ABSTRACT

In this research, we study the turnovers that have taken place in Mexican companies (particularly related to replacements of the Presidents of the Boards of Directors), during 1990-2000. We study three different periods of time: pre-crisis (1990-1993), crisis (1994-1995), and post-crisis (1996-2000). These changes can occur for different motives: variations in the market, competition in the labour market for directives, or poor performance. Nevertheless, we are interested in the relationship between turnovers and corporate governance variables. Using a Logit model, we find significant differences in the probability of replacing a President of the Board, according to diverse corporate governance schemes.

**JEL Codes:** G01; G30; G32; G34; M21; M51

**Keywords:** Corporate Governance, Turnover, Financial Crisis, Firm Performance.

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1. INTRODUCTION

The performance of the companies is related to the management of the Presidents of the Boards of Directors\(^3\). The turnover of these high executives represents an important decision on the part of the shareholders of the firms, for his repercussions on the managerial performance. It is also a measure of Corporate Governance, which favors the alignment of managerial aims, since the credible threat of a replacement limits the agents of the private benefits obtained by means of the power in the companies.

Different motives exist for those who manage to give these replacements. The variations of the market represent one of these factors, since not all the Presidents of the Boards of Directors are suitable for any contingency. The second factor refers to the competition on the market of executives; between more competitive it is this market, major it is the probability that the replacements happen. The poor managerial performance represents a third reason to change the directors, with what an improvement is waited in the corporate results. There exist also certain mechanisms of Corporate Governance that relate to the probability of turnover of the President of the Board of directors.

The present work studies the repercussion of four variables of Corporate Governance on the probability of turnover of the Presidents of the Boards of Directors in Mexico. The variables that are analyzed are: the family links, the business group links, the political links and the size of the Board of Directors. Additional, one seeks to establish the relation between the performance and the size of the firm with the change of these high executives. Finally, the possible differences are contemplated on the decisions of replacement of these executives, during situations of crisis financial and posterior to the same one, as well as his impact on the corporate results.

\(^3\) The authors want to be grateful for Alfonso Mendoza, Ignacio Ibarra and Mariano Rojas for your valuable commentaries.
The conclusions to those who come near in general differ from the rest of the reviewed literature. This owes to that the managerial Mexican reality is different from the observed one in many other countries. The high incident of majority owners inside the presidency of the Boards of Directors does that the studied variables of Corporate Governance do not have impact in the decisions of turnover. Even, the significance of such variables as the size of the firm and the managerial performance on the probability of replacement explains with different arguments, foreign to the theory of agencies.

This work is organized as follows: the section two presents the review of the literature and the relevant theory on the variables of Corporate Governance and his implications in the probability of turnover of the high executives. This paragraph ends with the consequences of the turnover on the managerial performance. The section three presents the objectives, hypothesis, the information and the used variables, as well as the methodology of the study. To check the hypotheses there are in use models Logit. In the section four one presents the descriptive pertinent statistics for this investigation. The section five refers to the econometric results and finally the section six concludes.

2. LITERATURE REVIEW

The turnover both of the General managers and of the President of the Board of Directors of any company can be given for different motives. One of them refers to the variations that they present on the market; this is, there exists the possibility that the high executives already does not have the aptitude to continue

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4 Several authors, between whom Florou (2005) is, show that a direct relation exists among the replacement of the General manager and of the President of the Directors' Meeting. When one gives one, it reverberates in the abandon of functions of other one, due to the great proximity that they have inside a company.
directing the destiny of the company, due to the size or complexity that has reached the market which it is facing (see Hermalin and Weisbach, 1998; Fee and Hadlock, 2000; Fung and Rui, 2006 and Jenter and Kanaan, 2006). Another causer of the turnover is the labour market of executives and executives, which there implies both internal competition (between high executives inside the same company) and day pupil (see Manne, 1965; Fama, 1980; Fama and Jensen, 1983a, 1983b; Morck et al. 1989; McNeil et al., 2004 and Nair, 2005). A third motivation to substitute an executive or managerial high place is the low managerial performance. The shareholders of companies who experience poor performances monitor more closely his managers and the directors, which favors the replacement (see Jovanovic, 1979; Coughlan and Schmidt, 1985; McKenna, 1986; Murphy, 1986; Warner et al., 1988; Weisbach, 1988; Conyon and Florou, 2002; Fee and Hadlock, 2004 and Jenter and Kanaan, 2006).

The possibility of substituting agents, such as the General manager or the President of the Board of Directors of a company, favors the alignment of managerial aims. La Porta et al. (1998); Nenova (2000); Claessens et al. (2002) and Dyck and Zingales (2004) hold that the legal system protects the investors by means of the grant of rights to discipline the managers by means of his turnover. The previous thing can be seen as a form to make to fulfill the contracts as they are designed, so that they limit the managers of the private benefits obtained by means of the control of the firms. In this respect, the replacements constitute a mechanism of Corporate Governance (see Manne, 1965; Harrison et al., 1988; Warner et al., 1988 and Gibson, 2003). On the other hand, there exist other measures of Corporate Governance that in turn relate to the turnovers.
2.1 Mechanisms of Corporate Governance and his relation with the turnovers

Certain mechanisms of Corporate Governance implemented by the companies can influence the probability of which they manage to present replacements of the executive high places or the directors. Some of these variables are: the existence of family links, the managerial links, the political links and the size of the Board of Directors.

2.1.1 Family links and turnovers of high executives

The managers - owners (or families) that direct companies have personal and financial motivations to increase the value of your companies. But at the same time, also they have incentive forts to obtain personal benefits and control on the firms, at the expense of the minority shareholders and other interested parties (see Anderson and Reeb, 2003a; Villalonga and Amit, 2006 and Bennedsen et al., 2007). According to Hillier and McColgan (2004), the majority of these companies contract members of his families like executives and the directors of the same ones, for what the nepotism is an important characteristic in this type of organizations. According with Lausten (2002) and Volpin (2002), under these conditions the relation between the turnover and the performance of the firm is weak, which demonstrates the entrenchment (see Denis et al., 1997; Dahya et al., 1998 and Hillier and McColgan, 2004). Exemplifies this Borokhovich et al. (1996); Tosi et al. (2003) and Agrawal et al. (2006) on having showed that the General managers, which are not members of the family, have major probability of replacement that the executives who yes form a part of the same one. It is so the family link in a firm does that the probability which an executive changes or the director diminishes.

For an exhibition on mechanisms of Corporate Governance in Mexico to see Dâvila and Watkins (2008).
On the contrary, Kaplan (1994b) and Firth et al. (2006) argue that the shareholders of family enterprises supervise meticulously his executives and the directors (still if these are members of the family), since his interests are great in the firm. Therefore, the probability of which these agents are dismissed is major that in not familiar companies, particularly if one presents a low managerial performance.

2.1.2 Managerial links and replacements of high executives

The managerial link implies certain degree of integration between companies\(^\text{6}\). This one allows that it should exists an internal market of executives and members of the Boards of Directors, which compete for directing the destinations of the most important companies of the group. Those that manage to take part in the firms that form a part of the apex of the managerial pyramid, obtain major prestige and power, which constitutes an aim of the agents.

Chang and Shin (2006) think that the probability of which they present replacements of high executives is major in those companies that form a part of a managerial group. The internal market of executives and members of the Boards of Directors reduces the problem of the asymmetric information in the contracting, doing that these agents are promoted easier and destroyed.

On the contrary, such authors as Gompers et al. (2003); Fich and Shivdasani (2006); Maury (2006); Bebchuk et al. (2004, 2008) and Bhagat and Bolton (2008), indicate that the entrenchment is also present in this type of companies. The probability of turnover a high executive is negatively associated with the quota of power that has same in the managerial group. It is for it that the probability of

\(^{\text{6}}\) The integration can be horizontal or vertical.
replacing an executive or the director can be a minor that in firms without this type of links.

2.1.3 Political links and replacements of high executives

In agreement with Faccio (2006), the political link is established when some member of the governmental bureaucracy forms a part of the company. This is, belongs to the Board of Directors, is an executive or a shareholder of the firm.

The politician - businessman has minor probability of being replaced, when his presence implies better possibilities of gaining licitations and major access to certain financial markets (see Agrawal and Knoeber, 2001 and Fan et al., 2007b). Nevertheless, these agents often face of managerial experience, which turns them more vulnerable before the replacement. This situation sharpens when the company shows unfavorable results (see Roberts, 1990; Fisman, 2001; Mak and Li, 2001 and Sung and Tong, 2003).

2.1.4 Size of the Boards of directors and turnovers of high executives

For Mak and Li (2001) and Ferris et al. (2003), the Boards of Directors small possess major problems of asymmetric information that the big ones; therefore, they can commit more mistakes in the decisions of contracting of the executive high places and the directors. This reverberates later in the executives' substitution, for what the probability of replacement can be a Superior that in company with big Boards of directors. In line with this, Lipton and Lorsch (1992); Jensen (1993); Yermack (1996) and Eisenberg et al. (1998) support that the small Boards of directors (among eight and ten members) enjoy better coordination and efficiency in the activities of monitoring of the firms. Therefore, the probability of
replacing agents can be major that in those companies with bigger Boards of directors.

Nevertheless, authors like Bhagat and Black (2002) do not find a relation between the size of the Board of Directors and the probability of replacement of high executives.

2.2 Other variables that influence the turnover of high executives

The variables of Corporate Governance before exposed relate to the possibility of substituting executives and the directors. Likewise, there exist other factors that influence the probability of replacing executives. The checked literature mentions the size of the company and the later performance as relevant variables, which are described later.

2.2.1 Firm size and turnover of high executives

The size of the company is an important variable that it is necessary to consider on having studied the replacements of the executives. According to Lausten (2002) and Conyon (1998), between bigger it is a firm, lower it is the probability of which it says goodbye to an high executive (the same thing applies for the members of the Board of Directors). This owes to the knowledge that this agent has acquired in the complex managing of an organization of great dimensions, which is difficult to substitute. In addition, between bigger it is a firm, easier it proves to hide mistakes of management, which prevents the executive from easily taking off of his cargo (see Agrawal and Knoeber, 1996).

Additional to the previous thing, in the big companies the salary and the compensations that the high civil servants receive tend to be major that in other corporations (see Perry, 1999). This allows to
contract more qualified and efficient persons, which reduces the probabilities of dismissal. The favorable wage conditions help to relieve also the problem of agencies, aligning the interests of the shareholders and the managers (as mention it Aggarwal and Samwick, 1999; Bebchuk et al., 2002 and Bebchuk and Fried, 2003); the previous thing reduces the probability of replacement.

In contrast, Denis et al. (1997) and Warner et al. (1988) indicate that in the companies of great size the probability of substituting high executives is major that in other. There argue these authors that in this type of companies major tendency exists of agents dismiss before falls in the managerial performance; in addition, the competition for positions on the labour internal market of the big companies is top that in the rest, which favors the replacements.

### 2.2.2 Performance of the companies and turnover of high executives

In agreement to the theory of agencies, the agent often is employed at conformity with the aims of the shareholders for the dread of being dismissed of his cargo. The principal aim of a company is to maximize the utilities; this means that the probability of which a high executive is replaced increases when the company presents under performance (see Alchian and Demsetz, 1972; Fama and Jensen, 1983a, 1983b; Puffer and Weintrop, 1991; Hotchkiss 1995; Conyon, 1998; Hoskisson et al. 1999; Lausten, 2002; Hillier et al., 2005; Maury, 2006 and Fan et al., 2007a). The investors generally see with good eyes the announcements of changes of the agents, due to the fact that these in average involve an improvement in the financial results of the firm (see Mud and Mud, 1990; Jensen and Murphy, 1990; Gibbons and Murphy, 1990; Denis and Denis, 1995; Cosh and Hughes, 1997; Parrino, 1997; DeFond and Park, 1999;
Kaplan, 1994b; Coffee, 1999; Weisbach, 1988; Bonnier and Bruner, 1989; Kim, 1996; DeFond and Hung, 2004 and Huson et al., 2004).

Nevertheless, Khanna and Poulsen (1995) and Firth et al. (2006) find empirical evidence that as soon as one gives the replacement of an high executive, the performance of the company falls. This can explain for the costs of learning, for the incorrect decisions of contracting or for inadequate limits of management.

2.3 Differ in decisions of turnover during crisis and normal situations

Chang and Shin (2006) and Heaney et al. (2007) mention that there is major the probability of which one gives the replacement of an high executive later to a crisis, specially when the firm presents under managerial performance. This owes to the most demanding policies of monitoring implemented by the companies, as consequence of the systemic crisis.

In times properly of crisis, a high correlation is not waited between the managerial results and the replacements. Under these circumstances it is not possible to blame the agents of the decrease of the managerial performance7, since the crisis concerns the whole market and is exogenous to the firm; it can owe to macroeconomic local or international factors, political problems, lack of competitiveness, or other situations that escape of the control of the company.

7 Until there is fulfilled the theory of the expiatory "scapegoat ", exposed by Furtado and Karan (1990) and Khanna and Poulsen (1995).
3. OBJECTIVES, HYPOTHESIS, DATA, VARIABLES AND METHODOLOGY

3.1 Objectives and hypothesis

The principal objective that is prosecuted in this research is to find factors of Corporate Governance, which influence the probability of turnover of the Presidents of the Boards of Directors in Mexico. One seeks to establish also the relation between the performance and the size of the company with the change of these high executives. For this there is in use information of the companies listed in the Mexican Stock Exchange (BMV, for his initials in Spanish of Bolsa Mexicana de Valores), from 1990 to 2000.

On the other hand, the possible differences are studied on the decisions of replacement of the Presidents of the Boards of Directors, during normal situations and of crisis. Specifically, they are compared the periods before the financial crisis of 1994 (1990-1993), with the times of crisis (1994-1995) and the epoch posterior to the same one (1996-2000).

In agreement with the previous thing, the following hypotheses appear:

**H1**: The family links relate of inverse form to the probability of turnover of the Presidents of the Boards of Directors. Authors like Stulz (1988), Fama and Jensen (1983a, 1983b) and Hillier and McColgan (2004) indicate that the majority of these companies contract members of his families as high executives of the same ones, which propitiates major labour stability.

**H2**: The managerial links favor to that the probability of which a President of the Board of Directors is replaced is low. Gompers et al. (2003); Bebchuk et al. (2004) and Bhagat and Bolton (2008) mention that the executives of this type of companies have high
degrees of power, for what to replace them is less probable than in another type of organizations.

**H3**: The political link foments that the Presidents of the Boards of Directors have a minor probability of being changed. Faccio et al. (2006) argue that the politicians - businessmen become strong of his charges, due to the grants and negotiations that manage to obtain with the government (which are of benefit to the company that they represent).

**H4**: Among bigger it is the size of the Board of Directors, minor is the probability of replacement for the President of the Board of Directors. Authors like Mak and Li (2001) and Ferris et al. (2003) show that the firms with big Boards of Directors have major aptitude to contract correctly high executive and Directors, which favors the stability of his positions.

There exist other variables that can influence the turnover of the Presidents of the Boards of Directors. Two of them widely mentioned in the literature are the size and the performance of the companies. They are of waiting for the following relations:

**H5**: The probability of replacement of the President of the Board of Directors relates inversely to the size of the company. According to Lausten (2002), between bigger it is a firm, more complex it is his management, and therefore there is lower the probability of which a high executive is replaced.

**H6**: A low managerial performance implies a major probability of replacement of the President of the Board of Directors. Barro and Barro (1990); Jensen and Murphy (1990); Gibbons and Murphy (1990); Denis and Denis (1995); Cosh and Hughes (1997); Parrino (1997); DeFond and Park (1999); Kaplan (1994b); Coffee (1999) and Huson et al. (2004) present evidence of which the executives are forced to leave the companies when there is a long and significant fall in the managerial results.
With regard to the differences on the decisions of replacement of the Presidents of the Boards of Directors, during normal situations and of crisis, the following results are waited:

**H7:** The number of replacements of the Presidents of the Boards of Directors increases posterior to a crisis. Accordingly with Chang and Shin (2006) and Heaney et al. (2007), this owes to the meticulous monitoring and control implemented in the companies as consequence of the crisis.

**H8:** In epochs of crisis it falls the number of replacements of the Presidents of the Boards of Directors. During the crises it is not possible to make these agents responsible for the fall of the results of the firms, since this episode concerns negatively the whole market.

Finally, the following relation is waited between the replacement of the President of the Board of Directors and the managerial performance:

**H9:** In agreement with such authors as Barro and Barro, 1990; Jensen and Murphy, 1990 and Gibbons and Murphy, 1990, posterior to the turnover appears an improvement in the performance of the firm.

### 3.2 Data

The compiled information is 171 companies that quote (or they quoted) in the Mexican Stock exchange of Values (BMV) from 1990 to 2000. All the monetary variables are presented in real terms, to weight of the year 2000.

For the first years of the period of time that handles the research, there is obtained the financial information (return on the assets like variable of performance and total assets like variable of managerial size) directly of the BMV. This information is available like microfilming. The great majority of the information is obtained in an
electronic way in the Integral System of Automated Values (SIVA, for his initials in Castilian), as well as in Infosel Financiero.

The information about the members of the Boards of Directors registers in a manual way of the Financial Yearbook that one finds in the Centre of Information\textsuperscript{8} of the BMV. The names of the politicians - businessmen are obtained directly of the Office of the Presidency of the Republic and of the Congress of the Nation and his respective pages in Internet. From this information there are constructed the categorical variables of Corporate Governance\textsuperscript{9}: family link, managerial link, political link and size of the Board of Directors.

3.3 Variables

There takes as a dependent variable the replacement of the Presidents of the Boards of Directors in Mexico\textsuperscript{10}. There is understood for replacement the change of the President of the Board of Directors of a company in one year especially. This variable takes the value of one (1) in the year in which one presents the replacement and zero (0) in other cases\textsuperscript{11}.

The variables of Corporate Governance that are contemplated are:

1. Family link (directors - owners) (\textbf{Familiar}): It is a dummy variable that takes the value of One (1) when in one year especially the President of the Board of Directors shares at least a surname with other one (s) member (s) of the same Board of Directors. It is Zero (0) in other cases

2. Managerial link (\textbf{Empresarial}): Dummy variable that is Zero (0) when the President of the Board of Directors of a company does

\textsuperscript{8} There is grateful Simón Cruz by the help in the summary of information in the Centre of Information of the BMV.

\textsuperscript{9} There is grateful Ana Antón, Montserrat Ángel, Erick Sanchez and Manuel Garzón by his collaboration in the apprehension of the names of the members of the Boards of Directors.

\textsuperscript{10} In Mexico, the historical information of the high executive is not public; therefore, one works exclusively with the Presidents of the Boards of Directors.

\textsuperscript{11} Of 1990-2000, one firm it can present more than one replacement. For these companies, changeable Replacement takes the value of 1 more of once.
not form (or it has formed) part of another Board of Directors in the same year during the period 1990-2000. It takes the value of One (1) when the President of the Board of Directors is (or he has been) member of other one or other Boards of Directors, for the same year, in the period included between 1990-2000.

3. Political link (Político): Dummy variable that is Zero (0) when the President of the Board of Directors is not (or he has not been) part of the governmental bureaucracy. It takes the value of One (1) when the President of the Board of Directors is (or he has been) Governor of some State of the Mexican Republic, elect Federal Deputy, member of the Senate or Secretary of State (in the lapse of time included among 1990-2000).

4. Size of the Board of Directors (TJD): It represents a dummy variable for the size of the Boards of Directors: One (1) for big Boards of Directors (bigger or equal to 19 members) and Zero (0) for small Boards of Directors (minors to 19 members). Of the financial yearbooks there were captured both the names of the members of the Boards of Directors, and the number of members of the same ones. The number of observations was of 1234 and an average was obtained for all the companies of 19.31 members. The members’ maximum in a Board of directors was of 60 and the minimal value for a Board of Directors was of 4. The standard deviation belonged 7.58 members. With this information there took the decision of which the point of inflexion out of 19 members for the big Boards of Directors.

The control variables used are:

1. Changes in the performance of the company (?ROA): It refers to the change in the return on the assets, latest two periods. This one allows to observe how the variations in the past performance influence the probability of turnover of the Presidents of the Boards of Directors. ?ROA it is constructed as \( \text{ROA}_t - \text{ROA}_{t-1} \).
2. Firm size (Tamaño): The size of the company is represented by the natural logarithm of the total assets.

3.4 Methodology

To estimate the probability of turnover of the Presidents of the Boards of Directors, of agreement to the characteristics of Corporate Governance of the firm, there is in use a Logit model. The estimated function is the following one:

$$ \text{Reemplazo} = f [\text{Familiar}_1, \text{Empresarial}_1, \text{Político}_1, \text{TJD}, \text{Tamaño}, \ ? \text{ROA}_2*(\text{Crisis}), \ ? \text{ROA}_2*(\text{Post-Crisis})] \ (1) $$

The variables family link, managerial link and political link are constructed from the figure of the President of the Board of Directors; it is to say, if this one is replaced, it is probable that in the same year also it changes the value of the variable of Corporate Governance into question. Therefore, to avoid mistakes of specification, in (1) these three variables stay behind a period.

On the other hand, in (1) the interaction of the change is done in the return on the assets (latecomer two periods) with the years of crisis and of post-crisis. This allows to differentiate the effect of \( ? \text{ROA}_2 \) on the probability of turnover of the President of the Board of Directors in the epoch of crisis and posterior to the same one.
4. DESCRIPTIVE STATISTICS

4.1 Turnovers and Corporate Governance characteristics

In the table 1 there appear the turnovers that were given in the Mexican companies, in agreement to his characteristics of Corporate Governance. The sample consists of a whole of 171 non-financial firms, listed in the Mexican Stock Exchange (BMV). It is possible to observe that of this sample, in whole they presented replacements in only 121 occasions. For the period of pre-crisis (1990-1993) only 31 had, same that they started increasing lightly across the time. For the period of crisis (1994-1995) they were 40 and in the period of post-crisis (1996-2000) they came near to 50 replacements.

Is observed that a relation exists between the changes of the Presidents of the Boards of Directors and the family and managerial links, since the companies with these characteristics are those that more replacements present. The family link generated the highest quantity of replacements in the pre-crisis and the post-crisis, whereas the managerial link had it in the crisis. In agreement to the literature, the owners of the family enterprises realize a major monitoring on his executives and the directors (still if these are members of the family), since they have more interests in game (see Kaplan, 1994b and Firth et al., 2006). It is because of it that the possibility that the executives are replaced increases in this type of companies, especially if there exists a poor managerial performance. As for the association between the replacement and the managerial link, is observed that in these structures of group there exists an internal market of executives and members of the boards of directors, which favors the possibility of the replacement. The problems of asymmetric information diminish, especially in the moment of the contractings, for what the agents are easier to be promoted and even removed of his charges (see Chang and Shin, 2006).
Table 1: Number of turnovers of the Presidents of the Boards of Directors in Mexico, during the epochs of pre-crisis (1990-1993), crisis (1994-1995) and post-crisis (1996-2000), in agreement to different characteristics of Corporate Governance.

<table>
<thead>
<tr>
<th>Firm characteristics</th>
<th>Whole years</th>
<th>Pre-Crisis</th>
<th>Crisis</th>
<th>Post-Crisis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole firms</td>
<td>121 100%</td>
<td>31 100%</td>
<td>40 100%</td>
<td>50 100%</td>
</tr>
<tr>
<td>Family link</td>
<td>58 48%</td>
<td>18 58%</td>
<td>16 40%</td>
<td>24 48%</td>
</tr>
<tr>
<td>Managerial link</td>
<td>61 50%</td>
<td>15 48%</td>
<td>28 70%</td>
<td>18 36%</td>
</tr>
<tr>
<td>Political link</td>
<td>25 21%</td>
<td>3 10%</td>
<td>11 28%</td>
<td>11 22%</td>
</tr>
<tr>
<td>Big Board of Directors</td>
<td>47 39%</td>
<td>14 45%</td>
<td>15 38%</td>
<td>18 36%</td>
</tr>
</tbody>
</table>

It is understood for turnover at the change of the President of the Board of Directors of a company, in one year especially. It is so for the same firm, there can be more than one replacement in the period of 1990-2000. The 4 characteristics (eliminating the category “whole firms”) that show themselves in the table 1 are not mutually exclusive. That is to say, every company can belong to more than one category of Corporate Governance. The family link is established when the President of the Board of Directors of a company has in one year especially, some equal surname to another member of the same Board of Directors. It thinks that a firm has family link in the pre-crisis, crisis and/or post-crisis if this link possesses in at least one of the years of the period in question. Managerial link is had when the President of a Board of Directors is taking part in the same year as member of other one or other Boards of directors. It is catalogued to a company by managerial link in the pre-crisis, crisis and/or post-crisis if this link has in at least one of the years of the period in question. When the President of the Board of Directors of a company has been a Governor of some State, elect Federal Deputy by means of popular voting, Senator of the Republic or Secretary of State (from 1990 to 2000), it is said that this company possesses political link. There is contemplated that a firm has political link in the pre-crisis, crisis and/or post-crisis if this link possesses in at least one of the years of the period in question. It is considered to be a company by big Board of Directors when the number of members is of 19 or more. If the company especially has big Board of Directors in at least 60% of the years of the period in study (pre-crisis, crisis or post-crisis), then it is assessed as a company by big Board of directors during this time.

4.2 Strategies of Corporate Governance and turnovers

In the table 2 one shows the repercussion of the decisions or "strategies" of Corporate Governance followed by the Mexican companies, during three sub-periods of study, on the replacements of the Presidents of the Boards of Directors of the Mexican considered companies. These strategies are combinations of the studied variables of Corporate Governance.
Table 2: Number of turnovers of the Presidents of the Boards of Directors in Mexico, during the epochs of pre-crisis (1990-1993), crisis (1994-1995) and post-crisis (1996-2000), in agreement to different strategies of Corporate Governance.

<table>
<thead>
<tr>
<th>Firm strategies</th>
<th>Whole years</th>
<th>Pre-Crisis</th>
<th>Crisis</th>
<th>Post-Crisis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole firms</td>
<td>121</td>
<td>31</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>Familiar link</td>
<td>11</td>
<td>4</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Mangerial link</td>
<td>12</td>
<td>4</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Political link</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Big Board of Directors (BBD)</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Family and managerial links</td>
<td>9</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Family and political links</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Family and BBD links</td>
<td>8</td>
<td>3</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Managerial and political links</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Managerial and BBD links</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Political and BBD links</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Family, managerial and political links</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Family, managerial and BBD links</td>
<td>15</td>
<td>7</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Family, political and BBD links</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Managerial, political and BBD links</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Family, managerial political and BBD links</td>
<td>10</td>
<td>1</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Firms without characteristics</td>
<td>34</td>
<td>5</td>
<td>10</td>
<td>18</td>
</tr>
</tbody>
</table>

It is understood for turnover at the change of the President of the Board of Directors of a company, in one year especially. It is so for the same firm, there can be more than one replacement in the period of 1990-2000. The 16 characteristics (eliminating the category “whole firms”) that show themselves in the table 2 are not mutually exclusive and exhaustive. The family link is established when the President of the Board of Directors of a company has in one year especially, some equal surname to another member of the same Board of Directors. It thinks that a firm has family link in the pre-crisis, crisis and / or post-crisis if this link possesses in at least one of the years of the period in question. Managerial link is had when the President of a Board of Directors is taking part in the same year as member of other one or other Boards of directors. It is catalogued to a company by managerial link in the pre-crisis, crisis and / or post-crisis if this link has in at least one of the years of the period in question. When the President of the Board of Directors of a company has been a Governor of some State, elect Federal Deputy by means of popular voting, Senator of the Republic or Secretary of State (from 1990 to 2000), it is said that this company possesses political link. There is contemplated that a firm has political link in the pre-crisis, crisis and / or post-crisis if this link possesses in at least one of the years of the period in question. It is considered to be a company by big Board of Directors when the number of members is of 19 or more. If the company especially has big Board of Directors in at least 60 % of the years of the period in study (pre-crisis, crisis or post-crisis), then it is assessed as a company by big Board of directors during this time.
With regard to the whole period of study (1990-2000), the major quantity of replacements (34) they were had in those companies that (NGC) did not present any of the strategies of Corporate Governance considered, which makes suspect that these variables are not the most relevant in the decisions of replacement in Mexico (which is not observed in the literature for other countries). To this it follows a strategy in which there are combined the family, managerial link and the big Boards of Directors (FEG-15); of there in forward, replacements are had in the companies that only presented managerial links (12) and family links (11), as well as in those that combined the family, managerial, political links and big Boards of Directors (FEFG-10); these are five dominant strategies.

Observing this table in each of the sub-periods of study, a clear norm of behavior does not exist; both in the crisis and in the post-crisis, the major number of replacements was given in those companies that do not possess any of the strategies of Corporate Governance contemplated.

4.3 Firm performance previous, during and posterior to the turnover

In the table 3 it proves to be average to the return on the assets (ROA) that the Mexican firms had in previous situations, during and posterior to the replacements of the Presidents of the Boards of Directors, of agreement to the adopted strategies of Corporate Governance.
Table 3: Average of the return on assets previous, during and posterior to the replacement of the Presidents of the Boards of Directors in Mexico, in agreement to characteristics of Corporate Governance.

<table>
<thead>
<tr>
<th>Firm strategies</th>
<th>Average ROA(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Previous</td>
</tr>
<tr>
<td>Whole firms</td>
<td>3.6 (16.5)</td>
</tr>
<tr>
<td>Family link</td>
<td>6.2 (8.9)</td>
</tr>
<tr>
<td>Managerial link</td>
<td>16.3 (45.9)</td>
</tr>
<tr>
<td>Political link</td>
<td>-0.6 (3.2)</td>
</tr>
<tr>
<td>Big Board of Directors (BBD)</td>
<td>-29.6 (7.8)</td>
</tr>
<tr>
<td>Family and managerial links</td>
<td>1.2 (4.0)</td>
</tr>
<tr>
<td>Family and political links</td>
<td>-21.8 (15.1)</td>
</tr>
<tr>
<td>Family and BBD links</td>
<td>8.0 (5.5)</td>
</tr>
<tr>
<td>Managerial and political links</td>
<td>10.2 (9.1)</td>
</tr>
<tr>
<td>Managerial and BBD links</td>
<td>-2.8 (11.8)</td>
</tr>
<tr>
<td>Political and BBD links</td>
<td>-23.7 (16.3)</td>
</tr>
<tr>
<td>Family, managerial and political links</td>
<td>-32.5 (0.0)</td>
</tr>
<tr>
<td>Family, managerial and BBD</td>
<td>6.3 (7.9)</td>
</tr>
<tr>
<td>Family, political and BBD links</td>
<td>-12.2 (0.0)</td>
</tr>
<tr>
<td>Managerial, political and BBD links</td>
<td>-19.8 (21.8)</td>
</tr>
<tr>
<td>Family, managerial political and BBD</td>
<td>2.2 (7.7)</td>
</tr>
<tr>
<td>Firms without characteristics</td>
<td>2.3 (13.9)</td>
</tr>
</tbody>
</table>

The 16 characteristics (eliminating the category “whole firms”) that show themselves in the table 3 are not mutually exclusive and exhaustive. For every company, ROA before the replacement it is that one properly in the year in which one gives this event; ROA during the replacement it refers to the observed one the year previous to the same one; ROA posterior to the replacement it refers to the observed one year after the change of this executive. To calculate the average ROA (simple average) previous, during and posterior to the turnover of the Presidents of the Boards of Directors of the companies in question, first there are eliminated 42 extreme values (ROA major 130 % and minor to 80 %, in the period from 1990 to 2000). In brackets one finds the standard deviation. The family link is established when the President of the Board of Directors of a company has in one year especially, some equal surname to another member of the same Board of Directors. Managerial link is had when the President of a Board of Directors is taking part in the same year as member of other one or other Boards of Directors. When the President of the Board of Directors of a company has been a Governor of some State, elect Federal Deputy by means of popular voting, Senator of the Republic or Secretary of State (from 1990 to 2000), it is said that this company possesses political link. It is considered to be a company by big Board of Directors when the number of members for one year especially is of 19 or more.
It is observed that in many of the cases, the performance before the replacement was negative. This indicates that the change in the President of the Board of Directors could be given by badly performance. Nevertheless, in general the change in the President of the Board of Directors favored to the managerial performance neither in the short term (during the year of the replacement) nor in the medium term (a year posterior to the change). Some notable exceptions of this were met in those companies by very poor performance before the replacement.

5. ECONOMETRIC RESULTS

5.1 Econometric model

To check the raised hypotheses there move along models Logit, with Huber/White's method. As it explains in the methodology, the estimated function expresses of the following way:

\[
\text{Reemplazo} = f \left[ \text{Familiar}_{-1}, \text{Empresarial}_{-1}, \text{Político}_{-1}, \text{TJD}, \text{Tamaño}, \beta \text{ROA}_{-2}(\text{Crisis}), \beta \text{ROA}_{-2}(\text{Post-Crisis}) \right] \quad (1)
\]

The function (1) is extended to contemplate also the effect of five dominant strategies of Corporate Governance (in agreement to the descriptive statistics), on the probability of turnover of the President of the Board of Directors:

\[
\text{Reemplazo} = f \left[ \text{NGC}_{-1}, \text{FEG}_{-1}, \text{FEpg}_{-1}, \text{Familiar}_{-1}, \text{Empresarial}_{-1}, \text{Tamaño}, \beta \text{ROA}_{-2}(\text{Crisis}), \beta \text{ROA}_{-2}(\text{Post-Crisis}) \right] \quad (2)
\]
5.2 Results

In the first column of the table A1 of the appendix, there appear the coefficients obtained for the function (1). In the second and third column of the same table they present the standard errors and the values z, with that the degrees are stipulated of significance of each of the coefficients. As it is possible to observe, only the variables to the firm size and change in ROA (with two lags) in the period of post-crisis they are significant (to 1 % and 10 %, respectively). The negative signs in both cases involve that to major size of the minor company it is the probability of turnover of the President of the Board of Directors, and that among major is the past, minor performance is the probability of turnover in the post-crisis. Both finds are corroborated by the table A2, which refers to the results of the function 2, and by the literature: According to Lausten (2002), among bigger it is a firm, more complex it is his management, and therefore there is lower the probability of which a high executive is replaced. On the other hand, such authors as Kaplan (1994b); Coffee (1999) and Huson et al. (2004) present evidence of which the executives are forced to leave the companies when there is a long and significant fall in the managerial results. According with Chang and Shin (2006) and Heaney et al. (2007), this is more evident in the post-crises, due to the meticulous monitoring and control implemented in the companies as consequence of these episodes.

Nevertheless, of the tables A1 and A2 there is deduced also that the variables and studied strategies of Corporate Governance do not have any impact on the probability of turnover of the Presidents of the Boards of Directors in Mexico, which is not consistent with the literature for other countries. This makes seem that the owners' high incident in the Boards of Directors of the Mexican companies (since approximately 70 % of the companies in Mexico is familiar; see Dâvila and Watkins, 2008) major prevalence has in the decisions of
replacement that any of the factors studied in the present research. In fact, observes great stability in these positions, which favors the previous argument; 52% of the companies of the sample did not present replacements during the period of study 1990-2000.

An example of before exposed is that in the company named Cementos Mexicanos, S.A. de C.V. (CEMEX for his key in the BMV) Lorenzo Zambrano works as President of the Board of Directors, as well as General manager (CEO for his initials in English of Chief Executive Officer) and majority associate with 51% of the common shares of the company. Beside being a company with familiar very clear links, they present the managerial very marked links, since the same Lorenzo Zambrano is present in several boards of directors like it is ICA, FEMSA, TLEVISA, VITRO and ALPHA\textsuperscript{12}, among others.

One gives the same case with Telefonos de México, S.A. de C.V. (TELMEX for his key in the BMV) where Carlos Slim is the President of the Board of Directors and in turn he is the majority associate with more than 51% of the common shares of the company. It is also a company with both family and managerial links, since as in CEMEX, children and brothers of the majority associate have positions inside the same company as well as in Board of Directors of other firms.

These two examples (that correspond to two of the biggest companies of Mexico) can spread for other companies, such as BIMBO, ELEKTRA, TLEVISA and TVAZTCA, among others, where the majority associates are in addition Presidents of the Boards of Directors. This does that the econometric results for the raised model do not have statistics significance, since the Mexican "reality" is different from the observed one in the literature for the majority of the countries (two exceptions are Italy\textsuperscript{13} and Germany).

\textsuperscript{12} There appear the names of the keys that have these companies in the Mexican Stock Exchange (Bolsa Mexicana de Valores, BMV for its initials in Castilian), for a better identification and reference of the same ones.

\textsuperscript{13} A more wide explanation is in Kaplan (1994b) and Brunello et al. (2003).
Given the incongruity between the managerial Mexican structure and the identified one in the literature for other countries, the relations between firm size and performance passed in the post-crisis, with the probability of turnover, should be given by factors different from the considered ones. Specifically, they might explain for the same managerial structure, where evidently the owners who are in addition Presidents of the Boards of Directors are not replaced. To check first this one handled the database to determine three ranges of companies, of agreement to the value of his total assets: the small ones (0-3,5 million Mexican pesos, 92 companies), the medians (3,5-11,5 million Mexican pesos, 40 companies) and the big ones (more than 11,5 million Mexican pesos, 39 companies), thinking that exactly, the big companies have an owners' major composition that they might be also Presidents of the Board of Directors (since about 85 % of the whole of these companies is familiar). On the other hand, this characteristic appears in 68% of the medium companies and 59 % of the small ones.

As for the past performance and his significant repercussion on the probability of turnover of the President of the Board of Directors, is observed that in most cases (52%) these replacements are given inside the same families that they control to a firm. The previous thing can be interpreted as a punishment by bad management without one affects the familiar structure of the company. On the other hand, 48% of the times the replacement owed to an alteration in the control of the company, where the family that it was controlling to the company stops being his owner.
6. CONCLUSIONS

The principal conclusion of this study is that the variables of Corporate Governance analyzed have not impact on the probability of turnover of the Presidents of the Boards of Directors of the Mexican companies. This find is not consistent with the literature for other countries, which suggests that Mexico is a special case. 70% of the companies in Mexico is familiar; the owners' high incident in the Boards of Directors of these companies has major prevalence in the decisions of replacement that any of the factors studied in the present research. This managerial structure favors the stability in the positions of the Presidents of the Boards of Directors; of fact, the majority of the studied companies did not present replacements during the period of study (1990-2000) and the total number of replacements was of only 121. On having analyzed every sub-period of time, is observed that this number is increasing approximately in 30%, happening from 30 replacements in the pre-crisis to 40 during the crisis and finally 51 in the post-crisis. It is not of waiting for an increase in the Presidents' changes of the Boards of Directors in times of crisis, but yes in the post-crisis, where as reaction before the crisis there is major monitoring and control, and possibly wear of those who occupied high charges in the organization during this episode. In general it appreciates that posterior to the replacements it falls the managerial performance, at least in the short term.

Another interesting result is that to major size of the firm, minor the probability of turnover of the President of the Board of Directors. This conclusion observes also in the literature for other countries, where it is argued that the complexity of labors of the big corporations favors the stability of these charges. Nevertheless, for Mexico the explanation is different: practically 85% of the biggest companies is familiar (and therefore the replacements are almost
non-existent); this percentage is 68% for the medium companies and only 59% for the small companies.

Finally, as for the past performance and his repercussion on the probability of turnover of the President of the Board of Directors, is observed that in most cases these replacements are given inside the same families that they control to a firm. The previous thing can be interpreted as a punishment by bad management without one affects the familiar structure of the Mexican company. In the rest of the times the replacement owed to an alteration in the control of the company, where the family that it was controlling to the company stops being his owner.
7. APPENDIX

Table A1: Probability of turnover of the Presidents of the Boards of Directors in Mexico, during the period of study 1990-2000, in agreement to variables of Corporate Governance.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Standard error</th>
<th>Z statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family link (-1)</td>
<td>-0.28</td>
<td>0.41</td>
<td>-0.69</td>
</tr>
<tr>
<td>Managerial link (-1)</td>
<td>0.41</td>
<td>0.32</td>
<td>1.28</td>
</tr>
<tr>
<td>Political link (-1)</td>
<td>0.50</td>
<td>0.66</td>
<td>0.76</td>
</tr>
<tr>
<td>Big Board of Directors</td>
<td>-0.04</td>
<td>0.76</td>
<td>-0.05</td>
</tr>
<tr>
<td>Managerial link (-1)</td>
<td>0.41</td>
<td>0.32</td>
<td>1.28</td>
</tr>
<tr>
<td>Political link (-1)</td>
<td>0.50</td>
<td>0.66</td>
<td>0.76</td>
</tr>
<tr>
<td>Big Board of Directors</td>
<td>-0.04</td>
<td>0.76</td>
<td>-0.05</td>
</tr>
<tr>
<td>Change in ROA (-2) crisis</td>
<td>-1.88</td>
<td>2.19</td>
<td>-0.86</td>
</tr>
<tr>
<td>Change in ROA (-2) post-crisis</td>
<td>-1.00*</td>
<td>0.60</td>
<td>-1.66</td>
</tr>
</tbody>
</table>

*, **, level of significance 10% and 1%, respectively.
In the table A1 they present the results of the estimations of the econometric model (1), using a Logit estimation.

Table A2: Probability of turnover of the Presidents of the Boards of Directors in Mexico, during the period of study 1990-2000, in agreement to the dominant strategies of Corporate Governance.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Standard error</th>
<th>Z statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family link (-1)</td>
<td>-0.62</td>
<td>0.55</td>
<td>-1.12</td>
</tr>
<tr>
<td>Managerial link (-1)</td>
<td>0.08</td>
<td>0.47</td>
<td>0.18</td>
</tr>
<tr>
<td>Family, managerial and BBD links (-1)</td>
<td>0.21</td>
<td>0.47</td>
<td>0.44</td>
</tr>
<tr>
<td>Family, managerial, political and BBD links (-1)</td>
<td>-0.43</td>
<td>0.52</td>
<td>-0.83</td>
</tr>
<tr>
<td>Without strategy</td>
<td>-0.67*</td>
<td>0.41</td>
<td>-1.65</td>
</tr>
<tr>
<td>Firm size</td>
<td>-0.11**</td>
<td>0.03</td>
<td>-4.25</td>
</tr>
<tr>
<td>Change in ROA (-2) crisis</td>
<td>-1.92</td>
<td>2.25</td>
<td>-0.85</td>
</tr>
<tr>
<td>Change in ROA (-2) post-crisis</td>
<td>-1.16*</td>
<td>0.70</td>
<td>-1.66</td>
</tr>
</tbody>
</table>

*, **, level of significance 10% and 1%, respectively.
In the table A1 they present the results of the estimations of the econometric model (2), using a Logit estimation.
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