

**From corporate scandals to legal reforms:
Forces that shape the market for corporate directors**

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Abstract

We document the effects that three different types of events: i) corporate scandals ii) hard legal reforms, and iii) soft legal reforms, have had on the Chilean market for corporate directors between 2008 and 2019. Like the effects generated by the sequence Enron-Worldcom-SOX, we find that the supply of corporate directors contracted due to increasing risks and workload faced by the profession. However, unlike the case of Enron-Worldcom-SOX the demand for corporate directors only changed marginally and the use of external directors remained almost constant. This is consistent with an overall result in which directors' compensations significantly increased and the average size of the board marginally decreased. In addition, we found that hard legal reforms had several unexpected and probably unwanted effects, including a reduction in the use of committees and in the presence of independent directors. Finally, and perhaps surprisingly for a civil-law country, we show that a corporate scandal followed by a soft legal reform has the capacity to significantly increase directors' efforts and accelerate changes in average board compositions.

JEL: G38, G34, K22

Keywords: Corporate events, board of directors, supply and demand for corporate directors, directors' compensations, board structure, board composition, independent directors, Chile, SOX.

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“The idea of this law project is to increase the standards and efficacy of corporate governance ... increasing information revelation... incorporating independent directors to the boards, regulating the director’s committee and operations with related parties and conflicts of interest, ...” Extract from the Chilean Minister of Finance proposal of Law 20.382 presented to Congress and approved in October 2009.

“La Polar marked a ‘before and after’ in corporate governance. Due to legal changes directors are now personally liable paying [fines] with their own assets ... and then, there was a change and a realization of the relevance of the board and its role”. Consultant’s opinion, May 2018.

1. INTRODUCTION

The demise of Enron and World Com followed by the enactment of SOX has triggered an avalanche of research studying the ways in which corporate scandals and new regulatory frameworks might affect the market for corporate directors (Adams *et al.* 2010, Wintoki 2007, Cohen 2007, Gordon 2007, Linck *et al.* 2008 among others). As shown by Linck *et al.* (2009), the sequence Enron/WC/SOX significantly changed the market for corporate directors because it made the profession riskier and increased firms’ need for directors’ expertise. Although regulators introduced SOX to prevent events such as Enron and World Com from ever happening again,² they probably did not anticipate the dramatic transformations that this regulatory body would generate in the structures and compositions of corporate boards across the country.³

While much research has been produced around Enron/WC/SOX, there is much less documentation about similar events and their consequences in other countries, particularly in emerging economies where property is concentrated and whose legal systems fall within the

² According to the American Bar Association, SOX aimed to 1. strengthen independence of auditing firms, 2. improve the quality and transparency of financial statements and disclosures, 3. enhance corporate governance, 4. improve objectivity of research, and 5. strengthen enforcement of the federal securities law.

³ Other effects commonly attributed to SOX are the delisting of firms (Wintoki 2007) and the transformation of the auditors’ industry (Ghosh & Pawlewicz 2009).

civil-law tradition.⁴ The aim of this paper is to take advantage of shocks in corporate Chile, in which combinations of three different types of events took place (corporate scandals, hard-law reforms and soft-law reforms) to study the different ways in which they might have affected the Chilean market for directors. Among other questions, in the context of an emerging economy, we aim to answer: Can scandals or legal reforms significantly change the supply and demand for directors? Can a hard-law reform generate unexpected/unwanted effects over the market for corporate directors? Lastly, can a scandal followed by a soft-law reform have significant effects on the structure and composition of boards?

Before 2010, Chilean companies had a rather complacent approach towards corporate governance. According to a 2007 study by McKinsey only 46% of the largest Chilean companies followed a code of good corporate governance and only 22% discussed corporate governance in their annual reports.⁵ That reality changed drastically when in July 2009 the directors of the pharmacy chain FASA were accused of violating their fiduciary duties for not appropriately protecting the interests of FASA's shareholders in the context of a collusion scandal. In December 2009, all FASA directors were forced to pay fines. Not only was this one of the first cases in modern times in which Chilean directors were held responsible for these charges, but the events received considerable media attention. People reacted with rage when they learned about the collusion, at the point of physically attacking stores. At the same time the corporate dimension of the FASA case was developing, Congress was discussing

⁴ Much of the literature discusses the capacity of corporate governance practices to prevent scandals (such as Baucus & Baucus 1997 before Enron, Yu *et al.* 2015 for the case of China and Utz 2019 linking scandals with ESG practices). Other literature studies the economic effects of scandals (such as Bonini & Boraschi, 2012). There is almost no literature addressing the impact of scandals on corporate governance practices.

⁵ The same study documented that less than 20% of boards had evaluation mechanisms, only 46% used committees (other than the one required by law), and less than 50% of directors thought that their colleagues attended board sessions adequately prepared. In addition, Lefort and Walker (2000) document a low use of independent directors and a high number of boards per director.

Law 20.382, arguably the most significant change to the Chilean corporations' law since its birth in 1981. The law aimed to provide more transparency to markets, correct potential asymmetries of information, and strengthen shareholders' rights. Although Law 20.382 had been discussed since the end of 2007, the law was not finally enacted until October 2009. President Bachelet presented the law to Congress as "an improvement of the norms that regulate firms' corporate governance," intended to raise Chilean standards to OECD levels. It is fair to suggest that the FASA and Law 20.382 marked 2010 as the year in which Chilean corporate governance was bound to change.

Less than two years after FASA's directors were fined, a new corporate scandal erupted in the country. In June 2011 it became known that the retailer La Polar had been irregularly managing its accounting for credit card receivables for more than five years. Once more, the scandal reached the board because regulators sued the directors for not having done enough to prevent the fraud. The legal dispute was swiftly resolved against the directors who were fined at the end of 2011. The scandal had broad consequences that affected the market, pension funds, auditing, and credit rating agencies. Motivated by these events, for the first time in 2012 the market and securities regulator introduced a corporate governance self-regulatory norm (NCG 341) based on the comply or explain principle. The norm asked all publicly traded companies to annually explain their compliance with 19 practices associated with the functioning of the board, relations of the firm with its shareholders and stakeholders, and its risk management policies. In that way, 2012, marked a second key year in the steps towards a transformation of corporate governance of public corporations in the country.

Because the results of NCG 341 were below expectations (i.e., Godoy *et al.* 2018), in 2015 the regulator revamped that norm with NCG 385, which demanded public firms to detail or justify compliance with 99 practices of corporate governance. As revealed by Novoa *et al.*

(2022) or Bustos and Walker (2022) this time firms introduced noticeable changes to their practices, especially those associated with ESG and risk management. Our characterization of the landscape of relevant events ends in 2016 when Congress approved through Law 20.945 substantial changes to antitrust legislation. Those changes explicitly restricted directors and executives from simultaneously sitting on the board of rival firms.⁶

Although other scandals and legal reforms took place from 2008-16, we will argue that the scandals of FASA and La Polar, the new hard-laws 20.382 and 20.945, and the new soft-regulations NCG 341 and NCG 385 are the ones that changed the landscape of corporate governance in the country. Keeping in mind the repercussions of Enron/WC/SOX we explore the extent that the sequence FA_382/LP_N341/N385/L20.945 might have had similar repercussions upon corporate governance and the market of directors in Chile.

While Linck *et al.* (2009) document that SOX had the unequivocal effects of contracting the supply of directors and expanding the demand for directors, we find that the events that happened in Chile between 2008 and 2016 also contracted the supply of directors but only marginally changed the demand for directors. In Chile, the risks (legal, reputational, or financial) of being a director and the director's average workload (i.e. committee tasks and responsibilities) increased, as it happened in the post-SOX environment and ergo, *ceteris paribus*, reduced the incentives to work as a director.⁷ Indeed, we find that the average number of boards per director significantly dropped from 2.4 in the period from 2005-07 to 1.8 in the period from 2017-19. The percentage of busy directors (directors who sit on more

⁶ ART 3, letter d), D.F.L. 211.

⁷ A Chilean press article from February 2019 would say: "If we compare it with 10 years ago, before if you invited any person to join a board, he/she would have accepted immediately without question. Today that has changed and probably 3 out of 5 people answer no", Luis Hernan Cubillos, partner and founder of Egon Zehnder Chile." Retrieved from: <https://www.pauta.cl/negocios/las-nuevas-tendencias-en-los-nombramientos-de-directores-en-chile>.

than one board) dropped from 53 to 39 and the percentage of super busy directors (directors who sit on more than four boards) fell from 15 to 6.⁸ Because of the associated risks, at the time it became nearly impossible to get local (D&O) insurance for directors.

The similarities of the Chilean case with the American one do not extend to the adjustments experienced by the demand for directors. Although in Chile, directors' workload increased, the average number of annual meetings of the so-called directors' committee (50-bis committee) significantly increased from 7.3 in the period from 2005-07 to 9.1 in the period from 2017-19, the Chilean reforms and external pressures did not impose the need for outside directors with the same determination as it happened in the post-SOX environment.⁹ Law 20.382 demanded for the first time that firms beyond certain market value as well as minority shareholder presence must have at least one independent director and the directors' committee should be comprised of as many independent directors as possible. Because the majority of firms did not have the legal obligation to pass the barrier of one independent director, their average presence on Chilean boards did not change when we compared data from the period of 2005-07 (16,2%) to the period of 2017-19 (16,3%). Even more, we find that Law 20.382 reduced the presence of independent directors as defined by the law.

We conclude that the events that hit corporate Chile in the period we study significantly increased directors' compensations and marginally reduced board sizes. Our estimations support a significant increase in all directors' compensations after Law 20.382

⁸ More than 45% of firms in our sample experienced a turnover of directors in any given year. Turnover is particularly high in the period from 2010 to 2016.

⁹ As documented by Linck *et al.* (2009) SOX + SRO imposed that: 1. The board of directors of each NYSE- and NASDAQ-listed firm must have a majority of independent directors. 2. Compensation and the nominating/governance committees must consist entirely of independent directors. 3. The audit committee must have a minimum of three members and consist entirely of independent directors.

and NCG 385 appeared in 2010 and 2015 respectively. Changes were most evident for committee members. While the average committee member was paid CLP 59.3 million between 2005-07, they were paid CLP 82.7 million between 2017-19, a 39.4% increase in real terms. Furthermore, while the compensation of the average director increased by almost 15% in 2010, it increased an additional 10% in 2015. In terms of board sizes, the only significant change took place in 2010 when it contracted by 15%. The average board size was 7.18 directors in 2005-07 and 7.26 directors in 2017-19. That is, almost no change, a strong contrast to what happened in corporate America post-SOX.

The meager adjustments in board sizes helped us realize that Law 20.382 had a series of effects that most likely were not expected and/or desired by the legislators who supported the law. The law had the intention of increasing the presence and relevance of independent directors but, as we have already mentioned, that did not happen. In addition, the law had the intention to potentiate the role played by the directors' committees, however, there was a noticeable reduction in the number of firms with director committees after the law was implemented.¹⁰ While in 2009 the percentage of firms without committees was 16.8%, that number increased to 28.7% in 2010 and consolidated to 30% in 2019! Although there can be more than one reason behind the decision of many firms to abandon the use of formerly mandatory committees, we believe that Law 20.382 made it too expensive. Unheard of in other jurisdictions, the law made firms pay committee members a third more than the total compensation paid to an ordinary director and required a special budget allocated to the

¹⁰ By 'committee' we refer to the committee required by Chilean law (50 bis) and not other committees (i.e., compensation, auditors, risk, evaluation) that firms might decide to utilize. The committee has key functions such as to present annual financial and strategic reports to shareholders, choose and evaluate auditors, gate keep transactions with potential conflicts of interests, make recommendations and decisions regarding top management replacements and compensations.

committee's operation.¹¹ That is, Law 20.382 not only increased the costs of running the board but also reduced the use of independent directors and 50-bis committees.

The final focus of the paper is to determine the potential effects of corporate scandals and/or soft-law reforms, over the composition and structure of Chilean boards. A-priori someone may expect that in a civil-law country, only a hard-law reform can generate significant changes upon behaviors because there are no legal precedents and soft-regulations are not embedded in the DNA of a formalistic country. The case of La Polar together with the enactment of NCG 385, without additional hard-law reforms, give us the opportunity to answer the question of interest. It is true that since FASA and Law 20.382 events have mounted to build a single continuous force that has shaped boards from 2010 onward, making causal identification more challenging. However, our capacity to isolate sources derives from the conviction that certain annual incremental (o detrimental) effects associated with corporate life could have only originated from some of the events we describe.

We find that committee's workload only increased in 2012, which is consistent with the major ripple effect that La Polar had over directors' awareness of their potential liabilities in legal disputes. We also find that board composition had significant changes in 2012 and/or 2015. The percentages of postgraduates, lawyers, internationals, and women at the board significantly increased. It is true that in some cases, particularly the presence of women on boards, La Polar and the new Codes only accelerated an ongoing trend. However, it is also true that the effects were not negligible and are in line with what other authors have found in the post SOX environment. The trend of increased diversity among board members is

¹¹ Art 50bis establishes that shareholders must approve the committee's individual compensation and budget which cannot be smaller than the 1.33 times the compensation of a regular director and the added compensation of all members of the committee, respectively.

supported by other trends such as the reduction in the number of boards per director and rotation (entries or exits) of directors.

Because other changes took place in the period we analyze, such as the sub-prime crisis or better/worse economic performance, we are careful about ruling out other possible explanations for our findings. In addition, we find slightly different behaviors in compensations when we split the sample in firms that do and do not belong to economic groups. We end by emphasizing three important lessons for firms and regulators. First, regulators should be more careful when anticipating the rational reactions to new regulatory requirements, which may lead to unwanted outcomes. Second, corporate scandals and soft-regulation do have the capacity to change the behavior of rational agents in a country where laws (hard-regulation) have been accepted as the predominant forms of shaping behavior. Third, our results suggest that the cost of running the same board after FASA and Law 20.382 is much higher. Our estimates are of an additional 146 million CLP only in the average annual board compensation. We do not say anything about the potential upside of new hard and soft regulations, not because we think there are none, but because it is difficult to quantify them.

Section 2 reviews the literature. Section 3 presents our data and candidly compares the corporate governance reality in Chile in 2007 with the same in 2017 (before and after the scandals and new regulations). Section 4 explains the events in more detail. Section 5 states our main hypotheses and questions. Section 6 derives the results which are discussed and extended in section 7. Section 8 covers robustness issues and section 9 concludes the paper.

2. LITERATURE REVIEW

Our article connects with two main strands of the literature. First, the literature that studies the market for corporate directors. We start by discussing what boards do, later we

discuss the supply and demand for directors; we end by summarizing the factors that affect the main board characteristics. Second, our paper also intersects with the literature studying the impact that given events might have over the market for directors. We first discuss corporate scandals, then the enactment of hard and soft regulations.

2.1 THE MARKET FOR CORPORATE DIRECTORS

What do boards do?

According to the comprehensive literature reviews of Adams *et al.* (2010) and Guest (2008), corporate boards have three main roles. First, they advise main executives. Second, they monitor the functioning of the company. Third, boards also help prevent or deal with company crises.

There is evidence as early as the 1970s that directors provide advice and counsel to the firms' top management (i.e., Mace 1971). Demb and Neubauer (1992) show that more than 65% of directors express that setting a strategic direction for the firm is one of their main tasks. Directors claim to be more committed to that job when compared to the likes of “monitoring top management”; “deciding on succession, hiring/firing top management” or “protecting shareholder interests”. More recently, Sievinen *et al.* (2020) and Chen *et al.* (2020) provide evidence on the advisory role played by independent directors in the context of Scandinavian and Chinese firms respectively.

According to the agency theory (Jensen 1986, 1993), the board also acts as a buffer that protects shareholders against intentional or unintentional misalignments in the objectives and/or decisions made by top managers. Although authors such as Mace (1971) and Lorsch and MacIver (1989) used to emphasize the passivity of the board, reality seems to have changed. Not only do MacAvoy and Millstein (1999) suggest that boards have become less passive, but due to their monitoring and inquisitive roles, the probability of a CEO dismissal

has increased over time (see Huson *et al.* 2001 and Kaplan & Minton 2012 among others) and the board is more involved in other critical decisions of the firm.

Finally, and as mentioned by Lipton *et al.* (2011), “corporate risk-taking and the monitoring of corporate risk remain top of mind for boards of directors, investors, legislators and the media....Risk management is not simply a business and operational responsibility of management—it is a governance issue that is squarely within the oversight responsibility of the board.” Note that the board not only has a role at preventing business, financial and/or legal crises but many times, they are central at managing them. In the case of business and financial crises, directors put at risk their own wealth. However, in the case of legal crises (i.e., violation of antitrust, corporate, securities or even criminal laws) directors also face the risk of being publicly stigmatized, legally fined, and even jailed.

Supply and Demand for Directors

The supply and demand for directors are shaped by the advisory, monitoring, and risk management roles of the board. The universe of potential directors, frequently called the “pool of directors”, is usually conformed by lawyers, corporate executives, and financiers (see Bolton & Dewatripont 2005). To these groups the literature adds, bankers, venture capitalists and political agents (see Adams *et al.* 2010). A potential director will be willing to take serve on a board if the offered compensation is superior to the effort associated with monitoring and advisory roles, and the potential losses he/she may suffer in the case of a company crisis. Directors are exposed to monetary (fines) and non-monetary (reputational harms) losses if they do not fulfill their legal responsibilities.¹² The effort made by a director will reduce the probability that a company faces a value-destroying event.

¹² Directors most frequently are exposed to corporate (i.e., due to the violation of fiduciary duties) and criminal (i.e., due to fraud or intentional appropriation of property) sanctions.

As for the demand for directors, firms internalize two elements. First, many regulations in the world impose a lower bound on the size of the board.¹³ Second, according to classic considerations of labor demand in professional markets (Ashenfelter & Card 2010) a company will demand directors up to the point in which compensation equals the advisory, monitoring and risk management benefits brought by the last member of the board.

An equilibrium analysis implies that shocks, scandals or regulatory reforms that increase the per-crisis expected loss faced by directors will contract the supply of directors but will have an unknown effect over the demand for directors. The supply effect is driven by an increase in the directors' effort in the form of more meetings, more preparation, and more work per meeting. The demand effect is driven by two forces, which act in opposing directions. While more capable directors will reduce the expected loss originated from a destroying event, fewer directors will be required to do the same job because each director will be more productive. Given that a-priori we do not know which of these two effects is greater, we cannot predict whether the demand will expand, contract, or remain unaffected.

Although not required to follow the rest of the paper, in an Online Appendix we present a simple model that formalizes the previous ideas about supply and demand for corporate directors and the impact that an external shock/event may have on them.

Main determinants of corporate board characteristics

There is a large body of international literature that studies the factors that might affect the composition and characteristics of corporate boards. As pointed out by Adams *et al.* (2010) among others, it is challenging to determine causality due to endogeneity problems. However, there are certain regularities that have been consistently documented.

¹³ The Chilean Corporate Law establishes that publicly traded companies require a minimum of 5 directors.

These regularities will be important for our econometric specifications, because of that in Table 1 we summarize them, distinguishing between international and Chilean evidence.

<<Insert Table 1 about here>>

2.2 DIFFERENT TYPES OF EVENTS

Corporate Scandals

Corporate scandals are intensively covered incidents associated with a firms' managerial wrongdoings. The wrongdoings might include legal (i.e. violation of laws and regulations), moral (i.e. non ethical behaviors) and ESG (i.e. negative economic, social or environmental impact) dimensions of the questioned behaviors. Although on a theoretical ground we should expect that these scandals can both directly (without the need of legal reforms) and indirectly (after a legal reform is enacted) impact the functioning of the market of corporate directors, there are few papers (which include Coffee 2005 and Utz 2019) that *systematically* study the effects of scandals. Most of the existing literature focuses on the implications of a particular scandal.

While the effects of the sequence Enron/WC/SOX have been broadly studied and it is the paramount example of a scandal followed by a major legal reform, the effects of scandals not followed by legal reforms have been more rarely studied. One of the few exceptions is the Siemens bribery scandal that occurred in Germany in 2006 and involved government officials in countries from all continents but Antarctica. Not for nothing Primbs and Wang (2016) call it the largest economic scandal in the history of the German Federal Republic. In a nutshell, since at least 1991, Siemens spent about 1 billion Euros in embezzlements and bribes all over the world to obtain contractual favors of all kinds.¹⁴

¹⁴ One of these contracts involved the license to set up the safety system for the Olympic Games in Athens 04.

As suggested by several case-studies that describe the scandal (see i.e., Rajiv *et al.* 2010 or Healy & Petkoski 2012) both the practices and the sanctions faced by Siemens' top managers very likely had tangible effects over corporate governance practices and the directors' market in Germany and other European countries. The 20 million Euros fine faced by six top executives of the firm in compensation for not having acted to stop the bribes despite having known about them could not have been ignored by the market.

Evidently there have been other corporate scandals in the U.S. and in the world beyond Enron which have been followed by major regulatory reforms. Just to mention some: the bankruptcy management by Swissair in 2001; the debt concealment by Italian Parmalat in 2003; the subprime instruments' management by American International Group, Bear Stearns and Lehman Brothers in 2008; and the abuse of "clawback" clauses by Australian Bankwest in 2008. However, to our knowledge the effects of these "combos" of scandals plus hard-reforms over the market for directors have not been systematically studied.

New Laws (Hard-Regulation)

SOX is the first example that comes to mind when we think about modern corporate legal reforms that significantly affected the market for corporate boards. Linck *et al.* (2009) show that corporate boards changed dramatically in the aftermath of SOX. As results from a simultaneous contraction of the supply and expansion of the demand for directors, directors' salaries and directors' seats (average board size) went up significantly. Because the position of directors became riskier and more demanding fewer individuals were willing to serve for the same pay. Simultaneously, because more tasks were required from directors, and the value of diversity as well as independence went up, the average board size increased.

The same authors, document that post SOX, boards met more frequently and the use of insurance as well as independent directors became more common. In addition, the pool of

directors changed. Not only did turnover increase but each director sat on fewer boards and the number of lawyers as well as financial directors on corporate boards went up.

In addition to the literature studying the effects of SOX, a number of papers have studied the impact of hard-legal reforms over corporate governance in other countries. Seki (2005) does it for Japan, Enriques and Volpin (2007) for European countries, Afsharipour (2009) for India and Black *et al.* (2019) for emerging markets.

New Codes (Soft-Regulation)

Thirty years after the introduction of the Cadbury Code in 1992, more than 91 countries have enacted corporate codes or equivalent bodies of soft-regulation in corporate governance. This trend in adoption has been encouraged by the broad acceptance of the comply-or-explain principle, under which firms are not obliged to implement suggested practices but inform whether they do, and in case they do not, explain why that is the case. While levels of compliance differ between developed and less developed countries, in both cases, the level of compliance has increased over time. More relevant for us, evidence of whether compliance has tangible effects on corporate value is mixed. While some authors find favorable evidence (i.e., Rapp *et al.* 2011, Rose 2016, Fernández-Rodríguez *et al.* 2004) others have not found significant results (i.e., Price *et al.* 2011) or have found that compliance is a formalism not translated into actual practices (see Bianchi *et al.* 2011).¹⁵

3. DATA AND EVIDENCE

We first explain the dataset that we use in our empirical analysis. Later we describe how corporate governance changed in Chile from the period from 2005-07 to the period from 2017-19.

¹⁵ Furthermore, while Conyon (1994), O'Shea (2005), and MacNeil and Li (2006) document that the Cadbury Code had positive effects over corporate practices in the U.K, Guest (2008) argues it had limited effects.

3.1. EXPLAINING THE DATASET

We work with the set of firms in which Chilean pension funds were allowed to invest in at some point between 2005 and 2019.¹⁶ This unbalanced panel, which oscillates between 120 and 134 firms per year, provides a representative sample of relatively large public firms in the Chilean market. The panel includes at least all the companies that belong to the most important local stock index (IPSA). Table 2 summarizes main statistics about these firms.

<<Insert Table 2 about here>>

Table 3 shows the number of firms per industry (2-digit-code) for years 2005, 2012 and 2019. The distribution shows little variation over time and the sample covers a total of 15 industries.

<<Insert Table 3 about here>>

Table 4 provides an aggregate view of the characteristics of the boards used in our econometric analysis. We manually collected data from firms' annual reports and shareholders meetings' reports. The sample is roughly the same for all variables (approximately 1,900 observations) with the exception of '# of 50-bis committee meetings' in which we only work with a subsample of firms that reported that information (947 observations). 'Compensations' is the result of adding four types of annual director compensation: 1) a monthly payment, that could be fixed or made per attendance to board meetings; 2) a variable compensation, as a proportion of net profits or dividends; 3) a 50-bis committee compensation, that could be fixed or per attendance to board meetings; 4) other compensations, including other committees' compensations or compensations related to additional duties.

¹⁶ In accordance with the minimum liquidity requirements established in art. 45, D.F.L. 3,500 and the Pension Fund Regime.

<<Insert Table 4 about here>>

3.2 CORPORATE GOVERNANCE, BEFORE AND AFTER

Compensations and Workload

Figure 1 shows the evolution of directors' compensations (president, vice-president, committee member, and ordinary directors) for the entire period analyzed. Figure 2 compares average compensation for the periods between 2005-07 and 2017-19.

<<Insert Figure 1 about here>>

<<Insert Figure 2 about here>>

While the average compensation for ordinary directors as well as for Presidents increased by 10%, the compensation for the committee members increased by 33%. While the compensation of a committee member used to be 1.32 times the compensation of an ordinary director in the period between 2005-07, that same ratio became 1.64 times in the period between 2017-19. That increment shows a strong contrast with the evolution of the ratio of compensations of the President relative to an ordinary director which only moved marginally from 2.26 to 2.32 after ten years. These statistics suggest that the compensation of the 50-bis committee members significantly increased in the period 2008 to 2016.

In addition, there are good reasons to believe that directors' workload increased in the same period. Companies started using committees (other than the one demanded by the law) more frequently. Although we do not have detailed information, responses from NCG 341 and NCG 385 reveal a higher use of auditing and risk management committees.¹⁷ Furthermore, anecdotal evidence suggests that directors were dedicating many more hours to

¹⁷ Godoy *et al.* (2018) report that at the end of the life of NCG 341, 68% of firms had a risk committee that reports directly to the board (up 7.3% since the norm was enacted). Novoa *et al.* (2022) find that after NCG 385, by the end of 2021 75% of firms had implemented an internal auditing unit (up 23% since 2015) and 67% had a risk-management unit (up 27% since 2015).

their duties on the boards in 2019 compared to 2009.¹⁸ In our database, we were able to document the number of annual meetings of the 50-bis committee for a subsample of 66 firms.¹⁹ Figure 3 shows the evolution of this statistic and reveals that a significant increase took place in 2012.

<<Insert Figure 3 about here>>

While on average the committee met 7.5 times per year in 2011, in 2012 that number increased to almost 9. For example, while Inversiones Siemel S.A.'s committee met three times in 2011, for the same company the committee met seven times in 2012.

Board Structure

Figure 4 summarizes the evolution of four key attributes of a board structure. These are: size of the board, percentage of independent directors, percentage of firms without a committee, and the number of boards per director.

<<Insert Figure 4 about here>>

The figures tell us that some of the board characteristics remained constant, but others changed in important ways. Within the first group, the size of the board, with about 7.2 directors, and the percentage of independent directors, around 16%. By contrast, within the second group, and rather surprisingly, the percentage of firms without the 50-bis committee increased almost 10 percentage points between 2007-09 and 2017-2019! Indeed, panel B suggests that the most significant effect took place in 2010, although the trend change would have happened in 2009. Figure 4 also reveals a reduction in the number of boards per director.

¹⁸ In the same article we quoted in footnote 7, Cubillos would add: "... Before, for a director it was enough to go to a lunch per month and make a smart comment regarding the economy and inflation that fulfilled his/her role. Today, companies expect much more from their directors; for example, they have to know the installations, and understand what is going on with the business".

¹⁹ There were 112 firms that had at least one meeting during the period.

While each director used to sit on 2.41 boards in the period from 2005-07, that number decreased to 1.82 in the period from 2017-19 (a 24% reduction). The declining trend started in 2009. Overall, the average director consistently sits on fewer boards every year after year since 2009.

Board Composition

We end the descriptive introduction of the data by showing main trends associated with board composition. Figure 5 shows the evolution of seven variables of interest. The first four relate to boards' dimensions of diversity. In all of them, we observe increasing trends, although of different magnitudes. While the percentage of women and international directors multiplied several times, 3.9 and 1.9 times respectively, the percentages of lawyers and directors with post-graduate studies increased more mildly. The two last variables shown by the figure corroborate the already mentioned trend of a reduction in the number of boards per director. Indeed, the percentage of busy directors reduced from 52.8% in the period 2005-07 to 39.3% in 2017-19. These trends are consistent with an increase in the percentage of boards that experienced at least one change (one entrance or one exit) in the span of 2008-16.

<<Insert Figure 5 about here>>

Overall, between 2007 and 2017 boards did change significantly regarding several dimensions such as compensation and committee members workload. It also suggests changes in the number of firms with 50-bis committees, the number of boards per director and in the composition of the board. However, there were other characteristics such as board size and presence of independent directors which did not change. Next, we document the main events that took place during the period from 2008-16 which, we believe, can explain these phenomena.

4. THE EVENTS

Considering the types of shocks that might affect corporate markets for directors, in this section we narrate four events that took place in Chile between 2008 and 2016. We first describe event 1 as the joint occurrence of the FASA scandal plus the new Law 20.382. Later we describe event 2 as the joint occurrence of the La Polar scandal plus the new soft regulation NCG 341. Next, we detail event 3 as the second soft regulation NCG 385. Finally, we describe Law 20.395 as a single new hard law. We focus on these events because we will argue that they structurally changed the market for corporate directors in Chile.

4.1 EVENT 1 (year 2010): FASA AND LAW 20.382

In January of 2008 different media sources (mainly TV channels and newspapers) informed the general public that the three largest Chilean Pharmacies (FASA, CV, SalcoBrand) might have been acting collusively by fixing the prices of 220 medications since the end of 2007.²⁰ After an investigation initiated in March of 2008, in December of 2008 the Chilean antitrust public prosecutor (FNE) presented charges against the Pharmacies.

While the collusive strain of the events had different endings for the three companies, as a whole, the market for corporate directors was shaken in July of 2009 by the decision of the regulator of the financial market and corporate societies (SVS at the time, now CMF) to sue FASA's directors for acting contrary to the dispositions of the Chilean corporate law (Law 18.046). On December 31st of 2009, SVS decided that the directors had violated their fiduciary duties for not having acted accordingly or informed themselves regarding the

²⁰ See for example: "Furiosos reclamos por potente salto en precio de píldoras anticonceptivas". *Las Últimas Noticias*, March 6, 2008.

collusion, condemning the Chair of the board and the other directors to pay fines of 1.500UF (US\$ 60.000) and 300UF (US\$ 12.000) respectively.²¹

The repercussions of FASA did not end with the aforementioned judicial sentences but also generated a substantial reform to the Law 18.046 incarnated by the enactment of Law 20.382 in October of 2009. Chapter IV of the Chilean corporate law, which regulates firms' management was importantly reformed. The most important changes included:²²

- Corporate boards of large firms are required to have at least one independent director (new Art 50bis).²³
- The definition of firms required to have a directors' committee, which is the same definition required by firms to have an independent director, becomes more restrictive than it used to be (new Art 50bis).²⁴
- The role played by the director's committee is strengthened by a required composition (if possible) of a majority of independent directors (new Art 50bis). In the case of only one independent director, she will be the person in charge of

²¹ Although directors appealed the SVS decision all the way to the Supreme Court, in December 2015 the Court confirmed the SVS's decisions and penalties imposed upon the directors. Public protests and a stock price drop of more than 10% followed the day in which FASA recognized its collusion and signed the agreement with FNE. In May of 2010, the Mexican group Casa Saba bought FASA which was followed by an additional change in property in 2014 that lead FASA to be owned by Walgreens Boots Alliance, which remains until today.

²² Also, at that time the Chilean securities market law (18.045) was reformed. Those reforms included an increment in the information that firms have to provide to its shareholders, regulators and the market and a more involved role of the Securities Regulator at promoting transparency in financial operations.

²³ Before the law 20.382, public firms were not required to have independent directors although its legal figure already existed. As defined by the old Art 50bis, an independent director is a director that would have been elected even after subtracting the controller's, or controller's related, votes. The new Art 50bis established clear conditions under which a director could not be independent (a number of commercial, economic, financial, professional and family relations either with the top management, controllers or the company itself).

²⁴ Before the law 20.382, all firms with a market value larger than a certain threshold were required to have a committee. With 20.382, the committee was required for all the firms with a market value larger than the same threshold *and* in addition with minority shareholders' participation above 12.5%.

electing the rest of the committee members.²⁵ The committee's role is also strengthened by the required allocation of additional resources.

- The minimum compensation of a member of the committee is set equal to 4/3 of the compensation received by a regular director (new Art 50bis).²⁶
- The role played by the President of the board of directors is weakened by a restriction that prohibits his/her presence on the committee unless he/she qualifies as independent (new Art 50bis).
- The directors' role at preventing the leak of material information is increased (new Art 46), and the standard of operation of the board is refined (new Art 48). For example, unless unanimously opposed, sessions must be recorded.
- The restrictions, considerations, and potential liabilities associated with transactions with related parties are revamped (new Art 44 and new Chapter XVI).

Overall, the changes introduced by law 20.382 increased the formal standards in the functioning of corporate governance in Chile in ways not seen since the enactment of Law 19.705 in 2000, which created the committee of directors and regulated transactions with related parties for first time.²⁷ Unlike the changes introduced by Law 19.705, which marked first steps, the changes introduced by Law 20.382 pushed corporate governance practices to levels more comparable to developed market standards. Indeed, Law 20.382 was part of a set of reforms introduced by the Chilean government to favor its acceptance in the OECD.

²⁵ In general, independent directors became more relevant. For example, an independent director vacancy must be filled by the non-elected independent director who had the second highest number of votes (new Art 32).

²⁶ Before law 20.382, the committee member compensation was not explicitly defined. There seems to have been some initial confusion regarding the basis for applying the 4/3 multiple. Over time it became clear that the basis includes both fixed and variable payments to ordinary directors, not just the fixed fraction.

²⁷ Law 19.705 not only regulates IPOs and SPOs but also improves regulation associated with corporate governance. The enactment of this law was significantly motivated by what has been called the Chispas case.

Bustos *et al.* (2012) provide more details associated with the landmarks in the sequence FASA and Law 20.382. Because our empirical analysis will be performed with annual data, we will call the first event FA_382.

4.2 EVENT 2 (year 2012): LA POLAR AND NCG-341

In June of 2011 it became publicly known that the retailer La Polar had irregularly managed its accounting for credit card receivables. Specifically, for more than five years a group of executives had been unilaterally renegotiating the financial obligations of a large number of clients, increasing their credit availability despite having defaulted on their credit card loans, without recognizing any credit losses and increasing sales based on credit that would not be paid back, pushing up the valuation of the public firm. The scandal drove the equity value of the company to negative US\$180 million, implied a market capitalization drop of nearly US\$1 billion, pushing the firm to the edge of bankruptcy.

Motivated by a generous system of incentives in place since the end of the 1990s, La Polar's top managers targeted sales and credit to low and middle-income segments of the retail market.²⁸ Within this credit system, most sales were financed with credit card debt, which allowed the firm to grow consistently. But, as explained, a large part of this growth had been financed by a scheme in which the company renewed credit card loans without consent. Although the board of directors and its committee were informed monthly about the firms' economic performance, portfolio analysis and risk management were rarely discussed during the board sessions.

While the first of many lawsuits were filed by the Chilean National Consumers Service (SERNAC), in July of 2011, legal actions continued with SVS suing 18 La Polar

²⁸ Based on share ownership, La Polar's CEO earned more than US\$5 million and La Polar's CMO, more than US\$ 1.5 million because of the firm's IPO in 2003 (see Koljatic & Waitzer 2016a).

(former) directors and (former) managers together with its auditor Pwc and the Pwc partner in charge. Charges included violations of the securities law (18.045) and the corporation law (18.046), including violations of fiduciary duties, conflicts of interest and false disclosure of information.²⁹ In March 2012, the SVS sanctioned 22 former La Polar directors, Pwc, and the Pwc partner in charge with fines that reached a total of US\$57 million.

The ripple effects of the corporate scandal were profound on several dimensions, especially in what relates to the definition of a director's obligations. As stated by Koljatic and Waitzer (2016a), "the decision of the SVS to punish former directors of La Polar ... sparked an intense debate about the responsibilities of directors of publicly held corporations in Chile." Several Chilean universities created specialized corporate governance centers, the press invigorated its coverage of corporate governance related topics and different institutions as well as experts participated in discussions regarding tasks, compensations, obligations, and risks faced by modern directors.

As it happened with FASA, the repercussions of La Polar included the introduction of a new law: Law 20.552's aim was to improve competition in financial markets. However, the changes that law brought to corporate governance standards were minimal.³⁰ More relevant to the evolution of corporate governance standards, La Polar pushed the Chilean regulator at the end of 2012 to introduce for the first time in the country a self-regulatory corporate governance code: Norm NCG 341. Using the comply-or-explain principle, this norm was meant to induce firms to reveal and explain to the market their annual levels of compliance regarding three dimensions of best corporate governance practices: 1.

²⁹ In addition, there are records of more than 500 shareholder lawsuits. See Koljatic and Waitzer (2016b).

³⁰ The only change in law 18.046 was a reform of Art 76. Public firms were required to reveal their financial and auditing information to regulators, investors, and the market, including eventual changes introduced after the shareholders meeting, in a more detailed and precise way than used to be before the new law.

Functioning of the board (i.e., induction to the board; relationship with the auditors); 2. Relationship with shareholders (i.e., remote voting; investor relations); 3. Compensations and risk management (i.e., risk management policies; whistle blowing mechanisms).

For many, in the Chilean market for corporate directors there is a before and after La Polar. A newspaper article from June of 2014 captures this feeling: “the task done or not done by directors (in La Polar) made it clear that they were not involved enough in the decisions of the firm. Since then... the search for executives (who can be directors) became more thorough. For example, AFPs outsourced it”. The President of Seminarium (Human Resources Consulting), Rafael Rodriguez, explains “directors became aware of the importance that they have their own opinion instead of following what the controlling shareholder says”. He would add “this has led directors to ask for more information and the firms to produce it. On this matter, there is a before and after La Polar”.³¹

Koljatic and Waitzer (2016a, 2016b) describe in more detail the most important events in the sequence of La Polar and norm NCG 341. We denote the second event LP_N341.

4.3 EVENT 3 (year 2015): NCG-385

Academic studies (i.e., Godoy *et al.* 2018) reveal that the impact of NCG 341 was below expectations. The norm did not generate noticeable changes in firms’ decisions and the explanations that firms provided for their answers were standardized and uninformative. Because of this, in 2015 SVS replaced NCG 341 with NCG 385, which was the self-regulating body in place until 2020 (whose results were to be reported in 2021).³²

³¹ “El antes y el después del caso La Polar en la industria financiera”, La Tercera, June 3, 2014. Retrieved from: <https://www.latercera.com/pulso/el-antes-y-el-despues-del-caso-la-polar-en-la-industria-financiera/>

³² In November of 2021, the CMF announced that NCG 385 will be replaced by NCG 461 starting in December of 2022 to be reported in 2023.

As with the previous norm, NCG 385 aimed at leveling Chilean standards of corporate governance practices with international standards. In addition, it intended to provide firms the flexibility to adjust their practices to their particular realities and to also foster information dissemination among investors, shareholders, and even managers. NCG 385 expanded the 19 questions asked by NCG 341 to 99 questions regarding the same dimensions of corporate *governance that were covered in the old norm, plus a significant number of new ones*. More recent work has found evidence that the new norm significantly changed firm behavior. While Novoa *et al.* (2022) document that the most important changes can be associated with ESG and risk management practices, Bustos and Walker (2022) show that, after 2015, the adoption of best practices followed a diffusion process in which firms basically mimicked what others were doing, presumably with the desire to avoid triggering value-destroying events. We call this third event, N385.

4.4 EVENT 4 (year 2017): LAW 20.945

In the context of a law project presented to Congress in March 2015 with the objectives of i) discouraging collusions; ii) better controlling the impact of M&As on competition; iii) providing regulators with more effective tools to prevent and/or detect anticompetitive behaviors; and iv) refine sanctions applicable to wrongdoers, legislators added a text in an attempt to discourage horizontal interlocking. The text included: “The simultaneous participation of a person in relevant executive positions or as a director in two or more competing companies, provided that the group business to which each of the aforementioned companies belongs has annual income for sales, services, and other activities of the business that exceed 100.00UF (US\$ 3.7 million approx.)... will be considered as facts, acts or conventions that prevent, restrict or hinder free competition”.

In addition, Law 20.945 re-instated (it used to exist until 2003) criminal sanctions to colluders. The law set a base sanction of one year of effective incarceration. Law 20.945 was promulgated in August 2016 and, in what refers to interlocking, became enforceable in 2017. We call this fourth event, L20.945.

5. HYPOTHESES AND MAIN QUESTIONS

Our previous discussions suggest that the sequence FA_382/LP_N341/N385/L20.945 increased directors' risk and workload. That is, the supply of directors was contracted (fewer individuals were willing to work for the same compensation). Our discussions also suggest that the sequence FA_382/LP_N341/N385/ L20.945 did not have a significant effect on the demand for independent directors. In addition, if the increase in workloads was large enough, then the demand for directors increased, although mildly. Figure 6 captures the suggested movements in supply and demand and leads us to formulate our first two hypotheses.

<<Insert Figure 6 about here>>

Hypothesis 1: Director's compensations increased with FA_382. In addition, it increased again with the other events (LP_N341, N385 or L20.945).

Hypothesis 2: Board size did not change or decreased with FA_382.

Furthermore, if the profession became riskier and more demanding, then some directors would have rationally decided to participate on fewer boards. Although there is the open question of whether the effect was strong enough to make a difference with events FA_382, LP_N341, or N385, we expect to find a significant reduction with Law 20.945 as that was a hard-law imposition. Based on this, we state a third hypothesis.

Hypothesis 3: The average number of boards per director reduced with Law 20.945 and was either reduced or remained the same with the other events (FA_382, LP_N341 or N385).

Together with the previous hypotheses, in which we test clear-cut outcomes we formulate additional questions whose answers a-priori are not clear:

Question 1: Did FA_382 change the structure of boards? In particular, did FA_382 change the presence of independent directors and/or the use of committees?

Question 2: What changes, if any, did LP_N341 generate?

Question 3: What changes, if any, did N385 generate?

While question one will allow us to determine whether Law 20.382 generated unexpected results, questions two and three will allow us to answer whether scandals and/or soft-reforms, by themselves, are able to generate significant changes regarding boards.

6. EMPIRICAL RESULTS

Table 5 summarizes our main findings. Tables 6-16 show the results of specific regressions. First, we discuss the results in connection with our hypotheses and questions. We then provide details on the econometrics behind the estimations and discuss other findings.

<<Insert Table 5 about here>>

6.1 MAIN FINDINGS

As we stated in Hypothesis 1, we find that the event FA_382 significantly and positively impacted directors' compensations. The detail of our estimations will reveal that not only the payoff of all directors increased by 13.3% with FA_382 but the compensation of the members of the 50-bis committees increased an additional 8.4%. Even more, we find that the event N385 also significantly increased directors' compensations, this time by 12.6%.³³ The other two events did not have significant effects on compensations. However,

³³ Although the cross-effect for Vice-presidents ('VPs') with N385 is -10.6% the aggregate effect for VPs is still positive.

because we estimate compounded effects, the effect of FA_382 lasted from 2010 to 2019 and N385 had incremental effects from 2015 on.

Our estimations regarding the size of the board, Hypothesis 2, revealed that only LP_382 had a significant impact which meant a reduction in the number of members of the average Chilean board. The reduction was of 0.15 directors. Our estimations do not find a significant effect associated with the rest of the events. That is, in meaningful numbers, the average board size remained approximately at 7 directors.

These two results are consistent with our hypothesis that the supply of directors decreased and the demand for directors did not change or increased only marginally, because of the sequence of events we have discussed throughout the paper.

One of the strongest effects found is that the number of boards per director significantly decreased with all the events. If we consider compound effects, after 2010, the index reduced by 0.1 and after 2017 by 0.53. That is, after eight years of events, on average, for every two directors who used to sit on two boards, one of them left one board. This firmly supports Hypothesis 3. Some might argue that the reduction of busy directors might have been an ongoing trend, but our results show that scandals and reforms, as a single force, accelerated this trend.

Did Law 20.382 trigger noticeable changes in the structure of the board? At least in terms of the presence of independent directors and the percentage of firms not using the 50-bis committee, the answer is yes.³⁴ That along with the aforementioned findings in which board size and the presence of busy directors decreased after 2010.

³⁴ As mentioned before, there was a change in the legal definition of an independent director. Although we were not able to build a series of independent directors with a common definition (pre and post 2009) we believe that the regression of the number of independent directors, as defined by the law, has the value of capturing the firms' decision to include independents directors as requested by the law at each point in time.

As for the impact of LP and the NCG regulations, our estimations support some clear findings. First, the only event which had a significant impact over the number of meetings held by the 50-bis committee was LP_N341 and was incremental. Our estimations reveal that starting in 2012, this committee held an additional meeting per year. We did not find effects associated to the other events. Second, N385 had a slightly significant impact in the renovation of board members. Director turnover increased in 2015 by 20%. It is true that the change was even stronger with FA_382 but that included a hard-law reform, so we cannot reject that the introduction of the second body of soft-regulation also importantly affected the renovation of Chilean boards. Third, LP_N341 and N385 were the events that most significantly impacted the composition of boards. Very likely, in some cases, such as the percentage of women, trends predate the events we study, but in other cases such as the percentage of internationals, lawyers and professionals with postgraduate studies, the events from 2012 and 2015 had statistically significant effects, although small in their size (in 2015, the presence of internationals and lawyers increased by 2% and 1.5% respectively).

6.2 ECONOMETRIC ESTIMATIONS

Consistent with the different set of observations, we deal with four types of estimations. First, in order to determine the effects of over compensations we use OLS. The sample consists of an unbalanced panel using a vector of four types of directors (President, Vice President, Committee Member and Ordinary) for 137 firms covering the period from 2005-19. We estimate the following equation.

$$\ln(\text{compensation}) = f(\text{FA_382}, \text{LP_N341}, \text{N385}, \text{L20.945}, \text{President}, \text{VP}, \text{Committee}, \text{Board size}, \text{AFP board}, \text{Controls}_{t-1}, \text{Firm fixed effects}) \quad (1)$$

Compensation is the result of adding four types of director compensation as we explained before. The independent variables include *FA_382*, *LP_N341*, *N385*, *L20.945* which are the event dummies; *President*, *VP* and *Committee* are the director-type dummies (ordinary director is the base case), *Board size* is the number of directors on the board in a given year, *AFP board* is the percentage of directors elected by pension funds.³⁵

Under the assumption that firm characteristics do not vary over time, we include firm fixed-effects to control for unobserved firm-level heterogeneity. Firm fixed-effects will address the concern that omitted variables, or any other time-invariant firm characteristic is driving our results. This specification may reduce the explanatory power of our control variables, but it should not impact our estimates of the effects of the events, which is essentially a time-series prediction. We also perform robustness checks including industry fixed effects and control for firm-level clustering. Results of these other specifications don't alter our conclusions with respect to the impact of the events.

<<Insert Table 6 about here>>

Table 6 presents the results from (1). While column (iii) has industry fixed effect, column (iv) has firm fixed effect, columns (i) and (ii) do not have fixed effects. We consider regression (v) our main regression because in addition to firm fixed effects, we incorporate crossed effects between event 1 and director type. We only report the crossed effects that were significant at least at the 90% confidence level. As we already mentioned, both events 1 and 3 had a significant effect at the 99%, over all directors' compensations. Also, event 1 had an additional significant effect, at the 95%, in the case of committee members.

³⁵ Controls include variables such as *ROE* which is the company's returns on equity, *Total assets* which is the book value of total assets, *Leverage* which is the book value of debt divided by book value of equity, *Economic growth* which is the real GDP growth rate.

To determine effects over the structure and composition of the board we once more use the OLS specification. The sample consists of an unbalanced panel for 143 firms in the period from 2005-19. We estimate the following equation:

$$\text{Characteristic} = f(\text{FA_382}, \text{LP_N341}, \text{N385}, \text{L20.945}, \text{AFP board}, \text{Controls}_{t-1}, \text{Firm fixed effects}) \quad (2)$$

Characteristic can be any of the following variables: board size, number of boards per director, director turnover, and the percentage of independent, women, international, post-graduated, lawyers and busy directors on the board in a given year. We use the same *FA_382*, *LP_N341*, *N385*, *L20.945* event dummies and the control variables described before. We also include firm fixed-effects.

<<Insert Tables 7-9 about here>>

<<Insert Tables 12-16 about here>>

Tables 7 through 16 with the exception of Tables 10 and 11, are versions of formulation (2) with different dependent variables (*Characteristic*). In all the estimations we consider our main regression to be the one with firm fixed-effects (the last column). While the results in Table 7 corroborate that *FA_382* significantly reduced the size of the boards and the other events did not, results in Tables 9 and 11 confirm that all events pushed directors to sit on fewer boards and *FA_382* reduced the use of independent directors, respectively. In addition, Table 12 shows that Law 20.945 generated significant director turnover. The set of results summarized in Tables 13-16 document variations in the composition of the board. They corroborate that the most significant effects were triggered by the introduction of soft-regulation bodies (NCG341 and NCG 385). The exception was the presence of women which had additional significant increments at the times of the events 1 and 4.

Third, Table 10 shows the results from estimating the effects of the events on the likelihood that a firm has a 50-bis committee. Using the database of an unbalanced panel of firm-year for 143 firms in the period 2005-19 we formulate the next Probit estimate.

$$Firm\ has\ a\ committee = f(FA_{382}, LP_{N341}, N385, AFP\ board, Controls_{t-1}, Firm\ fixed\ effects) \quad (3)$$

<<Insert Table 10 about here>>

"*Firm has a committee*" is a dummy variable that takes the value of 1 if the firm has a 50-bis committee in a given year. We use the same event and the control variables as before. The last column of Table 10 shows that both events 1 and 4 generated a significant drop in the probability that a firm has a 50-bis committee.

Finally, using the sub-sample of an unbalanced panel for 98 firms in the period from 2005-19, we estimate the following equation to determine the effects over directors' workload.

$$Workload = f(FA_{382}, LP_{N341}, N385, L20.945, AFP\ board, Controls_{t-1}, Firm\ fixed\ effects) \quad (4)$$

<<Insert Table 11 about here>>

Workload is the number of annual meetings of the 50-bis committee in a given year. The last column of Table 11 presents our main results. It shows that the only event that generated a significant change in Workload was LP_341.

7. DISCUSSION AND EXTENSIONS

In addition to findings that support a structural change in the market for corporate directors, we uncover a number of additional results. In terms of compensations (Table 6) we find that Presidents earn significantly more than ordinary directors. Our estimations speak of

80% more over the whole period. Consistent with the fact that Law 20.382 imposed that Presidents should not be part of the 50-bis committee, their compensations did not change with event 1.³⁶ In addition, our estimations reveal that vis-a-vis, larger companies (Ln(total assets)) or companies with more presence of independent directors elected by pension funds (AFP board) pay directors more.³⁷

Table 7 shows that the board size increases with the size of the company (Ln(total assets)) and the presence of pension funds (AFP board). Table 8 tells us that firm or industry characteristics are not behind the number of boards per director. In addition, all events significantly impacted this variable, always considering fixed effects. Results from Table 9 corroborate some expected correlations. Larger firms and firms that have the presence of pension funds are more likely to have independent directors. The first result was previously documented (see Table 1) and the second result confirms that AFPs have been the main force behind independent directors in Chile.

Tables 10 and 11 tell a common story linked to the size of companies. Table 11 reveals that the boards of large companies work more, at least measured by the number of meetings its committee has. If we add the finding that larger companies pay its committee members more, it follows that whenever they can, larger companies will eliminate these committees. That is captured in Table 10, larger companies were more likely to drop its 50-bis committee, if allowed by the law. A firm above the 50th percentile of our sample in terms of total assets was 15.6% more likely to drop its 50-bis committee after event 1 if allowed to. Finally, our estimations regarding the board's composition (Tables 13-16) suggest that the increase of lawyers and/or directors with post-graduate studies is sensitive to the industry.

³⁶ Indeed, the interaction between Law 20.945 and the President is negative but not significant.

³⁷ This result has to be taken with prudence as there might be reverse causality issues.

7.1 EXTENSIONS

We first analyze the impact of the events on the director's committee, mandatory only for certain firms. As explained, while in 2009 the percentage of firms without a committee was 16.8%, that number increased to 28.7% in 2010 and consolidated to 30% in 2019. Although there can be more than one reason behind the decision of many firms to decide to dismiss the use of these committees, it is worth considering the commonalities and the cost saved by the firms that dropped their committees after the event FA_382.

Table 17 compares the characteristics of the firms that eliminated their committee in 2010 with the characteristics of those that did not, pre and post FA_382. We notice that firms that dropped the committee are smaller, riskier, more concentrated and provided lower rates of compensation than firms that kept it. Additionally, we find that post FA_382, firms that eliminated the committee decreased their annual compensation by an average of 69 million CLP. Instead, firms that kept their committee increased their annual board compensation by an average of 77 million CLP. Hence, compensations associated with a committee after FA_382 increased by an average of 146 million CLP annually.

<<Insert Table 17 about here>>

Figure 7 compares the evolution of average board compensations for firms that eliminated or kept their 50-bis committee before and after FA_382. Trends are similar before the event however, the difference between compensations increases over time after the event.

<<Insert Figure 7 about here>>

Although the sample of firms that dropped the committee is small, we utilize a difference-in-differences approach to identify effects. Our estimations (shown in Table 18) confirm the intuition uncovered by figure 7. That is, they reveal that the diff-in-diff board

compensation after FA_382 was almost 20% (18%) lower than what they would have paid if they kept their committees.

<<Insert Table 18 about here>>

We also take a closer look at the importance of pension funds. Pension funds have been not only the main institutional investors in Chile but also the main force behind independent directors on boards. Our results (Table 1A in the Online Appendix) confirm that firms with pension fund presence are more likely to have independent directors. We also find that independent directors associated with AFPs are more likely to have postgraduate studies.

To end this section, we study differences in the impact of the events by dividing the sample into companies affiliated with business groups and companies which were not. There is significant evidence throughout the world showing that group affiliation increases board compensation. As in many other countries, Chilean companies have both high ownership concentration and high percentages of group affiliation (Lefort & Walker, 2000).

Figure 8 reports the average board compensations for group and non-group affiliated companies and shows that board compensation for group affiliated companies is higher than non-group affiliated, however, the difference becomes smaller over time.

<<Insert Figure 8 about here>>

Table 19 replicates our main compensation regression after splitting the sample into group- and non-group-affiliated companies. We find similar results in both subsamples when we distinguish by type of director but have slightly different results when we distinguish by event. In the sub-sample of non-group affiliated companies, FA_382 loses significance and N385 becomes negative. The crossed effect between N385 and director type in the non-group affiliated companies seems to be the reason why we find this same effect when we analyze the whole sample.

<<Insert Table 19 about here>>

8. ROBUSTNESS

In the type of econometric analysis we carry out here, essentially a time-series estimation, concerns about endogeneity arise because of omitted firm characteristics, for example in compensation decisions or board composition. Whenever possible, we use firm fixed-effects to address this concern. Fixed-effects may reduce the explanatory power of our control variables, but should not impact our estimations. Although frequently we also report results without firm fixed-effects, we mainly focus on the results with them.

Another concern is reverse causality. It is plausible that firm performance or firm size affect director compensation or board composition and vice versa. We address this problem by using a one-year lag in the control variables when we think this could be a problem.

We also test whether recovery from the global recession caused by the subprime crisis could have been the cause of the wage increase we find in 2010. We run regressions excluding 2008 and 2009. The results, presented in the Online Appendix (Table 2A), suggest that this is not the case and ergo our results are not a consequence of these years in particular.

Regarding the timing of the events, we considered that N341 was introduced in 2012. However, the Chilean regulator enacted N341 at the end of 2012 and implemented it only in March 2013. Therefore, we study the effects of assuming that this norm was a different event from La Polar. Our results, summarized in the Online Appendix (Table 3A), suggest that this alternative definition of event 1 does not alter our main findings.

Lastly, we check whether the compensation effects we find here could be linked to pre-existing trends in the market or firm performance. To do that, we estimate the impact that the events might have had on two variables of interest: (i) dividends and (ii) ROE. We find

that the events we consider in this paper do not affect either of these two variables (see Table 4A in the Online Appendix) and therefore rule them out as potential sources of co-causality.

9. CONCLUSIONS

We study the effects that scandals and new regulations might have on the market for corporate directors. While we show that, like Enron/WC/SOX, the events that took place in Chile in 2009 increased corporate directors' compensations permanently, unlike Enron/WC/SOX, they did not have a noticeable effect on board sizes. In addition, we document that the new hard regulations that followed these events had several unexpected and unwanted effects, and new soft regulations, also introduced after these events, accelerated transformations in the composition of Chilean corporate boards.

More research is needed to better understand the link between scandals/regulation and the operation, structure, and composition of corporate boards. This research should not only focus on gathering more evidence but also on developing a theoretical framework, which could be used to explain the observed directors' and boards' reactions to changes in levels of risk and responsibilities triggered by the sort of events we document in this paper. Overall, we expect to have contributed to the literature committed to improving the functioning of corporate boards worldwide and especially in emerging markets, where ownership concentration is ubiquitous.

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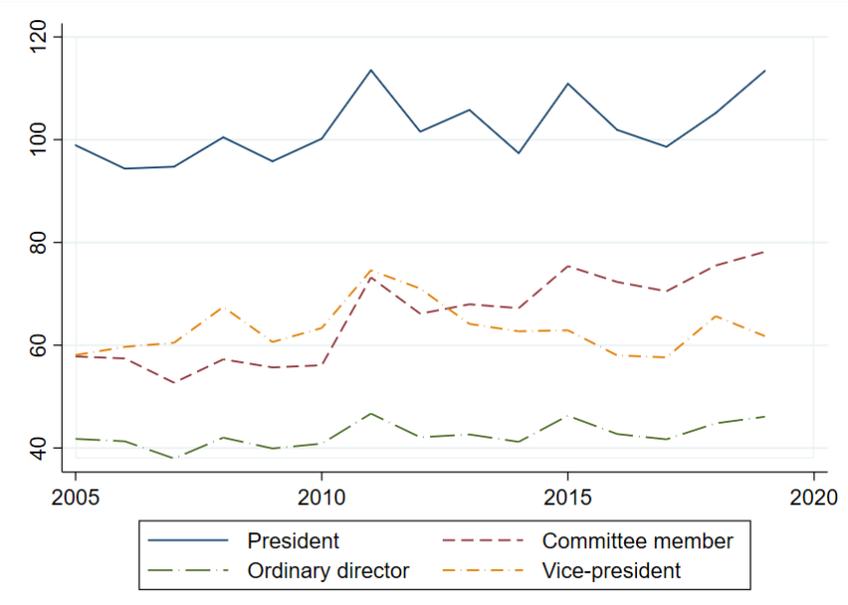
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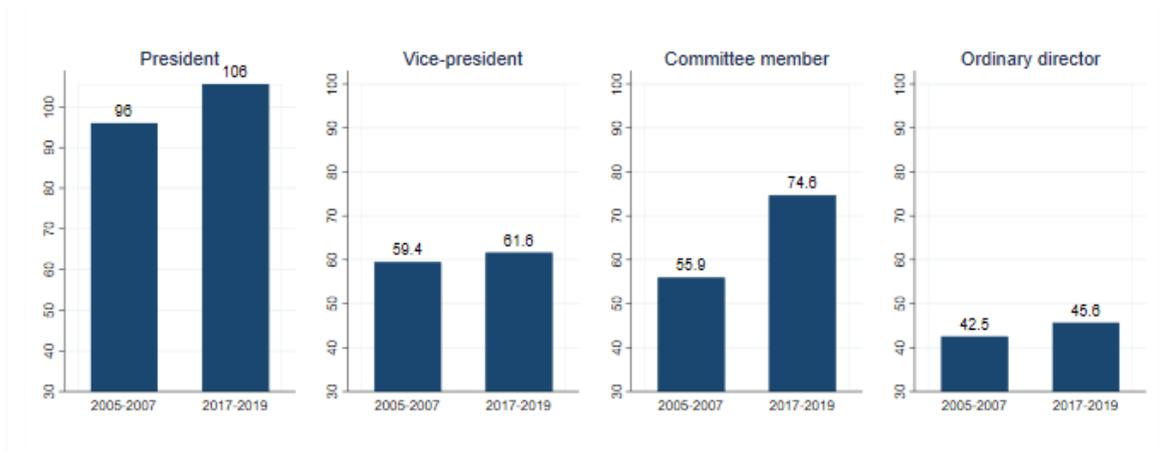
FIGURES

Figure 1. Firm-level evolution of directors’ compensations



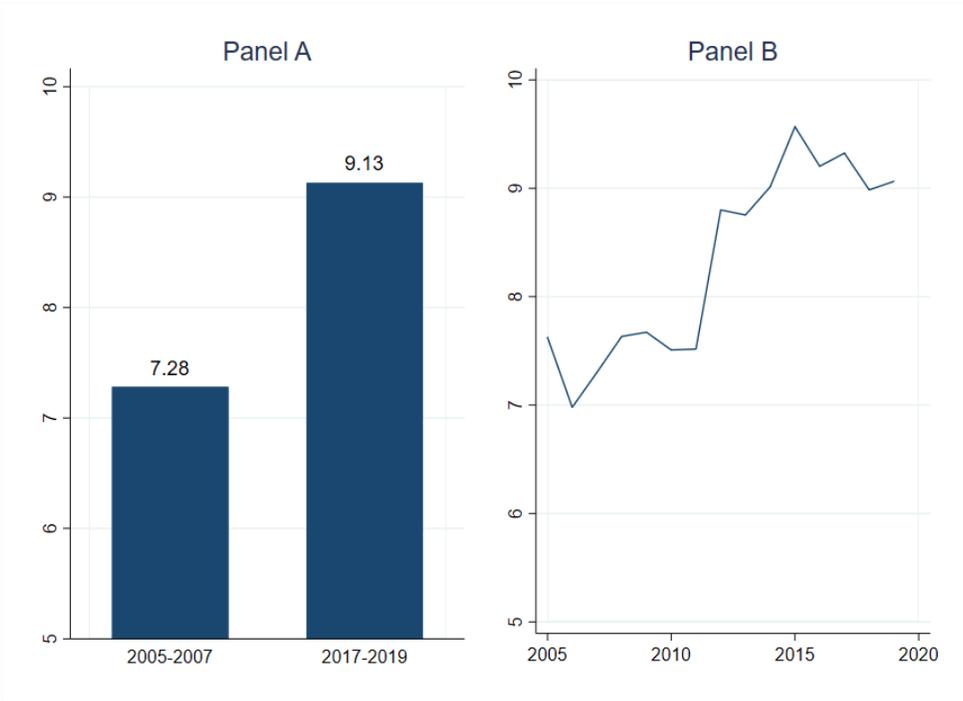
The figure reports the trend of firm-level directors’ compensations (president, vice-president, committee members, and ordinary directors) for the period 2005-2019. Compensations are the result of adding four types of annual director compensation: a monthly payment, which could be fixed or per meeting attendance to board meetings; variable compensation, as a proportion of net profits or dividends; 50-bis committee compensation, that could be fixed or per attendance to board meetings; other compensations, including other committee compensations or compensations related to additional duties. Values are in constant 2019 CLP millions.

Figure 2. Firm-level evolution of directors' compensations



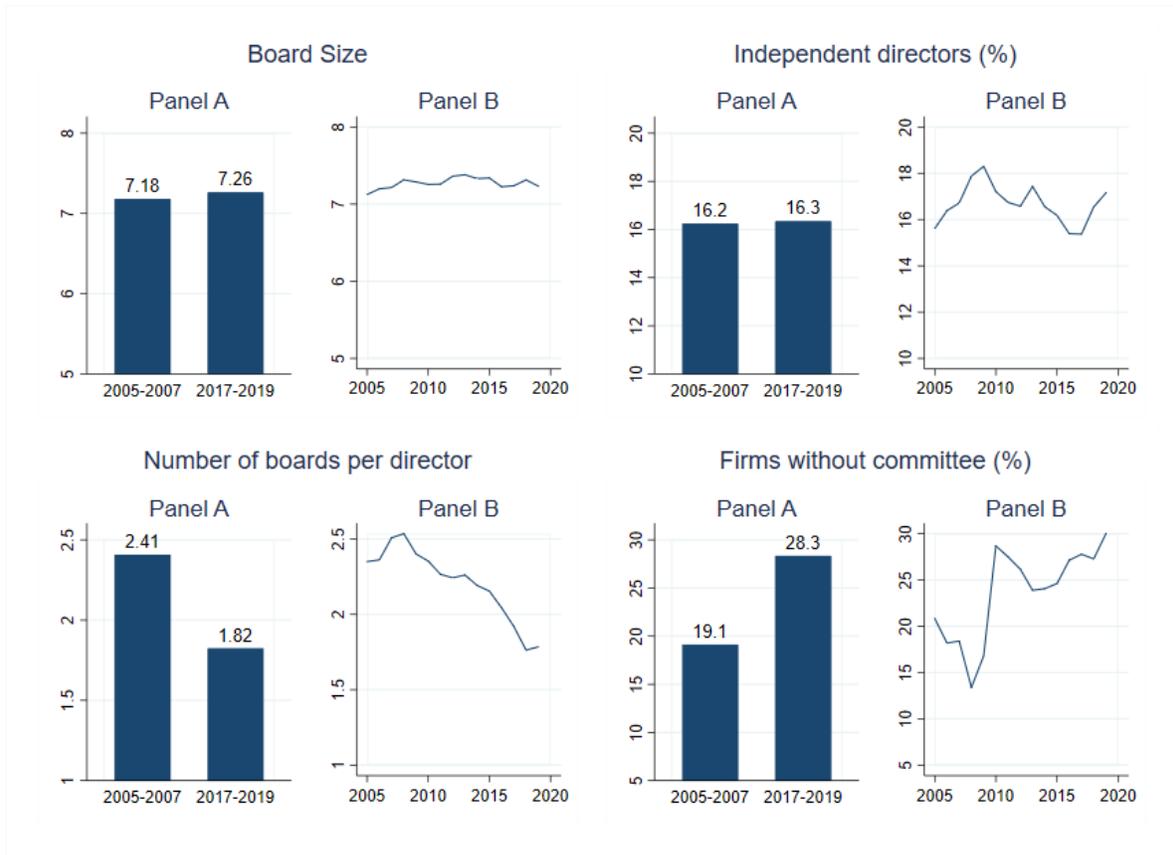
The figure reports the comparison of average directors' compensations (president, vice-president, committee members, and ordinary directors) for the periods from 2005-07 and 2017-19. Compensations are the result of adding four types of annual director compensation: a monthly payment, which could be fixed or per attendance to board meetings; variable compensation, as a proportion of net profits or dividends; 50-bis committee compensation, that could be fixed or per attendance to board meetings; other compensations, including other committee compensations or compensations related to additional duties. Values are in constant 2019 CLP millions.

Figure 3. Evolution of the number of annual meetings held by the 50-bis committee



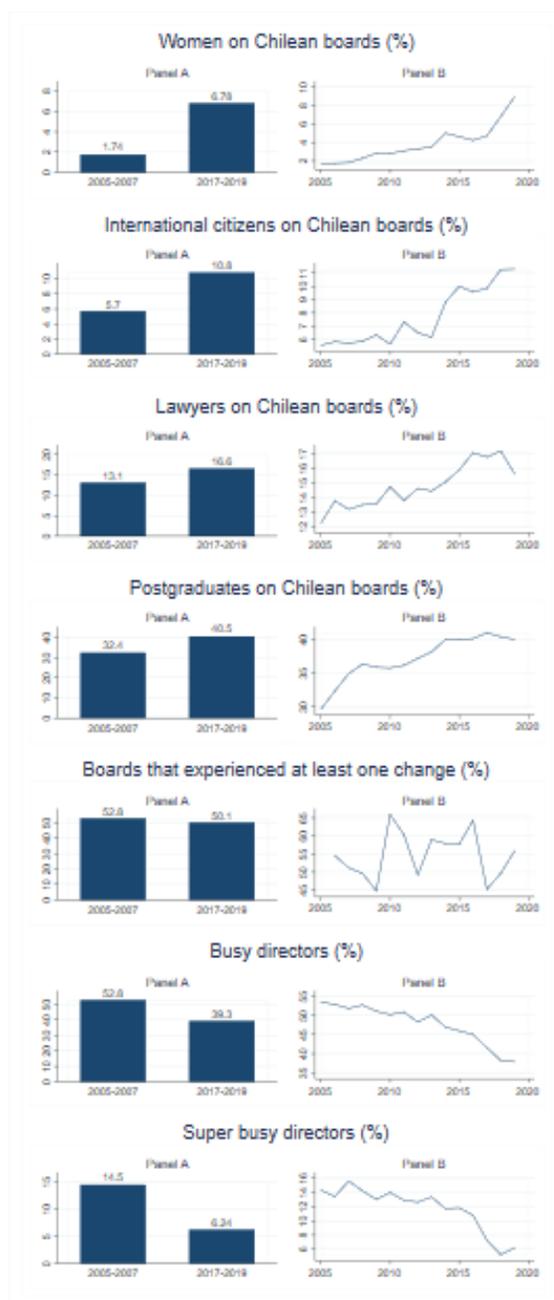
The figure reports the evolution of the number of annual meetings held by the 50-bis committee. Panel A compares the averages for the periods from 2005-07 and 2017-19. Panel B shows the trend over the entire period. The sample is composed of an annual average of 66 firms. There were 112 firms that had at least one meeting during the period.

Figure 4. Firm-level evolution of the board structure



The figure reports the evolution of four key attributes of a board structure. Panel A shows the comparison of averages for the periods from 2005-07 and 2017-19. Panel B shows the trend over the entire period. ‘Board size’ is the number of directors on the board. ‘Independent directors (%)’ is the percentage of independent directors on the board. ‘Number of boards per director’ is the number of boards per director. ‘Firms without 50-bis committee (%)’ is the percentage of firms without a 50-bis committee.

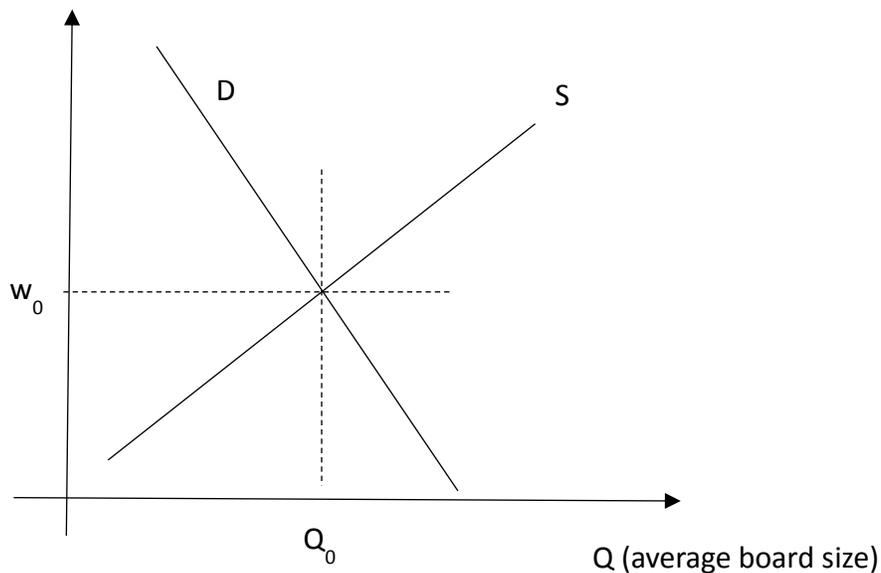
Figure 5. Evolution of board composition



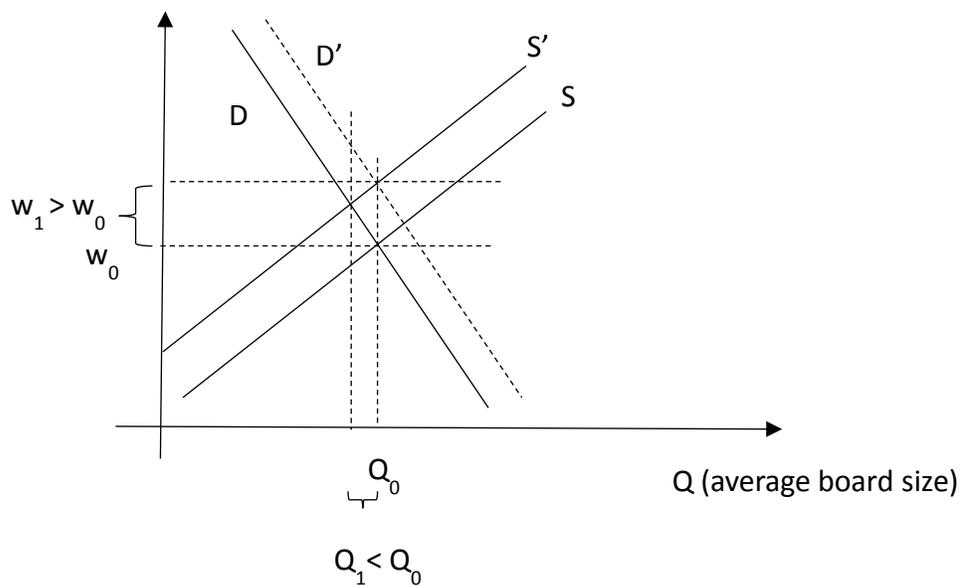
The figure reports the evolution of seven variables of interest for board composition. Panel A shows the comparison of averages for the periods from 2005-07 and 2017-19. Panel B shows the trend over the entire period. ‘Busy directors (%)’ is the percentage of directors who participate on more than one board of our sample in a given year and ‘Super busy directors (%)’ is the percentage of directors who participate on more than four boards of our sample in a given year.

Figure 6. Supply and Demand of Directors

W (average director's compensation)

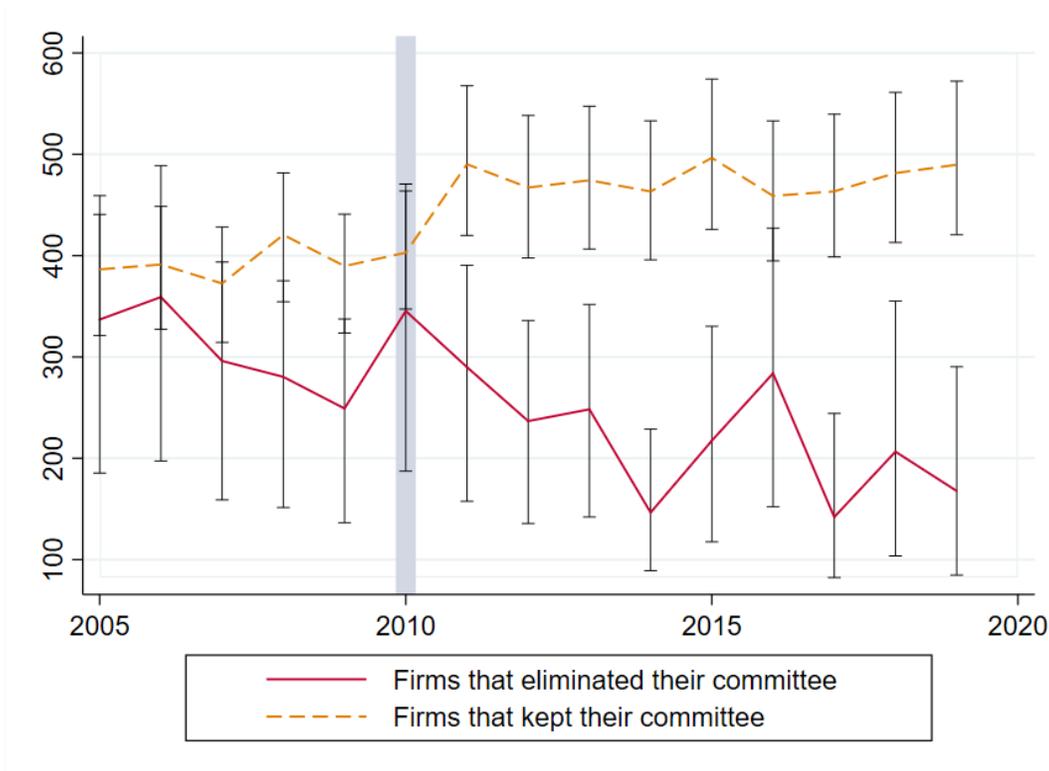


W (average director's compensation)



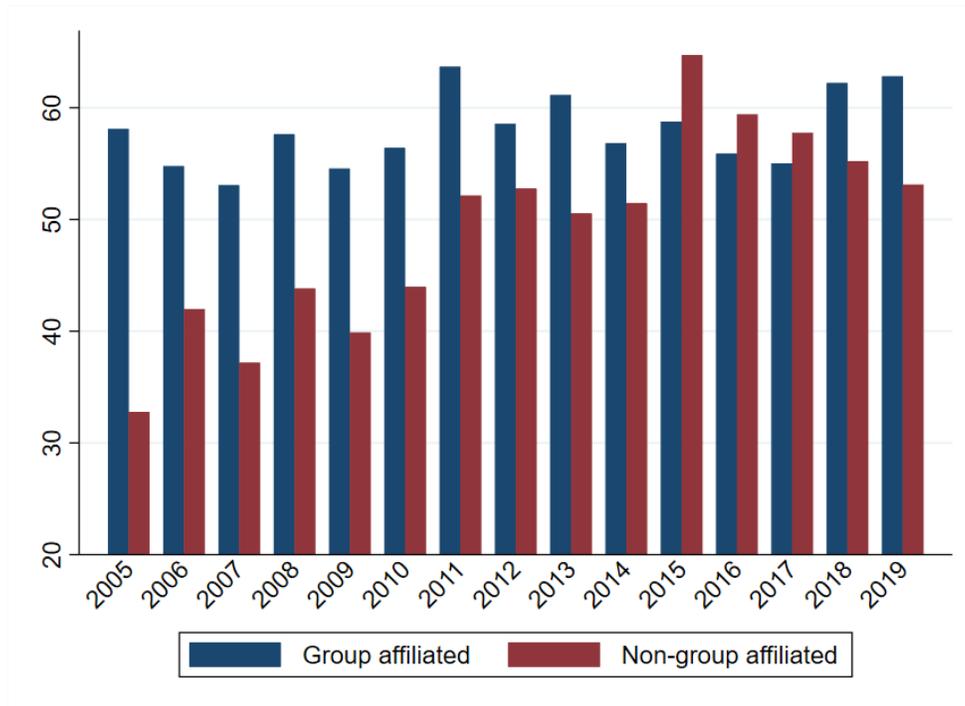
From a simultaneous contraction of the supply (S to S') and mild expansion of the demand (D to D') we expect a reduction in board size ($Q_1 < Q_0$) and an increment in directors' compensations ($w_1 > w_0$).

Figure 7. Firm-level board compensation for companies with and without committees.



The figure reports the trends with 90% confidence level in average board compensations for firms that eliminated their committee and firms that kept its committee before and after FASA and law 20.382 ('FA_382' event, which started in 2010) were enacted. Compensations are the result of adding four types of annual director compensation: a monthly payment, which could be fixed or per attendance to board meetings; variable compensation, as a proportion of net profits or dividends; 50-bis committee compensation, that could be fixed or per attendance to board meetings; other compensations, including other committee compensations or compensations related to additional duties. Values are in constant 2019 CLP millions.

Figure 8. Firm-level board compensation for group and non-group affiliated companies.



The figure reports the comparison of average board compensation for group and non-group affiliated companies. Compensations are the result of adding four types of annual director compensation: a monthly payment, which could be fixed or per attendance to board meetings; variable compensation, as a proportion of net profits or dividends; 50-bis committee compensation, that could be fixed or per attendance to board meetings; other compensations, including other committees' compensations or compensations related to additional duties. Values are in constant 2019 CLP millions.

TABLES

Table 1. Local and international evidence regarding the most relevant elements determining board attributes

Attribute	International	Chile
Compensation	Bryan and Klein (2004) report \$102,976 annual compensation per director in 2002. Fixed and variable (stock and options) are used, Adams <i>et al.</i> (2010). Variable compensation is more common the more outsiders sit on the board, Vafeas (1999). Adams and Ferreira (2008) find that a fee per session increases attendance.	Urzúa (2009) document fixed and variable (% over profits) compensation, as well as attendance and committee membership fees. He finds a negative correlation between compensations and controllers' cash-flow rights when controllers sit on the board.
Workload	Directors from well performing firms are more likely to sit on other boards (busy directors), Ferris <i>et al.</i> (2003). SOX significantly increased directors' workloads, Linck <i>et al.</i> (2009).	The average number of Boards per director is higher than in the U.S. (see Lefort & Walker 2000 or Silva <i>et al.</i> 2006).
Insurance	SOX significantly increased directors' use of insurance, Linck <i>et al.</i> (2009).	
Board Composition	Given the board size, agency costs and a board's access to internal information, Harris and Raviv (2008) derive the optimal combination of insiders (work in the firm) and outsiders (do not work in the firm). Over time, the presence of outsiders has increased, Patro <i>et al.</i> (2003). On average, outsiders comprise 55% of directors, insiders 30%, and gray directors (outsiders of dubious independence) 15%, Fich and Shivdasani (2006). According to Guest (2008), the participation of outsiders increases in relation to a firm's size, age, level of debt, diversification, free cash flow, and industry concentration. Instead, it decreases with Tobin's Q, R&D, share return volatility, ROA, and CEO.	Boards are dominated by controllers or controlled affiliated directors, Lefort and Walker (2007). Companies with greater separation of controlling and cash flow rights have more professional directors (elected with the controllers' votes but independent because of profile and lack of formal family or other ties to the controlling shareholder) on their boards. The percentage of independent directors and outsiders increases in relation to the size of the firm (2 out of 7 directors of the largest firms were independent but no more than 1 out of 7 directors in the smallest firms), Lefort and Urzua (2008).

Board size	<p>A firm's size, age, level of debt, diversification, free cash flow, and industry concentration positively impact a board's size. Tobin's Q, R&D, share return volatility, ROA, and CEO holding negatively impact the board's size, Guest (2008). Between 1989 and 1995, the average board had 12 directors and met 7.5 times per year, Fich and Shivdasani (2006). Linck <i>et al.</i> (2009) show an increment post-SOX. The average size increased from 7 (1996) to 8 directors (2005).</p>	<p>Between 2001 and 2005 the average board for a large firm had 6.9 directors with a standard deviation of 1.4. There were no differences between firms that belong to a group (7 directors) and those that do not (6.7 directors), Urzúa (2009).</p>
Independent directors	<p>The % of independents has grown over time, Linck <i>et al.</i> (2008) and Gordon (2007). In 2005, 94 % of boards had a majority of independents, Duchin <i>et al.</i> (2010). Over 1998-2005, representation of independents increased on audit, compensation, and nominating committees. Boone <i>et al.</i> (2007) find that successful CEOs structure fewer independent boards. Knyazeva <i>et al.</i> (2013) link larger pools of local director talent with more presence of independent directors on boards.</p>	<p>Historically, the percentage of independent directors, as defined by the Chilean Corporate Law (Art 50bis), has not surpassed 30%. Even more, Lefort and Walker (2000) reveal that when considering the 5 largest conglomerates, more than 80% of the directors can be considered affiliated to the controlling shareholders.</p>
Committees	<p>Conditioning the type of committee present on boards, Adams (2003) finds that diversified firms devote more time to monitoring while growing firms devote more time to strategic issues. Committees of large firms and those that pay dividends have more tasks. Also, committees of firms with higher CEO ownership have fewer tasks, Hayes <i>et al.</i> (2004).</p>	<p>Lefort (2005) states that at the beginning of the twenty first century committees were rarely used by Chilean companies. More recent data, since 2013, suggests that large companies are using auditing and risk management committees more frequently (see Godoy <i>et al.</i> 2018 and Bustos & Walker 2022).</p>
Director's Pool	<p>The pool of directors is mainly integrated by CEOs, lawyers and financial experts, Adams <i>et al.</i> (2010). Many firms use financial experts and SOX increased their presence, Linck <i>et al.</i> (2009). Outside the U.S., a variety of stakeholders sit on the board, Faleye <i>et al.</i> (2006) document the case of employees.</p>	

Table 2. Description of Firms

Variable	# firms	Group (%)	Pension fund's elected director (%)	Total assets			Net Profit			Leverage			ROE		
				Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max
2005	120	0.74	0.28	1,147	6.57	16,717	47.5	-13.2	511.7	1.09	0.00	4.93	10.0	-191.5	54.4
2006	121	0.74	0.29	1,233	4.48	17,584	59.1	-49.3	696.1	1.05	-6.41	5.22	11.9	-31.7	75.0
2007	125	0.73	0.34	1,228	5.98	16,861	57.5	-68.9	741.5	1.14	0.05	4.90	12.0	-46.8	85.2
2008	127	0.73	0.37	1,465	5.21	19,822	66.3	-94.5	785.9	1.27	0.03	5.22	8.01	-111.4	76.4
2009	125	0.75	0.36	1,595	15.1	26,968	59.8	-473.4	921.6	1.42	0.04	12.7	3.32	-208.9	98.3
2010	129	0.74	0.38	1,615	15.8	27,466	81.6	-10.1	716.8	1.38	0.02	12.9	16.0	-16.9	137.5
2011	131	0.76	0.37	1,677	17.0	31,193	55.5	-838.3	625.6	1.33	-2.47	12.2	7.05	-205.1	126.0
2012	130	0.75	0.35	1,787	19.4	33,110	47.6	-190.2	478.3	1.62	0.00	32.4	2.72	-803.4	205.8
2013	134	0.73	0.36	1,946	18.3	36,262	44.6	-653.6	810.2	1.39	-13.9	13.5	6.29	-199.3	112.1
2014	133	0.74	0.35	2,038	15.4	37,298	48.6	-357.2	706.8	1.28	-19.1	19.3	10.8	-129.6	635.5
2015	130	0.75	0.33	2,164	12.6	39,951	42.6	-172.1	734.2	1.07	-41.8	14.6	5.61	-98.8	89.3
2016	129	0.74	0.33	2,132	32.6	39,761	57.4	-43.35	658.0	1.32	0.00	14.9	9.60	-45.3	121.6
2017	126	0.75	0.31	2,085	31.9	40,128	56.2	-159.2	538.4	1.26	0.01	12.9	9.58	-45.9	64.2
2018	121	0.70	0.30	2,395	24.4	42,990	65.0	-157.8	860.9	1.29	0.00	13.4	6.42	-67.2	66.8
2019	120	0.73	0.28	2,651	5.00	47,696	51.1	-94.6	1,202	1.47	0.01	14.7	7.05	-93.5	61.9
Average	128	0.74	0.33	1,842	4.48	47,696	55.8	-838.3	1,202	1.30	-41.8	32.4	8.33	-803.4	635.5

This table shows main statistics about the firms (excluding pension funds and banks). ‘# firms’ is the number of firms. ‘Group (%)’ is the percentage of firms that belong to a group. ‘Pension funds’ elected director (%)’ is the percentage of firms where at least one independent director was elected with pension fund votes. ‘Total assets’ is the book value of total assets. ‘Leverage’ is the book value of debt divided by book value of equity. ‘ROE’ is the company’s returns on equity. However, in the estimates all variables are winsorized at the 1st and 99th percentiles to remove influential outliers. Values are in constant 2019 CLP millions.

Table 3. Description of Industries

Industries	# 2005	# 2012	# 2019
Agriculture, Forestry, Fishing and Hunting	8	12	12
Wholesale Trade	6	4	3
Retail Trade	9	13	11
Construction	2	4	4
Management of Companies and Enterprises	1	1	1
Utilities	18	17	15
Manufacturing	28	27	25
Information	4	3	3
Mining, Quarrying, and Oil and Gas Extraction	2	2	3
Arts, Entertainment, and Recreation	0	1	1
Health Care and Social Assistance	3	4	4
Finance and Insurance	28	29	26
Real Estate and Rental and Leasing	2	3	3
Professional, Scientific, and Technical Services	2	3	2
Transportation	7	7	7
All	120	130	120

Industries classified according to the North American Industry Classification System (2-digit-code)

Table 4. Aggregate description of Boards

Variable	N	Mean	Median	Sd	Min	Max
<i>Workload and Compensation</i>						
Board	1,901	433.3	249.1	547.7	0.00	5,728
President	1,897	105.6	53.3	158.1	0.00	2,151
Vice-president	1,498	65.0	33.7	91.6	0.00	1,100
Committee member	1,451	65.9	45.6	69.2	0.00	636.8
Ordinary director	1,901	46.0	25.4	59.9	0.00	639.4
Workload	947	8.44	8.00	4.28	1.00	30.0
<i>Board Structure</i>						
Board size	1,901	7.27	7.00	1.32	3.00	14.0
Independent directors (%)	1,901	16.7	14.3	14.6	0.00	100.0
Number of boards per director	1,901	2.21	1.86	1.11	1.00	7.60
Firms without 50-bis committee (%)	1,901	23.7	0.00	42.5	0.00	100.0
New directors	1,867	0.99	0.00	1.40	0.00	9.00
Exit directors	1,751	1.00	0.00	1.42	0.00	9.00
Director turnover	1,867	0.99	0.50	1.37	0.00	9.00
<i>Board Composition</i>						
Women (%)	1,901	3.81	0.00	7.93	0.00	60.0
International (%)	1,901	7.71	0.00	17.2	0.00	100.0
Lawyer (%)	1,894	14.8	14.3	15.1	0.00	75.0
Postgraduate (%)	1,877	37.2	37.5	20.0	0.00	100.0
Busy director (%)	1,901	47.9	42.9	29.9	0.00	100.0
Super busy director (%)	1,901	11.8	0.00	18.7	0.00	100.0

This Table shows the main statistics about board composition. Compensations are the result of adding four types of annual director compensation: a monthly payment, that could be fixed or per attendance to board meetings; variable compensation, as a proportion of net profits or dividends; 50-bis committee compensation, that could be fixed or per attendance to board meetings; other compensations, including other committees compensations or compensations related to additional duties. ‘Board’ is board compensation in a given year. ‘President’ is president compensation in a given year. ‘Vice-president’ is vice-president compensation in a given year. ‘Committee director’ is committee director compensation in a given year. ‘Workload’ is the number of annual meetings of the 50-bis committee in a given year. ‘Board size’ is the number of directors on the board in a given year. ‘Independent directors (%)’ is the percentage of independent directors on the board in a given year. ‘Number of boards per director’ is the number of boards per director in a given year. ‘Firms without 50-bis committee (%)’ is the percentage of firms without 50-bis committee in a given year. ‘New directors’ is the number of new directors in a given year. ‘Exit directors’ is the number of directors that exited the board in a given year. ‘Director turnover’ is the average between new directors and exit directors in a given year. ‘Women (%)’ is the percentage of women on the board in a given year. ‘International (%)’ is the percentage of international directors on the board in a given year. ‘Lawyer (%)’ is the percentage of lawyer directors on the board in a given year. ‘Postgraduate (%)’ is the percentage of postgraduate directors on the board in a given year. ‘Busy director (%)’ is the percentage of directors on the board who sit on more than one board in our sample in a given year. ‘Super busy director (%)’ is the percentage of directors on the board who sit on more than four boards in our sample in a given year. Values are in constant 2019 CLP millions.

Table 5. Summary of Main Results

Variable	FA_382	LP_N341	N385	L20.945
<i>Workload and Compensation</i>				
Compensation per director	+ (***)		+ (***)	
Workload		+ (***)		
<i>Board Structure</i>				
Board Size	- (**)			
Independent directors (%)	- (***)			
Number of boards per director	- (***)	- (**)	- (***)	- (***)
Firms with a 50-bis committee	- (***)			- (***)
Director turnover	+ (***)	- (**)	+ (*)	
<i>Board Composition</i>				
Women (%)	+ (**)	+ (*)		+ (***)
International (%)			+ (**)	
Lawyer (%)		+ (*)	+ (**)	
Postgraduate (%)		+ (***)		
Busy director (%)	- (**)	- (**)	- (***)	- (***)
Super busy director (%)		- (*)	- (*)	- (***)

This Table shows a summary of the main results. ‘FA_382’, ‘LP_N341’, ‘N385’ and ‘L20.945’ are the event dummies that equal one if the sample years are after 2010, 2012, 2015 and 2017 respectively or zero otherwise. ‘Compensations per director’ is the result of adding four types of annual director compensation: a monthly payment, that could be fixed or per attendance to board meetings; variable compensation, as a proportion of net profits or dividends; 50-bis committee compensation, that could be fixed or per attendance to board meetings; other compensations, including other committee compensations or compensations related to additional duties. ‘Board’ is board compensation in a given year. ‘Workload’ is the number of annual meetings of the 50-bis committee in a given year. ‘Board size’ is the number of directors on the board in a given year. ‘Independent directors (%)’ is the percentage of independent directors on the board in a given year. ‘Number of boards per director’ is the number of boards per director in a given year. ‘Firms that have a 50-bis committee’ is the likelihood of firms that have a 50-bis committee in a given year. ‘Director turnover’ is the average between new directors and exit directors in a given year. ‘Women (%)’ is the percentage of women directors on the board in a given year. ‘International (%)’ is the percentage of international directors on the board in a given year. ‘Lawyer (%)’ is the percentage of lawyer directors on the board in a given year. ‘Postgraduate (%)’ is the percentage of postgraduate directors on the board in a given year. ‘Busy directors (%)’ is the percentage of directors on the board who participate on more than one board in our sample in a given year. ‘Super busy directors (%)’ is the percentage of directors on the board who sit on more than four boards in our sample in a given year. *** p<0.01, ** p<0.05, * p<0.1

Table 6. Ln(compensations)

VARIABLES	(i)	(ii)	(iii)	(iv)	(v)
FA_382	0.348*** (0.0639)	0.167*** (0.0520)	0.170*** (0.0483)	0.174*** (0.0333)	0.133*** (0.0456)
LP_N341	0.0741 (0.0547)	0.0405 (0.0506)	0.0512 (0.0468)	0.0202 (0.0300)	0.0208 (0.0300)
N385	0.0827* (0.0496)	0.0973** (0.0484)	0.0785* (0.0456)	0.0969*** (0.0322)	0.126*** (0.0403)
L20.945	0.0604 (0.0497)	0.00508 (0.0410)	-0.0179 (0.0388)	-0.00933 (0.0277)	-0.00858 (0.0277)
President	0.708*** (0.0492)	0.790*** (0.0341)	0.794*** (0.0325)	0.785*** (0.0224)	0.806*** (0.0455)
VP	0.176*** (0.0543)	0.267*** (0.0349)	0.265*** (0.0330)	0.276*** (0.0230)	0.277*** (0.0450)
Committee	0.256*** (0.0433)	0.249*** (0.0277)	0.238*** (0.0261)	0.237*** (0.0178)	0.181*** (0.0332)
FA_382xCommittee					0.0844* (0.0448)
N385xVP					-0.106** (0.0512)
Board size		0.0489*** (0.0118)	-0.00229 (0.0119)	-0.0385*** (0.0137)	-0.0397*** (0.0137)
AFP board		0.174*** (0.0264)	0.0314 (0.0257)	0.0753** (0.0302)	0.0743** (0.0302)
ROE _{t-1}		0.0139*** (0.00118)	0.0138*** (0.00114)	0.0114*** (0.000882)	0.0114*** (0.000881)
Ln(total assets _{t-1})		0.358*** (0.00880)	0.398*** (0.0100)	0.229*** (0.0317)	0.228*** (0.0317)
Leverage _{t-1}		-0.125*** (0.0181)	-0.121*** (0.0200)	0.0289* (0.0171)	0.0285* (0.0171)
Economic growth _{t-1}		0.0161** (0.00816)	0.0135* (0.00762)	0.0163*** (0.00525)	0.0162*** (0.00525)
Constant	16.83*** (0.0527)	9.342*** (0.183)	8.976*** (0.205)	12.47*** (0.611)	12.51*** (0.611)
Fixed effects	No	No	Industry	Firm	Firm
Observations	6,072	5,564	5,564	5,563	5,563
R-squared	0.055	0.351	0.425	0.739	0.739

The Table reports OLS regression estimates of the impact of events on compensations. The sample consists of an unbalanced panel of types of directors for 137 firms in the period from 2005-2019. ‘Compensations’ is the result of adding four types of annual director compensation: a monthly payment, that can be fixed or per attendance to board meetings; variable compensation, as a proportion of net profits or dividends; 50-bis committee compensation, that can be fixed or per attendance to board meetings; other compensations, including other committee compensations or compensations related to additional duties. ‘FA_382’, ‘LP_N341’, ‘N385’ and ‘L20.945’ are the event dummies that equal one if the sample years are after 2010, 2012, 2015 and 2017 respectively or zero otherwise. ‘President’, ‘VP’ and ‘Committee’ are the director type dummies (ordinary director is the base case). ‘AFP board’ is the percentage of directors elected by pension funds. Column (i) and (ii) do not have fixed effects; Column (iii) has industry fixed effects; Column (iv) has firm fixed effects and; Column (v) has firm fixed effects and crossed effects between FA_382 and director type. We only report the crossed effects that were significant at least at the 90%. Values are in constant 2019 CLP millions. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 7. Board size

VARIABLES	(i)	(ii)	(iii)	(iv)
FA_382	-0.00713 (0.0876)	-0.219** (0.0997)	-0.178** (0.0874)	-0.148** (0.0615)
LP_N341	0.0931 (0.103)	0.133 (0.107)	0.117 (0.0946)	0.0721 (0.0579)
N385	-0.0847 (0.115)	-0.0595 (0.114)	-0.0608 (0.106)	-0.0852 (0.0635)
L20.945	0.00334 (0.117)	-0.0494 (0.105)	-0.0696 (0.0992)	-0.0725 (0.0622)
AFP board		0.662*** (0.0636)	0.520*** (0.0606)	0.305*** (0.0635)
ROE _{t-1}		-0.00112 (0.00177)	-0.00264* (0.00157)	-0.00221** (0.00112)
Ln(total assets _{t-1})		0.284*** (0.0181)	0.305*** (0.0179)	0.323*** (0.0528)
Leverage _{t-1}		-0.0104 (0.0218)	-0.103*** (0.0234)	-0.0118 (0.0264)
Economic growth _{t-1}		0.000461 (0.0161)	-0.00357 (0.0142)	-0.00368 (0.00934)
Constant	7.244*** (0.0441)	1.546*** (0.365)	1.314*** (0.361)	0.919 (1.032)
Fixed effects	No	No	Industry	Firm
Observations	1,976	1,690	1,690	1,687
R-squared	0.001	0.203	0.339	0.746

The Table reports OLS regression estimates the impact of events on board size. The sample consists of an unbalanced panel for 143 firms in the period from 2005-2019. 'Board size' is the number of directors on the board in a given year. 'FA_382', 'LP_N341', 'N385' and 'L20.945' are the event dummies that equals one if the sample years are after 2010, 2012, 2015 and 2017 respectively or zero otherwise. 'AFP board' is the percentage of directors elected by pension funds. 'ROE' is the company's returns on equity. 'Total assets' is the book value of total assets. 'Leverage' is the book value of debt divided by book value of equity. 'Economic growth' is the real GDP growth rate. Column (i) and (ii) do not have fixed effects; Column (iii) has industry fixed effect; and Column (iv) has firm fixed effect. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 8. Number of boards per director

VARIABLES	(i)	(ii)	(iii)	(iv)
FA_382	-0.124 (0.0875)	-0.0550 (0.0978)	-0.0417 (0.0895)	-0.101*** (0.0373)
LP_N341	-0.0772 (0.0892)	-0.103 (0.0985)	-0.0859 (0.0895)	-0.0735** (0.0358)
N385	-0.133 (0.0827)	-0.184* (0.0957)	-0.190** (0.0863)	-0.191*** (0.0371)
L20.945	-0.275*** (0.0758)	-0.263*** (0.0746)	-0.253*** (0.0666)	-0.159*** (0.0343)
AFP board		-0.0385 (0.0491)	0.0149 (0.0453)	0.0656* (0.0363)
ROE _{t-1}		-0.000891 (0.00141)	-0.00218* (0.00118)	0.000338 (0.000671)
Ln(total assets _{t-1})		0.0155 (0.0158)	-0.0161 (0.0184)	0.0587* (0.0335)
Leverage _{t-1}		-0.0669*** (0.0232)	-0.0739*** (0.0238)	-0.0216 (0.0157)
Economic growth _{t-1}		-0.0151 (0.0163)	-0.0139 (0.0150)	-0.00791 (0.00606)
Constant	2.433*** (0.0502)	2.261*** (0.330)	2.875*** (0.386)	1.261* (0.654)
Fixed effects	No	No	Industry	Firm
Observations	1,901	1,690	1,690	1,687
R-squared	0.039	0.048	0.215	0.848

The Table reports OLS regression estimates of the impact of events on the number of boards per director. The sample consists of an unbalanced panel for 143 firms in the period from 2005-2019. 'FA_382', 'LP_N341', 'N385' and 'L20.945' are the event dummies that equal one if the sample years are after 2010, 2012, 2015 and 2017 respectively or zero otherwise. 'AFP board' is the percentage of directors elected by pension funds. 'ROE' is the company's returns on equity. 'Total assets' is the book value of total assets. 'Leverage' is the book value of debt divided by book value of equity. 'Economic growth' is the real GDP growth rate. Column (i) and (ii) do not have fixed effects; Column (iii) has industry fixed effects; and Column (iv) has firm fixed effects. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 9. Percentage of Independent Directors

VARIABLES	(i)	(ii)	(iii)	(iv)
FA_382	-0.000240 (0.0113)	-0.0357*** (0.0125)	-0.0333*** (0.0126)	-0.0328*** (0.00837)
LP_N341	-0.00115 (0.0119)	-0.00467 (0.0123)	-0.00672 (0.0122)	-0.0114 (0.00766)
N385	-0.0107 (0.0111)	-0.00527 (0.0124)	-0.00628 (0.0120)	-0.00893 (0.00768)
L20.945	0.00555 (0.0111)	0.00634 (0.0106)	0.00588 (0.0101)	0.00304 (0.00661)
AFP board		0.101*** (0.00695)	0.0916*** (0.00771)	0.0747*** (0.00830)
ROE _{t-1}		-6.75e-05 (0.000225)	-9.82e-05 (0.000231)	-0.000176 (0.000211)
Ln(total assets _{t-1})		0.00517** (0.00215)	0.00908*** (0.00236)	0.0544*** (0.00756)
Leverage _{t-1}		0.00113 (0.00282)	-0.00212 (0.00331)	-0.0164*** (0.00536)
Economic growth _{t-1}		0.000597 (0.00207)	0.000528 (0.00204)	0.000608 (0.00131)
Constant	0.170*** (0.00615)	0.0679 (0.0442)	-0.00285 (0.0489)	-0.884*** (0.147)
Fixed effects	No	No	Industry	Firm
Observations	1,901	1,690	1,690	1,687
R-squared	0.001	0.134	0.182	0.648

The Table reports OLS regression estimates of the impact of events on the percentage of independent directors. The sample consists of an unbalanced panel for 143 firms in the period from 2005-2019. 'FA_382', 'LP_N341', 'N385' and 'L20.945' are the events dummies that equal one if the sample years are after 2010, 2012, 2015 and 2017 respectively or zero otherwise. 'AFP board' is the percentage of directors elected by pension funds. 'ROE' is the company's returns on equity. 'Total assets' is the book value of total assets. 'Leverage' is the book value of debt divided by book value of equity. 'Economic growth' is the real GDP growth rate. Column (i) and (ii) do not have fixed effects; Column (iii) has industry fixed effects; and Column (iv) has firm fixed effects. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 10. Firm has a 50-bis committee

VARIABLES	(i)	(ii)	(iii)	(iv)	(v)
FA_382	-0.355*** (0.102) [-0.108]	-0.601*** (0.184) [-0.102]	-0.689*** (0.199) [-0.107]	-1.367*** (0.525) [-0.092]	-1.027** (0.502) [-0.070]
LP_N341	0.104 (0.107) [0.032]	-0.0354 (0.171) [-0.006]	-0.0658 (0.180) [-0.010]	-0.0701 (0.314) [-0.005]	-0.0120 (0.289) [-0.001]
N385	-0.0370 (0.109) [-0.113]	0.0375 (0.160) [0.006]	0.0422 (0.166) [0.007]	0.0337 (0.271) [0.002]	0.150 (0.269) [0.010]
L20.945	-0.0746 (0.109) [-0.023]	-0.0477 (0.138) [-0.008]	-0.135 (0.143) [-0.021]	-0.504* (0.281) [-0.034]	-0.342 (0.253) [-0.023]
FA_382xLargefirms					-2.279** (1.009) [-0.156]
Large firms					2.843*** (0.957) [0.195]
Ownership		-0.0325*** (0.00200) [-0.006]	-0.0324*** (0.00234) [-0.005]	-0.0680*** (0.0145) [-0.005]	-0.0738*** (0.0164) [-0.005]
ROE _{t-1}		-0.00270 (0.00196) [-0.000]	-0.00411* (0.00218) [-0.001]	-0.00899*** (0.00343) [-0.001]	-0.00425 (0.00329) [-0.000]
Ln(total assets _{t-1})		0.579*** (0.0413) [0.099]	0.680*** (0.0418) [0.106]	1.440*** (0.319) [0.096]	
Leverage _{t-1}		-0.156*** (0.0368) [-0.027]	-0.240*** (0.0451) [-0.037]	-0.380*** (0.133) [-0.025]	-0.129 (0.0898) [-0.009]
Economic growth _{t-1}		0.0173 (0.0274) [0.003]	0.0144 (0.0291) [0.002]	0.0661 (0.0456) [0.004]	0.0470 (0.0455) [0.003]
Constant	0.936*** (0.0593)	-8.095*** (0.777)	-9.488*** (0.787)	-20.71*** (5.482)	7.184*** (1.392)
Fixed effects	No	No	Industry	Firm	Firm
Observations	1,901	1,666	1,610	1,666	1,666

The Table reports Probit regression estimates of the impact of events on the likelihood that a firm has a 50-bis committee in a given year. The sample consists of an unbalanced panel for 143 firms in the period from 2005-2019. 'FA_382', 'LP_N341', 'N385' and 'L20.945' are the events dummies that equal one if the sample years are after 2010, 2012, 2015 and 2017 respectively or zero otherwise. 'Ownership' is the percentage of ownership concentration of the largest shareholder. 'Large firms' is a dummy that equals one if the firm's total assets are above the 50th percentile of the sample. 'ROE' is the company's returns on equity. 'Total assets' is the book value of total assets. 'Leverage' is the book value of debt divided by the book value of equity. 'Economic growth' is the real GDP growth rate. Columns (i) and (ii) do not have fixed effects; Column (iii) has industry fixed effects; and Columns (iv) and (v) have firm fixed effects. Column (v) has crossed effects between FA_382 and large firms. Robust standard errors are in parentheses. Marginal effects are reported in brackets. The number of observations may vary because of perfect predictability of the dependent variable. *** p<0.01, ** p<0.05, * p<0.1

Table 11. Workload

VARIABLES	(i)	(ii)	(iii)	(iv)
FA_382	0.0577 (0.402)	-0.565 (0.454)	-0.263 (0.411)	-0.0337 (0.277)
LP_N341	1.346*** (0.446)	1.199** (0.476)	1.237*** (0.430)	1.074*** (0.262)
N385	0.527 (0.525)	0.429 (0.509)	0.466 (0.469)	0.280 (0.270)
L20.945	-0.256 (0.525)	-0.0670 (0.467)	-0.198 (0.437)	-0.259 (0.252)
AFP board		1.950*** (0.268)	1.320*** (0.273)	0.617** (0.244)
ROE _{t-1}		0.00744 (0.0105)	0.00713 (0.00999)	0.0114 (0.00737)
Ln(total assets _{t-1})		0.750*** (0.0893)	0.734*** (0.0940)	0.634** (0.283)
Leverage _{t-1}		0.186 (0.160)	0.553*** (0.177)	0.322** (0.157)
Economic growth _{t-1}		0.0102 (0.0738)	0.00126 (0.0661)	-0.0274 (0.0404)
Constant	7.455*** (0.225)	-8.540*** (1.823)	-8.599*** (1.881)	-5.864 (5.623)
Fixed effects	No	No	Industry	Firm
Observations	947	878	878	875
R-squared	0.036	0.179	0.304	0.803

The Table reports OLS regression estimates of the impact of events on workload. The sub-sample consists of an unbalanced panel for 98 firms in the period from 2005-2019. 'Workload' is the number of annual meetings of the 50-bis committee in a given year. 'FA_382', 'LP_N341', 'N385' and 'L20.945' are the event dummies that equal one if the sample years are after 2010, 2012, 2015 and 2017 respectively or are zero otherwise. 'AFP board' is the percentage of directors elected by pension funds. 'ROE' is the company's returns on equity. 'Total assets' is the book value of total assets. 'Leverage' is the book value of debt divided by the book value of equity. 'Economic growth' is the real GDP growth rate. Columns (i) and (ii) do not have fixed effects; Column (iii) has industry fixed effect; and Column (iv) has firm fixed effects. Robust standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 12. Director turnover

VARIABLES	(i)	(ii)	(iii)	(iv)
FA_382	0.412*** (0.112)	0.436*** (0.137)	0.403*** (0.136)	0.364*** (0.130)
LP_N341	-0.294** (0.119)	-0.278** (0.140)	-0.280** (0.138)	-0.266** (0.129)
N385	0.240** (0.113)	0.218* (0.132)	0.216* (0.127)	0.203* (0.122)
L20.945	-0.248** (0.118)	-0.188 (0.117)	-0.182 (0.113)	-0.168 (0.109)
AFP board		0.0560 (0.0673)	0.0386 (0.0694)	-0.236** (0.111)
ROE _{t-1}		-0.000115 (0.00173)	-0.00259 (0.00170)	-0.00441** (0.00192)
Ln(total assets _{t-1})		0.0242 (0.0219)	0.00276 (0.0223)	0.141 (0.0907)
Leverage _{t-1}		0.0522 (0.0323)	0.0692** (0.0353)	-0.00615 (0.0474)
Economic growth _{t-1}		-0.00308 (0.0218)	-0.00138 (0.0215)	-0.0102 (0.0205)
Constant	0.840*** (0.0501)	0.201 (0.449)	0.656 (0.459)	-1.874 (1.767)
Fixed effects	No	No	Industry	Firm
Observations	1,867	1,686	1,686	1,683
R-squared	0.012	0.020	0.079	0.222

The Table reports OLS regression estimates of the impact of events on director turnover. The sample consists of an unbalanced panel for 143 firms in the period from 2005-2019. 'Director turnover' is the average between new directors and exit directors in a given year. 'FA_382', 'LP_N341', 'N385' and 'L20.945' are the events dummies that equals one if the sample years are after 2010, 2012, 2015 and 2017 respectively or zero otherwise. 'AFP board' is the percentage of directors elected by pension funds. 'ROE' is the company's returns on equity. 'Total assets' is the book value of total assets. 'Leverage' is the book value of debt divided by the book value of equity. 'Economic growth' is the real GDP growth rate. Columns (i) and (ii) do not have fixed effects; Column (iii) has industry fixed effects; and Column (iv) has firm fixed effects. Robust standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 13. Percentage of women on Chilean boards

VARIABLES	(i)	(ii)	(iii)	(iv)
FA_382	0.00861* (0.00479)	0.0110* (0.00631)	0.00926 (0.00626)	0.0107** (0.00465)
LP_N341	0.0100* (0.00573)	0.0114* (0.00690)	0.0111 (0.00678)	0.00829* (0.00500)
N385	0.00493 (0.00661)	0.00916 (0.00762)	0.0102 (0.00735)	0.00751 (0.00502)
L20.945	0.0236*** (0.00773)	0.0234*** (0.00783)	0.0234*** (0.00757)	0.0202*** (0.00558)
AFP board		0.00742* (0.00400)	0.0116*** (0.00418)	0.00217 (0.00487)
ROE _{t-1}		0.000148 (0.000109)	0.000118 (0.000115)	9.98e-05 (0.000112)
Ln(total assets _{t-1})		-0.00263* (0.00158)	-0.00571*** (0.00167)	0.0155*** (0.00448)
Leverage _{t-1}		0.00850*** (0.00178)	0.00811*** (0.00213)	0.00141 (0.00268)
Economic growth _{t-1}		0.00110 (0.00102)	0.00114 (0.00101)	0.000925 (0.000772)
Constant	0.0207*** (0.00218)	0.0500 (0.0311)	0.112*** (0.0328)	-0.298*** (0.0869)
Fixed effects	No	No	Industry	Firm
Observations	1,901	1,690	1,690	1,687
R-squared	0.045	0.071	0.124	0.531

The Table reports OLS regression estimates of the impact of events on the percentage of women on Chilean boards. The sample consists of an unbalanced panel for 143 firms in the period from 2005-2019. 'FA_382', 'LP_N341', 'N385' and 'L20.945' are the event dummies that equal one if the sample years are after 2010, 2012, 2015 and 2017 respectively or zero otherwise. 'AFP board' is the percentage of directors elected by pension funds. 'ROE' is the company's returns on equity. 'Total assets' is the book value of total assets. 'Leverage' is the book value of debt divided by the book value of equity. 'Economic growth' is the real GDP growth rate. Columns (i) and (ii) do not have fixed effects; Column (iii) has industry fixed effects; and Column (iv) has firm fixed effects. Robust standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 14. Percentage of international citizens on Chilean boards

VARIABLES	(i)	(ii)	(iii)	(iv)
FA_382	0.00619 (0.0105)	-0.00240 (0.0137)	-0.00431 (0.0132)	0.0101 (0.00980)
LP_N341	0.00679 (0.0125)	0.00502 (0.0152)	0.00653 (0.0147)	0.00829 (0.0101)
N385	0.0263* (0.0152)	0.0180 (0.0167)	0.0173 (0.0158)	0.0197** (0.00962)
L20.945	0.00999 (0.0172)	0.00950 (0.0167)	0.0113 (0.0156)	0.00394 (0.00904)
AFP board		-0.00897 (0.00756)	-0.0216*** (0.00822)	-0.0456*** (0.0109)
ROE _{t-1}		0.000551*** (0.000182)	0.000140 (0.000193)	0.000112 (0.000178)
Ln(total assets _{t-1})		0.0180*** (0.00322)	0.0199*** (0.00278)	-0.00806 (0.00792)
Leverage _{t-1}		0.00325 (0.00426)	0.0119** (0.00481)	0.00521 (0.00383)
Economic growth _{t-1}		0.000570 (0.00221)	0.000653 (0.00213)	-0.00104 (0.00138)
Constant	0.0586*** (0.00507)	-0.300*** (0.0632)	-0.342*** (0.0543)	0.232 (0.154)
Fixed effects	No	No	Industry	Firm
Observations	1,901	1,690	1,690	1,687
R-squared	0.013	0.037	0.138	0.657

The Table reports OLS regression estimates of the impact of events on the percentage of international citizens on Chilean boards. The sample consists of an unbalanced panel for 143 firms in the period from 2005-2019. 'FA_382', 'LP_N341', 'N385' and 'L20.945' are the events dummies that equal one if the sample years are after 2010, 2012, 2015, and 2017 respectively or zero otherwise. 'AFP board' is the percentage of directors elected by pension funds. 'ROE' is the company's returns on equity. 'Total assets' is the book value of total assets. 'Leverage' is the book value of debt divided by the book value of equity. 'Economic growth' is the real GDP growth rate. Columns (i) and (ii) do not have fixed effects; Column (iii) has industry fixed effects; and Column (iv) has firm fixed effects. Robust standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 15. Percentage of lawyers on Chilean boards

VARIABLES	(i)	(ii)	(iii)	(iv)
FA_382	0.00995 (0.0108)	-0.00351 (0.0135)	-0.00517 (0.0128)	-0.00192 (0.00701)
LP_N341	0.00452 (0.0115)	0.00675 (0.0134)	0.00490 (0.0127)	0.0116* (0.00674)
N385	0.0177 (0.0123)	0.0114 (0.0143)	0.0110 (0.0136)	0.0151** (0.00701)
L20.945	0.000620 (0.0134)	0.00395 (0.0136)	0.00501 (0.0130)	0.00133 (0.00665)
AFP board		-0.0268*** (0.00785)	-0.0119 (0.00764)	-0.00210 (0.00702)
ROE _{t-1}		-0.000633** (0.000257)	-0.000600** (0.000248)	-0.000334* (0.000172)
Ln(total assets _{t-1})		0.00325 (0.00290)	0.00193 (0.00307)	-0.0106* (0.00630)
Leverage _{t-1}		-0.00213 (0.00329)	0.001000 (0.00320)	-0.0104*** (0.00333)
Economic growth _{t-1}		-0.00113 (0.00217)	-0.000771 (0.00206)	-0.00120 (0.00113)
Constant	0.133*** (0.00573)	0.100* (0.0577)	0.119* (0.0612)	0.374*** (0.123)
Fixed effects	No	No	Industry	Firm
Observations	1,894	1,683	1,683	1,680
R-squared	0.008	0.017	0.110	0.758

The Table reports OLS regression estimates of the impact of events on the percentage of lawyers on Chilean boards. The sample consists of an unbalanced panel for 143 firms in the period from 2005-2019. 'FA_382', 'LP_N341', 'N385' and 'L20.945' are the event dummies that equal one if the sample years are after 2010, 2012, 2015, and 2017 respectively or zero otherwise. 'AFP board' is the percentage of directors elected by pension funds. 'ROE' is the company's returns on equity. 'Total assets' is the book value of total assets. 'Leverage' is the book value of debt divided by the book value of equity. 'Economic growth' is the real GDP growth rate. Columns (i) and (ii) do not have fixed effects; Column (iii) has industry fixed effects; and Column (iv) has firm fixed effects. Robust standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 16. Percentage of postgraduates on Chilean boards

VARIABLES	(i)	(ii)	(iii)	(iv)
FA_382	0.0208 (0.0148)	-0.00370 (0.0181)	-0.00583 (0.0175)	0.00454 (0.0115)
LP_N341	0.0248 (0.0160)	0.0366** (0.0183)	0.0362** (0.0176)	0.0297*** (0.0108)
N385	0.0160 (0.0162)	0.0109 (0.0183)	0.00989 (0.0176)	0.0127 (0.0110)
L20.945	0.00411 (0.0165)	0.00311 (0.0164)	0.00228 (0.0158)	0.00127 (0.0112)
AFP board		0.0622*** (0.00990)	0.0564*** (0.0105)	0.0518*** (0.0116)
ROE _{t-1}		0.000412 (0.000294)	8.37e-05 (0.000304)	0.000380 (0.000250)
Ln(total assets _{t-1})		0.0157*** (0.00313)	0.0118*** (0.00348)	-0.0267** (0.0111)
Leverage _{t-1}		0.00406 (0.00457)	0.000825 (0.00484)	-0.00172 (0.00525)
Economic growth _{t-1}		-0.00212 (0.00284)	-0.00219 (0.00275)	-0.00312* (0.00174)
Constant	0.339*** (0.00788)	0.0173 (0.0625)	0.107 (0.0692)	0.882*** (0.216)
Fixed effects	No	No	Industry	Firm
Observations	1,877	1,673	1,673	1,671
R-squared	0.018	0.064	0.126	0.644

The Table reports OLS regression estimates of the impact of events on the percentage of postgraduates on Chilean boards. The sample consists of an unbalanced panel for 143 firms in the period from 2005-2019. 'FA_382', 'LP_N341', 'N385' and 'L20.945' are the event dummies that equal one if the sample years are after 2010, 2012, 2015 and 2017 respectively or are zero otherwise. 'AFP board' is the percentage of directors elected by pension funds. 'ROE' is the company's returns on equity. 'Total assets' is the book value of total assets. 'Leverage' is the book value of debt divided by the book value of equity. 'Economic growth' is the real GDP growth rate. Columns (i) and (ii) do not have fixed effects; Column (iii) has industry fixed effects; and Column (iv) has firm fixed effects. Robust standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 17. Comparison between firms that eliminated and kept the 50-bis committee.

Variables	Firms that eliminated their committee			Firms that kept their committee		
	Pre FA_382	Post FA_382	Δ	Pre FA_382	Post FA_382	Δ
Number of firms	14	12	-2	110	117	+7
Compensation	304	235	-69.1*	392	469	+76.6***
Group (%)	61.4	69.2	+7.8	75.4	74.4	-1.00
Ownership (%)	62.1	72.1	+9.97***	46.8	46.9	+0.23
Total assets	591	671	+79.7	1,401	2,006	+605***
Net profit	34.7	39.2	+4.54	59.6	56.7	-2.94
Leverage	1.52	1.45	-0.08	1.16	1.31	+0.15**
ROE	14.0	14.3	+0.32	9.03	7.45	-1.59

This Table shows main statistics pre FASA and law 20.382 (i.e., the period from 2005 to 2009) and post FASA and law 20.382 (i.e., the period from 2010 to 2019), for firms that eliminated their committee in 2010 versus those that did not. Compensations are the result of adding four types of director compensation: a monthly fee compensation, that can be fixed or per attendance on a basis of a monthly board meeting; variable compensation, as a proportion of net profits or dividends; 50-bis committee compensation, that can be fixed or per attendance of a board meeting; other compensations, this includes other committee compensations or any kind of extra compensations related to its position. Group (%) is the percentage firms that belong to a group. Ownership (%) is the percentage of ownership concentration of the largest shareholder. Total asset is the book value of total assets. Leverage is the book value of debt divided by the book value of equity. ROE is the company's returns on equity. However, in the estimates all variables are winsorized at the 1st and 99th percentiles to remove influential outliers. Values are in constant 2019 CLP millions.

Table 18. Difference-in-difference estimates in log-compensation for firms that dropped the Committee

VARIABLES	(i)	(ii)	(iii)	(iv)
FA_382	0.346*** (0.0642)	0.352*** (0.0671)	0.181*** (0.0534)	0.189*** (0.0494)
LP_N341	0.0738 (0.0547)	0.0736 (0.0548)	0.0399 (0.0505)	0.0501 (0.0467)
N385	0.0820* (0.0497)	0.0817 (0.0497)	0.0984** (0.0484)	0.0795* (0.0456)
L20.945	0.0601 (0.0497)	0.0598 (0.0497)	0.00603 (0.0410)	-0.0169 (0.0388)
President	0.709*** (0.0492)	0.709*** (0.0492)	0.789*** (0.0341)	0.793*** (0.0324)
VP	0.177*** (0.0543)	0.177*** (0.0543)	0.265*** (0.0349)	0.264*** (0.0330)
Committee	0.257*** (0.0432)	0.255*** (0.0431)	0.247*** (0.0277)	0.235*** (0.0260)
Treated	-0.0584 (0.0611)	-0.0209 (0.117)	0.225*** (0.0683)	0.266*** (0.0684)
TreatedxFasa_382		-0.0680 (0.129)	-0.126 (0.0886)	-0.181** (0.0877)
Constant	16.83*** (0.0541)	16.83*** (0.0560)	9.284*** (0.184)	8.879*** (0.206)
Controls	No	No	Yes	Yes
Fixed effects	No	No	No	Industry
Observations	6,072	6,072	5,564	5,564
R-squared	0.055	0.055	0.352	0.426

The Table reports difference-in-difference estimates regarding the impact of events on compensations. The sample consists of an unbalanced panel of type of director for 137 firms in the period from 2005-2019. ‘Compensations’ are the result of adding four types of annual director compensation: a monthly payment, that can be fixed or per attendance to board meetings; variable compensation, as a proportion of net profits or dividends; 50-bis committee compensation, that can be fixed or per attendance to board meetings; other compensations, including other committee compensations or compensations related to additional duties. ‘FA_382’, ‘LP_N341’, ‘N385’ and ‘L20.945’ are the event dummies that equal one if the sample years are after 2010, 2012, 2015, and 2017 respectively or zero otherwise. ‘President’, ‘VP’ and ‘Committee’ are the director type dummies (ordinary director is the base case). ‘Treated’ is a dummy that equals one if the firms eliminated their committee in 2010 (this dummy accompanies the firm throughout the sample period). ‘TreatedxFasa-382’ is the difference-in-difference estimator. Columns (i) and (ii) do not have fixed effects or control variables; Column (iii) has control variables; Column (iv) has industry fixed effects and control variables. Values are in constant 2019 CLP millions. Robust standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 19. Group and non-group affiliated companies: Ln(compensations)

VARIABLES	Group		Non-group	
	(i)	(ii)	(iii)	(iv)
FA_382	0.234*** (0.0392)	0.193*** (0.0523)	0.0792 (0.0626)	0.0253 (0.0887)
LP_N341	0.0145 (0.0342)	0.0153 (0.0342)	0.0416 (0.0600)	0.0421 (0.0602)
N385	0.0987*** (0.0360)	0.117*** (0.0444)	0.174*** (0.0645)	0.237*** (0.0808)
L20.945	0.0427 (0.0314)	0.0434 (0.0315)	-0.0919* (0.0539)	-0.0918* (0.0539)
President	0.743*** (0.0252)	0.746*** (0.0525)	0.891*** (0.0433)	0.945*** (0.0855)
VP	0.240*** (0.0264)	0.248*** (0.0542)	0.378*** (0.0447)	0.356*** (0.0816)
Committee	0.257*** (0.0206)	0.198*** (0.0395)	0.167*** (0.0332)	0.111* (0.0571)
FA_382xCommitte		0.101** (0.0514)		0.0668 (0.0860)
N385xVP		-0.0523 (0.0576)		-0.234** (0.104)
Constant	11.41*** (0.733)	11.48*** (0.730)	12.85*** (1.293)	12.81*** (1.294)
Fixed effects	Firm	Firm	Firm	Firm
Controls	Yes	Yes	Yes	Yes
Number of firms	109	109	53	53
Observations	4,064	4,064	1,499	1,499
R-squared	0.777	0.778	0.626	0.628

The Table reports OLS regression estimates of the impact of events on compensations. The sample is divided between group and non-group affiliated companies and consists of an unbalanced panel of type of directors for 137 firms in the period from 2005-2019. ‘Compensations’ are the result of adding four types of annual director compensation: a monthly payment, that can be fixed or per attendance to board meetings; variable compensation, as a proportion of net profits or dividends; 50-bis committee compensation, that can be fixed or per attendance to board meetings; other compensations, including other committee compensations or compensations related to additional duties. ‘FA_382’, ‘LP_N341’, ‘N385’, and ‘L20.945’ are the event dummies that equal one if the sample years are after 2010, 2012, 2015, and 2017 respectively or are zero otherwise. ‘President’, ‘VP’ and ‘Committee’ are the director type dummies (ordinary director is the base case). All columns have firm fixed effects and control variables. Columns (i) and (ii) are for group affiliated companies and columns (iii) and (iv) are for non-group affiliated companies. Columns (ii) and (iv) have crossed effects between FA_382 and N385 with director type. We only report the crossed effects that were significant at least at the 90%. Values are in constant 2019 CLP millions. Robust standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1