effects there is presence of heteroscedasticity and autocorrelation. Due to this, the corrected model of autocorrelation and heteroscedasticity was estimated (**Table 10**).

Table 9. Autocorrelation and Heteroscedasticity Test

```

Tests for the error component model:

ROE[BANK,t] = Xb + u[BANK] + v[BANK,t]
v[BANK,t] = rho v[BANK, (t-1)] + e[BANK,t]

Estimated results:

```

| | Var | sd = sqrt(Var) |
|-----|----------|----------------|
| ROE | 65.96093 | 8.121633 |
| e | 17.6577 | 4.202107 |
| u | 33.13123 | 5.755973 |

```

Tests:

Random Effects, Two Sided:
LM(Var(u)=0) = 97.56 Pr>chi2(1) = 0.0000
ALM(Var(u)=0) = 44.08 Pr>chi2(1) = 0.0000

Random Effects, One Sided:
LM(Var(u)=0) = 9.88 Pr>N(0,1) = 0.0000
ALM(Var(u)=0) = 6.64 Pr>N(0,1) = 0.0000

Serial Correlation:
LM(rho=0) = 77.57 Pr>chi2(1) = 0.0000
ALM(rho=0) = 24.09 Pr>chi2(1) = 0.0000

Joint Test:
LM(Var(u)=0,rho=0) = 121.66 Pr>chi2(2) = 0.0000

```

Table 10. Final Corrected Model

| Prais-Winsten regression, correlated panels corrected standard errors (PCSEs) | | | | | | |
|---|-----------------------|----|------------------|---|--|--------|
| Group variable: | BANK | | Number of obs | = | | 120 |
| Time variable: | YEAR | | Number of groups | = | | 12 |
| Panels: | correlated (balanced) | | Obs per group: | | | |
| Autocorrelation: | common AR(1) | | min | = | | 10 |
| | | | avg | = | | 10 |
| | | | max | = | | 10 |
| Estimated covariances | = | 78 | R-squared | = | | 0.4972 |
| Estimated autocorrelations | = | 1 | Wald chi2(6) | = | | 77.03 |
| Estimated coefficients | = | 7 | Prob > chi2 | = | | 0.0000 |

| ROE | Panel-corrected | | | | |
|-------------------------|-----------------|-----------|-------|-------|----------------------|
| | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] |
| MARKET_SHARE | .5670585 | .136651 | 4.15 | 0.000 | .2992274 .8348896 |
| SIZE | -.0001482 | .0000396 | -3.74 | 0.000 | -.0002258 -.0000706 |
| NPL | -.1491944 | .5245199 | -0.28 | 0.776 | -1.177234 .8788456 |
| GLOBAL_CAPITAL_RATIO | -.0084786 | .2925013 | -0.03 | 0.977 | -.5817706 .5648135 |
| OPERATION_EXPENSE_RATIO | -.3506404 | .0773648 | -4.53 | 0.000 | -.5022727 -.1990081 |
| CSR_EXPENSE_RATIO | .0571671 | .1594262 | 0.36 | 0.720 | -.2553024 .3696366 |
| _cons | 34.47628 | 6.023026 | 5.72 | 0.000 | 22.67137 46.2812 |
| rho | .6828519 | | | | |

The final Model is presented in the first scenario without including the time and the individual. As we can see in both models, the individual significance in some parameters is not significant, since the probability value is greater than 1%, 5%, 10%. However, in both final models, the global significance is significant, since the value of the Wald probability is less than 1% and with a degree of confidence of 99%.

Finally, the second Final Corrected Model is presented (**Table 11**), which includes the time part and the cross section.

Table 11. Final Corrected Model Final including time and individual.

| Prais-Winsten regression, correlated panels corrected standard errors (PCSEs) | | | | | | |
|---|-----------------------|----|------------------|---|---------|--|
| Group variable: | BANK | | Number of obs | = | 120 | |
| Time variable: | YEAR | | Number of groups | = | 12 | |
| Panels: | correlated (balanced) | | Obs per group: | | | |
| Autocorrelation: | common AR(1) | | min | = | 10 | |
| | | | avg | = | 10 | |
| | | | max | = | 10 | |
| Estimated covariances | = | 78 | R-squared | = | 0.7762 | |
| Estimated autocorrelations | = | 1 | Wald chi2(15) | = | 6274.65 | |
| Estimated coefficients | = | 27 | Prob > chi2 | = | 0.0000 | |

| ROE | Panel-corrected | | | | | [95% Conf. Interval] |
|-------------------------|-----------------|-----------|--------|-------|-----------|----------------------|
| | Coef. | Std. Err. | z | P> z | | |
| MARKET_SHARE | .9333539 | .438779 | 2.13 | 0.033 | .0733628 | 1.793345 |
| SIZE | .000014 | .0000289 | 0.48 | 0.629 | -.0000427 | .0000706 |
| NPL | -.7237063 | .590257 | -1.23 | 0.220 | -1.880589 | .433176 |
| GLOBAL_CAPITAL_RATIO | .0347982 | .319353 | 0.11 | 0.913 | -.5911221 | .6607186 |
| OPERATION_EXPENSE_RATIO | -.3687595 | .0491047 | -7.51 | 0.000 | -.465003 | -.2725161 |
| CSR_EXPENSE_RATIO | -.1170968 | .2192194 | -0.53 | 0.593 | -.546759 | .3125654 |
| BANK | | | | | | |
| BBVA PERU | 12.97062 | 4.962744 | 2.61 | 0.009 | 3.24382 | 22.69742 |
| Scotiabank PERU | 12.12256 | 7.991425 | 1.52 | 0.129 | -3.540341 | 27.78547 |
| Interbank PERU | 26.96639 | 9.864165 | 2.73 | 0.006 | 7.632979 | 46.29979 |
| Banbif PERU | 24.86298 | 13.28385 | 1.87 | 0.061 | -1.172891 | 50.89885 |
| Mibanco PERU | 34.17513 | 14.12321 | 2.42 | 0.016 | 6.494145 | 61.85611 |
| Pichincha | 23.41911 | 13.88849 | 1.69 | 0.092 | -3.801825 | 50.64004 |
| Santader | 19.39604 | 13.88308 | 1.40 | 0.162 | -7.814309 | 46.60638 |
| Falabella | 34.77531 | 14.77086 | 2.35 | 0.019 | 5.824955 | 63.72567 |
| Ripley | 37.97984 | 15.28378 | 2.48 | 0.013 | 8.024175 | 67.93551 |
| Comercio | 27.95873 | 14.66113 | 1.91 | 0.057 | -7.765692 | 56.69402 |
| Azteca | 37.60428 | 18.30486 | 2.05 | 0.040 | 1.727408 | 73.48114 |
| YEAR | | | | | | |
| 2010 | .4305238 | .3063442 | 1.41 | 0.160 | -.1698998 | 1.030947 |
| 2011 | -.4205563 | .3905642 | -1.08 | 0.282 | -1.186048 | .3449353 |
| 2012 | -3.233103 | .4447833 | -7.27 | 0.000 | -4.104863 | -2.361344 |
| 2013 | -4.383582 | .8041006 | -5.45 | 0.000 | -5.95959 | -2.807574 |
| 2014 | -5.2991 | 1.12504 | -4.71 | 0.000 | -7.504137 | -3.094062 |
| 2015 | -5.765304 | 1.202235 | -4.80 | 0.000 | -8.121642 | -3.408966 |
| 2016 | -6.305451 | 1.152903 | -5.47 | 0.000 | -8.5651 | -4.045802 |
| 2017 | -8.374123 | 1.050561 | -7.97 | 0.000 | -10.43318 | -6.315062 |
| 2018 | -8.305089 | .79838 | -10.40 | 0.000 | -9.869885 | -6.740293 |
| _cons | 11.44506 | 15.77232 | 0.73 | 0.468 | -19.46812 | 42.35825 |
| rho | .3447111 | | | | | |

4. Conclusions and Recommendations

The objective of this research was to demonstrate that the implementation of CSR policies positively affected the financial performance of Peruvian banks for the period 2009-2018. Specifically, the main financial ratio of banks was analyzed: ROE in relation to the different independent variables that affect them, within which we include the CSR ratio that is calculated by dividing the expenses in implementing social responsibility policies divided by the average productive assets of the Bank.

To demonstrate the relationship between CSR ratio and ROE of Peruvian banks, we use the Multiple Linear Regression Model. We run the Fixed Effects (FE) regression and the Random Effects (RE) GLS regression, using public data obtained from financial information and from the sustainability reports of the Peruvian banks selected in the representative sample. that they are periodically reported to the Superintendency of Banks, Insurance and Pension Fund Administrators of Peru – SBS, and that in turn they had information reported throughout the entire period of analysis.

According to the analysis carried out, we can reach the following conclusions and recommendations:

Conclusions

- i. From 2009, Peruvian Banks began to invest in CSR policies especially aimed at the financial inclusion of people and companies in Peru, due to the infrastructure deficit that allows for quality financial services and due the low levels of access to credit as a consequence of the high level of informality.
- ii. From 2014 and promoted by the Peruvian government financial inclusion policy, banks significantly increased their level of assets and investment in CSR policies.
- iii. Given that the results of the implementation of CSR policies are not immediate, the effects on financial performance do not appear significantly in the first years, since the implementation of CSR policies first have an impact on the reputation of the banks, which over time generates a greater confidence from the population and economic operators like companies or investors.

- iv. For the present research, the effects of this positive impact are not reflected if we use a short time horizon, such as the period that we used at the beginning of this research (2014-2018), which corresponds to the period of greatest investment by banks. Therefore, the present research work in its final model uses a time horizon of 10 years (medium term) from 2009-2018.
- v. According to the results of the Hausman Test, the Random Effects (RE) were more appropriate for the present investigation. In consequence, we use the RE as a Final Model for the period 2009-2018.
- vi. As a result of Final Model, we can conclude that in both models, the individual significance in some parameters is not significant, since the probability value is greater than 1%, 5%, 10%. However, in both Final Models, the global significance is significant, since the value of the Wald probability is less than 1% and with a degree of confidence of 99%.
- vii. In consequence, in the period 2009-2018, there is a direct relationship between the ROE and the CSR ratio. Thus, the increase in CSR ratio has a positive impact on the financial performance of the banks.

Recommendations

- i. We have concluded in the present research that Peruvian banks that have invested resources in social responsibility policies aimed at financial inclusion, have obtained a positive financial impact in the medium term (time horizon of 10 years). Therefore, we recommended that Banks continue with the social responsibility policies that they have been implementing and that CSR policies be internalized in the banks' strategies to achieve greater confidence of the population that contribute to greater financial inclusion and to provide quality financial services.
- ii. As a result of this research, it is shown that the CSR policies implemented by Peruvian banks have contributed to greater access to credit and financial inclusion, which has generated an impact on the well-being of people and companies in Peru. This achievement should motivate the other sectors of the Peruvian economy to apply other social responsibility policies that contribute to the development of Peruvian society as a whole, which in turn, if applied correctly, can generate positive financial returns for the benefit of companies that apply these policies.

- iii. It would be convenient to contrast this Peruvian experience with the impact of the CSR policies applied in the financial sector of other countries in the region, for which we recommend that similar studies be carried out in other countries, so that the results obtained in these Investigations can be comparable with the results of the present investigation.

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Appendices

Appendix 1. Annual data first analysis - 5 years 2014-2018

| | | Dependent variable | Independent variables | | | | | |
|---|------|--------------------|-----------------------|---------------------|-----------|----------------------|-------------------------|-------------------|
| BANK | YEAR | ROE (%) | MARKET SHARE | SIZE - TOTAL ASSETS | NPL RATIO | GLOBAL CAPITAL RATIO | OPERATION EXPENSE RATIO | CSR EXPENSE RATIO |
| The Bank BCP (Banco de Crédito del Perú) | 2014 | 21.37 | 34.19 | 102,317 | 2.30 | 14.45 | 42.82 | 3.25 |
| | 2015 | 25.76 | 33.22 | 120,523 | 2.43 | 14.34 | 38.59 | 3.01 |
| | 2016 | 23.49 | 33.22 | 118,410 | 2.71 | 15.35 | 38.81 | 2.79 |
| | 2017 | 21.32 | 33.16 | 129,621 | 2.97 | 15.05 | 39.66 | 2.83 |
| | 2018 | 21.27 | 33.73 | 133,779 | 2.66 | 14.17 | 40.14 | 2.94 |
| BBVA PERU | 2014 | 26.69 | 22.74 | 62,896 | 2.23 | 13.78 | 36.42 | 2.41 |
| | 2015 | 23.92 | 22.11 | 81,116 | 2.17 | 13.31 | 38.92 | 2.26 |
| | 2016 | 20.75 | 22.11 | 78,620 | 2.41 | 14.25 | 39.40 | 2.10 |
| | 2017 | 19.52 | 21.29 | 76,591 | 2.68 | 14.20 | 37.89 | 2.12 |
| | 2018 | 18.98 | 20.09 | 75,133 | 2.94 | 14.95 | 37.46 | 2.23 |
| Scotiabank PERU | 2014 | 18.26 | 15.58 | 44,170 | 2.43 | 12.89 | 39.74 | 2.79 |
| | 2015 | 17.26 | 16.45 | 57,169 | 2.89 | 13.97 | 38.29 | 2.57 |
| | 2016 | 17.40 | 16.45 | 55,452 | 3.08 | 14.41 | 37.37 | 2.44 |
| | 2017 | 15.89 | 16.88 | 57,750 | 3.15 | 15.47 | 37.00 | 2.46 |
| | 2018 | 15.28 | 17.05 | 63,814 | 3.53 | 14.64 | 36.96 | 2.45 |
| Interbank PERU | 2014 | 25.33 | 11.29 | 33,079 | 2.49 | 15.16 | 46.45 | 4.03 |
| | 2015 | 26.30 | 11.17 | 41,610 | 2.35 | 15.53 | 42.30 | 3.71 |
| | 2016 | 22.98 | 11.17 | 42,573 | 2.64 | 15.90 | 42.11 | 3.41 |
| | 2017 | 20.62 | 11.43 | 45,576 | 2.85 | 16.07 | 42.30 | 3.41 |
| | 2018 | 21.28 | 12.05 | 47,413 | 2.64 | 15.79 | 40.37 | 3.18 |
| Banbif PERU | 2014 | 13.78 | 3.52 | 9,266 | 1.64 | 12.34 | 50.06 | 3.13 |
| | 2015 | 13.77 | 3.62 | 11,268 | 1.77 | 12.33 | 44.94 | 2.60 |
| | 2016 | 11.57 | 3.62 | 12,523 | 2.50 | 13.32 | 44.86 | 2.21 |
| | 2017 | 9.79 | 3.82 | 13,034 | 3.14 | 13.28 | 48.43 | 2.25 |
| | 2018 | 11.51 | 3.75 | 14,043 | 2.92 | 13.35 | 44.33 | 2.11 |
| Mibanco PERU | 2014 | 10.56 | 2.15 | 5,729 | 6.98 | 15.64 | 61.61 | 8.16 |
| | 2015 | 13.75 | 3.67 | 10,921 | 4.81 | 15.32 | 57.98 | 8.32 |
| | 2016 | 22.91 | 3.67 | 11,215 | 4.46 | 15.54 | 56.05 | 8.52 |
| | 2017 | 24.80 | 3.84 | 12,143 | 4.74 | 15.27 | 49.83 | 8.15 |
| | 2018 | 26.46 | 3.69 | 12,941 | 5.27 | 14.35 | 46.93 | 8.09 |

| | | Dependent variable | Independent variables | | | | | |
|-----------|------|--------------------|-----------------------|---------------------|-----------|----------------------|-------------------------|-------------------|
| BANK | YEAR | ROE (%) | MARKET SHARE | SIZE - TOTAL ASSETS | NPL RATIO | GLOBAL CAPITAL RATIO | OPERATION EXPENSE RATIO | CSR EXPENSE RATIO |
| Pichincha | 2014 | 11.87 | 2.72 | 7,166 | 3.34 | 11.85 | 59.11 | 4.58 |
| | 2015 | 11.51 | 2.67 | 8,867 | 3.86 | 11.56 | 54.78 | 4.17 |
| | 2016 | 4.83 | 2.67 | 9,041 | 3.98 | 13.16 | 62.66 | 4.17 |
| | 2017 | 2.76 | 2.65 | 8,596 | 3.72 | 13.13 | 59.79 | 4.28 |
| | 2018 | 6.46 | 2.74 | 9,401 | 3.45 | 13.00 | 57.76 | 4.24 |
| Santander | 2014 | 13.00 | 1.27 | 3,927 | 0.43 | 13.73 | 37.41 | 1.31 |
| | 2015 | 14.70 | 1.26 | 5,388 | 0.44 | 14.04 | 33.22 | 1.22 |
| | 2016 | 12.43 | 1.14 | 5,067 | 0.69 | 16.86 | 36.94 | 1.07 |
| | 2017 | 11.95 | 1.22 | 5,090 | 0.80 | 17.27 | 36.04 | 1.23 |
| | 2018 | 12.59 | 1.46 | 5,820 | 0.62 | 13.49 | 37.15 | 1.45 |
| Falabella | 2014 | 18.55 | 1.58 | 4,036 | 3.57 | 15.26 | 64.03 | 12.43 |
| | 2015 | 18.84 | 1.71 | 4,865 | 4.24 | 14.54 | 57.65 | 11.39 |
| | 2016 | 12.94 | 1.67 | 4,984 | 5.71 | 15.38 | 55.01 | 10.96 |
| | 2017 | 9.98 | 1.44 | 4,540 | 7.81 | 17.19 | 54.20 | 11.72 |
| | 2018 | 9.05 | 1.13 | 4,048 | 2.97 | 17.05 | 61.63 | 15.24 |
| Ripley | 2014 | 14.57 | 0.61 | 1,561 | 3.70 | 17.10 | 67.63 | 17.63 |
| | 2015 | 19.44 | 0.68 | 1,948 | 2.49 | 13.60 | 66.21 | 16.70 |
| | 2016 | 18.73 | 0.76 | 2,280 | 2.69 | 14.69 | 59.39 | 14.21 |
| | 2017 | 17.57 | 0.76 | 2,340 | 3.04 | 14.39 | 56.39 | 13.56 |
| | 2018 | 15.41 | 0.71 | 2,361 | 2.93 | 14.64 | 58.89 | 13.78 |
| Comercio | 2014 | 10.68 | 0.57 | 1,636 | 5.70 | 12.55 | 59.59 | 5.13 |
| | 2015 | 13.17 | 0.50 | 1,708 | 3.46 | 12.20 | 55.79 | 4.98 |
| | 2016 | 14.15 | 0.54 | 1,768 | 3.34 | 13.71 | 55.40 | 4.40 |
| | 2017 | 13.22 | 0.59 | 1,964 | 3.07 | 12.13 | 54.15 | 4.15 |
| | 2018 | 10.74 | 0.54 | 1,966 | 2.68 | 13.04 | 52.70 | 4.13 |
| Azteca | 2014 | 15.49 | 0.31 | 1,169 | 9.81 | 16.44 | 42.37 | 16.52 |
| | 2015 | 8.76 | 0.19 | 934 | 11.00 | 22.22 | 54.91 | 18.51 |
| | 2016 | 10.70 | 0.15 | 647 | 9.24 | 25.41 | 73.39 | 27.73 |
| | 2017 | 1.95 | 0.16 | 534 | 9.46 | 23.29 | 71.18 | 39.80 |
| | 2018 | 1.44 | 0.13 | 498 | 9.36 | 25.10 | 77.95 | 49.68 |

Appendix 2. Annual data Final analysis - 10 years 2009-2018

| BANK | YEAR | Dependent variable | Independent variables | | | | | |
|---|------|--------------------|-----------------------|---------------------|-----------|----------------------|-------------------------|-------------------|
| | | ROE (%) | MARKET SHARE | SIZE - TOTAL ASSETS | NPL RATIO | GLOBAL CAPITAL RATIO | OPERATION EXPENSE RATIO | CSR EXPENSE RATIO |
| The Bank BCP (Banco de Crédito del Perú) | 2009 | 20.97 | 33.37 | 52,832 | 1.41 | 14.52 | 46.94 | 3.33 |
| | 2010 | 24.14 | 33.57 | 67,107 | 1.35 | 12.84 | 42.64 | 2.92 |
| | 2011 | 24.89 | 33.00 | 68,679 | 1.42 | 14.53 | 47.86 | 3.38 |
| | 2012 | 22.41 | 34.12 | 82,393 | 1.68 | 14.72 | 47.27 | 3.52 |
| | 2013 | 21.82 | 33.25 | 91,343 | 2.27 | 14.46 | 46.02 | 3.26 |
| | 2014 | 21.37 | 34.19 | 102,317 | 2.30 | 14.45 | 42.82 | 3.25 |
| | 2015 | 25.76 | 33.22 | 120,523 | 2.43 | 14.34 | 38.59 | 3.01 |
| | 2016 | 23.49 | 33.22 | 118,410 | 2.71 | 15.35 | 38.81 | 2.79 |
| | 2017 | 21.32 | 33.16 | 129,621 | 2.97 | 15.05 | 39.66 | 2.83 |
| | 2018 | 21.27 | 33.73 | 133,779 | 2.66 | 14.17 | 40.14 | 2.94 |
| BBVA PERU | 2009 | 36.54 | 23.44 | 30,047 | 1.04 | 13.31 | 31.45 | 2.52 |
| | 2010 | 33.70 | 24.55 | 37,785 | 1.04 | 14.65 | 33.28 | 2.54 |
| | 2011 | 34.31 | 24.19 | 42,254 | 0.92 | 12.46 | 36.94 | 2.63 |
| | 2012 | 33.08 | 23.49 | 49,714 | 1.19 | 12.43 | 35.44 | 2.56 |
| | 2013 | 29.79 | 23.59 | 56,550 | 1.74 | 12.42 | 36.55 | 2.52 |
| | 2014 | 26.69 | 22.74 | 62,896 | 2.23 | 13.78 | 36.42 | 2.41 |
| | 2015 | 23.92 | 22.11 | 81,116 | 2.17 | 13.31 | 38.92 | 2.26 |
| | 2016 | 20.75 | 22.11 | 78,620 | 2.41 | 14.25 | 39.40 | 2.10 |
| | 2017 | 19.52 | 21.29 | 76,591 | 2.68 | 14.20 | 37.89 | 2.12 |
| | 2018 | 18.98 | 20.09 | 75,133 | 2.94 | 14.95 | 37.46 | 2.23 |
| Scotiabank PERU | 2009 | 23.80 | 15.15 | 22,969 | 1.69 | 11.91 | 37.28 | 3.12 |
| | 2010 | 21.52 | 14.14 | 27,467 | 1.51 | 11.53 | 39.72 | 3.15 |
| | 2011 | 21.48 | 14.99 | 29,837 | 1.48 | 10.94 | 39.97 | 3.28 |
| | 2012 | 19.22 | 14.60 | 31,564 | 1.77 | 15.74 | 39.36 | 3.33 |
| | 2013 | 18.03 | 15.18 | 40,951 | 2.06 | 13.24 | 40.14 | 2.99 |
| | 2014 | 18.26 | 15.58 | 44,170 | 2.43 | 12.89 | 39.74 | 2.79 |
| | 2015 | 17.26 | 16.45 | 57,169 | 2.89 | 13.97 | 38.29 | 2.57 |
| | 2016 | 17.40 | 16.45 | 55,452 | 3.08 | 14.41 | 37.37 | 2.44 |
| | 2017 | 15.89 | 16.88 | 57,750 | 3.15 | 15.47 | 37.00 | 2.46 |
| | 2018 | 15.28 | 17.05 | 63,814 | 3.53 | 14.64 | 36.96 | 2.45 |
| Interbank PERU | 2009 | 36.75 | 11.38 | 16,177 | 1.49 | 11.54 | 46.91 | 6.03 |
| | 2010 | 33.69 | 11.26 | 19,362 | 1.52 | 14.43 | 46.43 | 5.73 |
| | 2011 | 31.40 | 11.39 | 20,050 | 1.50 | 13.67 | 45.72 | 5.19 |
| | 2012 | 26.83 | 11.05 | 23,672 | 1.84 | 13.28 | 46.26 | 4.97 |
| | 2013 | 26.49 | 11.70 | 29,872 | 1.75 | 13.39 | 48.84 | 4.46 |
| | 2014 | 25.33 | 11.29 | 33,079 | 2.49 | 15.16 | 46.45 | 4.03 |
| | 2015 | 26.30 | 11.17 | 41,610 | 2.35 | 15.53 | 42.30 | 3.71 |
| | 2016 | 22.98 | 11.17 | 42,573 | 2.64 | 15.90 | 42.11 | 3.41 |
| | 2017 | 20.62 | 11.43 | 45,576 | 2.85 | 16.07 | 42.30 | 3.41 |
| | 2018 | 21.28 | 12.05 | 47,413 | 2.64 | 15.79 | 40.37 | 3.18 |

| | | Dependent variable | Independent variables | | | | | |
|--------------|------|--------------------|-----------------------|---------------------|-----------|----------------------|-------------------------|-------------------|
| BANK | YEAR | ROE (%) | MARKET SHARE | SIZE - TOTAL ASSETS | NPL RATIO | GLOBAL CAPITAL RATIO | OPERATION EXPENSE RATIO | CSR EXPENSE RATIO |
| Banbif PERU | 2009 | 19.79 | 3.02 | 4,107 | 0.83 | 14.24 | 55.56 | 3.03 |
| | 2010 | 17.65 | 2.92 | 4,651 | 0.76 | 14.32 | 55.98 | 3.18 |
| | 2011 | 18.79 | 2.82 | 5,294 | 0.90 | 12.57 | 56.06 | 3.24 |
| | 2012 | 19.85 | 2.89 | 5,971 | 0.99 | 12.38 | 57.22 | 3.45 |
| | 2013 | 18.68 | 3.35 | 7,681 | 1.33 | 13.09 | 52.02 | 3.36 |
| | 2014 | 13.78 | 3.52 | 9,266 | 1.64 | 12.34 | 50.06 | 3.13 |
| | 2015 | 13.77 | 3.62 | 11,268 | 1.77 | 12.33 | 44.94 | 2.60 |
| | 2016 | 11.57 | 3.62 | 12,523 | 2.50 | 13.32 | 44.86 | 2.21 |
| | 2017 | 9.79 | 3.82 | 13,034 | 3.14 | 13.28 | 48.43 | 2.25 |
| | 2018 | 11.51 | 3.75 | 14,043 | 2.92 | 13.35 | 44.33 | 2.11 |
| Mibanco PERU | 2009 | 35.07 | 3.36 | 3,696 | 3.38 | 12.68 | 44.97 | 9.93 |
| | 2010 | 27.39 | 3.54 | 4,457 | 3.11 | 13.30 | 48.37 | 10.64 |
| | 2011 | 25.45 | 3.32 | 5,202 | 3.66 | 14.57 | 52.74 | 10.52 |
| | 2012 | 11.05 | 3.31 | 5,562 | 4.48 | 13.93 | 59.15 | 10.74 |
| | 2013 | 5.44 | 2.65 | 5,976 | 5.24 | 15.44 | 58.60 | 9.19 |
| | 2014 | 10.56 | 2.15 | 5,729 | 6.98 | 15.64 | 61.61 | 8.16 |
| | 2015 | 13.75 | 3.67 | 10,921 | 4.81 | 15.32 | 57.98 | 8.32 |
| | 2016 | 22.91 | 3.67 | 11,215 | 4.46 | 15.54 | 56.05 | 8.52 |
| | 2017 | 24.80 | 3.84 | 12,143 | 4.74 | 15.27 | 49.83 | 8.15 |
| | 2018 | 26.46 | 3.69 | 12,941 | 5.27 | 14.35 | 46.93 | 8.09 |
| Pichincha | 2009 | 5.72 | 2.40 | 2,818 | 2.48 | 11.63 | 67.37 | 6.99 |
| | 2010 | 9.95 | 2.44 | 3,454 | 2.82 | 11.55 | 57.10 | 6.68 |
| | 2011 | 9.53 | 2.44 | 4,503 | 2.14 | 12.41 | 63.00 | 6.30 |
| | 2012 | 10.61 | 2.59 | 5,318 | 2.00 | 12.47 | 63.58 | 6.21 |
| | 2013 | 13.18 | 2.78 | 6,568 | 2.28 | 12.28 | 62.15 | 5.02 |
| | 2014 | 11.87 | 2.72 | 7,166 | 3.34 | 11.85 | 59.11 | 4.58 |
| | 2015 | 11.51 | 2.67 | 8,867 | 3.86 | 11.56 | 54.78 | 4.17 |
| | 2016 | 4.83 | 2.67 | 9,041 | 3.98 | 13.16 | 62.66 | 4.17 |
| | 2017 | 2.76 | 2.65 | 8,596 | 3.72 | 13.13 | 59.79 | 4.28 |
| | 2018 | 6.46 | 2.74 | 9,401 | 3.45 | 13.00 | 57.76 | 4.24 |
| Santader | 2009 | -2.28 | 0.63 | 1,060 | 0.30 | 22.74 | 92.78 | 2.10 |
| | 2010 | 6.17 | 0.70 | 1,657 | 0.23 | 20.23 | 69.30 | 1.63 |
| | 2011 | 9.72 | 0.95 | 2,286 | 0.13 | 15.16 | 52.71 | 1.46 |
| | 2012 | 10.07 | 1.08 | 2,850 | 0.13 | 15.49 | 44.71 | 1.20 |
| | 2013 | 12.81 | 1.03 | 3,225 | 0.39 | 17.28 | 36.82 | 1.15 |
| | 2014 | 13.00 | 1.27 | 3,927 | 0.43 | 13.73 | 37.41 | 1.31 |
| | 2015 | 14.70 | 1.26 | 5,388 | 0.44 | 14.04 | 33.22 | 1.22 |
| | 2016 | 12.43 | 1.14 | 5,067 | 0.69 | 16.86 | 36.94 | 1.07 |
| | 2017 | 11.95 | 1.22 | 5,090 | 0.80 | 17.27 | 36.04 | 1.23 |
| | 2018 | 12.59 | 1.46 | 5,820 | 0.62 | 13.49 | 37.15 | 1.45 |

| | | Dependent variable | Independent variables | | | | | |
|-----------|------|--------------------|-----------------------|---------------------|-----------|----------------------|-------------------------|-------------------|
| BANK | YEAR | ROE (%) | MARKET SHARE | SIZE - TOTAL ASSETS | NPL RATIO | GLOBAL CAPITAL RATIO | OPERATION EXPENSE RATIO | CSR EXPENSE RATIO |
| Falabella | 2009 | 29.47 | 1.19 | 1,245 | 3.73 | 13.66 | 41.84 | 14.53 |
| | 2010 | 31.54 | 1.30 | 1,706 | 3.13 | 16.26 | 43.90 | 14.79 |
| | 2011 | 25.42 | 1.43 | 2,290 | 3.01 | 15.30 | 48.16 | 13.37 |
| | 2012 | 22.52 | 1.60 | 2,846 | 3.38 | 14.50 | 48.04 | 12.28 |
| | 2013 | 21.31 | 1.48 | 3,257 | 3.84 | 15.06 | 58.35 | 12.82 |
| | 2014 | 18.55 | 1.58 | 4,036 | 3.57 | 15.26 | 64.03 | 12.43 |
| | 2015 | 18.84 | 1.71 | 4,865 | 4.24 | 14.54 | 57.65 | 11.39 |
| | 2016 | 12.94 | 1.67 | 4,984 | 5.71 | 15.38 | 55.01 | 10.96 |
| | 2017 | 9.98 | 1.44 | 4,540 | 7.81 | 17.19 | 54.20 | 11.72 |
| | 2018 | 9.05 | 1.13 | 4,048 | 2.97 | 17.05 | 61.63 | 15.24 |
| Ripley | 2009 | 26.70 | 0.86 | 920 | 5.29 | 18.47 | 49.67 | 20.87 |
| | 2010 | 25.12 | 0.86 | 1,129 | 3.84 | 16.66 | 55.78 | 24.00 |
| | 2011 | 20.51 | 0.81 | 1,247 | 5.13 | 15.54 | 52.62 | 20.17 |
| | 2012 | 20.10 | 0.73 | 1,302 | 5.11 | 14.93 | 55.16 | 21.83 |
| | 2013 | 21.59 | 0.60 | 1,486 | 4.89 | 13.76 | 64.59 | 19.74 |
| | 2014 | 14.57 | 0.61 | 1,561 | 3.70 | 17.10 | 67.63 | 17.63 |
| | 2015 | 19.44 | 0.68 | 1,948 | 2.49 | 13.60 | 66.21 | 16.70 |
| | 2016 | 18.73 | 0.76 | 2,280 | 2.69 | 14.69 | 59.39 | 14.21 |
| | 2017 | 17.57 | 0.76 | 2,340 | 3.04 | 14.39 | 56.39 | 13.56 |
| | 2018 | 15.41 | 0.71 | 2,361 | 2.93 | 14.64 | 58.89 | 13.78 |
| Comercio | 2009 | 14.17 | 1.06 | 1,198 | 2.38 | 11.75 | 65.41 | 6.20 |
| | 2010 | 12.70 | 1.04 | 1,422 | 1.69 | 11.65 | 58.89 | 5.93 |
| | 2011 | 12.64 | 0.91 | 1,619 | 1.58 | 11.69 | 63.93 | 5.68 |
| | 2012 | 9.76 | 0.80 | 1,604 | 2.18 | 12.31 | 62.31 | 5.76 |
| | 2013 | 6.54 | 0.69 | 1,648 | 1.72 | 11.83 | 66.95 | 5.61 |
| | 2014 | 10.68 | 0.57 | 1,636 | 5.70 | 12.55 | 59.59 | 5.13 |
| | 2015 | 13.17 | 0.50 | 1,708 | 3.46 | 12.20 | 55.79 | 4.98 |
| | 2016 | 14.15 | 0.54 | 1,768 | 3.34 | 13.71 | 55.40 | 4.40 |
| | 2017 | 13.22 | 0.59 | 1,964 | 3.07 | 12.13 | 54.15 | 4.15 |
| | 2018 | 10.74 | 0.54 | 1,966 | 2.68 | 13.04 | 52.70 | 4.13 |
| Azteca | 2009 | 5.25 | 0.23 | 308 | 6.95 | 13.97 | 63.80 | 51.76 |
| | 2010 | 27.58 | 0.23 | 335 | 9.53 | 17.09 | 61.16 | 39.99 |
| | 2011 | 25.82 | 0.25 | 467 | 6.89 | 16.19 | 59.94 | 41.28 |
| | 2012 | 19.35 | 0.37 | 809 | 6.95 | 13.41 | 61.55 | 37.47 |
| | 2013 | 11.96 | 0.37 | 1,141 | 8.86 | 12.81 | 56.38 | 24.71 |
| | 2014 | 15.49 | 0.31 | 1,169 | 9.81 | 16.44 | 42.37 | 16.52 |
| | 2015 | 8.76 | 0.19 | 934 | 11.00 | 22.22 | 54.91 | 18.51 |
| | 2016 | 10.70 | 0.15 | 647 | 9.24 | 25.41 | 73.39 | 27.73 |
| | 2017 | 1.95 | 0.16 | 534 | 9.46 | 23.29 | 71.18 | 39.80 |
| | 2018 | 1.44 | 0.13 | 498 | 9.36 | 25.10 | 77.95 | 49.68 |