

# THE INFLUENCE OF PRIVATE EQUITY IN THE GOVERNANCE OF BRAZILIAN COMPANIES

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## Abstract

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The private equity (PE) investors usually seek opportunities in the target companies in order to earn high returns. One opportunity explored by PEs is the potential that the company has to improve its governance and provide a better structure for the investor, which results in the generation of shareholder value and improve market value. For this, PE enhances the adoption of good corporate governance practices with the goal of creating value for their investment. This study explores how PE improves the governance of target companies in Brazil. The quality of corporate governance is measured by a firm-level corporate governance index, by cross-listing shares in the U.S., and by listing on New Market, a special governance segment in Brazil. We estimate different panel regression and probit models to analyse the relation between PE and governance. We also test different governance metric as dependent variables and use various firm characteristics as control variables. Our results show a positive influence of PE in improving corporate governance in Brazil.

**Keywords:** Private Equity, Corporate Governance, Firm Value

## 1. INTRODUCTION

The goal of this paper is to study the influence of private equity (PE) investors in the corporate governance in Brazil. There has been a huge development of the PE industry in Brazil over the last few years. The Brazilian capital market has seen investments by economic agents acquiring stakes in companies in order to influence business management and improve corporate governance. This type of equity investment is often called "private equity", but in fact, there are different classifications depending on its strategy of entering the company, which may be called seed money (SM), venture capital (VC), private equity (PE), private investment in public equity (PIPE), among others. In this study, we use the term "PE" to refer to investment vehicles that have the purpose of acquiring equity stakes and influence the management of companies.

The PE investment vehicles usually offer opportunities for many companies, mainly small and medium-sized firms, to grow and develop, since they allow high-risk ventures to raise funds and implement a professional management in the company. On the other hand, it is also known that PEs act in order to

invest in nascent companies or firms with management problems in order to achieve significant returns for investors at the time of divestment. PEs are known to influence corporate management in such a way that the firm has the adequate size and governance to be sold to outside investors or be able to do an initial public offering (IPO).

There are also PE investors that invest in companies that have shares traded on the stock market. The invested companies usually have growth potential, but have governance and management problems. The focus of PEs is on companies with good fundamentals but traded at a discount due to certain operational and governance problems. Normally PEs seek to create value for companies and generate good returns for shareholders. Thus, what attracts these PE investment vehicles is the opportunity to buy shares in companies that need improvements in their governance practices.

This paper study analyses the influence of PEs in the governance of investees companies in Brazil. We study 378 companies listed on the Brazilian stock exchange and evaluate whether the governance quality is better for companies with PE when compared to companies without PE. We also analyse if the PE origin (domestic or international) has a

significant influence on the governance practice of investee companies.

This paper contributes to the governance literature by measuring the effect of PE on firm-level corporate governance practices. Brazil offers an interesting case study because it is a major emerging market, where PEs have an important role to finance investments and improve governance and transparency of companies.

The quality of corporate governance is measured by the firm-level corporate governance index (CGI) of Leal and Carvalhal (2007), which allows to measure four different governance attributes (disclosure, board of directors, ethics and conflicts of interest, and shareholder rights). We also use two other governance metrics: cross-listing of American Depositary Receipts (ADRs) in the U.S., and listing on New Market, a special governance segment created by the Brazilian stock exchange.

Our results show that there is a positive relation between PEs and governance practices in Brazil. Firms invested by PEs have better governance practices, higher CGI, and greater presence of ADRs and in the New Market. Furthermore, PEs companies have higher disclosure, better board practices, fewer conflicts of interest, and grant more rights to minority shareholders.

## 2. LITERATURE REVIEW

In general PE investors use funds or holding vehicles in order to buy control of the companies and improve their management and governance. According to Masulis and Thomas (2009), the types of investments included in the PE category can be venture capital, mid-stage company finance, distressed firm investment, and leverage buyout (LBO).

In the case of Brazil, the most common PE categories are the venture capital and mid-stage company finance. Since LBO involves a debt-backed investment, this practice is hardly used in Brazil because of the high interest rates in the country and the weak legal system, which does not fully guarantee the recovery of credit in the case of a default. A well-developed governance structure would help to combat these two problems, giving the firm the necessary strength to claim resources and guarantee their payment (Abor & Adjasi, 2007).

The goal of PEs is usually focused on mitigating agency problems and improving corporate governance (Achleitner, 2009). In particular, the literature highlights the benefit identified by Jensen (1989) regarding the best use of the company's cash flows, and the monitoring of managers' activities. Hellmann and Puri (2002) provide empirical evidence on the venture capital and the professionalization of start-up firms.

Tyková and Borell (2012) study whether private equity owners increase risk of financial distress and bankruptcy. Wilson et al. (2012) evaluate private equity portfolio company performance during the global recession. Metrick and Yasuda (2011) state that PEs are recognized by the illiquidity of the assets and the asymmetry of information between the agents (insiders and outsiders). The main characteristics of PEs are that

they are financial intermediaries (attract funds from investors and invest in target companies), and play an active role in the monitoring and administration of companies of the portfolio. The authors also point out that PE's main objective is to maximize the financial return through divestment through a private sale or an initial public offering.

There is empirical evidence showing that PEs increase returns and firm performance. Axelson et al. (2013), Ang et al. (2013), Harris et al. (2014), Higson and Stucke (2013), and Robinson and Sensoy (2013) document that the performance of PEs has been better than public equities for more than 30 years.

Faccio and Hsu (2017) study the relation between PE and employment, and show that politically connected PEs have higher job creation. Davis et al. (2014) show that PEs increase the productivity of the companies, whereas Cohn et al. (2014) and Cohn (2013) find that PEs enhance the operating performance of the firms. Harris et al. (2018) study funds of funds of private equity and show that they outperform stock market indices. Goktan and Muslu (2018) document that PE firms listed on stock exchanges have better disclosure practices and higher stock returns. Cornell and Gerger (2018) study whether and how PEs pay fair value for companies so that they can achieve superior returns.

Stafford (2017) find that PEs invest in small companies, with higher leverage, low risk and profitability. L'Her et al. (2016) show that PE tends to invest in small low-valued firms. Gompers et al. (2016) report that the value creation of PEs come from sales growth and increase in operating margin. The authors also show that PEs are more active in the board of directors to improve the governance of investee companies. Mariz and Savoia (2005) analyse the PE industry in the U.S. and compare it with Brazil. They point out the problems and what needs to be improved. They argue that, given the country's great potential for growth, PEs have an important role to play in providing resources to companies and in participating in initiatives with public authorities through public-private partnerships. The authors also point out that the PE industry in Brazil began in the period of privatization in the 1990's, and went through difficult times in the face of world crises of that time, together with internal problems of the economy. However, the PE sector has been increasing in Brazil since 2003, when investors started to better understand the dynamics of the country. On the other hand, the authors state that the main challenges of the PE industry in Brazil are the volatility of the stock market, high interest rates, political risk, small size of the capital market and weak regulation.

In addition, the Brazilian regulatory environment does not provide good protection for shareholders and creditors, which creates a great risk of losing the investment and increases the cost of capital. These facts directly affect the development of Brazil, since a well-structured legal and regulatory environment is positively associated with economic growth (Levine, 1999).

Ribeiro and Carvalho (2008) investigate the PE industry in Brazil and point out the problems when

trying to reproduce the same model of the USA. Many PE managers get small returns and need to revise the chosen model in order to continue their operations in the region. Many foreign PEs partner with Brazilian PEs to learn the domestic model and reduce the chances of failure in Brazil. The authors point out some variables that affect the returns of the PEs and cause the failures of adaptation in Brazil: problems in the distribution of wealth; high interest rates; low growth; strict labour market; bureaucracy and corruption; high and complex tax system; inefficient legal framework; precarious infrastructure and underdeveloped capital markets. The authors conclude that the PE industry is still small and there is room to grow compared to other economies. The idiosyncrasies are limiting to the industry, but given the lack of infrastructure, there is a business opportunity that can leverage PE investments.

Regarding the investments made by foreign PEs, Meuleman and Wright (2011) address the issue of joint ventures between domestic and foreign PEs and note that in countries with a large number of banks these partnerships occur in fewer numbers. They also observe that the greater the local experience, the lower the need for partnerships. In addition, the greater the human resource base, the faster the PEs learn about local peculiarities and the less likely it is to join a joint venture.

Minardi et al. (2013) analyse the performance of Brazilian IPOs backed by private equity. Siqueira, Carvalho and Netto (2011) investigate the determinants of PE and venture capital performance in Brazil, and find that the factors that influence performance are: committed capital, number of investments, existence of co-investments, foreign origin, experience of the management organization, focus on PE companies, intensity of contact between managers and portfolio companies, and the number of seats on boards of companies invested by fund manager. They also observe that the number of successes grows with the number of investments at a declining rate, suggesting either a limit to the capacity of managers or that a large number of investments allow greater diversification of risk, directing the investments to risky companies, but with high upside potential.

Besides the topic of private equity, this paper also extends the literature on corporate governance. Since the seminal works on agency theory (Jensen & Meckling, 1976; Ross, 1973), and on separation of ownership and control (Fama & Jensen, 1983), the

literature on corporate governance and ownership structure has vastly increased (see Chung & Zhang, 2011; Ezzine & Olivero, 2013; Gompers et al., 2003; Klapper & Love, 2004; La Porta et al., 1998, 2000; Shleifer & Vishny, 1997).

There is also a vast literature on corporate governance in Brazil. Carvalho and Nobili (2011) study whether corporate governance matter for stock returns by estimating a four-factor asset pricing model including a governance index. Black, Carvalho and Gorga (2012) evaluate what matters and for which firms for corporate governance in Brazil and other large emerging markets.

Leal and Carvalho (2007) create a firm-level corporate governance index (CGI) to analyse whether there is a significant relation between governance practices and firm value. This index is inspired in the international literature (see Gompers et al., 2003; Klapper & Love, 2004; La Porta et al., 1998). In this paper, we use the CGI of Carvalho and Leal (2007) as a proxy for governance quality to evaluate whether PE improves governance standards in Brazil.

### 3. DATA AND METHODOLOGY

Our sample is composed of 378 companies listed on the Brazilian stock exchange (B3) from 2002 to 2009. We analyse the ownership and control structure of the companies to identify the presence of PE, its origin (domestic or international), and its stake in the firm. We measure the percentage of both voting capital and total capital owned by PE investors in the firm.

We define PE as any vehicle that has the characteristic of making investments to have an equity stake in the company and an influence in its businesses, such as seed money funds, venture capital funds, private equity funds, investment fund of participation (FIP), private investment in public equity (PIPE), among others. We create a dummy variable "PE", which takes the value of 1 when a PE investor owns the company.

Table 1 shows the number of companies with PE investors from 2002 to 2009. The presence of PE in Brazilian companies has been increasing over time. The number of companies with PE investment increased from 17 in 2002 to 86 in 2009. Most PEs are domestic, but there has been an increase in foreign PE investment. In addition, there are companies that have both domestic and international PEs in their capital structure.

**Table 1.** Number of firms with private equity (PE) investment in Brazil

<i>Number of Firms</i>	2002	2003	2004	2005	2006	2007	2008	2009
PE	17	20	25	25	44	69	78	86
Brazilian PE	16	19	23	24	40	62	70	76
Foreign PE	1	1	2	2	4	8	9	16

We collect data from Economática database and Brazilian stock exchange (B3) website. With regard to corporate governance variables, we use the corporate governance index of Leal and Carvalho (2007) together with its 4 sub-indices (disclosure, board of directors, ethics and conflict of interest and shareholder rights). Further, we also employ listing in the New Market (NM) and the issuance of ADR in

the U.S. We also collect the following data: voting and total capital owned by the controlling shareholder, return on asset (ROA), return on equity (ROE), price-to-book (P/B), price-to-earnings (P/E), dividend yield (DIV), leverage (LEV), sales growth (GRO), operational margin (EBITDA), and firm size (SIZ). Table 2 shows the description of the variables used in the study.

Table 2. Description of variables

<i>Corporate Governance</i>	
CGI	Corporate Governance Index of Leal and Carvalho (2007)
Disc	CGI's sub-index for disclosure
Board	CGI's sub-index for board of directors
Ethic	CGI's sub-index for ethics and conflicts of interest
Right	CGI's sub-index for shareholder rights
NM	Dummy variable that takes the value of 1 if the firm is listed on New Market
ADR	Dummy variable that takes the value of 1 if the firm lists ADR in the U.S.
<i>Private Equity and Ownership Structure</i>	
PE	Dummy variable that takes the value of 1 if the firm is owned by PE investors
PEBRA	Dummy variable that takes the value of 1 if the firm is owned by Brazilian PE
PEFOR	Dummy variable that takes the value of 1 if the firm is owned by foreign PE
VOTPE	Percentage of voting capital owned by PE investors in the firm
TOTPE	Percentage of total capital owned by PE investors in the firm
VOTCON	Percentage of voting capital owned by the controlling shareholder in the firm
TOTCON	Percentage of total capital owned by the controlling shareholder in the firm
<i>Firm Characteristics</i>	
ROA	Return on asset (net income / total assets)
ROE	Return on equity (net income / shareholder equity)
P/B	Price-to-book (Market value of equity / book value of equity)
P/E	Price-to-earnings (Market value of equity / earnings per equity)
DIV	Dividend yield (dividend per share / market value per share)
LEV	Leverage (non-equity liabilities / total assets)
GRO	Growth (average growth of sales in the last 3 years)
EBITDA	Operational margin (EBITDA / total assets)
SIZ	Firm size (logarithm of total assets)

Note: The data are collected from Economatica database and Brazilian stock exchange (B3) website.

We estimate different models to verify the influence of PE on corporate governance. First, we organize the sample in two groups (companies with and without PE), and perform a test of differences in mean. Then, we estimate the following panel

regression models to analyse the relation between PE and governance. We test different governance metric as dependent variables and use various firm characteristics as control variables.

$$CGI = \beta_0 + \beta_1 PE + \beta_2 PEBRA + \beta_3 PEFOR + \beta_4 ROA + \beta_5 P/B + \beta_6 LEV + \beta_7 GRO + \beta_8 SIZ + \varepsilon \quad (1)$$

$$Disc = \beta_0 + \beta_1 PE + \beta_2 PEBRA + \beta_3 PEFOR + \beta_4 ROA + \beta_5 P/B + \beta_6 LEV + \beta_7 GRO + \beta_8 SIZ + \varepsilon \quad (2)$$

$$Board = \beta_0 + \beta_1 PE + \beta_2 PEBRA + \beta_3 PEFOR + \beta_4 ROA + \beta_5 P/B + \beta_6 LEV + \beta_7 GRO + \beta_8 SIZ + \varepsilon \quad (3)$$

$$Ethic = \beta_0 + \beta_1 PE + \beta_2 PEBRA + \beta_3 PEFOR + \beta_4 ROA + \beta_5 P/B + \beta_6 LEV + \beta_7 GRO + \beta_8 SIZ + \varepsilon \quad (4)$$

$$Right = \beta_0 + \beta_1 PE + \beta_2 PEBRA + \beta_3 PEFOR + \beta_4 ROA + \beta_5 P/B + \beta_6 LEV + \beta_7 GRO + \beta_8 SIZ + \varepsilon \quad (5)$$

$$NM = \beta_0 + \beta_1 PE + \beta_2 PEBRA + \beta_3 PEFOR + \beta_4 ROA + \beta_5 P/B + \beta_6 LEV + \beta_7 GRO + \beta_8 SIZ + \varepsilon \quad (6)$$

$$ADR = \beta_0 + \beta_1 PE + \beta_2 PEBRA + \beta_3 PEFOR + \beta_4 ROA + \beta_5 P/B + \beta_6 LEV + \beta_7 GRO + \beta_8 SIZ + \varepsilon \quad (7)$$

#### 4. RESULTS

Table 3 presents the descriptive statistics of the sample. We can observe that PE owns stakes in 12% of the firms in our sample. The presence is higher

for Brazilian PE than foreign PE (11% and 1% of the firms, respectively). On average, PE has 17.9% of the voting capital and 23.7% of the total capital of the company.

Table 3. Descriptive statistics

Variable	Average	Median	Min	Max	Std Dev
CGI	4.84	4.58	1.00	9.50	1.70
Disc	5.77	6.67	0.00	10.00	2.76
Board	5.59	6.00	0.00	10.00	2.51
Ethic	2.97	2.86	0.00	8.75	2.31
Right	4.59	4.00	0.00	10.00	2.38
PE	0.12	0.00	0.00	1.00	0.33
PEBRA	0.11	0.00	0.00	1.00	0.31
PEFOR	0.01	0.00	0.00	1.00	0.12
VOTPE	17.9%	0.0%	0.0%	100.0%	0.32
TOTPE	23.7%	13.0%	1.0%	100.0%	0.26
VOTCON	77.8%	79.0%	51.0%	100.0%	0.18
TOTCON	59.4%	57.0%	10.0%	100.0%	0.24
ROA	3.7%	3.6%	-45.3%	38.9%	0.09
ROE	11.6%	10.8%	-50.0%	75.3%	0.17
P/B	2.30	1.60	-7.60	27.10	2.89
P/E	10.35	8.60	-25.10	59.60	12.59
DIV	2.87%	1.80	0.00	15.30	3.31
LEV	58.7%	59.6%	0.0%	119.3%	0.22
GRO	13.3%	11.8%	-36.4%	65.4%	0.18
EBITDA	20.1%	17.6%	-37.3%	85.4%	0.18
SIZ	14.00	14.13	1.39	20.28	2.08

With regard to the governance variables, the average CGI is 4.84 (out of 10), which indicates poor quality of governance practices in Brazil. The same conclusion holds for CGI sub-indexes, which have low averages: 5.77 for disclosure, 5.59 for board of directors, 2.97 for ethics and conflict of interest, and 4.59 for shareholder rights. It is worth noting the large dispersion of the governance variables with scores ranging from 0 to 10. Moreover, only a few Brazilian companies list on NM (20% of the firms), and issue have ADRs in the U.S. (9% of the sample).

The ownership and control are very concentrated in Brazil. The controlling shareholder has on average 77.8% of the voting capital and 59.4% of the total capital. Regarding the financial variables,

Brazilian firms have an average ROA of 3.7%, ROE of 11.6%, P/B of 2.3, P/E of 10.3, dividend yield of 2.9%, leverage of 59%, sales growth 13.3%, and EBITDA margin of 20.1%.

Table 4 shows the comparison between companies with and without PE. The findings show that the governance practices are better in firms with PE when compared to firms without PE. On average, the CGI of companies with PE is 5.9 compared to 4.6 of companies without PE. This superiority also holds in all four dimensions of IGC. All differences between the governance practices of firms with and without PE are statistically significant at 1%.

**Table 4.** Comparison between firms with and without private equity

Variable	Firms with PE	Firms without PE	P-value
CGI	5.9	4.6	0.00***
Disc	7.2	5.5	0.00***
Board	6.8	5.4	0.00***
Ethic	3.4	2.9	0.00***
Right	5.6	4.4	0.00***
VOTCON	73.5%	78.7%	0.00***
TOTCON	51.8%	60.9%	0.00***
ROA	4.1%	3.6%	0.38
ROE	12.4%	11.4%	0.33
P/B	2.5	2.2	0.22
P/E	13.0	9.7	0.00***
DIV	2.7	2.9	0.50
LEV	58.2%	58.8%	0.67
GRO	12.8%	13.4%	0.66
EBITDA	23.1%	19.5%	0.00***
SIZ	14.8	13.9	0.00***

Note: \*\*\*, \*\*, \* indicate that the difference in mean between firms with and without PE is statistically significant at 1%, 5%, and 10%, respectively.

We can also see a smaller concentration of shares held by the controlling shareholder in companies with PE (74% of voting capital and 52% of total capital) than in non-PE firms (79% of the voting capital and 61% of total capital). Firms with PE are also larger, have higher operating margins, have higher market valuation (price-to-earnings), and all these differences are statistically significant at 1%.

Table 5 shows the results of panel regressions using the CGI as the dependent variable. We estimate the regression using fixed-effects (FE) and

weighted least squares (WLS) specifications. The coefficients of PE and PEBRA are positive and statistically significant at 1% in all models, whereas the coefficient of PEFOR is positive and statistically significant at 1% only for WLS. Therefore, we can conclude that firms with PE have better governance practices than firms without PE. The improvement in corporate governance is higher for Brazilian PE than foreign PE. With regard to control variables, CGI is positively related to firm size and price-to-book, and negatively associated with leverage.

**Table 5.** Private equity and corporate governance index

Variable	WLS	Fixed-Effect	WLS	Fixed-Effect	WLS	Fixed-Effect
PE	1.19*** (0.00)	0.85*** (0.00)				
PEBRA			1.19*** (0.00)	0.89*** (0.00)		
PEFOR					0.53*** (0.01)	-0.18 (0.54)
ROA	-0.01*** (0.00)	-0.01 (0.30)	-0.01*** (0.00)	-0.01 (0.35)	-0.02*** (0.00)	-0.01 (0.20)
P/B	0.14*** (0.00)	0.05** (0.03)	0.15*** (0.00)	0.05** (0.02)	0.15*** (0.00)	0.07*** (0.00)
LEV	-0.02*** (0.00)	-0.02*** (0.00)	-0.02*** (0.00)	-0.02*** (0.00)	-0.03*** (0.00)	-0.02*** (0.00)
GRO	1.38*** (0.00)	-0.15 (0.52)	1.41*** (0.00)	-0.18 (0.46)	1.29*** (0.00)	-0.30 (0.22)
SIZ	0.24*** (0.00)	0.53*** (0.00)	0.25*** (0.00)	0.53*** (0.00)	0.31*** (0.00)	0.58*** (0.00)
Adj R2	0.73	0.67	0.76	0.67	0.86	0.65
Obs	907	907	907	907	907	907

Note: \*\*\*, \*\*, \* indicate statistical significance at 1%, 5%, and 10%, respectively.

Table 6 shows the results of panel regressions using the CGI sub-index for disclosure as the dependent variable. The findings are similar to those in Table 5. The coefficients of PE and PEBRA are positive and statistically significant at 1% in all models, whereas the coefficient of PEFOR is positive

and statistically significant at 1% only for WLS. Firms with PE have better disclosure than firms without PE, and the improvement is higher for Brazilian PE than foreign PE. The quality of disclosure is also positively related to firm size, and negatively associated with leverage.

**Table 6.** Private equity and disclosure

Variable	WLS	Fixed-Effect	WLS	Fixed-Effect	WLS	Fixed-Effect
PE	1.10*** (0.00)	0.64*** (0.00)				
PEBRA			1.10*** (0.00)	0.68*** (0.00)		
PEFOR					0.94*** (0.00)	0.00 (0.99)
ROA	-0.00 (0.79)	-0.01 (0.70)	-0.00 (0.68)	-0.00 (0.73)	-0.00 (0.21)	-0.00 (0.60)
P/B	0.15*** (0.00)	-0.02 (0.59)	0.16*** (0.00)	-0.02 (0.60)	0.15*** (0.00)	-0.01 (0.84)
LEV	-0.04*** (0.00)	-0.01* (0.09)	-0.04*** (0.00)	-0.01 (0.11)	-0.04*** (0.00)	-0.01* (0.06)
GRO	1.72*** (0.00)	-0.27 (0.50)	1.50*** (0.00)	-0.29 (0.47)	1.53*** (0.00)	-0.38 (0.35)
SIZ	0.76*** (0.00)	0.77*** (0.00)	0.77*** (0.00)	0.77*** (0.00)	0.81*** (0.00)	0.80*** (0.00)
Adj R2	0.67	0.62	0.76	0.62	0.67	0.61
Obs	907	907	907	907	907	907

Note: \*\*\*, \*\*, \* indicate statistical significance at 1%, 5%, and 10%, respectively.

Table 7 shows the results of panel regressions using the CGI sub-index for board of directors as the dependent variable. The findings are similar to those in Tables 5 and 6. The coefficients of PE and PEBRA are positive and statistically significant at 1% in all models, whereas the coefficient of PEFOR is positive and statistically significant at 1% only for WLS. Firms

with PE have better board practices than firms without PE, and the improvement is higher for Brazilian PE than foreign PE. The quality of board practices is also positively related to firm size and price-to-book, and negatively associated with leverage.

**Table 7.** Private equity and board of directors

Variable	WLS	Fixed-Effect	WLS	Fixed-Effect	WLS	Fixed-Effect
PE	1.48*** (0.00)	1.19*** (0.00)				
PEBRA			1.51*** (0.00)	1.23*** (0.00)		
PEFOR					1.10*** (0.00)	0.07 (0.90)
ROA	-0.00 (0.12)	-0.01 (0.50)	-0.00 (0.24)	-0.00 (0.55)	-0.02*** (0.00)	-0.01 (0.36)
P/B	0.17*** (0.00)	0.11*** (0.00)	0.17*** (0.00)	0.11*** (0.00)	0.19*** (0.00)	0.13*** (0.00)
LEV	-0.01*** (0.00)	-0.02*** (0.00)	-0.01*** (0.00)	-0.02*** (0.11)	-0.02*** (0.00)	-0.03*** (0.00)
GRO	0.52*** (0.00)	-1.36*** (0.00)	0.41** (0.01)	-1.39*** (0.00)	0.54** (0.01)	-1.55*** (0.00)
SIZ	0.31*** (0.00)	0.75*** (0.00)	0.31*** (0.00)	0.74*** (0.00)	0.39*** (0.00)	0.81*** (0.00)
Adj R2	0.42	0.56	0.39	0.56	0.71	0.53
Obs	907	907	907	907	907	907

Note: \*\*\*, \*\*, \* indicate statistical significance at 1%, 5%, and 10%, respectively.

Table 8 shows the results of panel regressions using the CGI sub-index for ethics and conflict of interest as the dependent variable. The findings are different than the previous ones. The coefficient of PE is positive and statistically significant at 1% only for WLS. The coefficient of PEBRA is positive and

statistically significant at 1% (WLS) and 10% (FE). In contrast, the coefficient of PEFOR is not significant for WLS, and is negative and statistically significant at 5% for FE. The ethics and conflict of interest practices is positively related to sales growth, and negatively associated with firm size.

**Table 8.** Private equity, ethics and conflicts of interest

Variable	WLS	Fixed-Effect	WLS	Fixed-Effect	WLS	Fixed-Effect
PE	0.69*** (0.00)	0.34 (0.11)				
PEBRA			0.73*** (0.00)	0.41* (0.06)		
PEFOR					-0.33 (0.40)	-1.19** (0.02)
ROA	-0.02*** (0.00)	-0.00 (0.30)	-0.02 (0.00)	-0.01 (0.32)	-0.02*** (0.00)	-0.01 (0.28)
P/B	0.10*** (0.00)	-0.00 (0.91)	0.10*** (0.00)	-0.00 (0.89)	0.11*** (0.00)	0.00 (0.89)
LEV	-0.01*** (0.00)	0.00 (0.63)	-0.01*** (0.00)	0.00 (0.61)	-0.02*** (0.00)	0.00 (0.76)
GRO	2.88*** (0.00)	1.43*** (0.00)	2.86*** (0.00)	1.43*** (0.00)	2.58*** (0.00)	1.32*** (0.00)
SIZ	-0.23*** (0.00)	-0.17*** (0.06)	-0.23*** (0.00)	-0.17* (0.06)	-0.20*** (0.00)	-0.12 (0.13)
Adj R2	0.29	0.50	0.28	0.50	0.21	0.53
Obs	907	907	907	907	907	907

Note: \*\*\*, \*\*, \* indicate statistical significance at 1%, 5%, and 10%, respectively.

Table 9 shows the results of panel regressions using the CGI sub-index for shareholder rights as the dependent variable. The findings are similar to those in Tables 5, 6 and 7. The coefficients of PE and PEBRA are positive and statistically significant at 1% in all models, whereas the coefficient of PEFOR is positive and statistically significant at 1% only for

WLS. Firms with PE grant more rights to minority shareholders than firms without PE, and the improvement is higher for Brazilian PE than foreign PE. The quality of shareholder rights is also positively related to price-to-book, and negatively associated with leverage.

**Table 9.** Private equity and shareholder rights

Variable	WLS	Fixed-Effect	WLS	Fixed-Effect	WLS	Fixed-Effect
PE	1.13*** (0.00)	1.08*** (0.00)				
PEBRA			1.08*** (0.00)	1.12*** (0.00)		
PEFOR					1.02*** (0.00)	0.10 (0.83)
ROA	-0.03*** (0.00)	-0.01 (0.42)	-0.03*** (0.00)	-0.0 (0.47)	-0.04*** (0.00)	-0.01 (0.30)
P/B	0.12*** (0.00)	0.09*** (0.00)	0.12*** (0.00)	0.09*** (0.00)	0.14*** (0.00)	0.10*** (0.00)
LEV	-0.02*** (0.00)	-0.03*** (0.00)	-0.03*** (0.00)	-0.03*** (0.00)	-0.03*** (0.00)	-0.03*** (0.00)
GRO	1.38*** (0.00)	0.18 (0.62)	1.67*** (0.00)	0.15 (0.68)	1.44*** (0.00)	0.01 (0.97)
SIZ	-0.02 (0.49)	0.52*** (0.00)	0.00 (0.82)	0.52*** (0.00)	0.07*** (0.00)	0.57*** (0.00)
Adj R2	0.47	0.60	0.55	0.60	0.34	0.58
Obs	907	907	907	907	907	907

Note: \*\*\*, \*\*, \* indicate statistical significance at 1%, 5%, and 10%, respectively.

Table 10 shows the results of the probit models using the NM dummy as the dependent variable. The findings are similar to the previous ones. The coefficients of PE and PEBRA are positive and statistically significant at 1% in all models, whereas the coefficient of PEFOR is not statistically

significant. Firms with PE are more likely to list on the New Market when compared to firms without PE. The listing on NM is also positively related to price-to-book, sales growth, and negatively associated with leverage.

**Table 10.** Private equity and listing on new market

Variable	I	II	III
PE	0.61*** (0.00)		
PEBRA		0.61*** (0.00)	
PEFOR			0.12 (0.66)
ROA	-0.01 (0.47)	-0.01 (0.38)	-0.01 (0.23)
P/B	0.06*** (0.00)	0.06*** (0.00)	0.06*** (0.00)
LEV	-0.01*** (0.00)	-0.02*** (0.00)	-0.02*** (0.00)
GRO	1.15*** (0.00)	1.15*** (0.00)	1.04*** (0.00)
SIZ	-0.10*** (0.00)	-0.10*** (0.00)	-0.05 (0.11)
Adj R2	0.10	0.09	0.09
Obs	696	696	696

Note: \*\*\*, \*\*, \* indicate statistical significance at 1%, 5%, and 10%, respectively.

Table 11 shows the results of the probit models using the ADR dummy as the dependent variable. The findings are similar to the previous ones, but the statistical significance is lower than before. The coefficients of PE and PEBRA are positive and statistically significant at 5% and 10%, respectively,

whereas the coefficient of PEFOR is not statistically significant. Firms with PE are more likely to list ADR in the U.S. when compared to firms without PE. The listing on NM is also positively related to firm size, and negatively associated with price-to-book.

**Table 11.** Private equity and listing ADR in the U.S.

Variable	I	II	III
PE	0.25** (0.05)		
PEBRA		0.25* (0.06)	
PEFOR			0.29 (0.36)
ROA	0.01 (0.45)	0.01 (0.46)	0.01 (0.56)
P/B	-0.05* (0.07)	-0.05* (0.07)	-0.05* (0.09)
LEV	-0.00 (0.57)	-0.00 (0.52)	-0.00 (0.52)
GRO	0.43 (0.18)	0.43 (0.18)	0.36 (0.25)
SIZ	0.51*** (0.00)	0.52*** (0.00)	0.53*** (0.00)
Adj R2	0.28	0.28	0.28
Obs	918	918	918

Note: \*\*\*, \*\*, \* indicate statistical significance at 1%, 5%, and 10%, respectively.

## 5. DISCUSSION AND CONCLUSION

The objective of the study is to analyse the relationship between corporate governance and private equity (PE) investment. We study 378 listed companies in Brazil from 2002 to 2009. We measure the quality of corporate governance through various metrics, such as the firm-level index of Leal and Carvalho (2007), the listing in the New Market in Brazil, and the cross-listing of ADRs in the U.S.

Our findings show that PEs contribute significantly to improve governance practices in Brazil. The results are robust to different governance metrics and econometric specification. Firms with PE investment have better higher governance index and a greater presence in the New Market and in the U.S.

In addition, PE firms have a smaller separation between ownership and control, provide higher disclosure, adopt better practices with regard to the board of directors, and grant more rights to minority shareholders. We also provide evidence that PE firms are larger, have higher margins and firm valuation.

Our results have a few implications for policymakers and PE analysts, because we are able to

identify which governance practice is improved by PEs. The regulators can use our results to enact laws to enhance governance quality of companies invested by PEs. Moreover, active PEs are able to identify which governance practice should be prioritized to increase firm performance.

This paper has the following limitations. First, we perform a single-country analysis (Brazil) and cannot guarantee the validity of our results in other countries. Second, we only evaluate listed companies, which have public information. However, many PEs invest in non-listed firms, which are not part of our sample. Finally, our governance index contains only a few governance attributes, and do not contain all governance dimensions.

Future research could extend our analysis for other countries, for non-listed firms and using different governance mechanisms to analyse the effect of PEs on corporate governance. Furthermore, the tests should also be implemented in different time periods to evaluate the impact of economic cycles and crises on the role of PEs in enhancing corporate governance practices.

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