Influence of the Board and Ownership Concentration on the Misalignment between Executive Compensation and Performance

ABSTRACT

Objective: Analyze the influence of the board and ownership concentration on the misalignment between executive compensation and performance.

Method: Descriptive and quantitative research using secondary data from 196 companies listed on B3 – Brazil Stock Exchange and Over-the-Counter Market between 2010 and 2021, treated by panel data regression.

Originality/Relevance: Generally, studies assess the relationship and sensitivity between the level of remuneration and performance; this study advances by addressing determinants and investigating factors capable of affecting the portion of remuneration that is not explained by performance, which may be disconnected from a direct contribution to shareholders.

Results: The main results indicate that more extensive and independent boards have difficulty defining remuneration packages as they increase levels of misaligned remuneration. Likewise, more directors concerning advisors increase misalignment, increasing agency costs. Regarding shareholding concentration, the results highlight the importance of not being concentrated on the first two shareholders, as their monitoring could not reduce the problem of misalignment.

Theoretical/methodological contributions: Contributes to identifying risks for companies linked to more extensive and independent boards and the more significant number of executives per board member, as they aggravate the principal-agent problem. Provides evidence that increased ownership by a third significant shareholder can promote alignment of interests. In this way, it contributes to decisions to improve the structure and governance processes.

Keywords: Agency Theory, Corporate Governance, Executive Compensation, Board, Shareholding Concentration.

Received: May 12, 2023
Revised: September 05, 2023
Accepted: September 06, 2023
Published: September 30, 2023

How to Cite (APA)

1 INTRODUCTION

In order to mitigate the conflicts and costs arising from the separation between ownership and control, referred to by Agency Theory as agency problems and costs (Bebchuk & Fried, 2003; Jensen & Mackling, 1976), Corporate Governance (CG) emerged. One of its purposes is to ensure that shareholders will obtain a return on their investment (Barkema & Gomes-Mejia, 1998; Shleifer & Vishny, 1997) through elements and mechanisms such as Board, incentive systems and reward compensation, legal market systems for investor protection and the like.

Among its mechanisms, executive compensation is used as an incentive to reduce agency problems and align the interests between agent and principal (Jensen & Meckling, 1976). Various types of compensation can be adopted (Correia et al., 2014), such as fixed compensation (salaries and benefits), performance-based compensation (variable and stock participation), and particular forms of compensation (Wood & Picarelli, 2004), to reward and punish agents as a result of their performance, motivating them to act in the direction of seeking greater efficiency for the company (Jensen, 1998).

Studies on this topic seek to understand the behavior of remuneration and shareholder returns in the Brazilian market (Araújo & Ribeiro, 2017), mainly concerning the relationship between executive remuneration and financial performance (Aguiar & Pimentel, 2017). The results demonstrate a relationship between executive remuneration and companies' financial and market performance (Aguiar & Pimentel, 2017; Degenhart et al., 2017; Ernel & Medeiros, 2020; Leite & Hein, 2019).

However, the results found in national and international research are not conclusive (Araújo & Ribeiro, 2017). Based on a meta-analysis of 219 North American studies, Essen et al. (2015) found differences in the results of the relationship between executive remuneration and performance, with a predominance of weak relationships between the two. From this
perspective, in companies listed in Brazil, even in studies that found relationships between remuneration and performance, explanation levels were between 2.7% (Leite & Hein, 2019), 4.1% (Silva et al., 2018), 13.3% (Ernel & Medeiros, 2020), 15.1% (Santos & Silva, 2019), 31.9% (Degenhart et al., 2017) and 72.6% (Souza et al., 2017).

These results show that, in general, a large part of the remuneration is not explained by organizational performance, which points to a misalignment between the remuneration paid and the performance delivered by executives and signals an agency cost without evidence of a direct contribution to shareholders, called misaligned pay or not explained by performance (Marquezan et al., 2021); this is the portion of remuneration investigated in this study. Along these lines, Correia et al. (2014) stated that other CG mechanisms are necessary for remuneration policies to effectively align interests between agents and principals. One of the main mechanisms for this purpose is the Board, which is responsible for creating optimal contracts, guaranteeing the alignment of interests and maximizing shareholder returns (Jensen, 1993), and monitoring and supervising decisions (IBGC, 2015).

Studies that investigated the monitoring of executives by the Board based on the assumption that boards with an ideal structure would be able to contribute to the company's performance and align interests have presented divergent results (Parente & Machado Filho, 2020; Van Ees et al., 2009). Evidence indicates that more independent boards exist where the agent can expropriate, restricting the board's influence over the Board and problems due to dual positions (Fraile & Fradejas, 2013; Linck et al., 2008).

On the other hand, Freitas et al. (2020) showed that the percentage of independent members of the Board increases the remuneration level. Thus, in cases where the Board is relatively weak or ineffective, remuneration policies tend to be favorable to managers, which incurs the emergence of a cost of additional agency: executive compensation itself (Bebchuk & Fried, 2005). On the other hand, in environments with greater ownership concentration, the
controllers themselves can exercise more excellent monitoring over managers, replacing the task that would be carried out by the Board (Shleifer & Vishny, 1997). Jensen and Meckling (1976) stated that a high ownership concentration by a single shareholder would reduce costs, as well as the ability of the manager to intervene in his remuneration, as he would not be able to use his influence (Bebchuk & Fried, 2005), which could affect the portion of compensation not explained by performance.

From these discussions, it is understood that the Board, the ownership structure, and the use of incentives for management make up an essential set of CG mechanisms (Aguilera et al., 2015). Therefore, this research aims to analyze the influence of the Board and ownership concentration on the misalignment between executive compensation and performance. Secondary data from 196 companies listed on B3 – Brazil Stock Exchange and Over-the-Counter Market from 2010 to 2021 were analyzed and treated using regression with robust errors.

The study is justified because Brazil is characterized by high shareholder concentration, weak investor protection, and agency conflicts between agent-principal and principal-principal (La Porta et al., 1999; La Porta et al., 2000). In environments with high ownership concentration and principal-principal conflicts, business performance may not significantly influence the amount paid to managers (Wang & Xiao, 2011), in addition to there is no consensus in the literature on the benefits of high ownership concentration (Ernel & Monte, 2018).

In general, studies evaluate the existence of a relationship between the level of remuneration and performance (see, for example, Aguiar & Pimentel, 2017; Degenhart et al., 2017; Ernel & Medeiros, 2020; Leite & Hein, 2019; Silva et al., 2018), as well as the sensitivity of executive remuneration to performance (see, for example, Brandão et al., 2019; Iglesias et al., 2022). This study differs from previous ones by treating determinants and investigating factors capable of affecting the portion of remuneration not explained by organizational
performance, which may be disconnected from a direct contribution to shareholders, understood as an agency cost (Marquezan et al., 2021).

Likewise, investigations into the influence of shareholder concentration (Freitas et al., 2020) and the composition of the Board (Brandão et al., 2019) on the level of executive remuneration are still incipient in the national literature. The research differs from previous studies that investigated the effects of shareholder concentration and characteristics of the Board on the amount of executive remuneration, such as those by Freitas et al. (2020) and Theiss and Beuren (2017), as it seeks to identify whether these elements are capable of increasing or decreasing the amount of remuneration itself, but the portion that is paid above or below performance levels.

For literature, companies, and professionals, the study discusses and warns about the risks of executive remuneration being misaligned with organizational performance and the influence of the Board and ownership concentration on this. The Board is evaluated by independence, duality of positions, and number of members. Ownership concentration is analyzed by decomposing the participation in common shares of the three largest shareholders. Additionally, we seek to investigate the power of executives over the Board due to the more significant number of directors concerning the number of advisors. In this way, when analyzing 12 years, it contributes to discussions about CG structures and those seeking to clarify the dynamics of agency conflicts in listed companies in Brazil. Furthermore, it helps to identify gains and flaws in the performance of organizations and contributes to decisions to improve the structure and governance processes.

2 THEORETICAL REFERENCE

2.1 Executive Compensation and Performance

The compensation and incentive system is a CG tool used to mitigate agency conflicts, allowing agents to make decisions that maximize capital for the principal (Silva et al., 2018).
Among these, three main forms are identified: remuneration (fixed, variable, and bonus), shares, and options (Tirole, 2006). These incentives can be linked to performance in several ways, the most common of which is through bonuses based on profit growth in order to encourage executives to obtain short-term gains (Berk & Demarzo, 2010), while compensation for shares and share options have long-term effects (Taylor, 1994).

Several studies have been conducted in the Brazilian market to understand the relationship between remuneration and performance, with contradictory results (Aguiar & Pimentel, 2017). Souza et al. (2017), when investigating the relationship between remuneration and performance of 228 publicly traded companies between 2011 and 2013 using financial and non-financial indicators, found results that indicate a significant and positive relationship between financial performance and remuneration. However, they did not identify relevant relationships concerning market performance and remuneration, finding that remuneration policies may not effectively align interests. In line with this, Degenhart et al. (2017) identified that only the variables Return on Assets (ROA) and company size were statistically significant in explaining variations in executive remuneration (separated into fixed, variable, and total).

In contrast, Silva et al. (2018), when examining the relationship between executive compensation and performance indicators of 48 companies listed on the Ibovespa with information from 2014 to 2017, found evidence that the financial indicators (Earnings per share and ROE) were not statistically significant in explaining the variations of managers’ remuneration, while market indicators (variation in market value and Tobin's Q) explained part of the remuneration. Furthermore, Aguiar and Pimentel (2017) analyzed the relationship between remuneration and financial and market performance of 333 companies between 2011 and 2015 and identified a positive and significant relationship between the level of executive remuneration and financial performance and market share of Brazilian companies.

To this end, empirical evidence indicates that remuneration policies aim to link
managers' remuneration to the company's performance (Frydman & Jenter, 2010). The set of different types of remuneration is a form of compensation and incentive that aims to align interests between executives, directors, and shareholders in the same way that seeks to direct efforts for the short or long term, often discussed based on Agency Theory (Bebchuk & Weisbach, 2010; Silveira, 2010).

However, given the evidence of misalignment between remuneration and performance due to the low level of explanation of the models used in previous research (see, for example, Degenhart et al., 2017; Ernel & Medeiros, 2020; Leite & Hein, 2019; Santos & Silva, 2019), there is a need to use other mechanisms to align interests between agent and principal (Correia et al., 2014). The Brazilian Institute of Corporate Governance - IBGC (2015) points out that the Board is responsible for the remuneration policy and monitoring of managers. However, controllers can monitor managers in organizations with high shareholder concentration, replacing the Board's task (Shleifer & Vishny, 1997), as discussed below.

2.2 Board, Ownership Concentration, and Research Hypotheses

The Board is defined as the main CG body (Jensen, 1993), responsible for preparing and negotiating remuneration packages (Andrade et al., 2009; Fraile & Fradejas, 2013) and has been the subject of several studies (Parente & Machado Son, 2020). It includes topics such as dual positions between the president of the Board (Chairman) and chief executive officer (Brandão et al., 2019; Freitas et al., 2020), independent members (Brandão et al., 2019; Freitas et al., 2020; Santos et al., 2018), among others.

Regarding the influence of Board characteristics on executive remuneration, Freitas et al. (2020) analyzed the impacts of the Board structure and ownership concentration on the total compensation of executives in 232 companies listed on B3, with data from 2014 to 2016. The results show that the proportion of directors working on the Board and CEO duality reduces
remuneration, while the percentage of independent members of the Board increases remuneration.

Granzotto and Sonza (2019) sought to identify the efficiency of CG mechanisms related to executive compensation through explicit and implicit incentives and monitoring (Board) in resolving agency conflicts. Using data from 42 companies listed on B3 between 1999 and 2016 in an unbalanced panel, they identified that monitoring executives is more efficient in reducing agency conflicts, as advisors actively check executives' actions, which positively affects the performance.

The relationship with monitoring executives is one of the conditions for the effectiveness of Board as a CG mechanism (Brandão et al., 2019). More independent Boards make board participation more effective (Weisbach, 1988), while dual roles between CEO and Chairman increase the likelihood of higher remuneration not linked to performance (Vieira & Silva, 2018), as it can interfere with monitoring and was prohibited by the modification brought by Law No. 14,195, of 2021 to § 3 of article 138 of Federal Law 6,404/76. That said, the following hypotheses arise:

H1: Executive compensation not explained by financial performance is positively related to dual roles between the CEO and Chairman.

H2: Executive compensation not explained by financial performance is negatively related to the Board's level of independence.

Studies on the relationship between remuneration and performance also find problems of limitations in the drafting of contracts, which may be related to the managerial power approach (Bebchuk & Fried, 2003), in which there are signs of distortions in reward policies, favoring the level of executive remuneration (Akram et al., 2019). Executives entrenched in the company, resulting from difficulty articulating shareholders, can influence their remuneration (Bebchuk et al., 2002).
Evidence indicates that the presence of directors on the Board can increase (Brandão et al., 2019) or decrease (Freitas et al., 2020) the amount of remuneration. Furthermore, Core et al. (1999) showed that the composition of the Board can influence the level of executive remuneration and, as the board exercises power over the Board, it can influence the drafting of contracts and impose clauses that increase its benefits (Bebchuk & Fried, 2003), which worsens agency problems.

On the other hand, the size of the Board can positively affect the company's performance (Jensen, 1993). Therefore, larger boards could be able to analyze compensation contracts from different aspects, which corroborates the findings on improving the sensitivity of pay to performance (Ataay, 2018; Sarhan et al., 2019) and may imply an alignment of interests and the possible reduction of the portion of remuneration not explained by performance. Given this, it is proposed:

**H3:** Executive compensation not explained by financial performance is negatively related to the size of the Board.

**H4:** Executive compensation not explained by financial performance positively relates to the more significant number of executives per director.

The Board is considered the main body of the governance structure (Johnson et al., 1996) because, when ownership is dispersed, shareholders cannot bear the monitoring costs alone. Therefore, they elect a Board and assign its members responsible for monitoring the executives (Berk & Demarzo, 2010). However, when there is ownership concentration, the controllers themselves can monitor the managers and perform the tasks that would be the responsibility of the Board (Shleifer & Vishny, 1997). Jensen and Meckling (1976) addressed the role of the control structure and stated that the control dispersion provides less incentive to monitor decisions, giving greater discretionary power to managers in markets with low concentration (Shleifer & Vishny, 1997).
However, shareholder concentration is identified as the leading cause of conflicts between shareholders (principal-principal), as it is related to the control and ownership of organizations (Silveira et al., 2008). When concentration is low, majority shareholders tend to increase value for all shareholders by opting for profit-maximizing strategies (Shleifer & Vishny, 1997). On the other hand, in an environment of high concentration, controllers may seek to satisfy their interests to the detriment of the benefits to minority shareholders (Morck et al., 2005).

Given the evidence that greater concentration leads to a more remarkable ability of shareholders to protect their interests (Conyon & He, 2011), studies demonstrate that governance mechanisms related to the control structure and the Board are capable of influencing executive remuneration, reflected in the value of companies (Iglesias et al., 2022). From this perspective, the controller assumes the role of monitoring executives, which would be the responsibility of the Board (Dyck & Zingales, 2004) and can influence remuneration packages (Jiang et al., 2009).

In general, evidence from international literature confirms that executive remuneration tends to be lower in markets with greater ownership concentration (Croci et al., 2012; Hartzell & Starks, 2003; Luo, 2015). Therefore, if companies increase performance for shareholders without the respective relationship with remuneration, the misalignment between them grows, with possible agency conflict. From this perspective, Ataay (2018) identified a sensitivity between remuneration and performance in Turkish companies. However, when ownership concentration is more significant, sensitivity decreases, results that corroborate the evidence that ownership concentration can harm the quality of governance regarding the structure and composition of the Board (Crisóstomo et al., 2020).

In the Brazilian scenario, the results also converge to the finding of a negative association between ownership concentration and executive compensation (Freitas et al., 2020;
Theiss & Beuren, 2017). Thus, it is possible to verify that the control structure, represented by ownership concentration, is one of the determinants of remuneration (Correia et al., 2014) and can influence the portion of remuneration not explained by performance.

In this sense, it is proposed:

H5: Executive compensation not explained by financial performance is positively related to the level of ownership concentration.

3 METHODOLOGICAL PROCEDURES

3.1 Classification, population, and research sample

Data collection was carried out from secondary sources disclosed by companies on B3. In this sense, the research is quantitative and descriptive, as it tested the hypotheses through econometric models prepared with the proposed variables.

Regarding the population and sample, the first was composed of companies from different sectors and CG levels listed on B3, excluding those from the financial sector as they have greater regulation than other sectors, which may have an impact on executive remuneration (Degenhart et al., 2017), a procedure also adopted by Freitas et al. (2020) and Silva et al. (2018). The sample's composition can be seen in Table 1 and comprised of companies listed in July 2022 that disclosed the information necessary for the research development, totaling 196 companies and 1,740 observations in an unbalanced panel.

Table 1

<table>
<thead>
<tr>
<th>Sector</th>
<th>Number of companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial Goods</td>
<td>38</td>
</tr>
<tr>
<td>Cyclical Consumption</td>
<td>57</td>
</tr>
<tr>
<td>Non-cyclical consumption</td>
<td>19</td>
</tr>
<tr>
<td>Basic Materials</td>
<td>23</td>
</tr>
<tr>
<td>Oil, Gas and Biofuels</td>
<td>4</td>
</tr>
<tr>
<td>Health</td>
<td>8</td>
</tr>
<tr>
<td>Information Technology</td>
<td>4</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>3</td>
</tr>
<tr>
<td>Public utility</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>196</td>
</tr>
</tbody>
</table>
Furthermore, the choice of the analysis period from 2010 to 2021 was based on the availability of information, considering that companies began to disclose data regarding executive remuneration in 2010. Finally, despite the modification brought by Law No. 14,195, 2021, to § 3 of article 138 of Federal Law 6,404/76 on the non-duality of the leading positions of the Board and the executive board, it was decided not to exclude the observations from the year 2021, since it was observed that the majority of the companies analyzed already adopted this practice of governance, as discussed in the results.

3.2 Econometric variables and models

In order to test the hypotheses presented, two econometric models were developed. The descriptions, source, base authors, and expected relationships for each variable are presented in Figure 1.

The econometric model in equation [1] was used to obtain the dependent variable REMVne. REMVne is the residue of this equation in modulus.

\[
\text{REM}V_{it} = \beta_0 + \beta_1 \text{ROE}_{it} + \beta_2 \text{ROA}_{it} + \varepsilon_{it}
\]  

[1]

Being:

\( \text{REM}V_{it} \): variable remuneration (bonuses and profit sharing) of executives of a company i at time t;

\( \beta_0 \): model constant;

\( \beta_1 \ldots \beta_2 \): parameters of the model’s explanatory variables;

\( \text{ROE} \): Return on equity of company i at time t;

\( \text{ROA} \): Return on assets of company i at time t;

\( \varepsilon_{it} \): model error terms.
Influence of the Board and Ownership Concentration on the Misalignment between Executive Compensation and Performance


193

Figure 1

Search Variables

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Source</th>
<th>Base authors</th>
<th>RE*</th>
</tr>
</thead>
<tbody>
<tr>
<td>REMVne</td>
<td>Variable executive remuneration is not explained by performance, except share remuneration, in the module.</td>
<td>Modulus of the residue of the equation [1]</td>
<td>Marquezan et al. (2021)</td>
<td>RE*</td>
</tr>
<tr>
<td>DUAL</td>
<td>Duality of positions between chief executive officer (CEO) and president of the Board (Chairman): 0 for duality; 1 for nonduality.</td>
<td>FRE**</td>
<td>Brandão et al. (2019); Correia et al. (2014); Freitas et al. (2020)</td>
<td>+</td>
</tr>
<tr>
<td>INDEP</td>
<td>The ratio between the number of independent and total Board members measures the Board's independence level.</td>
<td>FRE</td>
<td>Brandão et al. (2019), Chhaochharia e Grinstein (2009), Freitas et al. (2020)</td>
<td>-</td>
</tr>
<tr>
<td>BSIZE</td>
<td>Board Size.</td>
<td>FRE</td>
<td>Correia et al. (2014); Marquezan et al. (2021)</td>
<td>-</td>
</tr>
<tr>
<td>DIR/B</td>
<td>The ratio between the number of members of the executive board and the number of members of the Board measures the board's power.</td>
<td>FRE</td>
<td>Marquezan et al. (2021).</td>
<td>+</td>
</tr>
<tr>
<td>ConcAC</td>
<td>Level of ownership concentration, measured by the proportion of common shares owned by the largest shareholder (ConcAC1), second most extensive (ConcAC2), and third-largest (ConcAC3).</td>
<td>Economática</td>
<td>Adaptado de Brandão et al. (2019), Correia et al. (2014), Freitas et al. (2020)</td>
<td>-</td>
</tr>
<tr>
<td>SIZE</td>
<td>Company size, measured by the logarithm of Total Assets</td>
<td>Economática</td>
<td>Chhaochharia e Grinstein (2009); Degenhart et al. (2017); Firth et al. (2007); Freitas et al. (2020).</td>
<td>+</td>
</tr>
<tr>
<td>DEBT</td>
<td>The ratio between gross debt and Total Assets measures the company's debt level.</td>
<td>Economática</td>
<td>Freitas et al. (2020)</td>
<td>+</td>
</tr>
</tbody>
</table>

*RE: Expected Relationship; **FRE: Reference Form.

Regarding equation [1], companies' financial performance is expected to be statistically significant and positive to explain variations in remuneration. For tests from H1 to H5, the model [2] is described as follows:

$$\text{REMVne}_{it} = \beta_{40} + \beta_{1} \text{INDEP}_{it} + \beta_{2} \text{DUAL}_{it} + \beta_{3} \text{BSIZE}_{it} + \beta_{4} \text{DIR/B}_{it} + \beta_{5} \text{ConcAC}_{it} + \beta_{6} \text{SIZE}_{it} + \beta_{7} \text{DEBT}_{it} + \varepsilon_{it}$$  [2]

Being:

$\text{REMVne}_{it}$: variable compensation of executives not explained by the performance of company i at time t;

$\beta_{0}$: model constant;

$\beta_{1} \ldots \beta_{7}$: parameters of the model’s explanatory variables;
**INDEP**: level of independence of the Board of a company i at a time t;

**DUAL**: the duality of positions between the chief executive officer (CEO) and chairman of the Board (Chairman) of a company i at a time t;

**BSIZE**: size of the Board of a company i at a time t;

**DIR/B**: the size of the board concerning the size of the Board of a company i at a time t;

**ConcAC**: level of ownership concentration of a company i at a time t;

**SIZE**: size of a company i at a time t;

**DEBT**: debt of a company i at a time t;

\( \varepsilon_{it} \): model error terms.

Regarding the hypotheses about the influence of the Board, for H1, it is expected that the duality of CEO positions is positive and statistically significant, which implies an increase in the misalignment between compensation and performance. For H2 and H3, it is expected that both variables present negative and statistically significant relationships since the theoretical expectation is that a Board with a higher level of independence (INDEP) and with more advisors (BSIZE) will be able to act to reduce remuneration misaligned with performance, through the drafting of more robust contracts and greater monitoring of managers.

Furthermore, for H4, a positive and statistically significant relationship is expected, as a greater number of executives concerning the Board (DIR/B) has greater power to influence their remuneration and, consequently, increases the misalignment between remuneration and performance. Finally, regarding the hypothesis relating to the influence of shareholding concentration (H5), it is expected that the level of shareholding concentration (ConcAC) is statistically significant and positive and worsens the misalignment between remuneration and performance since the controllers' ability to influence decisions and executive remuneration tends to increase as the level of ownership concentration increases, which reduces the power of the Board and managers and can accentuate agency conflicts.
3.4 Data collection, processing, and analysis

Data collection was based on the listing of companies on B3 in July 2022 and took place in the same month. Information regarding executive remuneration and the composition of the Board was obtained from sections 12.6/8 and 13.2 of the reference forms published by companies on B3 and the other data from the Economática database. After collection, they were organized in Microsoft Excel, according to company and corresponding year, reviewed, winsozirated at the 1% level, and processed in Stata software.

The quantitative analysis of the hypotheses was carried out through the application of panel data regression with robust standard error, using the ordinary least squares method (OLS), the model most used in research on the determinants of executive compensation (Ernel & Monte, 2018; Freitas et al., 2020; Theiss & Beuren, 2017). Robustness tests are presented and discussed in the results topic.

4 PRESENTATION AND DISCUSSION OF RESULTS

4.1 Results presentation

For tests from H1 to H5, descriptive statistics data are presented in Table 2.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Average</th>
<th>Standard deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSIZE</td>
<td>7.41</td>
<td>3.52</td>
<td>0.00</td>
<td>30.00</td>
</tr>
<tr>
<td>INDEP</td>
<td>0.21</td>
<td>0.24</td>
<td>0.00</td>
<td>0.92</td>
</tr>
<tr>
<td>REMV</td>
<td>2.717,27</td>
<td>4.477,99</td>
<td>0.00</td>
<td>23.789,33</td>
</tr>
<tr>
<td>DIR/B</td>
<td>0.78</td>
<td>0.78</td>
<td>0.00</td>
<td>28.57</td>
</tr>
<tr>
<td>ConcAC1</td>
<td>49,37</td>
<td>27,12</td>
<td>0.14</td>
<td>100.00</td>
</tr>
<tr>
<td>ConcAC2</td>
<td>13,26</td>
<td>10,75</td>
<td>0.00</td>
<td>49,15</td>
</tr>
<tr>
<td>ConcAC3</td>
<td>5,85</td>
<td>6,09</td>
<td>0.00</td>
<td>27,34</td>
</tr>
<tr>
<td>ROE</td>
<td>6,86</td>
<td>37,53</td>
<td>-233,06</td>
<td>128,53</td>
</tr>
<tr>
<td>ROA</td>
<td>2,70</td>
<td>10,24</td>
<td>-45,88</td>
<td>25,24</td>
</tr>
<tr>
<td>SIZE</td>
<td>14,95</td>
<td>1,86</td>
<td>9,43</td>
<td>20,71</td>
</tr>
<tr>
<td>DEBT</td>
<td>0,29</td>
<td>0,20</td>
<td>0</td>
<td>1,04</td>
</tr>
</tbody>
</table>

Return on equity (ROE) data has an average of 6.86, while return on assets (ROA) has an average of 2.7. Regarding variable remuneration (composed of bonuses and profit sharing),
it is possible to verify that not all companies studied adopted this remuneration policy.

Regarding the composition of the Board, the level of independence (INDEP) is low, with an average of 21%, while the board's power (DIR/B) averages 0.78 executives per director. In this sense, it is possible to affirm that there is a greater possibility of the influence of managers over the Board. Concerning the DUAL variable, the data indicate that the separation of the leading positions of the Board and the executive board reaches 89% of observations, indicating that the majority of companies analyzed adopted a good CG practice, even before the modification by Law No. 14,195, 2021 to § 3 of article 138 of Federal Law 6,404/76.

Finally, regarding the level of shareholder concentration, it appears that the proportion of common shares belonging to the largest shareholder (ConAc1) has an average of 49.3%, the second largest (ConAc2) at 13.26% and the third largest (ConAc3) of 5.85%, which highlights a high level of shareholder concentration in the companies analyzed and a more remarkable power of controlling shareholders.

Based on the portion of remuneration not explained by performance, we sought to identify the influence of the Board and the level of ownership concentration on this. The results are presented in Table 3. The basis for forming the dependent variable of the following test is the residual from the test of equation [1]; that is, originally, they are positive and negative values that demonstrate the part of the remuneration not explained by financial performance measured by ROE and ROA. For use in the equation and tests from H1 to H5, the module of these values is adopted, as the aim is to identify factors that explain the misalignment, regardless of the direction of this.

Initially, the test's validation elements were carried out through unbalanced panel data regression with robust errors (correction for autocorrelation and heteroscedasticity) and the OLS method. The Hausman and Chow tests indicated the use of fixed effects. The joint significance test of the variables (F test) demonstrates that the model is statistically significant.
in explaining variations in variable remuneration not explained by performance, with an explanation level of 5%.

Table 3

Influence of the board and ownership concentration on the misalignment between executive compensation and performance

<table>
<thead>
<tr>
<th>Comments</th>
<th>1740</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent Variable</td>
<td>[REMVne]</td>
</tr>
<tr>
<td>Independent Variable</td>
<td>Beta</td>
</tr>
<tr>
<td>INDEP</td>
<td>1.138,77</td>
</tr>
<tr>
<td>DUAL</td>
<td>91,13</td>
</tr>
<tr>
<td>BSIZE</td>
<td>120,9</td>
</tr>
<tr>
<td>DIR/B</td>
<td>76,64</td>
</tr>
<tr>
<td>ConcAC1</td>
<td>-18,97</td>
</tr>
<tr>
<td>ConcAC2</td>
<td>18,21</td>
</tr>
<tr>
<td>ConcAC3</td>
<td>-67,89</td>
</tr>
<tr>
<td>SIZE</td>
<td>876,75</td>
</tr>
<tr>
<td>DEBT</td>
<td>37,26</td>
</tr>
<tr>
<td>C</td>
<td>-10,327,16</td>
</tr>
</tbody>
</table>

R-sq 0,05
F p-value test 0,01*
Chow Test F: 9,16; p-value: 0,000
Hausman test $\chi^2$: 24,84; p-value: 0,003

*** p-value <0,1; ** p-value <0,05; * p-value <0,01

Concerning the Board and executives, the level of independence (INDEP) and the size of the Board (BSIZE) present positive and statistically significant relationships with misaligned remuneration. The same occurs with the ratio between the number of directors and advisors (DIR/B), which increases the volume of remuneration not explained by performance. Shareholding concentration shows divergent results. No significant relationships were identified between the two main shareholders. Having a major third-party shareholder reduces REMVne, improving alignment between pay and performance.

4.2 Discussion of results

The results revealed that the duality of positions between CEO and Chairman (DUAL) does not present a statistically significant relationship, leading to the rejection of H1. The results demonstrate that the duality of positions is not detrimental to the alignment of remuneration.
with performance, which corroborates the findings of Marquezan et al. (2021) and Brandão et al. (2019) on companies in Brazil and differs from Ataay (2018) due to the results found with Turkish companies, being favorable at a certain level, given theoretical expectations.

Furthermore, the evidence showed that, as the level of independence (INDEP) increases, the portion of misaligned remuneration increases, with a statistically positive and significant relationship at the 10% level, resulting in rejecting H2; this may be related to the fact that the CEO is one of the few participants with internal information, which increases the levels of asymmetry when concentrating information and increases their compensation levels (Zorn et al., 2017). The findings corroborate the studies by Freitas et al. (2020), who found the percentage of independent members as a factor that increases remuneration, and Brandão et al. (2019), as they observed that independent members of the Board reduce the sensitivity of compensation to performance and Marquezan et al. (2021) who found that the independence of the Board increases the misalignment between remuneration and performance.

Likewise, the Board size (BSIZE) had a positive and significant relationship at the 5% level. Also, it reflected the worsening of the misalignment between remuneration and performance, implying the rejection of H3, similar to the result found by Marquezan et al. (2021). This result suggests that smaller boards may be more cohesive in their decisions and implement more effective compensation packages (Core et al., 1999), while larger boards may weaken the corporate governance structure (Jensen, 1993).

The power of the Boar (DIR/B) revealed a significant and positive relationship at 10%, which implies that a more significant number of directors increases the misalignment between remuneration and performance, allowing a decision not to reject H4. Possible explanations are related to the managerial power approach, as more directors can exert more significant pressure and influence on a weaker or ineffective board, increasing managerial power (Bebchuk & Fried, 2005) and, consequently, the remuneration.
Furthermore, regarding the level of ownership concentration, the findings point to divergent results. While concentration in the first two shareholders does not influence remuneration, the results indicate that an essential third shareholder (ConcAC3) can act to reduce misaligned remuneration, rejecting H5 but adding a conditional element to the findings. This result can be explained by the potential conflict between principal and principal when there are one or a few shareholders with great power (Silveira et al., 2008), with less attention to the interests of minority shareholders (Morck et al., 2005), as in environments with high ownership concentration and principal-principal conflicts, business performance may not influence the amount paid to managers (Wang & Xiao, 2011).

Thus, the participation of a third shareholder with greater voting power can act as a counterpoint, as this is closer to the minority shareholders than the first two, which improves the alignment between remuneration and performance. This finding, to a certain extent, is related to evidence of reduction in remuneration levels when there is greater concentration (Croci et al., 2012; Hartzell & Starks, 2003; Luo, 2015), improving the sensitivity of remuneration concerning performance organizational and differs from the findings of Crisóstomo et al. (2020).

A summary of the hypotheses and their results is presented in Figure 2.

**Figure 2**

*Summary of hypotheses and results*

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>E*</th>
<th>R*</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: The misalignment between executive compensation and organizational</td>
<td></td>
<td></td>
<td>Reject</td>
</tr>
<tr>
<td>performance is positively related to the duality of roles between CEO and</td>
<td>+</td>
<td>NS*</td>
<td></td>
</tr>
<tr>
<td>Chairman.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2: The misalignment between executive compensation and organizational</td>
<td></td>
<td>+</td>
<td>Reject</td>
</tr>
<tr>
<td>performance is negatively related to the level of independence of the</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>board.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H3: The misalignment between executive compensation and organizational</td>
<td></td>
<td>+</td>
<td>Reject</td>
</tr>
<tr>
<td>performance is negatively related to the size of the Board.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H4: The misalignment between executive compensation and organizational</td>
<td></td>
<td>+</td>
<td>Do not</td>
</tr>
<tr>
<td>performance is positively related to the greater number of executives per</td>
<td></td>
<td></td>
<td>Reject</td>
</tr>
<tr>
<td>director.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H5: Executive compensation not explained by financial and market performance</td>
<td>+</td>
<td>-</td>
<td>Reject</td>
</tr>
<tr>
<td>is positively related to the level of ownership concentration.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*E: expected outcome; R: result found; NS: Not significant;*

Considering the Board as the main governance body responsible for remuneration
packages and ownership concentration to monitor the Board and the executive, the research sought to analyze the influence of the Board and ownership concentration on the misalignment between executive remuneration and performance. The duality of positions, an aspect linked to the weakening of governance systems, does not interfere with this phenomenon, contrary to expectations. Also, contrary to the expectations of the hypotheses, larger boards with more independents tend to worsen the principal-agent relationship as they increase misaligned remuneration. Thus, despite the complexity of drafting contracts and the external and market factors influencing performance and remuneration levels (Bebchuk & Fried, 2005), the research identifies specific Board factors that have unfavorable impacts and increase agency costs.

Also, the relationship between executives and board members is highlighted. The higher the proportion of executives per Board member, the higher the level of misaligned compensation, the evidence of the power of the executives in more significant numbers, and the difficulty of the board members in proposing compensation packages that contemplate a more significant number of directors. This finding warns companies that the greater complexity of packages for different executives can harm the principal, which alerts to problems between agent and principal.

Finally, ownership concentration proved to be an aspect of attention. Greater concentration in the first and second largest shareholders does not improve the relationship between the variables, which points to potential problems between principal-principal. However, the participation of a third significant shareholder can mitigate this problem by reducing misaligned remuneration through the distribution of forces among shareholders.

Furthermore, the results indicate the presence of conflicts between agent-principal since a more significant number of executives per director tends to worsen the misalignment, as well as between principal and principal, as the controller has the power to assume the role of monitoring the executives that would be the responsibility of the Board (Dyck & Zingales,
2004) and influence remuneration packages (Jiang et al., 2009). However, the two largest shareholders seem to disregard the cost of higher remuneration (Cao et al., 2011), while evidence shows that the third largest shareholder appears to be playing this role.

5 CONCLUSION

The research pays attention to executive compensation misaligned with performance, understood as the portion received by executives that cannot be explained by the organizational performance delivered. In particular, the article focuses on short-term variable remuneration, bonuses, and profit sharing linked to accounting performance through rates of return on assets and equity. It is understood that misaligned remuneration constitutes an agency cost, as the executive receives amounts above or below the company's performance, a potential problem of misalignment of interests.

The results show the Board's weak action in reducing misalignment between executive compensation and organizational performance using secondary data from 2010 to 2021 and linear regression testing. The risks for companies are linked to the difficulty of consensus among directors and shareholders in defining remuneration packages that reflect organizational performance levels in the volume of rewards paid, as well as the possibility that independent members may have difficulties in improving the sensitivity of remuneration to performance.

The study contributes to the literature by advancing investigations between executive remuneration, board, and ownership concentration. It adds to the initial studies on misaligned remuneration, treated as an agency cost. Thus, it advances by addressing determinants of the portion of remuneration that is not explained by the companies' organizational performance, which may be disconnected from a direct contribution to shareholders (Marquezan et al., 2021). For the literature and companies, the findings warn about the risks of executive remuneration being misaligned with organizational performance, the influence of characteristics of the Board,
and the distribution of ownership concentration on this.

The results prove that governance mechanisms are ineffective in mitigating agent-principal and principal-principal agency conflicts. The amendment by Law No. 14,195 of 2021 to § 3 of article 138 of Federal Law 6,404/76 brought improvements by making separating positions between the company's principal director and the president of the Board mandatory, a practice that most companies already adopted. However, the findings point to the need to limit large boards and warn about the number of independent directors, the power of executives, and the company's ownership structure. Given this, companies and regulatory bodies must pay more attention to these aspects and seek a balance to maximize the usefulness of boards, ownership structure, and remuneration policies.

In this way, the study contributes to discussions about CG structures, as it sought to clarify the dynamics of agency conflicts present in companies operating in Brazil, as well as helping to identify gains and flaws in the performance of organizations, contributing to decision-making, improvement of the governance structure and processes. New research can advance this topic, highlighting some aspects: identifying and applying other performance variables that explain executive remuneration; including other factors about the Board, mainly linked to its independence, knowledge, and experience; discuss other ways to evaluate the power of executives in determining their compensation packages; analyze different forms of ownership concentration or shareholder power, such as the existence of shareholder agreements and the power of institutional investors; evaluate external economic and cultural factors that may influence misaligned pay and performance.
REFERENCES


**Acknowledgment**

We are grateful for the institutional and financial support from the National Council for Scientific and Technological Development (CNPq) and the Foundation for the Coordination of Improvement of Higher Education Personnel (CAPES), for the development of this research.
RESUMO
Objetivo: Analisar a influência do conselho de administração e da concentração acionária no desalinhamento entre remuneração executiva e desempenho.
Método: Pesquisa descritiva e quantitativa por meio de dados secundários de 196 companhias listadas na Brasil, Bolsa, Balcão (B3), entre 2010 e 2021, tratados por regressão de dados em painel.
Originalidade/Relevância: Em geral, os estudos avaliam a existência da relação e a sensibilidade entre o nível de remuneração e o desempenho. Este estudo avança ao tratar determinantes e investigar fatores capazes de afetar a parcela de remuneração que não é explicada pelo desempenho, a qual pode estar desconectada de uma contribuição direta aos acionistas.
Resultados: Os principais resultados indicam que conselhos maiores e mais independentes têm dificuldade em definir pacotes de remuneração, pois elevam os níveis de remuneração desalinhadas. Igualmente, maior número de diretores em relação aos conselheiros eleva o desalinhamento, aumentando custos de agência. Sobre a concentração acionária, os resultados evidenciam a importância de essa não estar concentrada nos dois primeiros acionistas, pois seu monitoramento não foi capaz de reduzir o problema de desalinhamento.
Contribuições teóricas/metodológicas: Contribui ao identificar riscos para as companhias, vinculados a conselhos maiores e mais independentes, e o maior número de executivos por conselheiro, pois agravam o problema entre agente-principal. Fornece evidências de que a maior propriedade de um terceiro grande acionista pode promover alinhamento de interesses. Desse modo, colabora para as decisões de melhoria da estrutura e dos processos de governança.
Palavras-chave: Teoria da Agência, Governança Corporativa, Remuneração Executiva, Conselho de Administração, Concentração Acionária.