MANAGERIAL TURNOVER AND PERFORMANCE IN OUTSIDE BOARDS: OWNERSHIP MAKES THE DIFFERENCE

REEMPLAZO DE EJECUTIVOS Y DIRECTORES EN JUNTAS DE ADMINISTRACIÓN EXTERNAS: LA ESTRUCTURA DE PROPIEDAD HACE LA DIFERENCIA

ABSTRACT

We examine the relationship between CEO, board and Chairman turnovers and future performance in banks with fully outside boards. Using a rich dataset on executive turnovers from Costa Rica, we find that ownership moderates the effect that control mechanisms have on performance. Our results indicate that executive turnovers followed by the appointment of outside executives (CEO and Chairman) have a positive impact on performance. On the contrary, large board replacements create organisational costs and these negatively affect performance. These results mainly hold for shareholder-oriented banks where managers and owners are more likely to be aligned. Finally, these results underline the importance of examining the effectiveness of governance mechanisms in emerging economies. More detailed information about ownership, legal framework and executive replacements can make a difference when it comes to evaluate the effectiveness of governance mechanisms.

KEYWORDS: Corporate governance, executive turnover, banks, ownership types

RESUMEN

Este trabajo examina la relación entre el reemplazo de altos cargos directivos y gerenciales--CEO y miembros de la junta directiva--y el desempeño en bancos con juntas de administración totalmente externas. A partir de una amplia base de datos sobre cambios de ejecutivos y directivos en bancos de Costa Rica, encontramos que la estructura de propiedad modera el efecto entre mecanismos de control y el rendimiento económico de los bancos. Los resultados indican que los cambios de ejecutivos seguidos del nombramiento de ejecutivos externos (CEO y Presidente de la junta directiva) tienen un impacto positivo en el desempeño. Por el contrario, grandes cambios proporcionales en la junta directiva crean costos organizacionales que afectan negativamente el desempeño. Estos resultados son significativos principalmente entre los bancos privados (governados por accionistas), donde es más probable que los gerentes y propietarios estén alineados. Finalmente, estos resultados subrayan la importancia de examinar la efectividad de los mecanismos de gobierno corporativo en las economías emergentes. Información más detallada sobre la estructura de propiedad, el marco regulatorio así como de los reemplazos de ejecutivos pueden hacer la diferencia al evaluar la efectividad de los mecanismos de gobierno corporativo.

PALABRAS CLAVE: Gobierno corporativo, reemplazo de ejecutivos, banca, estructura de propiedad

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INTRODUCTION

What are the consequences of executive turnover on performance? Clearly, top managers play a key role in many companies: they can help create or destroy large amounts of value. Not surprisingly, many corporate governance studies deal with the possible links between managerial turnover and performance. Yet, the bulk of this research focuses on developed economies (Claessens and Yurtoglu 2013), and the consequences of those managerial replacements remain far from clear (Karaevli 2007).

One reason behind the relatively scarce research in emerging economies relates to the lack of more detailed information concerning board characteristics and the different types of turnover. Businesses in emerging markets exhibit significant organisational differences with respect to those in developed markets. Each emerging economy has a corporate governance system that reflects its institutions, and the differences are mainly linked to heavy state intervention and control of strategic firms such as banks (La Porta et al. 2002). In addition, excessive ownership concentration comes as a response to weak external controls and regulatory distortions (Young et al. 2008). This further justifies the need to examine the effectiveness of governance mechanisms in emerging economies (Fan et al. 2011).

From a corporate governance perspective, the specific characteristics of the governance system in emerging economies condition internal control mechanisms related to the board (composition and its monitoring role) and executive turnover. In settings that accommodate standard corporate governance assumptions, it seems reasonable to expect that the consequences of executive turnovers will differ depending on whether the incoming managers are internally promoted or appointed from outside the firm. For instance, Denis and Denis (1995), Borokhovich et al. (1996), Huson et al. (2004), and Zhang and Rajagopalan (2010) report, for the US, that the positive relation between CEO turnover and future performance is greater in firms that appointed an outside CEO.

Furthermore, there is a debate concerning the role that the current top executive and the board can have at the time of selecting new directors and top-managers (Adams et al. 2010). Finally, other voices claim that outside boards, that is, boards with members that do not directly obey the CEO, could alleviate and even prevent some of the corporate governance problems. We suggest that the decision to promote an insider or an outsider to top positions may respond to different scenarios and ownership structures that we should take into consideration.

For the empirical analysis, we use a rich data set of Costa Rican banks for the period 1999–2004 to evaluate the effect that the activation of certain governance interventions has upon changes in firm performance. In particular, our data allows us to study CEO turnover, changes in the board of directors and chairman removal. In addition, we have specific information regarding the nature of the incoming CEO and the chairman (internally promoted or appointed from outside) as well as the contract termination dates for board members and the chairman, so we are able to distinguish between unexpected and voluntary turnovers. We do not have, though, the specific reasons behind the CEO departure. Nevertheless, we are able to show how the use of more detailed data concerning executive turnover and the succession process affect the results on performance. Furthermore, ownership seems to play a role in the executive succession process and when we distinguish between shareholder and stakeholder-oriented firms, this helps explain part of this process, and the presence of negative effects on future performance. In a study of 69 banks from six OECD countries, De Andrés and Vallelado (2008) report that board characteristics affect bank performance, however, their study exclusively focuses on commercial banks where boards are more likely to be aligned with shareholders and intensively monitor managers (Adams and Ferreira 2007). We analyse a specific industry, banking, and a given country, Costa Rica. This specific setting is attractive since it previously underwent important changes in the regulatory framework jointly with enhancements in monitoring practices. By 1997 bank activity was deregulated among the different players and the supervisory institution had all its monitoring functions in place. Also, during the period analysed the CAMELS rating system was introduced to evaluate the health of financial institutions (IMF 2003). In

terms of governance characteristics, the legal framework establishes that bank boards in Costa Rica must be only formed by outsiders. This is a relevant feature as many papers focus on the presence and the size of outside board members. For example, Adams et al. (2010) find that outside board members have a positive influence on firm performance and that better performing firms are motivated to add independent members to the board. In fact, outside directors may function as a substitute in corporate governance for lower levels of inside ownership. Even in a context with no insiders in the board, we can observe how the decision on promoting an inside or an outside CEO has important implications. In addition, we distinguish two firm types: shareholder-oriented banks and stakeholder-oriented banks and check for the importance of ownership in terms of performance.

Our paper contributes to the literature on the effectiveness of control mechanisms in several ways. First we address the relevant question of whether unpredicted changes in the board and in the chairman position positively affect performance in an emerging economy. Corporate governance literature provides some insights about the expected effect on performance of changes in the board. Firms change their boards to improve the quality of decision making processes and firm performance from the shareholders' perspective (Hermalin and Weisbach 2003). A more independent board is more likely to actively monitor managers and respond faster to poor performance, a fact that could signal a higher quality of board's ability in its main responsibility: to select, monitor and replace managers (Adams et al. 2010). However, we find a negative effect on performance after large changes in the board, especially when this intervention occurs in stakeholder-oriented firms. The replacement of board members in those stakeholder-oriented banks is negatively linked to performance changes, while CEO turnover seems to be the key (and positive) type of intervention for shareholder-oriented banks.

WE EXAMINE THE RELATIONSHIP BETWEEN CEO, BOARD AND CHAIRMAN TURNOVERS AND FUTURE PERFORMANCE IN BANKS WITH FULLY OUTSIDE BOARDS

Second, by examining the relation between the characteristics of the succession process in the chairman position and changes in performance in shareholder and stakeholder-oriented firms, we also provide new evidence on whether this governance intervention plays a disciplinary role or just reflects a transition process. Third, concerning the relation between CEO turnover and performance changes, we are interested on testing if those boards more aligned with the principal make better decisions concerning CEO replacements. Denis and Denis (1995), Borokhovich et al. (1996), Epure and Lafuente (2015), Huson et al. (2004), and Zhang and Rajagopalan (2010) report a positive relation between future performance and the appointment of outside CEOs. They only study shareholder-oriented firms and these authors suggest that incoming managers from outside are perceived as good news by shareholders because this could imply an increase in managerial quality. This result is also confirmed in our analysis. Although we have information concerning the chairman departure (through the contract dates) we miss the information for the CEO, and thus we cannot distinguish among the different reasons behind the CEO departure. Finally, and following the growing call about the need to test governance predictions in organisations other than shareholder-oriented firms (Hermalin and Weisbach 2003), we extend the analysis to a sample of both shareholder-oriented and stakeholder-oriented firms, obtaining some important differences in their behaviour.

We are also aware of the presence of joint endogeneity problems commonly found in corporate governance literature (Hermalin and Weisbach 2003). To overcome this, we employ the system generalized method of moments (GMM) regression technique. Also, we focus on performance changes after the activation of control mechanisms to obtain more direct evidence on the effect of these events on future performance. We find that within the banks in our sample, the use of different governance interventions help discipline those managers performing poorly. We report a positive relation between

CEO replacement and changes in firm performance, especially when the CEO is an outsider. Furthermore, we report that performance improvements are only statistically significant for shareholder-oriented banks. Concerning board replacements, we find that they are not a relevant governance intervention for explaining changes in firm performance in general. Only after controlling for unexpected changes in the board, we do find a significant negative effect on changes in banking firms' performance. This is especially true for stakeholder-oriented banks. This finding could indicate that for stakeholder-oriented banks, large changes in the board imply the inclusion of members with different and, maybe, conflicting objectives, a fact that is detrimental to the quality of the governance system in these firms. Finally, our empirical findings also reveal that the type of departure and the succession process of the chairman also matter in certain scenarios. In particular, the appointment of an outside chairman exerts an effect on changes in firm performance depending on whether the removal was unexpected or not.

Can we establish a systematic relation between ownership types and performance? Not really, but we do find some relation between ownership type and the corporate governance interventions used by firms. Furthermore, this relation is linked to changes in performance.

The remainder of the paper is organised as follows. Section two comprises a summary of the Costa Rican financial system, and describes the main organisational features for the firms that participate in the banking system. Section three presents our theoretical framework. Section four describes the methodological approach, while the empirical results are presented in section five. Final conclusions are displayed in section six.

THE COSTA RICAN BANKING SYSTEM

BACKGROUND

In Costa Rica, like in most developing countries, deregulation processes in the banking system have taken place seeking an improvement in monitoring activities by regulators as well as an increase in competitiveness between banking firms. Before 1980, the Costa Rican banking system was tightly regulated in terms of both interest rates and activities.

In 1984, the Costa Rican Central Bank initiated a reform process aiming at eliminating its influence on bank interest rate pricing policies. Despite the market constraints, the new participants in the Costa Rican banking system consolidated. In 1990, a new reform process was launched, with important consequences for the financial system. First, the breakdown of the demand deposit monopoly took place in 1992, and the privately owned banks were allowed to openly capture resources from the population. Second, all state owned and privately owned banks were allowed to grant loans and operate in a foreign currency (US dollar). In 1995 further reforms were undertaken to improve the supervision tasks, transparency and competitiveness amongst financial firms (IMF 2003). Due to the increase in the number of participants and the complexity of the banking system, the Costa Rican Central Bank created the Superintendent of Financial Entities (SUGEF). SUGEF is a supervisory agency that monitors banking firms and operates as an independent organisation closely linked to the Costa Rican Central Bank. Similar policies were adopted in the securities and pension funds markets, and agencies were created to monitor these markets. These latter reforms led to creating, in 1997, the National Council of Supervision of the Financial System. This administrative unit of the Costa Rican Central Bank is the main supervisory authority of the financial system, and is in charge of monitoring and coordinating the work of the banking system superintendents, the stock market, and the pension fund operators (IMF 2003). Thus, full disclosure of bank activities occurred in 1997.

The last reform in the regulatory framework took place in 2001. To enhance monitoring, SUGEF introduced the CAMELS rating framework to further evaluate the health of financial institutions (IMF 2003). This scheme allows SUGEF to monitor six major aspects of financial firms: capital adequacy, asset quality, management soundness, earnings, liquidity, and sensitivity to market risk (SUGEF 2000). SUGEF uses the CAMELS framework as well as other qualitative tools to monitor all firms that participate in the financial system, including: state-owned commercial banks, private commercial banks, mutual banks,

cooperative banks, financial conglomerates, financial (non-banking) firms, credit unions and currency exchange offices. However, for the purposes of this paper, and given the significant operational differences that exist between these firms, we focus our analysis on those banking firms that operate under the same market conditions, that is, the state-owned commercial banks, private commercial banks, mutual banks and cooperative banks.

OWNERSHIP TYPES

Four types of banks jointly participate in the Costa Rican banking system. The first group, the state owned banks, is fully owned by the Costa Rican government. These banks basically aim to promote any kind of productive activity, along with the development of depressed areas. These banks, as well as the Costa Rican Central Bank, are considered independent firms since politicians, in accordance with the financial law, do not influence their managerial decisions. This group controlled over 55% of the deposit and loans market in 2004.

Privately owned banks form the second group. Private shareholders hold these firms whose goal is to maximise shareholder value (i.e., profit maximisation behaviour). In 2004, this group controlled nearly 34% of the loans market and 32.77% of all deposits. The third group is the mutual mortgage banks. They are not-for-profit firms. Furthermore, their activity is linked to a specific economic objective established by the government: to grant low adjustable interest rate mortgages, and allocate the governmental resources that facilitate mortgage credits to underprivileged families. The mutual mortgage banks controlled, in 2004, 4.00% and 4.28% of the asset and deposit market, respectively. Concerning their deposit portfolio, both the state owned banks and the mutual mortgage banks are totally guaranteed by the government.

The last group is made up of cooperative financial firms. These firms are owned by cooperative members and their primary objective is to attend the financial needs of their customers (cooperative members or not). They also promote the development of the cooperative partners' geographical areas. Similarly to the previous banking groups, their capability for financial activities is now unrestricted. Concerning their market share, in 2004 these firms accounted for 7% and 7.95% of the loans and deposit market, respectively.

We consider important to remark that these firms differ widely in their organisational structure and their objectives. On the one hand, private banks are shareholder-oriented firms that have profit maximisation as their primary objective. On the other hand, the rest of banking firms can be deemed as stakeholder-oriented firms aiming multiple goals, more related to the access to financial products and services to as many citizens as possible, as well as other social purposes. Agency theory suggests that in the presence of multiple stakeholders, stakeholder-oriented firms will exhibit lower monetary returns as compared with shareholder-oriented firms. In contrast, owners of commercial banks have a common objective function and they have strong incentives to exert a more active monitoring over managers (Shleifer and Vishny 1997; Macey and O'Hara 2003).

BOARD COMPOSITION: BETWEEN MASTERS AND SERVANTS

All Costa Rican banking firms operate under the same regulatory regime. However, some important considerations should be made regarding the composition of their boards. According to the national financial law, the banking firm's board has to be fully composed by outside members[1]. Consequently, the positions of Chairman and CEO cannot be vested in the same person. This regulatory constraint is in accordance with several corporate governance activists who have expressed their concern about the importance of firm's leadership structure. In this sense, Fama and Jensen (1983) and Jensen (1993) claim that concentration of decision control in one individual reduces board's effectiveness and leaves internal control

1 Unfortunately we lack the necessary data to distinguish independent outside members. The Ley del Sistema Bancario Nacional 1644, coming into force in 1953, regulates the composition of the board for the state owned banks in the articles 20th to 37th, as well as for privately owned banks (articles 144th to 149th). For the mutual mortgage banks, this is stated in the articles 76th to 82nd of the Ley del Sistema Financiero Nacional de la Vivienda 7052 coming into force the 13th of November, 1986; and finally, board composition for the cooperative banks is regulated in the articles 46th, 51st, 52nd, 54th and 55th of the Ley de Asociaciones Cooperativas 4179 coming into force the 28th of August, 1968.

mechanisms in a weaker position for disciplining poor managers.

In addition, the law remarks that board members should attend the meetings previously determined by each bank, and can only receive meeting fees as compensation. Furthermore, from the regulatory scheme of the Costa Rican banking system we can also obtain the specific conditions that the different bank types must obey in what concerns their boards. In the case of the state-owned banks, and despite the managerial independence of these banks from the Central Government, the financial law tells us that boards must have seven members designated by the Council of Ministers for periods different from the Government's term of office. In addition, board members neither can be part of the board in any other banking board nor shareholders of commercial banks. These characteristics lead us to suspect that state-owned banks are governed by boards that are more likely to behave as political servants rather than active monitors.

Concerning the shareholder-oriented banks, an additional legal constraint prevents board members to participate in the board or in the managerial team of any other bank. As regard board size, each bank determines the number of members in the board, being the only legal requirement that the board must have more than 5 members. There is no impediment concerning the possibility that shareholders sit on the board in these banks but we lack this information. As we indicate in section 4, our data does not allow us to identify board's shareholding, which represents a limitation in this study. Nevertheless, the presence of an objective linked to the maximisation of shareholders' residual income allows us to argue that in these firms the board will be more aligned with the principal. Finally, the regulatory regime establishes some legal considerations for the mutual mortgage and cooperative banks. In the former, their boards are restricted to have between 5 and 7 non-executive members, and these members must be mutual partners. For the latter, board size is conditioned to be an odd number over 5 members, and board seats are not exclusive for cooperative partners. However, board members cannot hold a position in any other financial firm.

As a summary, the Costa Rican banking system has four types of financial firms that jointly participate in the market. We split them in two groups according to their ownership type, shareholder-oriented and stakeholder-oriented firms. Boards are fully composed by outsiders and generally small in size. The financial law restricts the composition and remuneration scheme of the board of directors, but it facilitates the access to more detailed information in terms of the nature of the executive turnover and the origin of the successors. This will allow us to compare the effect on performance of the different managerial turnovers according to the characteristics of managers and the firm type.

CORPORATE GOVERNANCE: THEORY AND HYPOTHESES

Governance mechanisms are the organisational controls that reduce conflicts amongst the firm's stakeholders pursuing the maximisation of their welfare. There are two main views concerning corporate governance goals: Shleifer and Vishny (1997) put their emphasis on the maximisation of shareholder value, whereas Tirole (2001) considers stakeholders' welfare, and he remarks that when a governance mechanism takes place, a reaction in firm behaviour is expected to improve both controlling and non-controlling stakeholders' welfare.

Although corporate governance has become an important research topic, existing empirical evidence mostly focuses on large and publicly traded enterprises in developed economies, which only represent a small portion of the population of firms (Claessens and Yurtoglu 2013). Concerning the banking industry, and despite its relevance there are still few papers focusing on banks' corporate governance (Macey and O'Hara 2003; Crespí et al. 2004; De Andrés and Vallelado, 2008; Laeven and Levine, 2009; Erkens et al., 2012). Although banks show important operating differences with respect to firms in other industrial sectors, the lack of research about governance in this sector is especially surprising since banks play a strategic role in an economy (Rajan and Zingales 1998). Banking firms also face problems derived from inefficient control and monitoring since there is a conflict of interests between shareholders and depositors.

We examine the effect that three governance interventions (CEO turnover, changes in the board

members and chairman replacement) have upon changes in firm performance in firms with different organisational structures. Furthermore, looking at the effect that previous changes in the governance system exert on changes in firm performance allows us to control for potential joint–endogeneity problems due to time considerations.

We first evaluate the effect that CEO turnover and the type of the new manager have on changes in firm performance. CEO turnover is a process often linked to the monitoring task of the board. Thus, when there is a poor performing CEO the board can exert its monitoring role and replace him/her to enhance firm performance (Hermalin and Weisbach 1998). However, existent empirical evidence on the relation between CEO replacement and future performance shows mixed results. This can be explained by the presence of several factors that affect the likelihood of CEO turnover, such as the independence of the board members, the presence of large investors, and the participation in stock markets. On the one hand, there exists evidence suggesting a positive effect of CEO turnover on shareholders' wealth and firm operations (Denis and Denis 1995). Using a detailed database of US firms for the period 1985–1988, these authors show that CEO turnover has a positive effect on operating performance, especially for the case of unexpected departures. Similarly, Borokhovich et al. (1996), Huson et al. (2004) and Zhang and Rajagopalan (2010) report a statistically significant positive change in firm performance after CEO departures followed by a new CEO appointed from outside the firm. On the other hand, CEO replacement might be also seen as a negative signal consequence of poor managerial performance, leading to a fall in both firm value and future outcomes. Along with this interpretation, Warner et al. (1988) find that stock price changes are not influenced by CEO turnover, whereas Khanna and Poulsen (1995) report that in distressed firms stock prices negatively react to turnover announcements.

At this point, it is important to remark that, due to data availability, we focus on the origin of the successor rather than the type of departure. We are aware of the importance in distinguishing between voluntary and unexpected replacements. Nonetheless, Hermalin and Weisbach (2003), and Huson et al. (2004) remark that a voluntary CEO turnover can be due to retirement or the acceptance of some external offer to manage another firm. Hence, voluntary departure is not a signal of poor management or performance, and consequently, firm's future performance is expected to show smaller variations when compared with unexpected departures. Thus, the problem in identifying the type of departure only adds noise to our variable, which could lead to a downward biased result.

Concerning the type of successor, firms can appoint an insider or an outsider as CEO. When firms decide to promote an internal candidate to manage the firm, an insider, we do not expect that this type of succession will lead to significant improvements in firm performance, since the new CEO is more likely to continue with the traditional policies and routines within the firm. In the latter case, and as Huson et al. (2004) point out, we argue that a firm hires an outsider CEO seeking an organisational change derived from this new agent who is not influenced by the current schemes of the firm. Furthermore, the appointment of outside managers could imply a larger increase in firm performance, since they are expected to introduce new practices to employees in order to improve operating performance. Consequently, the first hypothesis to be tested becomes:

H1:

(a) CEO turnover increases future firm performance.

(b) CEO turnover followed by the appointment of an outsider increases future firm performance.

Our second governance intervention deals with changes in the board and its influence on changes in firm performance. Within any organisation, the board of directors is widely recognized to play an important role in corporate governance in monitoring and disciplining managers (Hermalin and Weisbach 2003). When the board does not fulfil this monitoring task, replacement of its members appears as a solution to enhance firm performance. Empirical evidence on the role of the board mostly focuses on the effect that board size and composition have upon performance. As regard board size, Yermack (1996), and Eisenberg et al. (1998) find that there is negative relation between board size and performance. This indicates that larger boards are less efficient since free-riding problems within the board rise. Concerning board composition, evidence provided by Hermalin and

OUR RESULTS INDICATE THAT EXECUTIVE TURNOVERS FOLLOWED BY THE APPOINTMENT OF OUTSIDE EXECUTIVES (CEO AND CHAIRMAN) HAVE A POSITIVE IMPACT ON PERFORMANCE

Weisbach (1991) and Mehran (1995) do not support the positive relation between more independent boards and performance. In fact, Hermalin and Weisbach (1998) suggest that poor performing firms increase their outside directors, leading to the insignificant relation between performance and more independent boards reported in the literature.

As we indicate in Section 3, board composition in the Costa Rican banking system is clearly defined in the regulatory framework, since the national financial law states that the bank's boards have to be outsiders, i.e., members of the board cannot be part of the managerial team. In this case, regulation reduces the bank's ability to incorporate executive directors into the board. Furthermore, controlling for board composition alleviates the potential endogeneity problems between board composition and performance (Hermalin and Weisbach 2003), a fact that leads us to focus the analysis on the type of departure. We examine the relation between board and firm performance by examining the influence that changes in the board (natural or unexpected) have upon changes in firm performance. We expect that firms change their boards in order to improve firm performance (Hermalin and Weisbach 2003). Furthermore, we also expect a positive relation between unexpected board replacements and firm performance: unpredicted changes in the board might be consequence of poor performance results, and if corporate governance works, the new board members show a more active involvement in their roles, aiming to signal their competence and expertise to both the principal and the director's market (Weisbach 1988; Fama and Jensen 1993). From this argument we formulate our second hypothesis:

H2:

(a) Board turnover positively affects future firm performance.

(b) The relation between board turnover and future firm performance is stronger for unexpected departures.

Finally, we also consider the replacement of the chairman. Since the chairman can monitor and exert his/her power in the corporate decision making process, his/her replacement might be a determining event in the life of the firm altering its performance. We argue that chairman turnover positively affects firm performance due to an improvement in the monitoring role of the board and the decision making process. Nevertheless, we must also pay attention to the type of departure and succession, since predicted replacement of the chairman position reflects a natural transition process for any firm. If this is the case, no change is expected in firm performance since organisational routines remain unchanged. Furthermore, the complementarities between the type of departure and the type of succession might be critical for future operating and corporate performance. The appointment of a chairman from outside the firm after a natural departure is unlikely to have a significant effect on the board members, since board members could perceive that there is no need to change the board routines and processes. In fact, the board could create social barriers to neutralize the new chairman efforts. Conversely, an unexpected departure of the chairman followed by the arrival of an outsider can indeed pursue an organisational change that aims to improve firm performance. The third hypothesis reads as follows:

H3:

(a) Chairman turnover increases future firm performance.

(b) The relation between the appointment of an outside chairman and changes in performance is stronger for the case of unexpected departures.

Agency theory usually links active monitoring over managers to shareholder-oriented firms. Nevertheless, our setting includes firms where the governance system

is affected due to the presence of different stakeholders (debtholders, employees and politicians). In this sense, should we expect that shareholder-oriented firms show a more active disciplinary behaviour over managers? Tirole (2001) shows that the major governance problem faced by firms with multiple goals is to evaluate the quality of decision making. Managers of stakeholder-oriented firms can not clearly know along which lines they will be evaluated, a fact that reduces their incentives. Hence, managers can justify poor (economic) performance results (as compared with those exhibited by competitors) on the basis that other costly objectives more linked to the firm, such as social responsibility or local implication, were better fulfilled. Based on this argument, we attempt to provide new evidence on whether the effectiveness in the implementation of this disciplinary mechanism differs when comparing shareholder and stakeholder-oriented banks.

Similarly, we are also interested in exploring whether changes in the board equally enhance performance in shareholder and stakeholder-oriented firms. Arguably, firms that have to respond to potential conflicts amongst their multiple stakeholders in the boardroom usually increase the cost of decision making processes, which could be observed in unfocussed goals and lower levels of decision quality (Tirole 2001). Furthermore, the difference in the objective functions between shareholder and stakeholder-oriented firms leads us to conjecture that the sensibility of changes in performance to changes in the board reveals the effectiveness of governance systems where performance is the dominant objective.

Finally, we also estimate an alternative specification to test whether large changes in the board (more than 50%) have an effect on performance changes and if so, check if the impact depends on the firm type.

H4:

(a) The relation between CEO turnover and future performance is stronger for shareholder-oriented firms.

(b) The effect of Chairman turnover and large board replacements on future performance is weaker for stakeholder-oriented firms.

DATA AND METHOD

DATA

The information to carry out this paper comes from the Costa Rican Central Bank for the period 1999–2004. Although the period under analysis witnessed a limited number of mergers and acquisitions, we decided to use an unbalanced panel data, which includes all the commercial banking firms for each year considered in the analysis. The final sample consists of state owned banks, mutual mortgage banks, privately owned banks, and cooperative financial firms. For the period under analysis, we include all 3 existing commercial state owned banks and the 3 mutual mortgage banks. Concerning the number of privately-owned banks, it decreased from 16 in 1999 to 12 in 2004, due to mergers and acquisitions undergone in the market. Finally, the cooperative financial firms account for 25 firms for the period 1999–2003 and 24 in 2004. The total sample size calculated over the period under analysis is 275.

Descriptive statistics are presented in Table 1, as well as the frequencies for changes in the CEO, board and in the chairman positions. Concerning the dependent variable, we measure economic performance through three alternative measures: the net interest margin (NIM) which is the difference between interest income and interest expense relative to total assets, the ratio of operating profit to total assets (ROA), and the ratio of net profit to equity (ROE).

Since we aim to measure the differential effect of governance interventions upon performance, we introduce these variables as changes between the year *t-1* and *t*. We remark that market based measures cannot be used since only six privately owned banks are listed in 2004. From Table 1 we observe that the average NIM rate stood at 6.69% for the period under analysis, whereas mean ROE and ROA was 10.80% and 2.55%, respectively. In addition, it can be observed that state owned banks are the largest in terms of size and they also show the highest ROE ratio for the period under analysis (15.26%). Due to the legal framework both private and cooperative banks accumulate more capital, while state-owned banks and the mutuals enjoy the government endorsement. This can be observed in the figures of Table 1, where the mean ROA is larger for private and cooperative banks, whereas state owned and

mutual banks show higher mean ROE rates. Concerning our lending performance variable, cooperative banks show the highest NIM (8.75%), a rate that more than doubles that shown by private banks (3.91%). As control variables we include bank size, measured by total assets (lagged), interaction terms between size and ownership type, and time dummies to account for the influence of competition over time.

Concerning the independent variables related to corporate governance interventions, our data allows us to distinguish different types of management changes, i.e., CEO, board and chairman turnovers; as well as the exact date of departure. Figure 1 presents the timing to identify governance interventions. Here, we consider that firm performance in period *t-1* provides relevant information to stakeholders and the board that could contribute to decide

Table 1. Descriptive statistics for the variables considered in the analysis

	State owned banks	Private owned banks	Mutual mortgage banks	Cooperative financial firms	Overall
Net Interest Margin (NIM)	0.0470 (0.0102)	0.0391 (0.0167)	0.0576 (0.0085)	0.0875 (0.0371)	0.0669 (0.0369)
Returns on Assets (ROA)	0.0162 (0.0101)	0.0175 (0.0105)	0.0128 (0.0063)	0.0331 (0.0373)	0.0255 (0.0293)
Returns on Equity (ROE)	0.1526 (0.0743)	0.1332 (0.0768)	0.1460 (0.0565)	0.0824 (0.0893)	0.1080 (0.0869)
Total assets (million of 2004 Costa Rican colones)	585,090.10 (375,014.40)	70,945.45 (77,671.27)	43,270.95 (28,652.29)	5,432.64 (7,990.91)	67,607.69 (174,808.10)
Equity / Assets	0.0805 (0.0311)	0.1280 (0.0582)	0.0700 (0.0160)	0.3338 (0.1783)	0.2321 (0.1783)
Board size	7.0000 (0.0000)	7.4400 (2.0615)	5.6667 (0.4880)	7.6667 (1.0532)	7.4167 (1.4980)
Δ *CEO t-1* (Total)	**1**	**11**	**0**	**8**	**20**
Promoted	0	1	0	3	4
Hired from outside	1	10	0	5	16
Δ *Board t-1* (Total)	**15**	**41**	**6**	**185**	**247**
Natural replacements	8	22	5	163	198
Unexpected replacements	7	19	1	22	49
Δ *Chairman t-1* (Total)	**3**	**10**	**9**	**37**	**59**
Natural replacements	0	5	5	31	41
Unexpected replacements	3	5	4	6	18
Promoted	3	4	9	30	46
Hired from outside	0	6	0	7	13
Number of observations	18	91	18	148	275

The sample includes information for the Costa Rican banking firms between 1999 and 2004. Net interest margin is calculated as the difference between interest income and interest expense relative to total assets. Return on equity is measured as the ratio of net profit to equity, and return on assets is defined as the ratio of operating profit divided by total assets. Total assets are expressed in million of 2004 Costa Rican colones. Board size is the average number of members in the board. CEO turnover, changes in the board and chairman removals are the sum of these events and their corresponding categories (type of departure and nature of the successor). Standard deviations are presented in brackets.

whether or not implement control mechanisms aiming to improve firm performance. At this stage, stakeholders can decide that the board is doing a poor monitoring task. In this case, governance intervention takes place to improve future performance, and this event is reflected as changes in the board or the replacement of the chairman (Figure 1). Also, the board can inform to stakeholders that the CEO is the main responsible for the poor performance showed by the firm. Hence, the board can intervene by replacing the general manager in order to enhance performance in the following period.

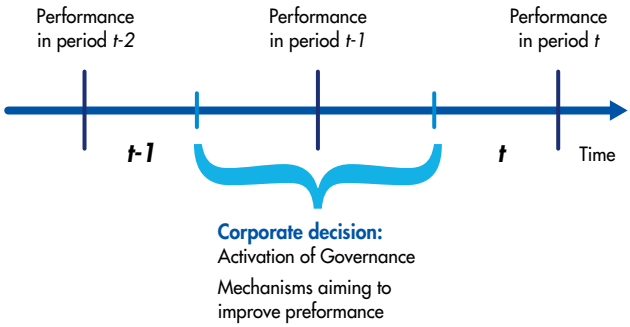

Figure 1. Timing of control mechanisms

The figure shows the sequence of events that relates control mechanisms and changes in firm performance. The activation of a control mechanism in period *t-1* is expected to exert an effect on firm performance variation between periods *t-1* and *t*.

We are interested in clearly identifying and distinguishing those governance interventions that are expected to influence performance in the following period from those that are not because of time considerations. Consequently, we consider that a governance mechanism corresponds to a specific period only if this intervention took place between the second half of year t-1 and the first half of period *t*[2].

For CEO turnover, we create two dummy variables that take the value of one if the successor is from inside or outside the firm, and zero otherwise. We identify an internally promoted replacement if the new CEO was either in the board or in the top managerial team in the year prior his/her appointment. In this case, it is important to remark that from the data set it is not possible to differentiate natural CEO removals from unexpected ones. From Table 1 we observe that the CEO removal rate is 8.77% for the period under analysis. The CEO turnover rate is similar to that reported by Denis and Denis (1995) and Weisbach (1988) for US firms (9.3% and 7.8%, respectively), by Conyon (1998) for the UK (8%), and lower than that found by Gibson (2003) for eight emerging economies (12.2%).

In addition, the mutual mortgage banks are the only financial firms that did not experience any CEO turnover in the period under analysis; whereas the only CEO replaced in state owned banks was followed by a candidate hired from outside the firm. Privately owned banks show a CEO turnover rate of 14.67% (91% of removals were followed by outsiders). Finally, the CEO turnover rate for the cooperative banks is also low (6.50%) and 63% of these removals were followed by the appointment of individuals from outside the firm.

Concerning changes in the board, we consider the exit rate from the board. Based on this definition turnover refers to the percentage of directors of a given board that left the position in the reference period. We distinguish between natural and unexpected board turnovers through a feature of our data set that indicates the contract termination date. Furthermore, knowing that only non-executive members can sit on the board, we consider the variation rate in the board for those cases when the turnover was natural and unexpected separately. Unfortunately, we cannot identify those members in the board that are also shareholders.

From Table 1 we observe that, on average, boards in the sample consist of 7.42 members and that mutual mortgage banks are the only banking firms whose boards have less than seven members. The result indicates that boards in the Costa Rican banking firms are smaller when compared with those reported by De Andrés and Vallelado (2008) for six OECD countries (16 members). In addition,

2 We also tested alternative definitions based on quarterly periods. Results remain unchanged and they are available from the authors.

boards replace 15.10% of their members per year and these changes are mainly natural (78%). Similar board turnover rates are reported by Crespí et al. (2004) for Spanish banking firms (20%).

We also observe that for state owned banks and the private ones the variation rate in the board is more equally distributed. For the former, 53% and 47% of board replacements represent natural and unexpected changes, respectively; whereas for the latter 53% of board changes were unexpected and 47% are catalogued as natural. The cooperative banking firms experienced the highest board change rate (20.34%), but 88% corresponds to natural

Table 2. Sample frequencies for changes in top management positions by year

	2000		2001		2002		2003		2004	
	N	%	N	%	N	%	N	%	N	%
Δ *CEO t-1* (Total)	**3**	**1.00**	**7**	**1.00**	**2**	**1.00**	**7**	**1.00**	**1**	**1.00**
Promoted	2	0.33	0	0.00	0	0.00	2	0.29	0	0.00
Hired from outside	1	0.67	7	1.00	2	1.00	5	0.71	1	1.00
Δ *Board t-1* (Total)	**58**	**1.00**	**42**	**1.00**	**59**	**1.00**	**51**	**1.00**	**37**	**1.00**
Natural replacements	48	0.83	32	0.76	43	0.73	45	0.88	30	0.81
Unexpected replacements	10	0.17	10	0.24	16	0.27	6	0.12	7	0.19
Δ *Chairman t-1* (Total)	**13**	**1.00**	**13**	**1.00**	**14**	**1.00**	**12**	**1.00**	**7**	**1.00**
Natural replacements	10	0.77	7	0.54	9	0.64	10	0.83	5	0.71
Unexpected replacements	3	0.13	6	0.46	5	0.36	2	0.17	2	0.29
Promoted	8	0.62	11	0.85	11	0.79	10	0.83	6	0.86
Hired from outside	5	0.38	2	0.15	3	0.21	2	0.17	1	0.14

N refers to the total number of changes for the different governance interventions. CEO turnover, changes in the board and chairman removals are, for each year, the sum of these events and their corresponding categories (type of departure and nature of the successor).

Table 3. Sample frequencies for simultaneous changes in top management positions

	2000	2001	2002	2003	2004
$\Delta Chairman_{t-1} \wedge \Delta CEO_{t-1}$	1	2	0	1	0
$\Delta Chairman_{t-2} \wedge \Delta CEO_{t-1}$		0	0	2	0
$\Delta Board\ (> 50\%)_{t-1} \wedge \Delta CEO_{t-1}$	1	1	0	1	0
$\Delta Board\ (> 50\%)_{t-2} \wedge \Delta CEO_{t-1}$		0	0	0	0
$\Delta Board\ (> 50\%)_{t-1} \wedge \Delta Chairman_{t-1}$	3	1	0	4	0
$\Delta Board\ (> 50\%)_{t-2} \wedge \Delta Chairman_{t-1}$		0	0	0	0

Total number of simultaneous changes for the different governance interventions.

changes. Finally, mutual mortgage banks show the lowest board variation rate (7.33%) and for these banking firms board changes are mainly natural (84.85%). In addition, Table 2 shows that for every year natural replacements exceed unexpected changes in the board.

As regard chairman turnover, we are able to distinguish four different types of chairman replacements: natural or unexpected replacements that can be followed by an internally promoted candidate or by a person from outside the firm. The criteria used to identify an internally promoted (hired from outside) chairman is based on the presence (absence) of the individual in the board during the year prior to his/her appointment. In addition, we can observe if the chairman's departure was natural or unexpected based on the contract termination date. Therefore, we create a set of four dummy variables corresponding to chairman turnover according to the nature of the replacement (natural or unexpected) and the origin of the new chairman (promoted or hired from outside). Also, we create a set of four interactions terms between these four dummies to test for the presence or complementarities in the chairman replacement process. From Table 1 we observe that, on average, banks replace 25.88% of their chairmen and most of these changes are natural (69.49%) followed by internal candidates (78%). The chairman turnover rate reported in this paper is higher than that found by Crespí et al. (2004), who report a chairman turnover rate of 16% for Spanish banking firms, whereas Florou (2005) finds for a sample of UK firms a chairman replacement rate of 14.17%.

In the case of state-owned banks and mutual mortgage banks, all chairmen replacements were followed by internally promoted persons. The cooperative banking firms show a high rate of natural chairman turnover (83.78% of the cases) and most replacements were followed by the appointment of internal candidates (81.08%). For private banks, natural and unexpected replacements are equally distributed in the sample but most of these removals were followed by the appointment of persons from outside the bank (60%).

When comparing these results it is possible to differentiate two different trends followed by the Costa Rican banking firms. On the one hand, active chairmen appointments from the market are not used by state owned and mutual mortgage banks as a governance intervention to attain performance improvements. These banks benefit from external mechanisms such as governmental protection, as well as their position in their corresponding market niches. On the other hand, privately owned and cooperative banks are more active when it comes to the use of internal mechanisms. From Table 1 we observe that CEOs in these firms are mainly replaced by individuals hired from outside the firm. Also, chairman replacement is an important control intervention used by these firms. However, it is important to remark that for the privately owned banks chairmen removal followed by persons from outside becomes the most common pattern, whereas for the cooperative banks internal promotions follow natural replacements.

Having determined that the intensity in the implementation of governance interventions differ among the Costa Rican banking firms, we examine whether shareholder oriented banks (privately-owned banks) benefit more from the implementation of governance interventions. Further, we propose to evaluate how these interventions are related to economic and operating performance.

METHOD

Concerning the econometric approach, panel data analysis is the most efficient tool when the sample is a mixture of time series and cross-sectional data, since this structure allows for taking into consideration the unobservable and constant heterogeneity, i.e., the specific characteristics of each firm. In addition, we have endogeneity problems since the independent variables related to changes in the governance system could be simultaneously determined along with the dependent variable (Hermalin and Weisbach 2003). Consequently, we need to use an econometric method that deals with endogeneity, as well as with the presence of firm specific unobservable fixed effects that can be correlated with some explanatory variables.

We use the system Generalized Method of Moments (GMM) estimator developed by Arellano and Bover (1995) as methodological tool. This econometric method considers the unobserved effect transforming the variables into first differences, and it uses the GMM to control for endogeneity problems. The GMM procedure introduces the

lagged dependent variable to control for serial dependence in this variable, and it allows for building instruments for those variables that are potentially endogenous. Under this technique, the model is estimated in both levels and first differences, as level equations are simultaneously estimated using differenced lagged regressors as instruments. In this way, apart from controlling for individual heterogeneity, variations among firms can be retained (Blundell and Bond 1998). This fact stands as a key point, since the dynamic dimension of panel data permits to check response processes across time and to identify how the firms' governance characteristics affect their performance. Also, the system GMM estimators with adjusted standard errors are more efficient than the one-step estimator if the residuals are heteroskedastic. Furthermore, Blundell and Bond (1998) remark that the system estimator is more efficient and it improves the asymptotic efficiency of the first difference estimator when the GMM first-difference estimator shows poor performance, particularly when, as in our case, time is short.

Performance is assumed to be a function of a set of independent variables where governance system plays an important role. To test this we propose the following regression:

[1]

$$\Delta\text{Performance}_{i,t} = \alpha_0 + \alpha_1\Delta\text{Performance}_{i,t-1} + \beta_1 Size_{i,t-1} + \beta_2 Size_{i,t-1} \times \text{Bank Type}_{i,t} + \beta_3\Delta\text{CEO}_{i,t-1} + \beta_4\Delta\text{Board}_{i,t-1} + \beta_5\Delta\text{Chairman}_{i,t-1} + \psi_t + \upsilon_{i,t}$$

where $i = 1,...,N$ and $t=1,...,T$ represent the cross-sectional units and the time periods, respectively, while ψ_t is the time-specific effect and $\upsilon_{i,t} = \varepsilon_i + \nu_{i,t}$ is the error term containing an unobserved time-invariant, firm-specific effect (ε_i) that controls for unobservable heterogeneity (like geographic location), and a stochastic error term varying cross-time and cross-section($\nu_{i,t}$). As mentioned in section 3, agency theory postulates that changes in the governance system aim to enhance firm performance. To corroborate our hypotheses about the presence of a positive effect of governance interventions upon performance we expect $\beta_3 > 0$ (H1a), $\beta_4 > 0$(H2a) and $\beta_5 > 0$(H3a).

In a second stage we run a set of regressions where we consider the differential characteristics of board changes, as well as CEO and chairman turnovers. The full model to be estimated follows:

[2]

$$\Delta\text{Performance}_{i,t} = \alpha_0 + \alpha_1\Delta\text{Performance}_{i,t-1} + \delta_1 Size_{i,t-1} + \delta_2 Size_{i,t-1} \times \text{Bank Type}_{i,t} + \delta_3\Delta\text{CEO}_{i,t-1}^{Promoted} + \delta_4\Delta\text{CEO}_{i,t-1}^{Outsider} + \delta_5\Delta\text{Board}_{i,t-1}^{Natural} + \delta_6\Delta\text{Board}_{i,t-1}^{Unexpected} + \delta_7\Delta\text{Chairman}_{i,t-1}^{Natural\ \wedge\ Promoted} + \delta_8\Delta\text{Chairman}_{i,t-1}^{Natural\ \wedge\ Outsider} + \delta_9\Delta\text{Chairman}_{i,t-1}^{Unexpected\ \wedge\ Promoted} + \delta_{10}\Delta\text{Chairman}_{i,t-1}^{Unexpected\ \wedge\ Outsider} + \psi_t + \upsilon_{i,t}$$

Based on our theory, we expect that the appointment of a CEO from outside the bank leads to the achievement of organisational changes that improve firm performance (H1b: $\delta_4>0$). We also want to confirm that unexpected board departures imply an increase in the monitoring task for the firm(H2b: $\delta_6>0$). And finally, we expect that $\delta_8<0$ and $\delta_{10}>0$, i.e., the appointment of a chairman from outside the banking firm affects firm performance depending on the nature of the replacement (natural or unexpected) (H3b).

Finally, and given the differences in ownership types, we extend the analysis by evaluating the effectiveness of control mechanisms between shareholder and stakeholder-oriented firms. Theoretical arguments by Shleifer and Vishny (1997) emphasise that the presence of multiple stakeholders with different objective functions can negatively affect the quality of governance because decision making processes become unfocussed. This implies that shareholder-oriented firms, with profit maximisation as objective, will monitor managers more effectively, and consequently, the activation of control mechanisms will be clearly linked to improvements in performance. Hence, we explore the effectiveness of governance systems in shareholder and stakeholder-oriented companies by estimating the following regression:

[3]

$$\Delta\text{Performance}_{i,t} = \alpha_0 + \alpha_1\Delta\text{Performance}_{i,t-1} + \gamma_1 Size_{i,t-1} + \gamma_2 Size_{i,t-1} \times \text{Private Bank}_{i,t} + \gamma_3\Delta\text{CEO}_{i,t-1} + \gamma_4\Delta\text{CEO}_{i,t-1} \times \text{Private Bank}_{i,t} + \gamma_5\Delta\text{Board}_{i,t-1} + \gamma_6\Delta\text{CEO}_{i,t-1} \times \text{Private Bank}_{i,t} + \gamma_7\Delta\text{DChairman}_{i,t-1} + \gamma_8\Delta\text{DChairman}_{i,t-1} \times \text{Private Bank}_{i,t} + \psi_t + \upsilon_{i,t}$$

Using this notation, we can rewrite our last hypotheses as follows:

- Hypotheses 4a: $\gamma_3 < 0,\ \gamma_4 > 0$
- Hypotheses 4b: $\gamma_5 < 0,\ \gamma_6 > 0$ and $\gamma_7 < 0,\ \gamma_8 > 0$

Our formulation implies that the effect of changes in the CEO position is stronger for private banks rather than stakeholder-oriented banks (H4a). Similarly, we expect that $\gamma_5 + \gamma_6 > \gamma_5$ or $\gamma_6 > 0$ and $\gamma_7 + \gamma_8 > \gamma_7$, meaning that changes in the board and in the chairman position are negatively correlated with future performance in stakeholder-oriented banks.

As a measure of goodness of fit, we first present the result of the Wald test of joint significance for all the independent variables. We also test model specification validity through the Hansen–Sargan test of overidentification. In particular, this procedure proposed by Arellano and Bond (1991) examines whether the instrumental variables are uncorrelated to the residuals[3]. Finally, we test for the presence of first and second degree serial correlation amongst the error terms. Failure to reject the null hypothesis of no second-order serial correlation could indicate that valid orthogonality conditions are used and the instruments are valid.

RESULTS

GOVERNANCE INTERVENTIONS AND PERFORMANCE

In Table 4 we present the results of the first application, which only considers CEO, board and chairman turnovers as independent variables, irrespectively of the characteristics of those changes[4]. Our empirical findings indicate that CEO turnover exerts a statistically significant effect upon changes in firm performance. This result is consistent with our hypothesis H1a and is similar to those reported by Denis and Denis (1995), Gibson (2003), and Huson et al. (2004).

From Table 4 one can also observe that neither changes in the board nor chairman replacements explain changes in performance. Furthermore, we also estimate an alternative specification to test whether large changes in the board have an influence on changes in performance (specification 2 in Table 4). More specifically, we include in the analysis a dummy variable that takes the value of one if a large change in the board took place (more than 50%), and zero otherwise. For this variable, we report a statistically significant negative effect only when the variation in NIM is the dependent variable. This leads us to partially reject H2a. From the board perspective, the finding could reveal that large board replacements implies the appointment of new members who could lack expertise in board tasks, and their decisions can negatively alter bank's lending policies, and loan or deposit mix in the short-run. Results for the variable reflecting chairman turnover are not statistically significant. Hence, we reject H3a since the activation of this governance intervention does not seem to be linked to performance in a significant way. *(See Table 4)*

Concerning the possible interaction among different governance interventions, we have also controlled for simultaneous effects, both with and without delay[5]. As the figures contained in Table 4 show, their effect is rather small and not significant. The result of the Sargan test reported in Table 4 indicates that there is no correlation between instruments and error terms, providing evidence that valid instruments are used. Also, the estimates of the AR (1) and AR (2) lead us to maintain that the error terms are not serially correlated.

3 The null hypothesis of the Sargan test states that the instruments are correlated with the error terms. Failure to reject the null hypothesis provides evidence that valid instruments are being used.

4 Estimation of equations [1] and [2] using the first difference GMM are not presented due to lack of space but they are available from the authors. The results of the Sargan test provide evidence that the lagged levels dated t–2 as instruments are not valid in the first difference GMM model. Our estimates of the AR (1) coefficients show that the lagged levels of variables provide weak instruments in the first difference GMM model.

5 Specification (3) in Table 4 was also estimated considering the variables that reflect significant changes in the board and replacement in the chairman position as lagged terms. Results are not shown due to lack of space but they remain unchanged and they are available from the authors.

Table 4. The relation between governance interventions and changes in firm performance

	Δ *Net interest margin*			Δ *Return on assets*			Δ *Return on equity*		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Size (ln assets) *t-1*	-0.3730 (0.7013)	-0.7823 (0.5475)	-0.6558 (0.5619)	0.0029 (0.0106)	0.0026 (0.0108)	0.0018 (0.0101)	0.0104 (0.0402)	0.0110 (0.0425)	0.0094 (0.0438)
Size *t-1*×private owned banks	-1.0951 * (0.6076)	-0.8660 * (0.4899)	-0.9157 * (0.5013)	-0.0050 (0.0080)	-0.0046 (0.0079)	-0.0039 (0.0081)	-0.0357 (0.0339)	-0.0355 (0.0331)	-0.0343 (0.0339)
Size *t-1*×mutual mortgage banks	0.0914 (0.6389)	0.1008 (0.5080)	-0.0039 (0.5014)	-0.0005 (0.0073)	-0.0012 (0.0070)	-0.0007 (0.0074)	-0.0443 (0.0336)	-0.0393 (0.0332)	-0.0383 (0.0341)
Size *t-1*×cooperative banks	0.2265 (0.5575)	0.4891 (0.4077)	0.4268 (0.4259)	-0.0041 (0.0081)	-0.0039 (0.0080)	-0.0035 (0.0083)	-0.0401 (0.0341)	-0.0397 (0.0327)	-0.0388 (0.0332)
Δ CEO *t-1*	0.4529 ** (0.2021)	0.4957 ** (0.2426)	0.3855 * (0.2335)	0.0033 * (0.0019)	0.0033 * (0.0019)	0.0039 * (0.0021)	0.0177 *** (0.0070)	0.0176 *** (0.0070)	0.0182 *** (0.0071)
Δ Board of directors (%) *t-1*	-0.2376 (0.4899)			-0.0023 (0.0034)			0.0078 (0.0093)		
Δ Board of directors (>50%) *t-1*		-0.9217 ** (0.3995)	-0.9605 ** (0.3858)		-0.0018 (0.0020)	-0.0013 (0.0035)		0.0027 (0.0071)	0.0021 (0.0072)
Δ Chairman *t-1*	-0.0148 (0.1074)	0.0472 (0.1101)	0.0065 (0.1101)	0.0010 (0.0017)	0.0010 (0.0017)	0.0010 (0.0018)	-0.0028 (0.0061)	-0.0028 (0.0062)	-0.0027 (0.0064)
Δ Chairman *t-1* Λ Δ CEO *t-1*			0.9201 (0.7868)			-0.0047 (0.0069)			-0.0056 (0.0223)
Δ Board of directors (>50%) *t-1*			-0.1011			0.0001			0.0021
Λ Δ Chairman *t-1*			(0.4749)			(0.0037)			(0.0114)
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	0.0342 (0.0732)	0.1028 (0.0750)	0.0959 (0.0749)	0.0003 (0.0017)	0.0002 (0.0018)	0.0003 (0.0015)	0.0055 (0.0051)	0.0052 (0.0058)	0.0053 (0.0060)
Wald test (chi2)	71.92 ***	92.50 ***	132.26 **	37.95 ***	58.58 ***	65.08 ***	44.78 ***	42.17 ***	52.13 ***
Sargan test	4.37	4.28	4.30	7.35	7.57	7.40	4.94	5.01	5.02
Test for AR1	-1.65 *	-1.37	-1.32	-0.38	-0.31	-0.31	-1.49	-1.54	-1.52
Test for AR2	-1.43	-1.34	-1.38	-1.13	-1.04	-1.09	0.50	0.48	0.47

Regressions are estimated as follow (equation 1):

$$\Delta\text{Performance}_{i,t} = \alpha_0 + \alpha_1\Delta\text{Performance}_{i,t-1} + \beta_1 Size_{i,t-1} + \beta_2 Size_{i,t-1} \times \text{Bank Type}_{i,t} + \beta_3\Delta\text{CEO}_{i,t-1} + \beta_4\Delta\text{Board}_{i,t-1} + \beta_5\Delta\text{Chairman}_{i,t-1} + \psi_t + \upsilon_{i,t}$$

ΔCEO dummy equal to one if we identify a change in the CEO position. Δ Chairman dummy equal to one if a change in the Chairman position took place. Board of directors (%) refers to the proportion of directors that left the board. Δ Board of directors (>50%) is a dummy variable equal to one if the exit rate from the board exceeds 50%. We also estimated an alternative specification to evaluate the joint impact of different governance interventions on changes in performance (Model 3). Dependent variables: Variation in net interest margin (NIM), variation in return on assets (ROA), and variation in return on equity (ROE). Standard errors are presented in brackets. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 level, respectively.

As it has been already mentioned, one of the contributions of the paper lies in the use of more detailed information concerning the features of the different replacements, so we proceed now to examine their influence. Despite the relevance of the finding concerning managerial changes, we analyse next the effect that the dismissal and the succession characteristics of these changes have upon firm performance. Results of this second application can be found in Tables 5a and 5b. We present first the results of all organisational changes when the variation in the net interest margin (NIM) is considered as the dependent variable (Table 5a), whereas Table 5b considers changes in the returns on assets (ROA) as the dependent variable.

We also estimated Equations [2] and [3] using changes in ROE as dependent variable. Results for this variable, not presented here due to space limitations, are in general weaker in terms of significance and goodness of fit. We think that the lack of significance could indicate that this variable (ROE), which includes some extraordinary results and financial figures, is more exposed to the influence of other corporate actions not related to the bank's core activity. Therefore, we consider NIM and ROA as more informative variables about the ordinary economic performance of banking firms, and from now on our comments are based on results from these two variables.

In particular, the first column in Tables 5a and 5b examines the effect of CEO turnover followed by an internally promoted candidate and by a person hired from outside the firm. The second specification considers the effect that natural and unexpected removals of board members have upon changes in firm performance. Similarly, columns three and four introduce into the analysis changes in the chairman position followed by a member of the board (internal candidate) or an individual hired from outside, as well as the natural and the unexpected changes in this position. In these specifications, chairman's replacement and succession processes are considered as independent events. Finally, in column five we consider the different types of CEO and board removals, as well as the possible complementarities between the departure type (natural or unexpected) and the succession type (promoted or hired from outside) for the chairman.

As regard measures of goodness of fit, results in Tables 5a and 5b for the Sargan test provide evidence of the validity of the instruments used in our analysis. In addition, Tables 5a and 5b present the results for the AR (1) and AR (2) tests. Again, we fail to reject the null hypothesis of these tests, indicating that the error terms are not serially correlated. *(See Table 5a and 5b)*

Concerning CEO turnover, our empirical findings are in accordance with those reported in Table 4, revealing that the implementation of this control mechanism has a statistically significant positive effect upon changes in firm performance (NIM and ROA). However, this is only true when the new CEO is hired from outside the firm. That is, the observed positive effect comes only from the fact of hiring an external CEO. Unlike the information on changes in the board or the chairman appointments, we do not know the contract termination date for CEOs. Nevertheless, as we mentioned earlier, we believe that voluntary CEO turnovers are unlikely to explain changes in performance and these events only add noise to our estimates (Hermalin and Weisbach 2003). Our empirical findings are in accordance with Huson et al. (2004), who find that a CEO removal followed by an outsider creates the conditions for organisational change. That is, they introduce new internal policies (organisation dynamics) that become critical to improve team effectiveness and, consequently, firm performance. The result is also consistent with our hypothesis H1b, confirming the disciplinary role that this governance mechanism plays in the Costa Rican banking firms. As expected, these results hold when we use both NIM and ROA as performance measures.

Finally, an important qualification is also in order. The intensity in the implementation of this control mechanism varies significantly amongst types of financial firms. As it can be seen in the descriptive statistics (Table 1), this governance mechanism is mainly activated by shareholder-oriented banks, where in 84.65% of their removals a candidate hired from outside replaces the outgoing CEO. Thus, ownership diversity plays also a role when making a decision about the implementation of governance interventions.

Concerning changes in the board, we have already argued above that this mechanism could have an influence on performance depending on the type of replacement carried out within the firm. Using the more detailed information we have on these changes, we proceed now

Table 5a. Effect of governance interventions upon changes in firm performance

	Δ *Net interest margin*				
	(1)	(2)	(3)	(4)	(5)
Size (ln assets) *t-1*	-0.1818 (0.8615)	-0.5854 (0.8232)	-0.3010 (0.5302)	-0.2133 (0.6611)	-0.9306 (0.8465)
Size *t-1*×private owned banks	-1.0996 (0.7242)	-1.3324 (0.7232)	-1.3222 *** (0.4472)	-1.4404 ** (0.5741)	-0.6559 (0.7255)
Size *t-1*×mutual mortgage banks	-0.0217 (0.5493)	0.1752 (0.7289)	-0.2011 (0.4523)	-0.2676 (0.5220)	0.6312 (0.7661)
Size *t-1*×cooperative banks	0.1817 (0.7157)	0.3048 (0.7009)	0.0938 (0.3772)	-0.0088 (0.5034)	0.7167 (0.6820)
Δ CEO *t-1* (Promoted)	-0.2323 (0.6727)				-0.6589 (0.7810)
Δ CEO *t-1* (Hired from outside)	0.5725 *** (0.1881)				0.5706 *** (0.1881)
Δ Board of directors (%) *t-1* (Natural)		-0.0516 (0.4433)			0.0957 (0.4215)
Δ Board of directors (%) *t-1* (Unexpected)		-1.2285 (0.9238)			-1.9619 ** (0.8417)
Δ Chairman *t-1* (Natural)			-0.1664 (0.1403)		
Δ Chairman *t-1* (Unexpected)			0.0893 (0.2001)		
Δ Chairman *t-1* (Promoted)				-0.1174 (0.1175)	
Δ Chairman *t-1* (Hired from outside)				0.1529 (0.1388)	
Δ Chairman *t-1* (Natural Λ Promoted)					0.0520 (0.1368)
Δ Chairman *t-1* (Natural Λ Hired from outside)					0.0962 (0.2061)
Δ Chairman *t-1* (Unexpected Λ Promoted)					0.1507 (0.2110)
Δ Chairman *t-1* (Unexpected Λ Hired from outside)					1.1550 *** (0.1759)
Time dummies	Yes	Yes	Yes	Yes	Yes
Intercept	0.0068 (0.0809)	0.0771 (0.0817)	0.0487 (0.0813)	0.0429 (0.0867)	0.0731 (0.0821)
Wald test (chi2)	54.02 ***	98.68 ***	127.40 ***	90.74 ***	848.16 ***
Sargan test	4.76	4.60	3.96	4.35	4.92
Test for AR1	-1.64	-1.50	-1.51	-1.51	-1.54
Test for AR2	-1.35	-1.25	-1.42	-1.32	-1.12

Regressions are estimated as follow (re-writing equation 2):

$$\Delta\text{Performance}_{i,t} = \alpha_0 + \alpha_1\Delta\text{Performance}_{i,t-1} + \delta_1 Size_{i,t-1} + \delta_2 Size_{i,t-1} \times \text{Bank Type}_{i,t} + \Sigma\delta_k \text{CG}_{i,t-1} + \psi_t + \upsilon_{i,t}$$

CG represents the vector of governance mechanisms. For CEO turnover (ΔCEO), we create two dummies equal to one if the incoming CEO is from inside or outside the firm. We introduce four dummy variables corresponding to chairman turnover (ΔChairman) according to the nature of the replacement (natural or unexpected) and the origin of the successor (promoted or hired from outside).Δ Board of directors (%) refers to the proportion of directors that left the board according to the type of departure (natural or unexpected). Dependent variable: Variation in net interest margin (NIM). Standard errors are presented in brackets. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 level, respectively.

Table 5b. Effect of governance interventions upon changes in firm performance

	Δ *Return on assets*				
	(1)	(2)	(3)	(4)	(5)
Size (ln assets) *t-1*	0.0058 (0.0109)	0.0050 (0.0104)	0.0029 (0.0115)	0.0038 (0.0108)	0.0040 (0.0109)
Size *t-1*×private owned banks	-0.0056 (0.0078)	-0.0083 (0.0077)	-0.0066 (0.0092)	-0.0073 (0.0082)	-0.0044 (0.0084)
Size *t-1*×mutual mortgage banks	-0.0022 (0.0065)	-0.0027 (0.0071)	-0.0025 (0.0087)	-0.0027 (0.0076)	0.0003 (0.0080)
Size *t-1*×cooperative banks	-0.0046 (0.0079)	-0.0056 (0.0079)	-0.0046 (0.0095)	-0.0051 (0.0085)	-0.0028 (0.0086)
Δ CEO *t-1* (Promoted)	-0.0023 (0.0039)				-0.0039 (0.0037)
Δ CEO *t-1* (Hired from outside)	0.0043** (0.0019)				0.0038 ** (0.0019)
Δ Board of directors (%) *t-1* (Natural)		-0.0010 (0.0039)			-0.0004 (0.0033)
Δ Board of directors (%) *t-1* (Unexpected)		-0.0058 (0.0057)			-0.0097 ** (0.0049)
Δ Chairman *t-1* (Natural)			0.0001 (0.0023)		
Δ Chairman *t-1* (Unexpected)			0.0014 (0.0014)		
Δ Chairman *t-1* (Promoted)				0.0010 (0.0019)	
Δ Chairman *t-1* (Hired from outside)				-0.0005 (0.0018)	
Δ Chairman *t-1* (Natural Λ Promoted)					0.0006 (0.0024)
Δ Chairman *t-1* (Natural Λ Hired from outside)					-0.0025 (0.0021)
Δ Chairman *t-1* (Unexpected Λ Promoted)					0.0009 (0.0014)
Δ Chairman *t-1* (Unexpected Λ Hired from outside)					0.0060 ** (0.0027)
Time dummies	Yes	Yes	Yes	Yes	Yes
Intercept	-0.0003 (0.0018)	0.0001 (0.0017)	0.0003 (0.0017)	0.0003 (0.0017)	-0.0001 (0.0017)
Wald test (chi2)	35.25 ***	30.64 ***	36.52 ***	37.39 ***	130.80 ***
Sargan test	6.51	6.28	6.65	6.52	5.86
Test for AR1	-0.27	-0.20	-0.30	-0.29	-0.09
Test for AR2	-0.89	-1.17	-1.06	-1.09	-0.73

Regressions are estimated as follow (re-writing equation 2):

$$\Delta \text{Performance}_{i,t} = \alpha_0 + \alpha_1 \Delta \text{Performance}_{i,t-1} + \delta_1 Size_{i,t-1} + \delta_2 Size_{i,t-1} \times \text{Bank Type}_{i,t} + \Sigma \delta_k \text{CG}_{i,t-1} + \psi_t + \upsilon_{i,t}$$

CG represents the vector of governance mechanisms. For CEO turnover (ΔCEO), we create two dummies equal to one if the incoming CEO is from inside or outside the firm. We introduce four dummy variables corresponding to chairman turnover (ΔChairman) according to the nature of the replacement (natural or unexpected) and the origin of the successor (promoted or hired from outside).ΔBoard of directors (%) refers to the proportion of directors that left the board according to the type of departure (natural or unexpected). Dependent variable: Variation in net interest margin (NIM). Standard errors are presented in brackets. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 level, respectively.

to check these intuitions. Unexpected changes in boards could lead to the incorporation of new members who can provide fresh ideas to this body that could improve board effectiveness, concerning its monitoring activities. Our empirical findings lead to reject hypothesis H2b: unexpected replacement of board members have a negative and statistically significant effect on changes in performance (NIM and ROA). The result suggests that this governance intervention could also generate costs since it entails the hiring of new members who could lack expertise in board tasks related to a specific firm, leading to a learning process that can negatively affect firm performance. Hence, unexpected replacement of board members could imply an abrupt learning and adaptation process for them. Thus, a negative relation between board turnover and changes in performance would reflect the presence of costs associated to changes in the board that could outweigh its benefits, especially for the case of unexpected replacements.

Once again, the descriptive statistics tells us that board replacements are more frequently used by certain banks than others. We know (Table 1) that this governance mechanism is mainly implemented by state owned and cooperative banks. We also observe that most of board replacements carried out by mutual mortgage and cooperative banks were natural (with 84.84% and 86.85% of total board changes, respectively). Conversely, for privately owned banks board departures are more equally balanced (49% of total board replacements were unexpected). The result could indicate that the implementation of this control intervention is more related to performance only for these banking firms.

Finally, we present our empirical findings regarding chairman replacement (specifications three, four and five in Tables 5a and 5b), including the type of departure and succession in this governance mechanism. From columns 3 and 4 we can observe that neither natural replacements, nor the origin of the substitute exert any statistically significant effect upon differences in performance when they are individually considered. Such finding corroborates the idea that this change reflects more a transition process within the firm than a corporate decision aiming to improve performance. Nevertheless, our empirical findings strongly support the fact that an unexpected departure followed by a candidate hired from outside becomes an important disciplinary mechanism to improve firm performance. The result follows independently of the dependent variable (changes in NIM or ROA). Once again, the advantage of having more detailed information concerning the type of change helps us to be more precise with the effect of this governance intervention. Having checked the descriptive statistics (Table 1), we observe once more that this control mechanism was mainly activated by privately owned banks (50% of the total departures)[6].

Furthermore, an unexpected replacement of the chairman followed by a person from outside the firm could reflect a governance intervention that facilitates organisational change. In this case, results are consistent with our hypothesis H3b, since a chairman from outside the firm is more likely to implement strategic changes such as restructuring poorly performing activities to improve performance. Stakeholders are willing to increase board effectiveness through such organisational change. Hence, board members will perceive the need for an organisational change, leading to positive reactions towards the new (outsider) chairman actions.

Also, from the descriptive statistics we observe that the promotion of internal candidates for the chairman position is the dominant path in stakeholder-oriented banks (all chairman replacements in state-owned and mutual mortgage banks were followed by the appointment of internal candidates, whereas this rate stands at 81% for cooperative banks). The result could indicate that internally promoted chairmen, more aligned with the different stakeholders, are preferred by these banking firms.

Further, shareholder-oriented banks seek chairmen in the labour market more actively (60% of the chairmen were replaced by persons hired from outside). Again, this could be interpreted as a discipline signal derived from this type of intervention, aiming to attain the shareholders' interests.

6 All chairman replacements in the state-owned banks were unexpected. However, we consider that the effect of this control mechanism in these banks was lessened due to the fact that all replacements were followed by individuals who were members of the board (that is, internal candidates in our terminology).

WHO BENEFITS FROM THE ACTIVATION OF GOVERNANCE INTERVENTIONS?

In this section, we extend the analysis by questioning whether executive turnovers are more effective in banks where owners have strong incentives to monitor managers. Thus, we conducted our analysis separating our sample in two groups: shareholder-oriented (privately-owned banks) and stakeholder-oriented banks (state-owned, mutual mortgage and cooperative banking firms). Results are presented in Tables 6 and 7, where Table 6 shows the regression results based on Equation [3]. In addition, we evaluate the robustness of our results by an univariate test of mean changes in our performance measures (NIM and ROA) as a response to the implementation of each governance mechanism under analysis (Table 7).

Consistent with our previous findings, we observe that CEO turnover is the most important disciplinary mechanism to improve performance (NIM and ROA) (Table 6). More interesting, from specifications 3 and 4 in Table 6, it can be seen that the positive impact that CEO turnover has on changes in performance only applies for shareholder-oriented banks. This is corroborated by the univariate test, where we observe that 73% of private banks that underwent a change in the CEO position significantly improved their performance (5.67% in NIM and nearly 1% in ROA) (Table 7). Consequently, we fail to reject our hypothesis H4a which proposed that the positive effect of CEO turnovers on performance changes is stronger in shareholder-oriented firms.

Concerning board replacements, we can confirm now that large changes in the board (50% or higher) create adaptation costs for the new board members leading to a negative effect on firm performance. Nevertheless, the negative impact of this governance mechanism is statistically significant only for the stakeholder-oriented banks. Further, 75% of stakeholder-oriented banks showed a negative change in performance after a large change in the board (11.35% in NIM and 2.26% in ROA). *(See Table 6 and 7)*

This result can indicate that, for shareholder-oriented banks, large changes in the board also imply the inclusion of members who could lack expertise in board tasks, as well as the incorporation of individuals with diverse objectives, a fact that could lead to even more unfocused and longer decision making processes.

Finally, the average change in performance of those banking firms that replaced the chairman is not statistically different from those banks that did not. This finding complements that obtained from the previous sub-section, confirming that the presence of detailed information concerning the type of departure and the nature of the successor in the chairman position becomes critical for understanding the effect of this governance mechanism. Hence, we partially reject our hypothesis H4b, since we only report a significantly greater negative relation between large board replacements and performance changes in stakeholder-oriented firms.

CONCLUDING REMARKS

The corporate governance of banks is a 'trendy' topic (e.g., Crespí et al. 2004, Epure and Lafuente 2015, Lafuente et al. 2019); however, little is known about both the effect that different governance interventions have on performance, and the role played by ownership diversity in this type of organizations. Using a robust data set for the period 1999–2004, we examine the effectiveness of the governance system in the Costa Rican banking sector, an industry characterised by fully outside boards and where four different types of firms compete in the market. This particular model of board of directors allows some exploration beyond traditional studies on corporate governance. The distinctive features in the regulatory framework of the Costa Rican banking system lead us to question whether the implementation of governance interventions is equally effective in scenarios where board independence and leadership structure are exogenous to the firm. Using more detailed information about control mechanisms, our results reveal that the direction and intensity of the effects of the different governance interventions on changes in performance are conditioned by both the firm type and the underlying characteristics of the replacements.

In particular, empirical findings confirm that CEO and chairman turnovers are relevant governance mechanisms that help explaining improvements in firm performance. For the CEO turnover, results indicate that the appointment of a CEO from outside the firm creates the conditions for organisational change, as it could possibly facilitate the introduction of new policies within the firm,

leading to higher positive changes in firm performance. This result holds for shareholder-oriented firms but not for stakeholder-oriented firms, where the role of CEOs seems to be less relevant.

Concerning the board of directors, our results support that, for stakeholder-oriented banks, unpredicted changes in the board imply an adaptation process by the new board members, leading to higher costs related to this learning

Table 6. Response to the implementation of governance interventions for private and non-private owned banks

	Δ *Net interest margin*				Δ *Return on assets*			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Size (ln assets) *t-1*	-0.1448 (0.3219)	-0.2877 (0.3318)	0.0088 (0.2713)	-0.1632 (0.2650)	-0.0016 (0.0073)	-0.0016 (0.0075)	0.0003 (0.0069)	0.0001 (0.0070)
Size *t-1*×private owned banks	-1.3087*** (0.3718)	-1.3293*** (0.3531)	-0.7711 ** (0.3867)	-0.7991 ** (0.3938)	-0.0013 (0.0048)	-0.0011 (0.0047)	0.0005 (0.0045)	0.0011 (0.0044)
Δ CEO *t-1*	0.4505 ** (0.2031)	0.4922 ** (0.2428)	-0.1378 (0.2763)	-0.1163 (0.3806)	0.0033 * (0.0019)	0.0034 * (0.0019)	-0.0017 (0.0027)	-0.0016 (0.0027)
Δ CEO *t-1*×private owned banks			1.2778 *** (0.3423)	1.1854 *** (0.4155)			0.0083 ** (0.0034)	0.0083 ** (0.0034)
Δ Board of directors (%) *t-1*	-0.2432 (0.4901)		-0.3036 (0.5343)		-0.0023 (0.0033)		-0.0045 (0.0039)	
Δ Board of directors (%) *t-1* × private owned banks			-0.6690 (0.9546)				0.0031 (0.0062)	
Δ Board of directors (>50%) *t-1*		-0.9192 ** (0.4005)		-1.3507*** (0.5184)		-0.0017 (0.0020)		-0.0048 ** (0.0025)
Δ Board of Directors (>50%) *t-1*×private owned banks				0.8512 (0.6471)				0.0045 (0.0037)
Δ Chairman *t-1*	-0.0150 (0.1069)	0.0446 (0.1100)	0.1026 (0.1122)	0.1228 (0.1198)	0.0010 (0.0017)	0.0009 (0.0017)	0.0015 (0.0021)	0.0013 (0.0021)
Δ Chairman *t-1*×private owned banks			-0.0899 (0.1946)	-0.1074 (0.1788)			-0.0023 (0.0024)	-0.0019 (0.0022)
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	0.0289 (0.0682)	0.0902 (0.0727)	-0.0410 (0.0633)	0.0283 (0.0571)	0.0005 (0.0017)	0.0006 (0.0017)	-0.0001 (0.0016)	-0.0003 (0.0016)
Wald test (chi2)	71.62 ***	90.22 ***	146.52 ***	132.88 ***	23.24 ***	40.50 ***	61.14 ***	95.34 ***
Sargan test	4.40	4.36	4.85	5.35	7.57	7.79	6.88	6.58
Test for AR1	-1.64	-1.35	-2.42 **	-1.83 *	-0.44	-0.37	-0.15	0.04
Test for AR2	-1.43	-1.34	-1.17	-1.17	-1.19	-1.10	-1.16	-0.93

Regressions are estimated as follow (re-writing equation 3):

$$\Delta \text{Performance}_{i,t} = \alpha_0 + \alpha_1 \Delta \text{Performance}_{i,t-1} + \gamma_1 Size_{i,t-1} + \gamma_2 Size_{i,t-1} \times Private\ \text{Bank}_{i,t} + \sum \gamma_k \text{CG}_{i,t-1} + \sum \gamma_k \text{CG}_{i,t-1} \times Private\ \text{Bank} + \psi_t + \upsilon_{i,t}$$

Private bank is a dummy variable equal to one if the bank is a shareholder-oriented firm. CG represents the vector of governance mechanisms. CEO is a dummy variable equal to one if we identify a change in the CEO position.Δ Chairman is a dummy variable equal to one if a change in the Chairman position took place. Board of directors (%) refers to the proportion of directors that left the board.Δ Board of directors (>50%) is a dummy variable equal to one if the exit rate from the board exceeds 50%. Time dummies are included in all the specifications. Dependent variables: Variation in net interest margin (NIM), variation in return on assets (ROA), and variation in return on equity (ROE). Standard errors are presented in brackets. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 level, respectively.

process that might outweigh the benefits derived from this type of governance intervention. The result is also true for the case of large board turnovers. When considering the replacement of the chairman, our results show that the effect that the appointment of a chairman from outside the banking firm has on future firm performance relies on the type of departure. Thus, a natural departure followed by the appointment of a new chairman from outside the board could create a conflict within the board, since the board members can generate barriers to prevent any change in the board routines and processes. To the contrary, we find that after an unexpected departure, the appointment of a chairman from outside the banking firm creates value. We argue that the change in the executive leadership can lead to improve the monitoring tasks of the board and the corporate decision making process.

The results of this paper give support to the argument that ownership diversity entails the use of different governance mechanisms. On the one hand, shareholder-oriented banks prefer to hire someone from outside the bank after a departure (both in CEO and Chairman positions) to improve performance. On the other hand, the nature of stakeholders in other types of banks seems to increase the costs of implementing unexpected changes, favouring the search of more broadly agreed alternatives. These findings are open for further verification. Future studies should explore the observed differences in the implementation of governance mechanisms by firms that have different ownership structure. Another interesting research avenue could be to enrich the analysis by examining the governance in emerging markets and see whether the entrance of foreign firms improve firms' governance practices in developing economies.

Table 7. Test of difference in the response to the implementation of governance interventions between private and non-private owned banks

	Δ *Net interest margin*		Δ *Return on assets*	
Governance mechanism	**No intervention**	**Governance intervention**	**No intervention**	**Governance intervention**
Δ ***CEO t-1***				
Private owned banks	-0.0148 (50:50)	0.0567 ** (73:27)	-0.0010 (50:50)	0.0072 ** (73:27)
Non-private owned banks	-0.0076 (53:47)	-0.0270 (44:56)	-0.0002 (53:47)	-0.0069 (44:56)
Δ ***Board of Directors (>50%)t-1***				
Private owned banks	-0.0784 (54:46)	-0.1196 (40:60)	0.0004 (54:46)	-0.0025 (40:60)
Non-private owned banks	0.0108 (54:46)	-0.1135 *** (25:75)	0.0006 (54:46)	-0.0226 ** (25:75)
Δ ***Chairman t-1***				
Private owned banks	-0.0753 (57:43)	-0.1189 (30:70)	0.0011 (57:43)	-0.0056 (30:70)
Non-private owned banks	-0.0275 (53:47)	0.0309 (51:49)	0.0005 (53:47)	-0.0031 (51:49)

The table presents, by type of bank (private and non-private owned bank) and type of governance intervention (CEO turnover, Chairman removal and large changes in the board), the average change in performance (net interest margin and return on assets). For each performance measure we split the sample into two mutually exclusive groups: banks that implemented a governance mechanism, and banks that did not implement any of the governance mechanisms under evaluation. The univariate test compares, by type of bank, the difference in the mean performance change between banks that implemented a governance mechanism and those banking firms that did not. Percentage of firms with positive and negative changes in performance are reported in brackets. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 level, respectively.

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