

Pension Funds and the Cost of Debt. Evidence from Chile

Abstract: This paper studies the influence of Pension Fund Managers (AFPs), as institutional investors, on the cost of debt of Chilean firms. These investors may influence capital structure decisions, by monitoring firms' managers and transferring useful information to the capital markets. We perform our analysis based on hand-collected data for a sample of 93 Chilean public companies in the period 2009-2014. AFPs participate in the capital markets, in general and in the firm particularly, not only as shareholders but also as bondholders. Our results therefore explain how AFPs could influence firms' capital structure decisions. We find a positive relation between the participation of AFPs in both the ownership structure and board of the firm and the cost of bank debt. The AFPs prefer companies to issue public debt instead of private debt in order to reduce the asymmetries of information and improve internal governance.

Keywords: Institutional investor, Pension fund managers, Bank debt; Cost of debt, Chile.

1. Introduction

In the last three decades, global emerging markets have experienced an important improvement on investor sophistication (Amihud & Li, 2006; Chung, Firth, & Kim, 2002a; Elyasiani & Jia, 2010; Elyasiani, Jia, & Mao, 2010; Gillan & Starks, 2003; Gompers & Metrick, 2001). On the one hand, the relative importance of capital markets in comparison with banks has increased, and, on the other hand, institutional investors' participation in quoted firms has provided a better understanding of firms' decisions and enhanced their corporate governance (Ferreira & Matos, 2008a).

However, despite these improvements, firms in emerging markets still face some lack of access to credit (Campello & Larrain, 2015). In fact, the traditional assumption by developed markets that large firms can borrow as much as they want may not necessarily be valid in emerging markets, where firms need to provide collateral quality and incur informational costs in order to access private and public debt markets.

Therefore, we evaluate the incidence of external institutional investor involvement on firms' cost of debt. Specifically, we focus on a particular external institutional investor in the Chilean context, the Administradoras de Fondos de Pensión (AFPs).

At the beginning of the 80s, Chilean regulators developed an important reform to the pension system, going from a public system to a private system. After that, the AFPs became the managers of the funds capitalized through the individual contribution system which involves the entire Chilean workforce. These special institutional investors invest in different financial assets on behalf of the workforce (e.g. shares, corporate bonds, government bonds, among others) both locally and overseas. In this context, the AFPs have become sophisticated investors who spend resources and time supervising and assessing firms' decisions on quality, their governance, and their ethics in business.

One of the major contributions of the pension fund reform was the improvement in the corporate governance practices of firms in which the AFPs invest, enhancing both the quantity and the quality of company information in the capital markets (Lefort & González, 2008; Walker & Lefort, 2002). This happens because the Chilean government, via its executive and legislative powers, recognizes the significance and relevance of this kind of

investor, and all of this is supported by the fact that these private entities manage the future pensions of the Chilean workforce. Subsequently, a number of legal reforms that protect the interests of minority investors, including the AFPs, have been passed. Some of these reforms have arisen naturally as part of the normal evolution of the financial markets; whilst others have been enacted as a reaction to renowned failures in business ethics and governance in the local markets¹. Therefore, the role of the AFPs could be considered critical to Chilean capital markets since they serve as both minority shareholders and as bondholders. They therefore have incentives to engage in supervisory activities in order to ensure value maximizing decisions.

This contribution to the governance of firms in the Chilean corporate sector has been translated into greater efficiency and quality of the capital markets, enhancing the firms' market value and reducing their cost of capital (Acuña & Iglesias, 2001; Iglesias, 1999-2000; Vittas, 1996; Walker & Lefort, 2002). For instance, according to the Superintendency of Securities and Insurance (*Superintendencia de Valores y Seguros, SVS*)², market capitalization has grown more than 300% from 2002 and 2011, whilst the total value traded in capital markets in Chile has increased more than 10 times in the same period. The financial depthness³ has increased from 46% of GDP in 1981 to 276% in 2011. Despite the financial development that has been remarked upon during the last decades in Chile, it remains far behind that observed in developed economies such as in the US or Europe. Nevertheless, it is the most financially sophisticated market of the South American region (Beck, Demirgüç-Kunt, & Levine, 2000; La Porta, Lopez-De-Silanes, Shleifer, & Vishny, 1998; WEF, 2009, 2012) and has better scores relative to its neighbor countries (WEF, 2009, 2012).

The legal system is crucial to understand both the role played by institutional equity investors in non-financial firms and their impact on debt. La Porta et al. (1998) emphasize that the legal system determines the degree of protection of interest of both shareholders and creditors, which conditions the ownership structure of firms and the development of capital markets. Omran, Bolbol, and Fatheldin (2008) state that ownership concentration is an endogenous response to poor legal protection of investors. Particularly, La Porta et al. (1998) confirm that the Anglo-Saxon legal systems protect more efficiently the interests of investors than the French civil-law legal systems. As a consequence of the weak protection of shareholders rights in Chile, a French civil-law country, highly concentrated ownership structures in hands of individual investors and/or holdings are observed in the corporate sector. This high concentration of ownership has also been the natural solution to some market imperfections. For instance, firms in Chile have generated pyramidal structures to take advantage of internal capital markets, as have others developing countries (Buchuk, Larrain, Muñoz, & Urzúa, 2014; Gillan & Starks, 2003; Khanna & Palepu, 2000; Lefort & Walker, 1999-2000).

This study is a pioneering work that empirically contrasts, through a governance approach, the impact on the cost of debt (private and public) as a consequence of AFPs' participation in non-financial firms (through the ownership structure and the board of directors). From a theoretical point of view about private debt, the participation of AFPs in firms might have two different effects. On the one hand, as a consequence of the active role of these institutional investors in monitoring managers, banks creditors might charge lower interest rates in debt contracts (Roberts & Yuan, 2010); whilst on the other hand, the AFPs might press those firms where they invest to issue public debt (e.g. corporate bonds and promissory notes) as a strategy to minimize the asymmetries of information with these markets. This fact might

¹ Among which there are the cases Chispas and Corfo-Inverlink, and more recently, the La Polar scandal.

² Governmental regulator and supervisor of the Chilean capital market.

³ Measured as the sum of the bank deposits, mortgages, domestic public debt, corporate bonds and the market capitalization.

cause an increase in the relative cost of bank debt, as a consequence of a greater leverage through public debt. By other hand, from a perspective of public debt, lalala

This empirical analysis has been developed with a sample of 93 quoted Chilean firms comprising 440 observations for the 2009-2014 period, using a unique hand-collected database on the cost of debt (private and public) and the participation of AFPs in both the firms' ownership structure and on the boards of directors. By one hand, the main findings supports a positive relationship between the presence of pension funds (AFPs) in quoted firms and the cost of bank debt. This finding seems to support the idea that the AFPs, in their role of main institutional shareholders or bondholders, exert pressure on firms to issue public debt as a tool of information disclosure. By the other hand, the results show negative relationship between the presence of pension funds in quoted firms and the cost of public debt. This could imply that AFPs have a positive effect on the risk of the company, which allows reduce the cost of public debt. Consequently, the higher stakes of AFPs in the ownership of firms are associated with higher costs of private debt and lower cost of public debt, caused by the shift from private to public debt stimulated by actions taken by these institutional equity investors.

The findings in this study are relevant for four reasons. First, this is an original research from Chile that studies the impact of these very relevant institutional investors, AFPs, on non-financial firms in the cost of debt. Second, and different from Roberts and Yuan (2010), which is perhaps the closest antecedent to our research, this study is focused on a single developing country belonging to the French civil-law legal system. Third, this study extends the previous empirical literature (Gillan & Starks, 2003; Roberts & Yuan, 2010) by considering the role of AFPs as shareholders as well as members of the board of directors. And finally, unlike most of the previous literature, this study is focused on the liability side of the balance sheet more than on the equity side. Particularly, our interest is on the analysis of the cost of debt (private and public) which, so far, has not been properly analyzed, much less for emerging economies. Consequently, under a governance approach, we intend to shed some light on this issue, contributing to the empirical literature on the role of institutional equity investors and their impact on the cost of debt.

The rest of this paper is organized as follows. In the second section we develop the theoretical framework and the research hypotheses. Section three describes the methodology and source of information used in the empirical analysis. In the fourth section the main results are presented and discussed and finally, in section five, the paper concludes.

2. Theoretical Framework

a. The Relevance of Institutional Investors

Although most of the literature on institutional investors does not study directly the relationship between institutional equity investors and the cost of both private and public debt, we can still glean certain hints which might be relevant for this particular study. For instance, according to Ferreira and Matos (2008b), the role played by institutional investors on corporate governance issues and their impact on firm value depends on the legal and institutional frameworks of the country –common-law versus civil-law system, among others–. Similarly, the recent work of Araya, Jara, Maquieira, and San Martín (2015) studies the role of institutional equity investors as a governance system inside the firm in an emerging economy. They suggest that when institutional ownership is small in common-law countries, there is an increase in firm value; while on the contrary, when institutional ownership is too high, firm value may be affected negatively. However, they state that in civil-law countries when institutional ownership is small, there is a negative impact on firm value; but as this equity ownership increases, firm value is positively impacted.

Bennett, Sias, and Starks (2003) suggest that institutional investors have different investment strategies and incentives in their corporate governance role. Bhattacharya and Graham (2009), Dong and Ozkan (2008), Brickley, Lease, and Smith Jr (1988) and more recently Jara, López, and López-de-Foronda (2012), classify institutional investors as pressure resistant and pressure sensitive. The first group is comprised of pension and mutual funds, which are characterized by a more independent position towards the firm; basically they just hold an investment relationship with the firm but not a business relationship. Therefore, the ultimate goal of these equity investors is to maximize the return on the funds they manage and protect the interest of those they represent. Since the performance of these investors is measured by the return on the portfolios they manage, they will be pushed toward active monitoring of the firm's executives in order to maximize the market value. These investors are characterized by having a long-term profile. The second group is comprised of banks and insurance companies, characterized by having a less independent position, because they hold both an investment and a business relationship within the firm. This relationship fosters a conflict of interest because it is more likely that these investors have private connections with the firm's management, hold strategic alliances with them, and even might be prone to vote according to the relationships they hold with management. As a consequence of this conflict, these investors might not play their governance role very efficiently and therefore might not properly assess the performance of the company. As a result, this relationship might impact negatively the performance of the firm and ultimately place upward pressure on the cost of debt. These investors are usually characterized by their short-term or transitory investment approach.

The empirical literature for countries with developed capital markets where firms have diluted ownership structures, suggests that institutional investors have a positive impact on the firm performance (Elyasiani et al., 2010; Ferreira & Matos, 2008b; McConnell & Servaes, 1990; Ruiz-Mallorquí & Santana-Martín, 2011). Gillan and Starks (2003) state that when ownership structure is diluted, there are not incentives for a single shareholder or group of minority shareholders to monitor the managers' behavior due to the high costs of involved monitoring. They suggest that as an external corporate governance system, minority shareholders such as institutional investors might monitor managers efficiently. According to Parrino, Sias, and Starks (2003), institutional investors *vote with their feet*, or in other words, they sell their shares when they are dissatisfied with management or when they disagree with some corporate actions –also called exit policy in terms of Bathala, Moon, and Rao (1994). Furthermore, Bethel, Liebeskind, and Opler (1998) find evidence for the US market that when the institutional shareholder purchases a substantial block of shares, the market overvalues the stock price as a result of the monitoring role of these institutional investors. Additionally, Woidtke (2002) finds that private pension funds add more value to the firm than public pension funds. She argues that the actions of the latter are guided by social and political reasons rather than by the maximization of firm value as occurs with private funds. Finally, Hartzell and Starks (2003) and Borokhovich, Brunarski, Harman, and Parrino (2006) suggest that the market perceives the monitoring better when it is done by pension funds with no commercial interests on the firms and where the funds have equity investments. All these findings are consistent with the role of institutional investors in mitigating the agency problems between shareholders and executives as well as in improving the performance of the firm (Lefort & Urzúa, 2008).

Conversely, there are a number of studies which demonstrate the negative impact of institutional equity investors on corporate performance. Wahal (1996), Smith (1996), Duggal and Millar (1999), and Faccio and Lasfer (2000) show that when active institutional investors condition their investment policy to certain business practices, it impacts negatively on the

firms' corporate governance practices. Additionally, Almazan, Hartzell, and Starks (2005) suggests that when investors hold commercial relationships with firms, it may affect their incentives and preferences to supervise corporate decisions efficiently.

b. AFPs, Corporate Governance and Debt: The Chilean case

As mentioned above, the impact that institutional investors might have on corporate decisions is determined by the development of capital markets and the legal protection of investors, amongst other external factors. It has been widely recognized that institutional investors' behavior has changed, from being passive investors to active monitors. For instance, Coffee (1991) suggests that the trend toward increased activism on the part of institutional investors can be explained by the fact that exercising voice has become less costly because of the significant equity ownership of institutions and the resulting increased capacity for collective action. At the same time, following an exit policy has become increasingly more expensive because they must accept substantial discounts in order to liquidate their significant holding.

As a consequence of the weak protection of investors' interests, the ownership structure of firms in Chile is particularly concentrated and characterized by the presence of active majority shareholders in monitoring tasks (Lefort & González, 2008). Although this natural solution to the vertical agency problem –also called type I agency problem– between managers and shareholders is partially solved with this configuration of the ownership structure, the solution itself involves another potential conflict of interests, usually referred to in the literature as the horizontal agency problem –or type II agency problem, which entails the wealth expropriation of the minority by the controlling one.

Several empirical studies show a positive impact of the private pension system on the corporate governance of firms in the Chilean context (Iglesias, 1999-2000; Lefort & Urzúa, 2008; Lefort & Walker, 2007a; Walker & Lefort, 2002). Among other facts, the evidence suggests that pension reform is associated with a lower cost of capital as a consequence of less direct costs of debt issuance, a lower premium for term, and greater liquidity in the capital markets (Walker & Lefort, 2002). Additionally, the reduction in cost of capital is explained by improvements in the governance system of firms where the AFPs have an active monitoring role. Lefort and Walker (2007b) and Lefort and Urzúa (2008) document for the Chilean case that the presence of pension funds as minority shareholders within the firm impacts positively its value, and consequently, negatively in its cost of capital.

Unlike other institutional equity investors, the AFPs have certain particularities that make them able to impact the efficiency of firms' governance mechanisms. First, the AFPs' actions are largely visible and are of great public interest. Thus, despite the fact that AFPs are minority shareholders, they have a greater capacity to deal with the potential opportunistic behavior of majority/controlling shareholders. Second, despite the fact that AFPs cannot intervene directly in firm management, the ultimate goal of the AFPs is the maximization of the portfolio's return they manage and the protection of the interests of their affiliates. Third, in illiquid capital markets such as in Chile, the AFPs cannot *vote with their feet* as short-term traders in other contexts do, which encourages the pension fund managers to both hold a long-term orientation in their investment profile and to build a relationship with the firm.

Although there is certain consensus about the positive impact of the AFPs on firms' governance; there is no general agreement in the evidence regarding their impact on the cost of debt. There is empirical evidence which supports a positive impact as well as a negative relationship by the pension fund managers on the cost of private debt. There are a couple of arguments supporting the negative relation which help us to derive what we call our

monitoring hypothesis. The first one suggests that when executives are subject to a tight control by pensions funds, they will make better financial decisions which reduce the default risk and therefore, the cost of bank debt. Secondly, the bank monitoring costs should be lower in those firms largely participated by AFPs which eventually is translated into a lower cost of bank debt. Among other roles, AFPs are efficient in improving the transparency and in monitoring efficiently the discretionary decisions made by the controlling shareholders (Araya et al., 2015), and particularly, in monitoring the opportunistic earnings of management (Chung, Firth, & Kim, 2002b). Therefore, the quality of financial reporting improves with the subsequent decline in the cost of banking monitoring and the lending rates.

Although this papers analyses the impact of the AFPs as minority equity investors, we cannot dissociate the fact that they are at the same time the most important bondholders in the Chilean corporate sector. Therefore, it is necessary to contrast their role as a public creditor with that played by private creditors. This fact allows us to derive our crowding out hypothesis which suggests a negative relationship between the AFPs' equity investment and the cost of bank debt. In that sense, it is worth mentioning that banks are the main source of external funds of Chilean firms. The predominance of bank borrowing is explained by the immature capital markets *vis-à-vis* the weak enforcement of the law which protects the shareholders (Fernández, 2005; Lefort & Walker, 2002). This particular evolution of the financial system in Chile has resulted in a relatively better ability to protect the interests of financial intermediaries than public creditors (Jara & Sánchez, 2012). In addition to that, private creditors are more specialized monitors because they have access to private information about the future prospects of firms; whilst public creditors –such as AFPs, must trust the publicly available information only (Krishnaswami & Subramaniam, 1999). Therefore, it is observed that public creditors are in a disadvantageous position relative to private creditors. Accordingly, the AFPs in their role as the most important minority shareholders exercise their voting rights by supporting the issuance of public debt, rather than private debt, as a disciplining device. This incentive to issue public debt instead of private debt is rooted in the desire of the AFPs to reduce the informational gap with outsiders. Hence, as the equity stake of AFPs in the company increases, there will be a crowding out effect of private debt for public debt. Similarly, according to Bhojraj and Sengupta (2003), greater institutional ownership intertwined with stronger outside control of the board leads to lower bond yields and higher ratings on their new bond issues. Therefore, as the public debt level increases relative to private debt, the firm can no longer take advantage of the economies of scale on the cost of bank debt. As a result, these arguments show that the increasing presence of AFPs as shareholders of the firm impacts positively on the marginal cost of bank borrowing and negatively on the marginal cost of public borrowing.

Therefore, the hypotheses to be tested empirically are as follow:

H₁: There is a positive impact on the cost of bank borrowing caused by the participation of AFPs in the firms' ownership structure as a consequence of their desire for higher levels of public debt.

H₂: There is a negative impact on the cost of public borrowing caused by the participation of AFPs in the firms' ownership structure as a consequence of their monitoring role.

3. Sample, Data, and Methodology

a. Sample

The empirical analysis is performed with a sample of 93 non-financial firms quoted in the Santiago Stock Exchange (*Bolsa de Comercio de Santiago*) for the 2009-2014 period, which comprises a sample of 440 observations. The source of information is twofold. On the one hand, the financial information and information about the ownership structure in the hands of

the majority shareholder was obtained from *Thomson One Data Base*. On the other hand, the information for the cost of debt was collected manually. In the case of private debt was estimated from the individual firms' annual reports and by year. By public debt it was estimated how the bond's yield-to-maturity since the public information by bonds issued by companies. Similarly, the information about the AFPs' ownership participation in the firms was hand-collected from the Chilean Pensions Supervisor's annual report "Participación de las AFP y las AFC en Juntas y Asambleas" from 2009 to 2014.

b. Variables

The dependent variables are related to the cost of debt. Our first dependent variable is the marginal cost of bank debt (*CBD*) which is measured as the average marginal interest rate of bank borrowing in a certain year weighted by the amount of bank debt issued. In the case of public borrowing, our dependent variable is measure as the average interest rate of public debt
xxx

The set of independent variables is compounded by the ownership participation of the AFPs (*PAFP*) in the non-financial firms. This variable was computed by year as the number of shares which belong to the pension fund managers as a proportion of the total number of outstanding shares. We also used the dummy variable *DIRAFP* which takes the value 1 if the pension funds are represented in the board of directors, and 0 otherwise. According to law, a single AFP cannot hold more than 7% of the outstanding shares in the companies where it invests. Nevertheless, all the AFPs may invest in the same company, and since there are six AFPs in Chile, their joint participation may not exceed 42% of the firm's ownership. Such joint ownership allows the AFPs to coordinate the way they choose their representatives in the board of directors. Such coordination is handled through the *Asociación de AFPs*⁴ in Chile. Consequently, as a blockholder, the AFPs choose the directors who represent them on the boards of the firms where they invest.

This is an essential variable since according to agency theory, institutional investors can have a direct influence on the firm's financial decisions (López, García-Meca, & Tejerina, 2015).

Additionally, several control variables widely used in the empirical literature were included in the econometric models (Lin, Ma, Malatesta, & Xuan, 2011; Roberts & Yuan, 2010). These control variables are related to the firm's characteristics such as firm size and age, leverage, growth opportunities, profitability, assets tangibility or collateral, , default risk, and a dummy variable which capture the possible shareholder - bondholder nature of the AFPs, as well as dummy variables for the industry sector and time. In the case of the cost of public debt we also include a currency control variable.

The size of the firm (*LNTA*) is measured as the natural logarithm of total assets. It is important to use a control variable for firm size since larger firms will be more willing to use less debt when financing growth opportunities. As such, firms can choose to use financing which does not involve active monitoring (such as retained earnings); inexpensive debt (such as debt with related parties); debt whose cost can be minimized through economies of scale (such public debt); or debt whose cost can be arbitrated in international capital markets (such as Eurobonds) (Jara & Sánchez, 2012).

The market to book ratio (*MTB*) is used as a proxy variable of growth opportunities. We control for this variable because theory suggests that firms with valuable growth opportunities are more prone to have problems of asymmetries of information. Therefore, it is expected that

⁴ Asociación gremial de Administradoras de Fondos de Pensiones, www.aafp.cl

firms with more growth opportunities have a higher cost of debt. The firm leverage (*TDTA*) is measured as total debt over total assets. This variable is also used as a proxy of insolvency risk. Consequently, the higher the debt level, the higher the risk of the investment projects, and because of that a positive relationship between leverage and the cost of debt is expected. Asset tangibility or collateral (*TANG*) is computed as net property, plant, and equipment over total assets (Rajan & Winton, 1995; Rajan & Zingales, 1995). The better the firm's capacity to offer collaterals to guarantee borrowed funds, the lower the expected default risk and borrowing interest rates. An alternative explanation for this relationship is provided by Lin et al. (2011). They suggest that those firms with more tangible assets may offer higher recovery values in default states, which may imply lower spreads on their loans, all else being equal. Thus, a negative relationship between the asset tangibility and the cost of debt can be expected.

The default risk (*Z*) was measured through the Altman Z-Score.⁵ In the analysis also is relevant to capture the effect of AFPs in a possible double role, shareholder and bondholder, and we include a dummy variable value 1 if AFP at the time shareholder and bondholder, and zero otherwise. Finally, industry and time dummy variables were included as control variables in the econometric models. In the specific case of public borrowing, we include a set of dummy control variables in the currency in which the company has been financing.

c. Methodology

We were interested in assessing the impact of the ownership of the institutional investors, exercised through ownership structure and boards of directors, in the cost of borrowing, through private and public debt. In order to achieve this goal, we build a panel data which combine time series and cross sectional data. Realizing the analysis through panel structures two econometrics problems could arise, the constant and unobservable heterogeneity and the endogeneity problem (Baltagi, 2013). Considering that we apply Fixed-effect Ordinary Least Square. This econometric technique is suitable for causal analysis and allows controlling for the endogeneity problem associated with the study of the impact of the ownership participation of pension funds on the cost of debt. This econometric problem may be caused for three different reasons. First, the double causality bias, because the AFPs' ownership might determine the cost of debt; and at the same time, the cost of debt might impact the AFPs' ownership. Second, the simultaneity bias which is produced when the AFPs' ownership as well as the cost of debt are determined simultaneously by the same factors. And finally, the sample selection bias.

The regression equation to test the impact of the AFPs' equity investment on the firms' cost of debt takes the two following form, depending if the analysis correspond to private or public cost of borrowing:

$$CBD_{it} = \alpha + \beta_1 AFP + \beta_2 LNTA_{it} + \beta_3 TDTA_{it} + \beta_4 MTB_{it} + \beta_5 VR1_{it} + \beta_6 Z_{it} + \beta_7 ROA_{it} + \beta_8 AGE_{it} + Share/BondDummy + IndDummies + TimeDummies + \varepsilon_{it} \quad (1)$$

$$YTM_{it} = \alpha + \beta_1 AFP + \beta_2 LNTA_{it} + \beta_3 TDTA_{it} + \beta_4 MTB_{it} + \beta_5 VR1_{it} + \beta_6 Z_{it} + \beta_7 ROA_{it} + \beta_8 AGE_{it} + Share/BondDummy + CurrDummies + IndDummies + TimeDummies + \varepsilon_{it} \quad (2)$$

⁵ Altman's Z-score is determined by the following equation Altman (1968): $Z = (1.2 \text{ working capital} + 1.4 \text{ retained earnings} + 3.3 \text{ EBIT} + 1.0 \text{ sales}) / \text{total asset} + (0.6 \text{ equity at market value}) / \text{total liabilities}$.

The dependent variables are *CBD* and *YTM*, where *CBD* corresponds to the bank interest rates paid for the firms and *YTM* corresponds to the Yield-To-Maturity from the public debt issues by the firm. *AFP* represents the participation of pension funds in the firm, through ownership, *PAFP*, or board of directors, *DIRAFP*. In addition to that, it is controlled by other variables widely used in the empirical literature (Azofra & Rodríguez, 2012; Frank & Goyal, 2009; Harris & Raviv, 1991; Maquieira, Olavarrieta, & Zutta, 2007; Titman & Wessels, 1988) and ε_{it} is the error term.

The growth opportunities (*MTB*) and the firm profitability (*ROA*) were also used as control variables. Pension funds look for firms with profitable investment projects to invest in since it is easier to access the market for public debt. Firm size (*LNTA*) was also included. Pension funds tend to invest in large firms which usually have less volatile cash flows, have more diversified business units, operate in more mature industries and have good credit ratings, which allow them to obtain public financing and reduce the informational gap between the firm and outsiders. This scenario allows AFPs to incur in lower supervisory costs which increases their ownership participation in this kind of firms.

The *VR1* variable is the ownership or voting right of the controlling shareholder. We control for this variable because the Chilean corporate sector is characterized by weak protection of minority investors (Demirgüç-Kunt & Maksimovic, 2002; La Porta, Lopez-De-Silanes, & Shleifer, 1999; Lefort & González, 2008). Therefore, the higher the ownership concentration in the hands of the controlling shareholder, the higher the expropriation risk born by the pension funds as minority investors. Consequently, they will avoid investing in firms with substantial expropriation risk, and therefore a negative relationship is expected between the participation of AFPs in the ownership of quoted firms and the voting rights of the controlling shareholder.

4. Results

a. Descriptive statistics

Table 1 shows that banks charge Chilean firms with an average annual interest rate (*CBD*) of 3.9% and the average yield-to-maturity for public debt is 4.1%. Concerning ownership structure, the table shows that AFP's as equity investors keep a 4.1% of the outstanding shares (*PAFP*); while the majority investors hold about 47.3% of the ownership (*VR1*). The AFPs are present in 3.7% of the board of directors (*DIRAFP*) of the sample firms.

TABLE 1. Descriptive Statistics and Mean Difference Test

<i>Variables</i>	<i>Mean</i>	<i>Standard Dev.</i>	<i>Min.</i>	<i>Max</i>
A. <i>Total sample</i>				
<i>CBD</i>	0.039	0.022	0.025	0.143
<i>YTM</i>	0.041	0.010	0.022	0.077
<i>PAFP</i>	0.041	0.058	0.000	0.263
<i>DIRAFP</i>	0.037	0.485	0	1
<i>LNTA</i>	26.60	1.669	22.69	31.10
<i>MTB</i>	1.563	1.075	0.209	5.332
<i>ROA</i>	0.037	0.066	-0.309	0.230
<i>TANG</i>	0.442	0.210	0.014	0.881
<i>TDTA</i>	0.262	0.117	0.009	0.579
<i>VR1</i>	0.473	0.221	0.020	0.999
<i>Z</i>	2.296	1.371	-0.592	13.11
<i>Observations</i>	440			

This table shows the mean, standard deviation, minimum and maximum values of each variable for the whole sample.

b. Empirical findings

This section describes the results for the multivariate analysis. Table 2 and 3 displays the results for the estimations of the OLS regressions. In this case, the dependent variable is (*CBD*). As discussed in our hypothesis 1, AFPs (*PAFP* and *DIRAFP* in Table 2 and 3, respectively) have a positive and significant influence over the cost of bank debt. The greater the AFPs participation, the greater the cost of bank debt. AFPs use their voting rights in firms where they invest to issue public debt, which causes an increase in the marginal cost of bank. This result is robust with our two alternative measures of AFPs' equity interests (*PAFP* and *DIRAFP*). For instance, in regression (1) of the Table 2, we observe that when *PAFP* increases by a certain extent, the cost of bank debt (*CBD*) increases also by 0.071 times the change in *PAFP*, ceteris paribus

The results also show that large firms (*LNTA*) have less cost of debt. The same with the ROA variable. By other hand, firms more indebted, as expected, are affected by higher costs of bank debt.

TABLE 2. Pension Funds Ownership (AFP) and the Cost of Bank Debt

VARIABLES	(1) CBD	(2) CBD	(3) CBD	(4) CBD	(5) CBD	(6) CBD	(7) CBD	(8) CBD
<i>PAFP</i>	0.071*** (0.017)	0.077*** (0.018)	0.078*** (0.018)	0.057** (0.025)	0.061*** (0.021)	0.065*** (0.022)	0.064*** (0.022)	0.058** (0.026)
Size	-0.004*** (0.001)	-0.003*** (0.001)	-0.003*** (0.001)	-0.003*** (0.001)	-0.005*** (0.001)	-0.005*** (0.001)	-0.005*** (0.001)	-0.005*** (0.001)
Liabilities/Assets	0.019** (0.007)	0.019** (0.007)	0.019** (0.007)	0.021*** (0.007)	0.035*** (0.009)	0.035*** (0.009)	0.034*** (0.009)	0.035*** (0.009)
Tobin's Q	-0.001 (0.003)	-0.000 (0.003)	-0.000 (0.003)	-0.000 (0.003)	-0.002 (0.003)	-0.002 (0.003)	-0.002 (0.003)	-0.002 (0.003)
Cash Flow Rights U. Own.	0.010** (0.004)	0.011** (0.004)	0.010** (0.005)	0.011** (0.005)	0.004 (0.005)	0.004 (0.005)	0.004 (0.006)	0.004 (0.006)
Z-Score	-0.002 (0.001)	-0.002 (0.001)	-0.002 (0.001)	-0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
Operating ROA	0.039** (0.018)	0.041** (0.018)	0.040** (0.018)	0.043** (0.018)	0.001 (0.021)	0.002 (0.021)	0.000 (0.022)	0.000 (0.022)
Ln(Age)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.002 (0.001)	-0.002 (0.001)	-0.001 (0.001)	-0.001 (0.001)
AFP-Bondholder		-0.004 (0.003)	-0.004 (0.003)	-0.007** (0.004)		-0.002 (0.003)	-0.002 (0.003)	-0.002 (0.004)
AFP Own. x AFP-Bondholder				0.047 (0.037)				0.013 (0.037)
Inv. Advisor Own			-0.003 (0.008)	-0.003 (0.008)			0.003 (0.009)	0.004 (0.009)
Constant	0.121*** (0.019)	0.105*** (0.022)	0.106*** (0.021)	0.104*** (0.022)	0.170*** (0.019)	0.164*** (0.022)	0.164*** (0.022)	0.163*** (0.022)
Observations	435	435	435	435	435	435	435	435
R-squared	0.205	0.211	0.211	0.215	0.512	0.513	0.513	0.513
Adj. R-Squared	0.157	0.160	0.158	0.161	0.308	0.307	0.305	0.303
Year FE	YES	YES	YES	YES	NO	NO	NO	NO
Year-Industry FE	NO	NO	NO	NO	YES	YES	YES	YES

This table shows the regression results with firm fixed-effect. Year and year-industry controls were included in the models. Robust standard errors in parentheses. *, **, and *** indicate significance at the 10%, 5% and 1% levels, respectively.

TABLE 3. AFP on Board (AFP) and the Cost of Bank Debt

VARIABLES	(1) CBD	(2) CBD	(3) CBD	(4) CBD	(5) CBD	(6) CBD	(7) CBD	(8) CBD
<i>DIRAFP</i>	0.006*** (0.002)	0.007*** (0.002)	0.007*** (0.002)	0.007** (0.003)	0.005* (0.003)	0.005* (0.003)	0.005* (0.003)	0.005 (0.004)
Size	-0.003*** (0.001)	-0.002** (0.001)	-0.002** (0.001)	-0.003*** (0.001)	-0.005*** (0.001)	-0.004*** (0.001)	-0.004*** (0.001)	-0.004*** (0.001)
Liabilities/Assets	0.017** (0.008)	0.016** (0.008)	0.016** (0.008)	0.018** (0.008)	0.033*** (0.009)	0.033*** (0.009)	0.033*** (0.009)	0.033*** (0.009)
Tobin's Q	-0.000 (0.003)	0.000 (0.003)	0.000 (0.003)	-0.001 (0.003)	-0.002 (0.003)	-0.002 (0.003)	-0.002 (0.004)	-0.002 (0.004)
Cash Flow Rights U. Own.	0.009** (0.004)	0.009** (0.005)	0.009* (0.005)	0.009* (0.005)	0.002 (0.006)	0.002 (0.006)	0.002 (0.006)	0.002 (0.006)
Z-Score	-0.002 (0.001)	-0.002 (0.001)	-0.002 (0.001)	-0.002 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
Operating ROA	0.043** (0.018)	0.045** (0.018)	0.045** (0.018)	0.041** (0.018)	0.002 (0.022)	0.002 (0.022)	-0.000 (0.022)	-0.000 (0.022)
Ln(Age)	-0.002 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.002* (0.001)	-0.002* (0.001)	-0.002 (0.001)	-0.002 (0.001)
AFP-Bondholder		-0.004 (0.003)	-0.004 (0.003)			-0.001 (0.003)	-0.001 (0.003)	-0.001 (0.004)
Inv. Advisor Own			0.001 (0.008)	-0.002 (0.009)			0.006 (0.009)	0.006 (0.009)
AFP Board Dir. x AFP-Bondholder				-0.009* (0.005)				0.001 (0.005)
Constant	0.108*** (0.018)	0.092*** (0.021)	0.092*** (0.021)	0.117*** (0.020)	0.161*** (0.019)	0.158*** (0.022)	0.158*** (0.022)	0.158*** (0.022)
Observations	440	440	440	435	440	440	440	440
R-squared	0.181	0.186	0.186	0.195	0.502	0.502	0.503	0.503
Year FE	YES	YES	YES	YES				
Adj. R-Squared	0.132	0.135	0.133	0.140	0.297	0.295	0.293	0.291
Year-Industry FE					YES	YES	YES	YES

This table shows the regression results with firm fixed-effect. The variable definitions is in the Appendix A. Year and Year-industry controls were included in the model 1 to 4 and 5 to 8, respectively. Robust standard errors in parentheses. *, **, and *** indicate significance at the 10%, 5% and 1% levels, respectively.

Table 4 and Table 5 confirm the arguments that the AFPs influence to issue public debt, which causes a decrease in the marginal cost of public debt. When we analyze the findings of *DIRAFP* variable, we observe that it is statistically significant under the measure of the cost of public debt (*YTM*).

TABLE 4: Pension Funds Ownership (AFP) and Bond Yields

VARIABLES	(1) YTM	(2) YTM	(3) YTM	(4) YTM	(5) YTM
<i>PAFP</i>	-0.019*** (0.006)	-0.019*** (0.006)	-0.022*** (0.008)	-0.020** (0.008)	-0.028* (0.014)
AFP-Bondholder				0.004** (0.002)	0.002 (0.003)
AFP Own. x AFP-Bondholder					0.009 (0.016)
Ln(Years to Mat.)		0.003*** (0.001)	0.002*** (0.001)	0.003*** (0.001)	0.003*** (0.001)
Ln(Issue Amount)		-0.000 (0.000)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
Size			-0.002 (0.001)	-0.002 (0.001)	-0.002 (0.001)
Liabilities/Assets			0.031** (0.013)	0.029** (0.013)	0.029** (0.013)
Tobin's Q			-0.007** (0.003)	-0.006* (0.003)	-0.006* (0.003)
Operating ROA			-0.018 (0.026)	-0.020 (0.027)	-0.017 (0.027)
Z-Score			0.002 (0.003)	0.002 (0.003)	0.002 (0.003)
Cash Flow Rights U. Own.			0.008* (0.004)	0.007* (0.004)	0.007* (0.004)
Ln(Age)			0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
Inv. Advisor Own				0.001 (0.007)	0.001 (0.007)
Constant	0.077*** (0.003)	0.066*** (0.008)	0.096*** (0.022)	0.094*** (0.024)	0.095*** (0.025)
Observations	440	440	440	440	440
R-squared	0.596	0.604	0.667	0.670	0.671
Year-Industry-Currency FE	YES	YES	YES	YES	YES
Bond Seniority FE	YES	YES	YES	YES	YES
Credit Rating FE	YES	YES	YES	YES	YES
Adj. R-Squared	0.542	0.549	0.594	0.595	0.594

This table shows the regression results with firm fixed-effect. The variable definitions is in the Appendix A. Year-industry.currency, bond seniority and credit rating controls were included in the models. Robust standard errors in parentheses. *, **, and *** indicate significance at the 10%, 5% and 1% levels, respectively.

TABLE 5: AFP on Board (AFP) and the Bond Yields

VARIABLES	(1) YTM	(2) YTM	(3) YTM	(4) YTM	(5) YTM
<i>DIRAFP</i>	-0.002** (0.001)	-0.002** (0.001)	-0.003*** (0.001)	-0.003*** (0.001)	-0.002 (0.003)
<i>AFP-Bondholder</i>				0.005*** (0.002)	0.006*** (0.002)
<i>AFP Board Dir. x AFP-Bondholder</i>					-0.002 (0.003)
<i>Ln(Years to Mat.)</i>		0.003*** (0.001)	0.002** (0.001)	0.002** (0.001)	0.002** (0.001)
<i>Ln(Issue Amount)</i>		-0.000 (0.000)	0.000 (0.001)	0.001 (0.001)	0.001 (0.001)
<i>Size</i>			-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
<i>Liabilities/Assets</i>			0.033** (0.013)	0.030** (0.013)	0.031** (0.013)
<i>Tobin's Q</i>			-0.006* (0.003)	-0.006* (0.003)	-0.006* (0.003)
<i>Operating ROA</i>			-0.021 (0.027)	-0.025 (0.027)	-0.026 (0.027)
<i>Z-Score</i>			0.002 (0.003)	0.002 (0.003)	0.002 (0.003)
<i>Cash Flow Rights U. Own.</i>			0.007* (0.004)	0.007* (0.004)	0.007 (0.004)
<i>Ln(Age)</i>			0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
<i>Inv. Advisor Own</i>				-0.000 (0.006)	-0.001 (0.006)
<i>Constant</i>	0.075*** (0.003)	0.064*** (0.008)	0.078*** (0.022)	0.078*** (0.024)	0.077*** (0.024)
Observations	440	440	440	440	440
R-squared	0.599	0.602	0.672	0.678	0.678
Year-Industry-Currency FE	YES	YES	YES	YES	YES
Bond Seniority FE	YES	YES	YES	YES	YES
Credit Rating FE	YES	YES	YES	YES	YES
Adj. R-Squared	0.543	0.546	0.597	0.601	0.599

This table shows the regression results with firm fixed-effect. The variable definitions is in the Appendix A. Year-industry.currency, bond seniority and credit rating controls were included in the models. Robust standard errors in parentheses. *, **, and *** indicate significance at the 10%, 5% and 1% levels, respectively.

5. Conclusions

The last three decades have witnessed a process of great development of capital markets worldwide, with their ongoing legislative reforms which regulate the way capital markets work. These improvements have been translated into more efficient corporate governance mechanisms. This work aims to analyze how one of these multiple mechanisms of corporate governance works, namely the role of pension fund managers as minority shareholders in monitoring firms' management. This monitoring role is studied through the impact of AFP ownership participation on the cost of debt in the Chilean corporate sector.

The main findings show that institutional ownership increases the cost of bank borrowing. These results are contrary to what Roberts and Yuan (2010) have found for US public firms listed on the three major stock exchanges (NYSE, NASDAQ and AMEX) from 1995 to 2004. They suggest that institutional investors play a critical role by reducing firm risk through an active monitoring of management. Consequently, private creditors such as banks would incur lower monitoring costs, and such cost savings are transferred eventually to borrowers (firms) through the lower marginal cost of debt. Nevertheless, our findings suggest that private creditors are characterized by being more efficient and specialized monitors than the capital markets, and consequently the institutional monitoring of pension funds is redundant.

The findings show that the AFPs in their role as the main minority shareholders impact the cost of debt for two reasons. First, by pursuing the board of directors to issue public debt for financing, reducing the public cost of debt. Pension fund managers take these actions to reduce the asymmetries of information between the firm and the outsider. This situation presses up the cost of bank borrowing because firms can no longer take advantage of the economies of scale of bank debt if they use more public debt instead. Second, the increased participation of pension funds in the ownership structure of firms reduces the potential expropriation of minority shareholders by majority/controller shareholders. The role played by AFPs in equity investments permits the reduction of asymmetries of information with the capital markets, and consequently the firms may issue public debt in more favorable conditions. This is supported by what we call the crowding-out hypothesis which suggested that as the equity stake of AFPs in the company increases, there will be a crowding out effect of private debt for public debt. Therefore, as the public debt level increases relative to private debt, the firm can no longer take advantage of the economies of scale on the cost of bank debt and consequently the interest spreads increase.

Finally, there are several possible extensions for this work. On the one hand, the analysis of pension funds' participation in public firms and its impact on the debt structure –not the cost of debt– may shed light on the capital structure decisions of Chilean firms. On the other hand, the impact of the divergence between the voting rights and cash flow rights of the controlling shareholder and the role of pension funds as minority shareholders could also be studied. Similarly, other kinds of institutional investors not considered in this study could be included. This might clarify some ideas which are still in darkness concerning the investment decisions of pension funds as well as the finance decisions made by the Chilean corporate sector.

References

- Acuña, R., & Iglesias, A. (2001). La Reforma de las Pensiones. In F. Larraín & R. Vergara (Eds.), *La Transformación Económica de Chile* (pp. 430-490). Santiago: Centro de Estudios Públicos.
- Almazan, A., Hartzell, J. C., & Starks, L. T. (2005). Active Institutional Shareholders and Costs of Monitoring: Evidence from Executive Compensation. *Financial Management*, 34(4), 5-34.
- Altman, E. I. (1968). Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. *The Journal of Finance*, 23(4), 589-609.
- Amihud, Y., & Li, K. (2006). The declining information content of dividend announcements and the effects of institutional holdings. *Journal of Financial and Quantitative Analysis*, 41(3), 637-660.
- Araya, F., Jara, M., Maquieira, C., & San Martín, P. (2015). Influencia de los inversionistas institucionales en las decisiones de estructura de capital de la empresa. Evidencia para un mercado emergente. *El Trimestre Económico*, LXXXII (2)(326), 279 - 311.
- Azofra, V., & Rodríguez, J. A. (2012). El endeudamiento de la empresa española: Teorías y realidades. *Papeles de Economía Española*, 132, 37-61.
- Baltagi, B. H. (2013). *Econometric Analysis of Panel Data* (J. W. S. Ltd. Ed. 5th Ed. ed.). Chichester, UK.
- Bathala, C. T., Moon, K. P., & Rao, R. P. (1994). Managerial Ownership, Debt Policy, and the Impact of Institutional Holdings: An Agency Perspective. *Financial Management*, 23(3), 38-50. doi:10.2307/3665620
- Beck, T., Demirgüç-Kunt, A., & Levine, R. (2000). A New Database on the Structure and Development of the Financial Sector. *World Bank Economic Review*, 14(3), 597-605.
- Bennett, J. A., Sias, R. W., & Starks, L. T. (2003). Greener Pastures and the Impact of Dynamic Institutional Preferences. *Review of Financial Studies*, 16(4), 1203-1238. doi:10.1093/rfs/hhg040
- Bethel, J. E., Liebeskind, J. P., & Opler, T. (1998). Block Share Purchases and Corporate Performance. *The Journal of Finance*, 53(2), 605-634. doi:10.1111/0022-1082.244195
- Bhattacharya, P. S., & Graham, M. A. (2009). On institutional ownership and firm performance: A disaggregated view. *Journal of Multinational Financial Management*, 19(5), 370-394. doi:<http://dx.doi.org/10.1016/j.mulfin.2009.07.004>
- Bhojraj, S., & Sengupta, P. (2003). Effect of Corporate Governance on Bond Ratings and Yields: The Role of Institutional Investors and Outside Directors. *Journal of Business*, 76(3), 455-475.
- Borokhovich, Kenneth A., Brunarski, K., Harman, Yvette S., & Parrino, R. (2006). Variation in the Monitoring Incentives of Outside Stockholders. *Journal of Law and Economics*, 49(2), 651-680. doi:10.1086/505368
- Brickley, J. A., Lease, R. C., & Smith Jr, C. W. (1988). Ownership structure and voting on antitakeover amendments. *Journal of Financial Economics*, 20, 267-291. doi:[http://dx.doi.org/10.1016/0304-405X\(88\)90047-5](http://dx.doi.org/10.1016/0304-405X(88)90047-5)
- Buchuk, D., Larrain, B., Muñoz, F., & Urzúa, F. (2014). The internal capital markets of business groups: Evidence from intra-group loans. *Journal of Financial Economics*, 112(2), 190-212. doi:<http://dx.doi.org/10.1016/j.jfineco.2014.01.003>
- Campello, M., & Larrain, M. (2015). Enlarging the Contracting Space: Collateral Menus, Access to Credit, and Economic Activity. *Review of Financial Studies*. doi:10.1093/rfs/hhv069
- Chung, R., Firth, M., & Kim, J.-B. (2002a). Institutional monitoring and opportunistic earnings management. *Journal of Corporate Finance*, 8, 29-48.
- Chung, R., Firth, M., & Kim, J.-B. (2002b). Institutional monitoring and opportunistic earnings management. *Journal of Corporate Finance*, 8(1), 29-48. doi:[http://dx.doi.org/10.1016/S0929-1199\(01\)00039-6](http://dx.doi.org/10.1016/S0929-1199(01)00039-6)
- Coffee, J. C. (1991). Liquidity versus Control: The Institutional Investor as Corporate Monitor. *Columbia Law Review*, 91(6), 1277-1368. doi:10.2307/1123064
- Demirgüç-Kunt, A., & Maksimovic, V. (2002). Funding growth in bank-based and market-based financial systems: evidence from firm-level data. *Journal of Financial Economics*, 65(3), 337-363.

- Dong, M., & Ozkan, A. (2008). Institutional investors and director pay: An empirical study of UK companies. *Journal of Multinational Financial Management*, 18(1), 16-29.
doi:<http://dx.doi.org/10.1016/j.mulfin.2007.06.001>
- Duggal, R., & Millar, J. A. (1999). Institutional ownership and firm performance: The case of bidder returns. *Journal of Corporate Finance*, 5(2), 103-117. doi:[http://dx.doi.org/10.1016/S0929-1199\(98\)00018-2](http://dx.doi.org/10.1016/S0929-1199(98)00018-2)
- Elyasiani, E., & Jia, J. (2010). Distribution of institutional ownership and corporate firm performance. *Journal of Banking & Finance*, 34, 606-620.
- Elyasiani, E., Jia, J., & Mao, C. X. (2010). Institutional ownership stability and the cost of debt. *Journal of Financial Markets*, 13(4), 475-500. doi:<http://dx.doi.org/10.1016/j.finmar.2010.05.001>
- Faccio, M., & Lasfer, M. A. (2000). Do occupational pension funds monitor companies in which they hold large stakes? *Journal of Corporate Finance*, 6(1), 71-110.
doi:[http://dx.doi.org/10.1016/S0929-1199\(99\)00016-4](http://dx.doi.org/10.1016/S0929-1199(99)00016-4)
- Fernández, V. (2005). Monetary policy and the banking sector in Chile. *Emerging Markets Finance & Trade*, 41(3), 5-36.
- Ferreira, M. A., & Matos, P. (2008a). The colors of investors' money: The role of institutional investors around the world. *Journal of Financial Economics*, 88, 499-533.
- Ferreira, M. A., & Matos, P. (2008b). The colors of investors' money: The role of institutional investors around the world. *Journal of Financial Economics*, 88(3), 499-533.
doi:<http://dx.doi.org/10.1016/j.jfineco.2007.07.003>
- Frank, M. Z., & Goyal, V. K. (2009). Capital Structure Decisions: Which Factors Are Reliably Important? *Financial Management*, 38(1), 1-37. doi:10.1111/j.1755-053X.2009.01026.x
- Gillan, S. L., & Starks, L. T. (2003). Corporate Governance, Corporate Ownership, and the Role of Institutional Investors: A Global Perspective. *Journal of Applied Finance*, 13(2), 4-22.
- Gompers, P., & Metrick, A. (2001). Institutional Investors and Equity Prices. *Quarterly Journal of Economics*, 116(1), 229-259.
- Harris, M., & Raviv, A. (1991). The Theory of Capital Structure. *The Journal of Finance*, 46(1), 297 - 355.
- Hartzell, J. C., & Starks, L. T. (2003). Institutional Investors and Executive Compensation. *The Journal of Finance*, 58(6), 2351-2374. doi:10.2307/3648196
- Iglesias, A. (1999-2000). Pension reform and corporate governance: Impact in Chile. *Revista ABANTE*, 3(1), 109-141.
- Jara, M., López, F., & López-de-Foronda, Ó. (2012). Does the influence of institutional investors depend on the institutional framework? An international analysis. *Applied Economics*, 44(3), 265-278. doi:10.1080/00036846.2010.502112
- Jara, M., & Sánchez, S. (2012). Factores Determinantes del Endeudamiento Bancario en la Empresa No Financiera Chilena. *El Trimestre Económico*, 79(313), 53-84.
- Khanna, T., & Palepu, K. (2000). The Future of Business Groups in Emerging Markets: Long-Run Evidence from Chile. *The Academy of Management Journal*, 43(3), 268-285.
- Krishnaswami, S., & Subramaniam, V. (1999). Information asymmetry, valuation, and the corporate spin-off decision. *Journal of Financial Economics*, 53(1), 73-112.
- La Porta, R., Lopez-De-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *The Journal of Finance*, 54(2), 471-517.
- La Porta, R., Lopez-De-Silanes, F., Shleifer, A., & Vishny, R. (1998). Law and Finance. *The Journal of Political Economy*, 106(6), 1113-1155.
- Lefort, F., & González, R. (2008). Hacia un mejor gobierno corporativo en Chile. *Revista ABANTE*, 11(1), 17-37.
- Lefort, F., & Urzúa, F. (2008). Board independence, firm performance and ownership concentration: Evidence from Chile. *Journal of Business Research*, 61(6), 615-622.
doi:<http://dx.doi.org/10.1016/j.jbusres.2007.06.036>
- Lefort, F., & Walker, E. (1999-2000). Ownership and capital structure of Chilean conglomerates: Facts and hypotheses for governance. *Revista ABANTE*, 3(1), 3-27.

- Lefort, F., & Walker, E. (2002). Cambios estructurales e integración. Discusión y análisis del mercado accionario chileno. *Cuadernos de Economía*, 116, 95-122.
- Lefort, F., & Walker, E. (2007a). Do Markets Penalize Agency Conflicts Between Controlling and Minority Shareholders? Evidence from Chile. *The Developing Economies*, 45(3), 283-314. doi:10.1111/j.1746-1049.2007.00044.x
- Lefort, F., & Walker, E. (2007b). The Effect of Corporate Governance Practices on Company Market Valuation and Payout Policy in Chile. In Chong & Lopez-de-Silanes (Eds.), *Investor Protection in Latin America* (pp. 289-235). Stanford: Stanford University Press.
- Lin, C., Ma, Y., Malatesta, P., & Xuan, Y. (2011). Ownership structure and the cost of corporate borrowing. *Journal of Financial Economics*, 100(1), 1-23. doi:<http://dx.doi.org/10.1016/j.jfineco.2010.10.012>
- López, F., García-Meca, E., & Tejerina, F. (2015). Institutional directors and board compensation: Spanish evidence. *Business Research Quarterly*, 18(3), 161-173. doi:10.1016/j.brq.2014.07.003
- Maquieira, C., Olavarrieta, S., & Zutta, P. (2007). Determinantes de la Estructura de Financiación: Evidencia Empírica para Chile. *El Trimestre Económico*, 74(293(1)), 161-193. doi:10.2307/20857107
- McConnell, J. J., & Servaes, H. (1990). Additional evidence on equity ownership and corporate value. *Journal of Financial Economics*, 27(2), 595-612.
- Omran, M. M., Bolbol, A., & Fatheldin, A. (2008). Corporate governance and firm performance in Arab equity markets: Does ownership concentration matter? *International Review of Law and Economics*, 28(1), 32-45. doi:<http://dx.doi.org/10.1016/j.irl.2007.12.001>
- Parrino, R., Sias, R. W., & Starks, L. T. (2003). Voting with their feet: institutional ownership changes around forced CEO turnover. *Journal of Financial Economics*, 68(1), 3-46. doi:[http://dx.doi.org/10.1016/S0304-405X\(02\)00247-7](http://dx.doi.org/10.1016/S0304-405X(02)00247-7)
- Rajan, R., & Winton, A. (1995). Covenants and collateral as incentives to monitor. *The Journal of Finance*, 50(4), 1113-1146.
- Rajan, R., & Zingales, L. (1995). What do we know about capital structure? Some evidence from international data. *The Journal of Finance*, 50(5), 1421-1460.
- Roberts, G., & Yuan, L. (2010). Does institutional ownership affect the cost of bank borrowing? *Journal of Economics and Business*, 62(6), 604-626. doi:<http://dx.doi.org/10.1016/j.jeconbus.2009.05.002>
- Ruiz-Mallorquí, M. V., & Santana-Martín, D. J. (2011). Dominant institutional owners and firm value. *Journal of Banking & Finance*, 35(1), 118-129. doi:<http://dx.doi.org/10.1016/j.jbankfin.2010.07.020>
- Smith, M. P. (1996). Shareholder Activism by Institutional Investors: Evidence from CalPERS. *The Journal of Finance*, 51(1), 227-252. doi:10.2307/2329308
- Titman, S., & Wessels, R. (1988). The determinants of capital structure choices. *The Journal of Finance*, 43(1), 1-19.
- Vittas, D. (1996). Pension Funds and Capital Markets : Investment Regulation, Financial Innovation, and Governance. *World Bank View Point*, 71(1), 1-4.
- Wahal, S. (1996). Pension Fund Activism and Firm Performance. *Journal of Financial & Quantitative Analysis*, 31(1), 1-23.
- Walker, E., & Lefort, F. (2002). Pension Reform and Capital Markets: Are There Any (Hard) Links? *Revista ABANTE*, 5(2), 77-149.
- WEF. (2009). *The Global Competitiveness Report 2008-2009*: World Economic Forum.
- WEF. (2012). *The Global Competitiveness Report 2012-2013*: World Economic Forum.
- Woidtke, T. (2002). Agents watching agents?: Evidence from pension fund ownership and firm value. *Journal of Financial Economics*, 63(1), 99-131. doi:[http://dx.doi.org/10.1016/S0304-405X\(01\)00091-5](http://dx.doi.org/10.1016/S0304-405X(01)00091-5)