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Institutional investors' response to improved corporate governance: Evidence from the brazilian capital market

La respuesta de los inversores institucionales a un mejor gobierno corporativo: evidencia del mercado de capitales brasileño

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Abstract

This study examines whether normative pressures from stock market regulators to improve the governance quality of Brazilian listed firms influence the participation and activism of institutional investors. More specifically, we investigate the association between institutional investor's ownership and firm's voluntary adhesion to the São Paulo Stock Exchange (B3) differentiated levels of corporate governance quality. Empirical testing is performed on a ten-year (2002–2011) panel data set from a sample of 439 firms listed on the B3. Our findings suggest that firms in differentiated corporate governance levels, that is, with better level of transparency and commitment to monitoring, are more attractive to institutional investors. We interpret this result as evidence supporting the shareholder activism movement, attributed by several scholars to institutional shareholders. Our study contributes to the governance literature on the firm's response to normative pressures and the ability of internal governance mechanisms to signal lower agency cost to capital market. Our evidence also contributes to the ongoing discussion about the role and influence of institutional investors in the functioning of capital markets, and more specific in emerging market like Brazil.

JEL code: G34, M41, F39
Keywords: Corporate governance; Institutional investor; Stock market; Investment decisions

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Resumen

El estudio examina si las presiones normativas de los reguladores del mercado de capitales para mejorar la calidad del gobierno de las firmas cotizadas en Brasil influyen en la participación y el activismo de los inversores institucionales. Más específicamente, investigamos la asociación entre la propiedad del inversor institucional y la adhesión voluntaria de la firma a los niveles diferenciados en la Bolsa de Valores de São Paulo (B3) de la calidad del gobierno corporativo. Las pruebas empíricas se han realizado en un conjunto de datos de panel de diez años (2002-2011) de una muestra de 439 empresas que cotizan en la B3. Nuestros resultados sugieren que las firmas en niveles diferenciados de gobierno corporativo, es decir, con mayor nivel de transparencia y compromiso con el monitoreo, son más atractivas para los inversionistas institucionales. Interpretamos este resultado como evidencia que apoya el movimiento de activismo de los accionistas, atribuido por varios académicos a los accionistas institucionales. Nuestro estudio contribuye a la literatura de gobierno corporativo sobre la respuesta de las firmas a las presiones normativas y la capacidad de los mecanismos de gobierno interno para señalar menor coste de agencia para el mercado de capitales. Nuestra evidencia también contribuye a la discusión en curso sobre el papel y la influencia de los inversores institucionales en el funcionamiento de los mercados de capital, y más específicamente en mercados emergentes como Brasil

Código JEL: G34, M41, F39
Palabras clave: Gobierno corporativo; Inversores institucionales; Mercado de capitales; Decisiones sobre Inversiones

Introduction

The assessment of corporate governance practices help investors in their investment decision. Corporate governance is very often defined as "the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment" (Shleifer and Vishny, 1997, p. 737). The level of monitoring, top management discretion and the ability to exercise influence on the firm's performance, are some of the governance aspects that outside investor assess when deciding whether to invest or not (Comissão de Valores Mobiliários, hereinafter CVM, 2002). Having this in mind, to mitigate conflicts of interest, management and board of directors have been encouraged to deploy and enhance corporate governance mechanisms. The premise is that good governance attenuates potential conflicts of interest between owners and managers (Leal and Saito, 2003), or between majority and minority shareholders (Schiehll et al., 2013), to reduce risk, attract investors and the reduce cost of capital (Jensen and Meckling, 1976).

Institutional investors, because of the amount of resources they invest and their ability to monitor management, are assumed to be key actors in the development of the capital markets (Thompson-Flôres, 2004). Institutional investors are assumed to be the source of effective outside monitoring because they are not only intrinsically motivated but have the oversight skills of professional investors (Johnson et al., 2010). In Brazil, to improve corporate governance practices and investor protection many initiatives have been made. (Leal, Carvalhal, Ierevolino, 2015). However, few studies examined the effects of those initiatives from the perspective of the institutional investors. As such, this study attempts to contribute to this discussion by investigating whether the investment decisions of institutional investors are related to the quality of firm corporate governance practices. We conduct this investigation based on a sample of firms listed in the São Paulo Stock Exchange (B3) using data from 2002 to 2011.

Brazil is the ninth largest economy in the world. The International Monetary Fund (IMF) points out that more simplified taxation reduced barriers to trade and cost reduction through infrastructure improvements are needed to improve foreign investment in Brazil (Brasil, 2017). It is also worth noting that Brazil is one of the countries where differentiated interest rates are paid if we compare with the USA and other countries with strong capital markets (BBC, 2017). This leads one to infer that other reasons may explain the investment by institutional investors in the Brazilian market, such as the quality of corporate governance. As an emerging market that abounds in information asymmetry, ownership concentration, ineffective market surveillance, and poor investor protection (Lameira and Ness 2007; Black, De Carvalho and Gorga 2010), Brazil offers a unique setting to investigate this issue. Historically, the private benefits of control in Brazilian companies

have been high and the minimum legal rules and firm-level governance weak (Dyck and Zingales 2004). In addition, because developing countries present greater variation in their use of corporate governance mechanisms than most mature markets (Judge 2009), there is more room for firm-level governance to explain variations in the shareholdings by institutional investors. This motivates our study in the context of Brazilian capital market.

Our results support our hypothesis, and suggests that firms in differentiated corporate governance levels, that is, with better level of transparency and commitment to monitoring (among other features), are more attractive to institutional investors. We interpret this result as evidence supporting the shareholder activism movement, attributed by several scholars to institutional shareholders (i.e., Johnson et al., 2010). In other words, improvements on corporate governance practices are motivated and perceived by market participants, such as institutional investors. More important, our study also provides evidence about the benefits for firms which employ efforts to minimize agency costs, generated by the managerial discretion and the intrinsic risk that managers or large shareholders would take decisions for their own benefit rather than make them for the benefit of all shareholders. As such, our study contributes to the ongoing discussion about the role and influence of institutional investors in the functioning of capital markets, and more specific in emerging market like Brazil.

This document is organized as follows: section 2 describes the research context and the theoretical background. Section 3 presents the research hypothesis and describes the research methods used. Section 4 presents our empirical results. Section 5 provides the discussion and conclusions.

Literature review and research hypothesis

The monitoring role of institutional investors

Previous literature examining the effects of ownership structure on internal governance mechanisms suggests that investors absorb all the monitoring costs but receive benefits that are only proportional to their shareholdings (e.g., Fama and Jensen 1983; Byrd et al. 1998). This implies that minority shareholders may have no incentives to closely monitor management, leaving the task to large shareholders. The presence of large shareholders in the ownership structure is therefore expected to increase monitoring efforts, reduce agency costs, and increase firm value (Byrd et al. 1998). Institutional investors could be identified as "organizations that actively participate in the capital market, investing a large volume of resources, usually in the long run" (Pinto, 1984, p. 1). In financing firms, investors usually obtain certain rights and powers, which are attributed by national institutions that manifest themselves through laws and regulations (Schiehll and Martins, 2016). The access to private information is characterized as one of those rights (La Porta *et al*., 2002). Therefore, institutional investors are assumed to be effective controllers because they are not only intrinsically motivated but have the oversight skills of professional investors.

Institutional investors are also characterized by their portfolio diversification, asset availability and amount of resources to invest in long term. The diversification of the portfolio is used with the aim of reducing the risk of investment in certain assets. Given the availability and amount of resources invested, institutional investors have the capacity to contest the power provided to the shareholders, so as they can be considered important in the development of capital markets, once they are given supervisory capacity and influence in the firm they invest. In certain situations, institutional investors could, for being part of firms control blocks, be recognized as their controllers (Thompson-Flôres, 2004). Overall, the literature discussed above suggests that quality of it governance structure may be an important determinant of the presence of institutional investors in firms' ownership structure.

The role of corporate governance on investors decision

Corporate governance is defined as "a set of practices that aims to optimize the performance of a firm to protect all stakeholders such as investors, employees and creditors, facilitating access to capital" (CVM, 2002, p. 1). Corporate governance consists of internal and external mechanisms (Schiehll and Bellavance, 2009). Internal aspects involve the composition of the board of directors (their structure and committees), internal systems of control, disclosure, managerial incentives, and the ownership structure of the firm. As external formative aspects, we can cite "the influence of blockholders, financial analysts, auditors, regulators and competition in the market for corporate control" (Brown *et al.*, 2011, p. 98). With the dispersion of resources, which defines the ownership structure of a firm, control and property cease to be in the same hands, which is characterized by the separation of ownership and control (Berle and Means, 1984). The position of the owner of the firm was reduced to legal interest. Even in the organization, seen as a group, where could be call as control, the owner of the firm had some legal and factual powers over the firm. It is believed that the personal gain can be the motivator of the control. Additionally, there are different interests in control, and they may oppose the interests of property (Berle and Means, 1984).

It would be the delegation of authority, by a principal to his agent, the problem of agency. Jensen and Meckling (1976, p. 5) define the agency issue as "a contract by which one or more people (the main) involve another person (the agent) to perform any service on their behalf, which involves delegate some decision-making authority to the agent", representing it in the management of a firm. The agency problem emerges with information asymmetry between principal and agent, as well as the possibility of conflict of interest between them and the different provisions to take risks (Jensen and Meckling, 1976). The level of agency problems may be different in each country, due to the existing legislation, protection of minority shareholders, dividend policies, among other characteristics of each country (Jensen and Meckling, 1976; La Porta *et al.*, 2000). Given the large number of family-controlled firms in the Brazilian capital markets, the agency problem is established between controlling shareholders and minority shareholders. Besides possessing inside information, large or controlling shareholders may influence management decisions, thus benefiting themselves at the expense of minority shareholders. (La Porta *et al*., 2000).

In Brazil, there are legal mechanisms aimed at reducing conflicts of interest generated among controlling shareholders and minority shareholders, provided by the *Comissão de Valores Mobiliarios* (CVM), the equivalent of Security and Exchange Commission (SEC), and by the Brazilian corporate law. The protection of minority shareholders, therefore, limits the scope of expropriation, and is considered an external corporate governance mechanism (Leal and Saito, 2003). Hence, in the Brazilian context, corporate governance practices emerge to mitigate these problems and improve the relationship between majority and minority shareholders. According to São Paulo Stock Exchange (B3) it is "a set of incentive and control mechanisms to ensure that decisions are taken in line with the long-term goals of the organizations" (B3, 2011)

Consistent with the above discussion, corporate governance would be an important way to mitigate agency costs, as a set of regulatory mechanisms acting between management, minority and majority shareholders, as the case of the Brazilian capital market. The B3 has different corporate governance systems, enabling the business firms to choose the one that fit their interests, which makes the investor of this market choose the corporate governance system that he considers the ost efficient to mitigate the agency problem.

Previous empirical evidence on the association between firm governance structure and institutional shareholdings

The study by Wahab *et al*. (2008) examined 434 firms listed on Bursa Malaysia during 1999 to 2002, and provided evidence of not significant association between firm's corporate governance quality and institutional investors shareholdings. Chung and Zhang (2011) investigated the relationship between institutional investors and corporate governance in a sample of firms listed on New York Stock Exchange (NYSE), American Stock Exchange (AMEX) and NASDAQ, and found a positive association. In the similar vein, the study by Ismail and Rahman (2011) analyzed the relationship between level of disclosure on risk management as a function of monitoring efforts by the Board of Directors and institutional investors. Their study suggests positive association between institutional investors and the monitoring efforts by board of directors, which in turn influence the level of disclosure of information relating to risk management. Bobillo et al. (2002) used data from Germany, France, Italy, United States, Japan and Spain to study the association between the ownership structure, debt financing, and various corporate governance mechanisms. The result points to a negative association between ownership dispersion and governance quality, in Spanish and U.S. firms.

Frank and Ghosh (2012) examined the impact of board composition and Chief Executive Officer (CEO) influence on the level of institutional investment. This study shows that institutional investors prefer less equity ownership by the CEO, indicative of a preference for reduced CEO influence and increased governance. Ni, Liao and Huang (2017) used data from Taiwan Stock Exchange, from 2008 to 2013, considering that that corporate governance and financial issues may not be related to the shareholding change of foreign institutions. Their results reveal that corporate governance is related to the shareholding change of foreign institutions. They also reinforce that this concern seems rarely examined in the relevant literature.

In the Brazilian context, Thompson-Flôres (2004) examined the extent to which pension funds can mitigate agency costs, by fostering good governance practices. Oliveira (2005) studied if there was positive correlation between the quality of corporate governance and ownership of a specific institutional investor in Brazil, the Caixa de Previdência dos Funcionários do Banco do Brasil (PREVI). Also, using a sample of Brazilian firms, Silveira (2004) provide empirical evidence that the quality of corporate governance does not have significant influence on business performance. Punsuvo *et al*. (2007) examined the relationship between equity participation of pension funds and the quality of corporate governance of firms investing their resources. Their results suggest a negative relationship between the Brazilian pension funds activism and corporate governance indices.

The study of Moura *et al*. (2012) examined the equity interest of institutional investors and its relationship with the adoption of corporate governance practices by Brazilian firms. The corporate governance indices considered in the study were the same ones proposed by Silveira (2004). The results show a positive association between institutional investors and corporate governance practices. Besides, among the firms in the sample, those whose equity participation of institutional investors was bigger, showed the best corporate governance practices. Finally, in a recent study, Nascimento, Santos and Camara (2017) analyzed whether there are stock price differences between shares listed in different Corporate Governance Indices. Using data from 2007 to 2016, the study found that the shares listed in a special segment of corporate governance were more profitable compared to those listed in the traditional market. In the context of financial institutions, Tunay and Yüskel (2017) tested the existence of an association between the presence of institutional investors in the ownership structure of banks and corporate governance quality. The authors provide evidence that institutional investors have preference for countries and firms with a high level of corporate governance. In addition, in countries where they invest, institutional investors tend to increase levels of corporate governance.

Consistent with the above discussion, we contend that in the context of Brazilian firms, previous studies focused mainly on the influence of pension funds or examined a specific type of institutional investors, providing limited evidence on the capacity of firm's governance quality to attract institutional investors. For example, Thompson-Flôres (2004), Oliveira (2005), Punsuvo *et al*. (2007) focused their studies only in pension funds. Silveira (2004) has examined ownership structure and Moura *et al*. (2012) had examined only the five biggest firms with institutional investors in each sector of B3, and only in 2009. To contribute to this literature, in this study we focus on a large spectrum of institutional investors and consider the evolution of their participation in Brazilian firms' ownership structure, and in the different segments in the Brazilian stock market. In the Brazilian stock market, there are four different corporate governance segments representing different levels of corporate governance: Level 1, Level 2, New Market and Bovespa More. These different segments of corporate governance of Brazilian firms are discussed in detail in the next section. Therefore, we follow adopt similar approach than Chung and Zhang (2011), and consider each market segment as different level of corporate governance quality. Accordingly, we propose to investigate the following research hypothesis:

Hypothesis 1*:* In the Brazilian capital market, shareholdings by institutional investors are positively associated with firms' corporate governance quality.

Research setting

The Brazilian capital market is relatively young and characterized by ownership concentration (Leal and Saito, 2003; Grando, 2014). Similar to other emerging markets, it abounds in information asymmetry, ownership concentration, ineffective market surveillance, and poor investor protection (Lameira and Ness 2007; Black, De Carvalho and Gorga 2010). Brazil offers a unique setting to investigate our research question. Historically, the private benefits of control in Brazilian companies have been high and the minimum legal rules and firm-level governance weak (Dyck and Zingales 2004). In addition, because developing countries present greater variation in their use of corporate governance mechanisms than most mature markets (Judge 2009).

Table 1
Participation of investor's in Brazilian stock exchange (B3), between 2010 and 2017.

Year Investor Type	Individuals	Institutions	Foreign
2017	16,8%	27,2%	48,4%
2016	17,0%	24,9%	52,3%
2015	13,7%	27,2%	52,8%
2014	13,7%	28,9%	51,2%
2013	15,2%	32,8%	43,7%
2012	17,9%	32,1%	40,4%
2011	21,4%	33,3%	34,7%
2010	26,4%	33,3%	29,6%

Source: B3 (2018)

Table 1 shows the percentage of participation by type of investors in Brazilian stock market, taking as reference the main stock exchange (B3, 2018). As shown in Table 1, the volume of negotiation by institutional investors has been always around one third of all B3 transactions along the period investigated. This demonstrates the importance and influence

of institutional investors in our research setting. To mitigate conflicts between minority shareholders and controlling shareholders, firms were encouraged to deploy and enhance internal corporate governance (Leal and Saito, 2003). As means of enhancing corporate governance quality, B3 classify firms into four different segments: Level 1, Level 2, New Market and Bovespa More. More detail is presented in Table 2.

Table 2
Comparison between B3's governance segments

	TRADITIONAL	LEVEL 1	LEVEL 2	NEW MARKET	BOVESPA MORE
Characteristics of shares issued	Allows the existence of shares (voting and non-voting) (legislation)	Allows the existence of shares (voting and non-voting) (legislation)	Allows the existence of shares (voting and non-voting) (with additional duties)	Allows the existence only of shares	Only shares can be negotiated and issued but is allowed the existence of PN
Minimum percentage of outstanding shares (free float)	There is no rule	At least 25% free float			25% free float until the 7th year of listing, or minimum liquidity conditions
Public distributions of shares	There is no rule	Efforts to share dispersion			There is no rule
Sealing the statutory provisions (from 5/10/2011)	There is no rule		Limitation of less than 5% of the voting capital, qualified quorum and "immutable clauses"		There is no rule
Composition of the Board of Directors	Minimum of 3 members (according to legislation)		Minimum of 5 members, of which at least 20% must be independent with unified term up to 2 years		Minimum of 3 members (according to legislation)
Prohibition of cumulation of positions (from 5/10/2011)	There is no rule	Chairman of the Board and Chief Executive Officer or Chief Executive by the same person (a grace period of 3 years from accession)			There is no rule
Obligation of the Board of Directors (from 5/10/2011)	There is no rule		Demonstration on any public offer for the acquisition of shares of the company		There is no rule
Financial Statements	As legislation		Translated into English		As legislation
Public meeting and annual calendar of corporate events	Optional	Required			Optional
Additional disclosure of information (from 5/10/2011)	There is no rule	Securities trading policy and code of conduct			There is no rule
Grant tag-along rights	80% for shares (as legislation)	80% for shares (as legislation)	100% for shares (voting and non-voting) 100% for common shares and 80% for PN (until 5/9/2011)	100% for common shares	
Tender offer at least by economic value	As legislation	As legislation	Compulsory in case of delisting or segment output		Compulsory in case of delisting or segment output
Membership of the market Arbitration Chamber	Optional	Optional	Required		

Source: B3 (2012)

To a firm have its shares listed on the B3, it requires the presentation of documents and information that enable to register on Traditional category, which is the first (or minimal) level. Among other criteria, firms are required to disclose audited financial statements, information about the independent auditor, ownership structure, debt index, risk factors, and information on guarantees are also requested. Still, their audited financial statements are required according to Brazilian standards and with international financial reporting standards (IFRS), which must be submitted annually, within 90 days after the end of the financial year. For firms to list in one of the corporate governance segments (Level 1, Level 2, New Market and Bovespa More), which identifies the level of corporate governance, firms must meet specific standards (for each level) determined by B3 (B3, 2012).

Firms are not included automatically in any segment. Even if they respect all the criteria, it is necessary that firms request to get in a differentiated corporate governance segment, which implies formal commitment in fulfilling all the requirements and allowing the stock market to play its watchdog role and, when necessary, a punitive one (B3, 2012).

The segment called Level 1 is considered the first in terms of guidelines and standards of corporate governance, and it was deployed in 2000 along with the Level 2 and New Market segments. About the commitments made by firms listed on Level 1, large portion is intended to allow, through disclosure of information, assistance to investors at the time of evaluating the firm´s value. Some of the guarantees made by the firm's disclosure, is additional cash flow information,

shareholder position, and shares outstanding, and independent auditor report. (B3, 2012). The Level 2 segment has some additional prerequisites. Firms listed in this level have preferred shares, allowing voting rights in certain situations. The Level 2 is directed to firms that already have shares traded in the stock market and that, in some ways, have difficulties in turning its preferred shares into ordinary shares. The firms also become obliged to disclose additional data in the Quarterly Information reports, the standardized financial statements and annual information published. Like firms listed on Level 1, firms must have a minimum of 25% of outstanding shares (B3, 2012).

The New Market segment requires highest standard of corporate governance. Firms listed in this segment can issue only common shares, ensuring that all shareholders have the right to vote. The board of directors of these firms must have a minimum of 5 members. Of these members, a minimum of 20% must be of independent directors, in addition to the term of a maximum of two years in the board. The public disclosure should also be made available in English and should be disclosed with monthly share traded (inside trading) by the controlling shareholders. The commitment of a minimum of 25% of outstanding shares is also a requirement. (B3, 2012). Firms listed in the Bovespa More segment may be considered as firms aiming to enter subtly on the capital market. These firms seek to maintain high standards of corporate governance in addition to the quest for liquidity of its shares. This segment has similar features to the New Market, which also requires transparency in firms and high standard of corporate governance (B3, 2012). At the time firms list on the Bovespa More segment, they do not receive the requirement of a minimum number of outstanding shares. However, during the first seven years after its entry in the segment, firms need to perform a minimum of ten negotiations per month and be present in 25% of the trading sessions or have at least 25% of outstanding shares. (B3, 2012).

According to the above categories of corporate governance quality, the B3 follows the international trend established in other important capital markets. This makes possible different categories of firms in terms of governance quality, which is assumed to meet the interests of many investors. Taking into consideration the importance of institutional investors to Brazilian's capital market and recognizing that empirical studies do not show conclusive results; our motivation is to understand whether there is a relation between the level of corporate governance and the investment decision of institutional investors.

Research methods

Sample and data

Empirical testing is performed on data from companies listed in the São Paulo Stock Exchange (B3). As such, the target population of our study consists of 515 firms listed on the stock exchange on December 2011. The sample selection was based on the following criteria: the firm had its ownership structure and shareholders' identity disclosed on the fillings available through the stock exchange (B3, 2012), and have financial information available through the Economática® data base. Using these criteria, it was possible to collect all necessary data about the firms. Firms listed in the segment level "Bovespa More" were excluded from the analysis because there were only four firms and not the full period (only three years). From the remaining firms, 76 firms were excluded because they were either delisted (37) in the subsequent year, or because (39) had not filed their annual financial reports by the end of 2011. This yields a final sample of 435 firms, and an unbalanced panel data set with 4.211 firm years' observations. The information available for listed companies included in our sample was used in our analysis.

Given the financial crisis in 2008, we considered important to analyze the data in two different periods. The whole period comprises ten-year information (2004 to 2013) which is therefore divided into two sub-periods. The first period is

prior the financial crisis, and is composed of four years (2004 to 2007), while the second period comprises the five years after the financial crisis (2009 to 2013).

Empirical model and variables measurement

Consistent with the studies discussed above, the following regression model was specified:

$$PROP\_INST_{i,t} = \beta_0 + \beta_1 LEVEL\ 1_{i,t} + \beta_2 LEVEL\ 2_{i,t} + \beta_3 NM_{i,t} + \beta_4 BM_{i,t} + \beta_5 VMA_{i,t} + \beta_6 VOLAT_{i,t} + \beta_7 VOL\_NEG_{i,t} + \beta_8 PRICE_{i,t} + \beta_9 RET_{i,t} + \beta_{10} VLR\_SPREAD_{i,t} + \beta_{11} ANOS\_NDGC_{i,t} + \beta_{12} DIV\_ATV_{i,t} + \beta_{13} DIVID_{i,t} + \beta_{14} ROA_{i,t} + \beta_{15} Q\_TOBIN_{i,t} + \beta_{16} TANGIB_{i,t} + \varepsilon_{i,t}$$

Dependent variable: institutional shareholdings

The dependent variable: $PROP\_INST_{i,t}$, represents the percentage of shareholdings held by institutional investors, and is calculated by the number of shares held by institutional investors divided by the total number of outstanding shares of the firm. Table 3 presents related literature supporting our measure.

Table 3
Studies using similar proxy for Institutional Ownership (PROP_INSTi,t variable)

	Study	Variable	Variable definition
1	Wahab; How; Verhoven (2008)	Institutional Ownership	Total percentage consisting of 5 largest institutional investors.
2	Hsu; Koh (2005)	Institutional Ownership	Approximately the total number of shares held by institutional investors, divided by the total number of shares outstanding.
3	Bhojraj; Sengupta (2003)	Institutional Ownership	Percentage of common shares of the firm held by institutions.
4	Moura; Macêdo; Hein (2012)	Index of Institutional Ownership	Percentage of institutional investors shares in relation to the total of the firm's shares.
5	Gürbüz; Aybars; Kutlu (2010)	Institutional Ownership	Ratio of the number of shares held by institutional investors for the number of shares outstanding.
6	Chung; Zhang (2011)	Institutional Ownership	Relation between number of shares from institutional investors and the total number of shares.

The categorization of institutional investors (Johnson et al., 2010), was based on its identity as disclosed in firm's documents, following the classification used by the B3 (2012). Accordingly, the following categories are considered institutional investors:

(A) Pension funds and private pension entities;

(B) Pawn broking;

(C) Foundations of social security;

(D) Investment funds;

(E) Insurance companies and capitalization;

(F) Investment companies.

B3 (2012) highlights that a portion, not knowing the exact amount, of insurance firms would be better classified as professional investors than as institutional investors, since the profit or loss obtained in this type of operation could hardly be passed on to customers. Due to this factor, the present study did not qualified insurance and capitalization firms as institutional investors.

Independent variables

The main explanatory variable used to test our hypothesis about the effect of differentiated corporate governance levels on institutional investors ownership is a categorical variable. The variable may indicate, to each governance segment level, which firms belongs to them. See table 2 for a summary of the necessary conditions to belong to a specific B3 governance segment. In view of the differences in each special segment of the B3, we decided to use a dichotomous variable for each level. In Table 4 (bellow) we explain our classification.

Table 4
Dummies used in the econometrical model

B3 Listing segment	Variable label	Value used if the firm belongs to this listing segment	Value used if the firm does not belong to this listing segment
Level 1	LEVEL 1 $_{i, t}$	1	0
Level 2	LEVEL 2 $_{i, t}$	1	0
New Market	NM $_{i, t}$	1	0
Bovespa More	BM $_{i, t}$	1	0

Control variables

Control variables that may be significant in explaining institutional shareholdings have been identified through our literature review, and contextualized to consider characteristics specific to the Brazilian capital market. A description of our set of control variables is presented in Table 5.

Table 5
Control variables

LABLE	VARIABLE DESCRIPTION	MEASUREMENT
VMA	Market value of shares	Average value of the year
VOLAT	Standard deviation of the average daily returns	Average annual value
VOL_NEG	Average monthly volume of shares outstanding	Average annual number of outstanding shares divided by twelve
PRICE	Average price of the shares	Annual average price
RET	Annual turnover of the shares	Actual values
VLR_SPREAD	Difference between the sale price and the purchase price of the shares	Earnings per share, in real
ANOS_NDGC	Number of years since the first appearance of the firm in a differentiated level of B3 corporate governance	Absolute number of years since his first appearance in a specific segment of corporate governance
DIV_ATV	Ratio between total debt and total value of assets	Actual values
DIVID	Annual income of dividends	Actual values
ROA	Ratio of net income to the book value of total assets	Amounts in thousands of *reais*
Q_TOBIN	Rate "Q of Tobin"	Calculation explained below
TANGIB	Reason of tangible assets	Amounts in thousands of *reais*

Results

This section is divided into four parts. The first part presents the descriptive statistics and focus on the analysis of the percentage of shares held by institutional investors, its evolution along the period under analysis, the sample firm's membership of the B3 special governance segments. Also, correlations between the variables of interest are discussed along with the results of Hausman Test, which defines the type of effect to be used in our panel data set. The third part presents the results obtained from multivariate panel data regressions. The fourth part consists of the discussion about our results regarding our overarching research hypothesis about the institutional investor response to improved corporate governance in Brazilian listed firms. All the econometric tests (correlations, Hausman test, regressions, and others) were made with the E-views software.

Descriptive statistics

Our first step was to analyze the evolution of the number and percentage of institutional shareholdings in the firms in our sample.

Table 6
Participation of institutional investors in the market

Year	Number of surveyed companies	Number of companies with institutional investor	Average percentage of participation of institutional investor
2002	318	115	46%
2003	329	114	47%
2004	343	135	46%
2005	376	178	41%
2006	427	202	38%
2007	456	233	39%
2008	467	245	39%
2009	478	250	38%
2010	502	259	40%
2011	515	280	38%
Total	4.211	2.011	48%

As shown in Table 6, the number of firms with institutional investors increased over the years; the average percentage of shares held by them reduced around 17% from 2002 to 2011. In the same period, we can observe that there is a growth of 61.95% in the total listed firms against an increase of 143.48% in firms with shares held by institutional investors over the period under analysis (2002 to 2011). This provides evidence that the percentage of firms in which there is at least 0.01% of institutional investor grew more than twice the total in the sample firms during the period under analysis.

Regarding the adoption of differentiated levels of corporate governance practices (or quality), Table 7 documents two peaks, in the years 2006 and 2007. The average number of firms included in differentiated levels of governance by B3, during the period under analysis was 22.7 firms, noting that in all years there have been new inclusions. It is also possible to verify that between 2008 and 2009 the number of adhesions dropped, possibly due to the global financial crisis. Adhesions increased again in the following years, 2010 and 2011.

Table 7
Membership of the differentiated corporate governance levels

Year	Number of companies that have joined a differentiated level of GC per year
2002	12
2003	4
2004	14
2005	12
2006	40
2007	73
2008	20
2009	11
2010	14
2011	27
Annual Average	22.7

It is worth noting that two estimates were carried out, using the same empirical model:

A) period of ten years - unbalanced; and

B) period of four years (prior to the crisis) – unbalanced.

Table 8 presents the descriptive statistics for all variables, covering the period of 2002 to 2011. Regarding our dependent variable ($PROP\_INST_{it}$), it turns out that in this group of observations it was found at least one firm with no institutional investor, as well as it was found at least one firm with institutional ownership of 73%.

Table 8
10 years' descriptive statistics - unbalanced

	Average	Median	Maximum	Minimum	Standard Deviation
PROP_INST	0.106	0.018	0.731	0.000	0.165
LEVEL 1	0.092	0.000	1.000	0.000	0.289
LEVEL 2	0.067	0.000	1.000	0.000	0.250
NM	0.817	1.000	1.000	0.000	0.388
ANOS_NDGC	3.700	3.000	1.100	1.000	2.843
DIV_ATV	2.809	2.695	9.300	0.000	1.674
DIVID (-1)	0.498	0.119	8.673	0.000	1.006
LOG (PRECO)	0.453	0.438	6.011	-2.303	1.086
Q_TOBIN	6 583.462	3 640.597	30 038.322	286.505	6 906.343
RET (-1)	0.021	0.100	1.000	-1.200	0.339
ROA	0.213	0.076	1.000	0.002	0.335
VLR_SPREAD (-1)	-1.509	0.544	1.527	-3.151	2.426
LOG (VMA (-1))	1.670	2.104	4.898	-9.756	2.106
VOL_NEG	6 155.144	13.959	170 000.000	5.688	24 389.264

The average of firms with institutional ownership is almost 11%, consistent with the information that in 2012 institutional investors represented 15% of all B3 negotiations. Another important information that can be seen is that the average of organizations in a different level of corporate governance.

Table 9
Descriptive statistics - 4 years – unbalanced

	Average	Median	Maximum	Minimum	Standard Deviation
PROP_INST	0.069	0.000	0.772	0.000	0.153
DIV_ATV (-1)	2.750	2.600	2.162	0.000	1.790
LEVEL 1	0.031	0.000	1.000	0.000	0.173
NM	0.102	0.000	1.000	0.000	0.304
LEVEL 2	0.007	0.000	1.000	0.000	0.082
TANGIB	2.732	2.069	4.137	-2.885	4.670
VLR_SPREAD	1.467	1.011	1.128	-1.135	2.529
VOL_NEG	11 921.824	34.507	1 360.009	4.778	81 626.730
DIVID (-1)	0.790	0.400	8.673	0.000	1.305

The statistics regarding our dependent variable, obtained when using the panel data of four years (2004 to 2007), present similarities with the ten-year data set, where institutional ownership presents a maximum value of 77%, while the average stood at 6.9%. In the following paragraphs, we discuss the correlation among the variables used in our study.

Correlations

The importance of the correlation between the variables is given by the fact that it measures the degree of linear association between them. In case there are explanatory variables with high correlation, their coefficients turn out to be non-significant (Gujarati, 2000).

Table 10
Correlation Analysis - 10 years - unbalanced

	1. PROP_INST	2. LEVEL 1	3. LEVEL 2	4. NM	5. ANOS_NDGC
1	1.000				
2	-0.068	1.000			
3	0.276 ***	-0.084 ***	1.000		
4	-0.073***	-0.653 ***	-0.549***	1.000	
5	-0.013***	0.171***	-0.048***	-0.108***	1.000
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

16. VOLAT	15. VOL_NEG	14. LOG (VMA)	13. VLR_SPREAD	12. TANGIB	11. ROA	10. RET	9. Q_TOBIN	8. LOG (PRECO)	7. DIVID	6. DIV_ATV
0.019	-0.159***	0.135**	0.028***	-0.007	-0.055**	0.004***	0.137	0.046**	0.061***	0.086 ***
-0.120	0.218***	0.066**	0.144***	-0.020	0.044**	0.075***	0.244	0.078**	0.066***	0.237***
-0.019	-0.067***	0.235**	-0.001***	-0.028	-0.022**	-0.010***	-0.024	0.053**	0.022***	-0.129***
0.156	-0.100***	-0.098**	-0.054***	0.050	-0.004**	-0.052***	-0.142	-0.026**	-0.027***	-0.063***
-0.145	0.120***	0.116**	0.118***	-0.052	-0.104**	0.108***	0.466	0.013**	0.147***	0.089***
0.083	0.074***	0.048**	-0.190***	-0.123	0.197**	-0.021***	0.118	-0.016**	0.001***	1.000
-0.265	-0.087***	0.323**	0.516***	0.035	-0.174**	0.068***	0.243	0.049**	1.000	
-0.155	-0.102***	0.353**	0.140***	0.104	-0.042**	0.356***	0.145	1.000		
-0.152	0.175***	0.320**	0.181***	-0.039	-0.093**	0.105***	1.000			
-0.514	0.078***	0.461**	0.293***	-0.052	-0.196**	1.000				
0.313	0.323***	-0.192**	-0.531***	0.127	1.000					
0.030	-0.038***	0.100**	-0.073***	1.000						
-0.365	-0.144***	0.432**	1.000							
-0.339	-0.162***	1.000								
-0.033	1.000									
1.000										

*p<0.1, **p<0.05, ***p<0.01. See variable definitions in Tables 3, 4 and 5.

Checking the correlations between variables using the ten years' period, we observe that PROP_INST variable (proxy for Institutional Ownership) is relatively correlated with LEVEL_2 and in a minor degree with Q_TOBIN, Log (VMA) and VOL_NEG. The degrees of correlation between the variables are acceptable, given their low values.

Table 11
Correlation Analysis - 4 years – unbalanced

	1. PROP_INSTI_T	2. LEVEL 1	3. LEVEL 2	4. NM	5. ANOS_NDGC	6. LOG(PRECO)	7. DIV_ATV
1	1.000						
2		1.000					
3			1.000				
4				1.000			
5					1.000		
6						1.000	
7							1.000
8							
9							
10							
11							
12							
13							
14							
15							
16							

	1. PROP_INSTI_T	2. LEVEL 1	3. LEVEL 2	4. NM	5. ANOS_NDGC	6. LOG(PRECO)	7. DIV_ATV
1	1.000						
2	0.014	1.000					
3	0.285***	-0.014***	1.000				
4	0.018**	-0.059**	-0.034**	1.000			
5	-0.011	0.131	-0.188	0.028	1.000		
6	-0.012	0.136	0.103	0.230	0.330	1.000	
7	-0.005**	-0.002**	-0.005**	-0.021**	0.099**	0.037**	1.000

	8. DIVID	9. Q_TOBIN	10. RET	11. ROA	12. TANGIB	13. VLR_SPREAD	14. LOG(VMA)	15. VOL_NEG	16. VOLAT
8. DIVID	1.000								
9. Q_TOBIN	-0.039*	1.000							
10. RET	0.026	0.074	1.000						
11. ROA	-0.907	0.057	0.014	1.000					
12. TANGIB	-0.032***	0.017***	0.147***	0.110***	1.000				
13. VLR_SPREAD	-0.041*	0.129*	0.128*	0.268*	0.049*	1.000			
14. LOG(VMA)	0.297	0.021	0.283	0.178	0.272	0.386	1.000		
15. VOL_NEG	-0.002**	-0.032**	-0.023**	0.002**	0.009**	-0.040**	-0.046**	1.000	
16. VOLAT	0.195	-0.141	0.118	-0.326	-0.123	-0.311	-0.185	0.260	1.000
8. DIVID	-0.059*	-0.025	0.061	1.000					
9. Q_TOBIN	0.006	-0.084	0.518						
10. RET	0.082	-0.071	0.131						
11. ROA	0.004	0.039	-0.088						
12. TANGIB	0.114***	0.175***	-0.197***						
13. VLR_SPREAD	-0.018*	-0.060*	0.071*						
14. LOG(VMA)	-0.224	0.078	0.177						
15. VOL_NEG	-0.004**	-0.009**	0.329**						
16. VOLAT	-0.050	-0.030	0.056						
8. DIVID	-0.037*	0.022*	-0.098*	0.122*	-0.059*	-0.039*			
9. Q_TOBIN	-0.029	-0.018	-0.084	0.518	0.006	-0.025	1.000		
10. RET	0.071	-0.029	-0.071	0.131	0.082	0.026	0.074	1.000	
11. ROA	0.033	0.026	0.039	-0.088	0.004	-0.907	0.057	0.014	1.000
12. TANGIB	0.037***	0.049***	0.175***	-0.197***	0.114***	-0.032***	0.017***	0.147***	0.110***
13. VLR_SPREAD	0.012*	0.026*	-0.060*	0.071*	-0.018*	-0.041*	0.129*	0.128*	0.268*
14. LOG(VMA)	0.034	0.073	0.078	0.177	-0.224	0.297	0.021	0.283	0.178
15. VOL_NEG	-0.024**	-0.014**	-0.009**	0.329**	-0.004**	-0.002**	-0.032**	-0.023**	0.002**
16. VOLAT	-0.050	0.004	-0.030	0.056	0.200	0.195	-0.225	-0.141	0.118
8. DIVID	-0.015*	-0.037*	0.022*	-0.098*	0.122*	-0.059*	-0.039*		
9. Q_TOBIN	-0.090	-0.029	-0.018	-0.084	0.518	0.006	-0.025	1.000	
10. RET	0.043	0.071	-0.029	-0.071	0.131	0.082	0.026	0.074	1.000
11. ROA	0.020	0.033	0.026	0.039	-0.088	0.004	-0.907	0.057	0.014
12. TANGIB	0.060***	0.037***	0.049***	0.175***	-0.197***	0.114***	-0.032***	0.017***	0.147***
13. VLR_SPREAD	-0.004*	0.012*	0.026*	-0.060*	0.071*	-0.018*	-0.041*	0.129*	0.128*
14. LOG(VMA)	0.042	0.034	0.073	0.078	0.177	-0.224	0.297	0.021	0.283
15. VOL_NEG	0.213**	-0.024**	-0.014**	-0.009**	0.329**	-0.004**	-0.002**	-0.012**	-0.023**
16. VOLAT	0.102	-0.050	0.004	-0.030	0.056	0.200	0.195	-0.225	-0.141

*p<0.1, **p<0.05, ***p<0.01. See variable definitions in Tables 3, 4 and 5.

Having analyzed the correlation between the variables of the models, the next step was to perform the Hausman Test, to verify the effect to be used in the econometric models. The Hausman Test allows us to define whether the Panel data must be carried out with fixed or random effect, which you can see in Table 12. The use of fixed or random effect allows qualifying the data for consistency. Usually, the data with more constants variables during the years use the random effect, for example. This test also verifies the problem of endogeneity, which in this study demonstrate no problem at all.

Table 12
Hausman test results

	Hausman test
10 years-unbalanced	0.003
4 years-unbalanced	0.388

Multivariate regressions

This section presents the results and their analysis obtained in two estimates, with the ten years' period and with the four years' period (prior to the financial crisis). Because two coefficients for the explanatory variables capturing the governance segment level of the focal firms (dummies market segment) are positive and significant at 1%, results support our hypothesis. Greater firm-level governance quality, as captured by the variables LEVEL 2 and NM, is positively associated with institutional shareholder shareholdings in the focal firm. With respect to the control variables, they played their role and helped the regressions in the explanation of the dependent variable, as expected.

Table 13
The Result allowed - 10 years' data – unbalanced

Method Used:		Ordinary least squares-panel data
Effect: Fixed		Number of points: 240
Dependent Variable: PROP_INST		
Variables	Coefficient	Probability
LEVEL 1	0.027	0.211
LEVEL 2	0.235	0.000
NM	0.068	0.000
VMA	0.007***	0.046***
VOL_NEG	-9.110	0.000
log (PREÇO)	-0.008	0.047
RET	-0.115*	0.000*
VLR_SPREAD	0.001*	0.000*
ANOS_NDGC	-0.006	0.000
DIV_ATV	0.001	0.000
DIVID	-0.009*	0.000*
ROA	-0.013	0.011
Q_TOBIN	6.170	0.001
CONSTANT	-0.011	0.386

R-squared	0.199	F-Statistic	2.458
Adjusted r-squared	0.118	Prob (F-Statistic)	0.001
Durbin-Watson			1.263

* Estimated Variable with effect "(-1)"; ** Estimated Variable with "log"; Estimated variable with "(-1)" and "log"

In short, the coefficients in Table 13 reveals that, when firms are listed in a differentiated level of B3's corporate governance there is an increase in the percentage of shares held by institutional investors. There is also a positive association with the market value of stock prices, in the value of the spread, in the ratio between the total debt to total value of the assets and the Q of Tobin. The opposite, a negative association occurs with the average rate of the monthly volume of outstanding shares, the price, the annual turnover, dividend payouts and in the number of years that firms belonging to one of the different levels of the stock market. Nevertheless, the variable LEVEL 1, a dummy variable indicating firms belonging to the Level 1 of corporate governance, was not significant, while the other two variables (Level 2 and NM) were significant to 1%.

Table 14
The Result allowed - 4 years' data – unbalanced

Method Used:	Ordinary least squares-panel data		
Effect: Random	Number of points: 293		
Dependent Variable: PROP_INST			
Variables	Coefficient		Probability
LEVEL 1	0.032		0.685
LEVEL 2	0.662		0.000
NM	-0.064		0.006
VOL_NEG	2.610		0.001
VLR_SPREAD	-0.003		0.063
DIV_ATV	0.001*		0.036*
DIVID	0.006*		0.089*
TANGIB	0.002		0.000
CONSTANT	0.049		0.002
R-squared	0.187	F-Statistic	8.149
Adjusted r-squared	0.164	Prob (F-Statistic)	0.000
Durbin-Watson			1.799

* Estimated Variable with effect "(-1)"; ** Estimated Variable with "log"; Estimated variable with "(-1)" and "log"

Analyzing the regression results presented in Table 14 we can observe that the variable corresponding to the firms listed on Brazil's New Market shows a negative association. In the other independent variables of the model, only another one demonstrated a negative association: the value of the spread. Therefore, the monthly volume of outstanding shares, the ratio between the total debt accounting and the total value of the assets, the annual incoming of dividends and the tangibility, showed positive relation with the number of shares held by institutional investors. Finally, in Table 15 we analyze to what extent the explanatory variables and the control variables supports the model. Such analysis was possible through the assessment of the statistic R^2 and R^2 Adjusted.

Table 15
General Analysis of the regressions

Model	R^2 (%)	Adjusted R^2 (%)
10 years unbalanced	19.95	11.83
4 years unbalanced	18.67	16.38

Discussion

The dummy Level 1 showed no significant result to 1%, 5% or 10% in any of the two models, while Level 2 variable has shown positive and significant association with institutional shareholdings. The sample firms that listed in the New Market segment proved significant to 1% on both proposed models. Surprisingly, using data from ten years' period presented positive associations, while in regressions with data from four years, the period prior to financial crisis, presented negative associations. The variable VOL_NEG (average monthly volume of shares outstanding) presented, in both models, significant association with a positive sign. When the relation is negative with the variable NM is positive with the variables VOL-NEG. We interpret this results as evidence that in economic moments in which the firm has bigger volume of shares outstanding, which is also a proxy for younger firms, institutional investors would have an investor preference at Level 1 and Level 2 in B3. In this situation, the investor prefer stocks with firm has a minimum corporate governance.

Our results support our hypothesis, since we showed that there is a statistically significant and positive association between institutional investor shareholdings and the governance segment levels of B3. Our results therefore corroborate previous studies, such as Chung and Zhang (2011). On the other hand, Oliveira (2005) who also used Brazilian data, found no statistically significant results. It is also consistent with the conceptual framework, since corporate governance practices seems to evolve along the time (since 2005) and its disclosure improved, providing institutional investors with more transparency about Brazilian firm's internal governance configuration (Martins et al., 2017; Schiehll et al, 2013).

Overall our results suggest that firms in differentiated corporate governance levels, that is, with better level of transparency and commitment to monitoring (among other features), are more attractive to institutional investors. We interpret this result as evidence supporting the shareholder activism perspective, attributed by several scholars to institutional shareholder (i.e., Johnson et al., 2010). In other words, improvements on corporate governance practices are perceived by market participants, such as institutional investors. More important, our study also provides evidence about the benefits for firms which employ efforts to minimize agency costs, generated by the managerial discretion and the intrinsic risk that managers or large shareholders would take decisions for their own benefit rather than make them for the benefit of all shareholders.

Conclusions

The objective of this study was to examine whether the institutional investor's investment decision is related to firms' adhesion to differentiated corporate governance practices. In this regard, the explanatory variable representing firms listed on Level 1 of B3's corporate governance was not significant at 1%, 5% or 10% in both estimated models. The variable corresponding to the firms listed in Level 2 reported significance at 1%. The variable containing firms listed on New Market proved significant to 1% in both models. This evidence suggests an increased participation of institutional investors in firms listed on Special Corporate governance segments in Brazil's capitals market. Also, this also provide evidence that corporate governance practices matter and are important to organizations who held institutional investors stock options.

Regarding the analysis of different periods, some variables showed significant association but at different significance levels depending on the year under analysis. It was possible to observe that more variables did not obtained a minimum degree of confidence when compared to regression of ten years. The regression that had the greatest number of significant variables, and obtained the highest r-squared, was the one which data was of ten years. This fact seems to show the importance of the analysis of two periods. The pre-crises data, besides the better adjusted R^2, showed worst statistic indicators.

The regressions showed mostly positive and significant relation between firms with corporate governance and institutional investors. Even if it is not possible to identify the reasons for each investment held by institutional investors, our results suggest that in fact institutional investor's decision to invest is associated with the quality of firm's internal corporate governance. Positive coefficients shown in regressions may suggest that the efforts of firms, keeping in a differentiated corporate governance level, can transmit institutional investors a sign that possible conflicts of interest are minimized and that greater transparency in its activities and decisions is guaranteed. In addition, it shows the effect on various governance levels stipulated by the stock market. As such, an important contribution of our study was to find positive association between corporate governance quality and institutional investors shareholdings, which, up to the moment, was not found in the Brazilian context. It is worth noting however, as any empirical study, that our study has some limitation which provide opportunities for future research. For example, our study did not take into consideration aspects that may also drive institutional shareholdings, such as: (a) the presence of controlling shareholders in firm's ownership structure; (b) shares with different voting rights, and (c) whether firms are cross traded and/or have ADRs. Future research, can certainly extend this discussion by addressing these issues.

This paper revealed important results. No study showed, at a statistical level, the influence of the corporate governance to institutional investors in Brazilian stock market. Besides the fact that it is an emerging market, Brazil has a relevant number of family controlled firms listed in the stock market. More important, our study contribute to understand the improvement of corporate governance practices in Brazilian firms and consequently the increased of institutional investors investment in these firms.

References

BBC. (2017). Available in: http://www.bbc.com/portuguese/brasil-37710131. Consulted: 11 July 2017.

Berle, A. A. & Means, G. G. C. (1984). *The modern corporation and private property,* Transaction publishers, São Paulo, SP.

Bhojraj, S. & Sengupta, P. (2003). Effect of corporate governance on bond ratings and yields: The role of institutional investors and outside directors. *The Journal of Business*. 76 (3), 455-475.

Black, B. S., De Carvalho, A. G. & Gorga, E. (2010). The corporate governance of privately controlled Brazilian firms. *Emerging Markets Review*. 11, 21-38. http://dx.doi:10.1016/j.ememar.2009.09.004

B3. (2011). Available in: http://www.bmfbovespa.com.br/home.aspx?idioma=pt-br. Consulted: 10 October 2011.

B3. (2012). Available in: http://www.bmfbovespa.com.br/home.aspx?idioma=pt-br. Consulted: 19 October 2012.

B3. (2018). Available in: http://www.bmfbovespa.com.br/pt_br/servicos/market-data/consultas/dados-de-mercado/. Consulted: 26 September 2018.

Bobillo, A. M., de Andres Alonso, P. & Gaite, F. T. (2002). Internal funds, corporate investment and corporate governance: International evidence. *Multinational Business Review*, 10(2).

Brasil. (2017). Available in: http://www.brasil.gov.br/economia-e-emprego/2016/10/fmi-brasil-volta-ao-posto-de-8-maior-economia. Consulted: 03 June 2017.

Brown, P., Beekes, W. & Verhoeven, P. (2011). Corporate governance, accounting and finance: A review. *Accounting & Finance*, 51 (1), 96-172. https://doi.org/10.1111/j.1467-629x.2010.00385.x

Byrd, J., Parrino, R. & Pritsch, G. (1998). Stockholder–manager conflicts and firm value, *Financial Analysts Journal*, 54 (3), 14-30. https://doi.org/10.2469/faj.v54.n3.2177

Chung, K. H. & Zhang, H. (2011). Corporate governance and institutional ownership". *Journal of Financial and Quantitative Analysis*, 46 (1), 247-273. https://doi.org/10.1017/s0022109010000682

Comissão de Valores Mobiliários (CVM). (2002). Recomendações da CVM sobre Governança Corporativa. Rio de Janeiro.

Dyck, A. & Zingales, L. (2004). Private benefits of control: An international comparison. *The Journal of Finance*, 59 (2), 537-600. https://doi.org/10.1111/j.1540-6261.2004.00642.x

Fama, E. F. & Jensen, M. C. (1983). Separation of ownership and control. *The Journal of Law and Economics*, 26 (2), 301-325. https://doi.org/10.1086/467037

Frank, L. A. C. & Ghosh, C. (2012). Does firm governance affect institutional investment? Evidence from real estate investment trusts. *Applied Financial Economics*, 22, 1063–1078. https://doi.org/10.1080/09603107.2011.639733

Grando, T. (2014). The effect of controlling interest and family management in publicly traded companies, Masters Dissertation, University of Vale do Rio dos Sinos.

Gürbüz, A. O., Aybars, A. & Kutlu, Ö. (2010). Corporate governance and financial performance with a perspective on institutional ownership: Empirical evidence from Turkey. *Journal of Applied Management Accounting Research*, 8 (2).

Hsu, G. C. M. & Koh, P. S. (2005). Does the presence of institutional investors influence accruals management? Evidence from Australia. *Corporate Governance: An International Review*, 13 (6), 809-823. https://doi.org/10.1111/j.1467-8683.2005.00472.x

Ismail, R. & Rahman, R. A. (2011). Institutional Investors and Board of Directors' Monitoring Role on Risk Management Disclosure Level in Malaysia. *IUP Journal of Corporate Governance*, 10 (2).

Jensen, M. C. & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3 (4), 305-360. https://doi.org/10.1016/0304-405x(76)90026-x

Johnson, R. A., Schnatterly, K., Johnson, S. G. & Chiu, S. (2010). Institutional Investors and Institutional Environment: A Comparative Analysis and Review. *Journal of Management Studies*, 47 (8), 1590-1613. https://doi.org/10.1111/j.1467-6486.2010.00930.x

Judge, W. (2009). Editorial–Toward a global theory of corporate governance. *Corporate Governance: An International Review*, 17 (2), iii-iv. https://doi.org/10.1111/j.1467-8683.2009.00736.x

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. & Vishny, R. W. (2000). Agency problems and dividend policies around the world. *The Journal of Finance*, 55 (1), 1-33. https://doi.org/10.1111/0022-1082.00199

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. & Vishny, R. (2002). Investor protection and corporate valuation. *The Journal of Finance*, 57 (3), 1147-1170. https://doi.org/10.1111/1540-6261.00457

Lameira, V.D.J. & Ness, W.L. Jr (2007). ADRS, differentiated levels of corporate governance at the Sao Paulo stock exchange and the performance of publicly traded Brazilian companies. *International Journal of Business Studies*, 15 (2), 67-83.

Lameira, V. D. J., Lee Ness Junior, W. & van Aduard de Macedo-Soares, T. D. L. (2007). Governança corporativa: impactos no valor das companhias abertas brasileiras. *Revista de Administração-RAUSP*, 42 (1), 64-73.

Leal, R.P.C., Carvalhal, A.L. & Iervolino, A.P. (2015). One Decade of Evolution of Corporate Governance Practices in Brazil. *Rev. Bras. Finanças (Online)*, 13 (1), 134–161. https://doi.org/10.12660/rbfin.v13n1.2015.50904

Leal, R. P. C. & Saito, R. (2003). Finanças corporativas no Brasil. *RAE Eletrônica*, 2 (2), 1-15. https://doi.org/10.1590/s1676-56482003000200005

Martins, H. C., Schiehll, E. & Terra, P.R.S. (2017). National Governance Quality, Ownership Structure and Debt Maturity: A comparative study between Brazil and Chile. *Corporate Governance: An International Review*, (In Press). https://doi.org/10.1111/corg.12192

Moura, G. D., Macêdo, F. R. & Hein, N. (2012). Institutional investors and corporate governance best practices: an analysis of the largest Brazilian companies listed on the BOVESPA. VII ANPCONT.

Nascimento, S.P., Santos, R.G. & Camara, M.R.G. (2017). Governança corporativa: uma análise entre o IGC e o Ibovespa. *R. Bras. Eco. de Emp.*, 17 (2), 55-70.

Ni, Y., Liao, Y., Huang, P. (2017). Foreign Institutional Investors, Shareholding Change, and Corporate Governance. *Emerging Markets Finance & Trade*, 53, 764-775. https://doi.org/10.1080/1540496x.2015.1105634

Oliveira, R. M. (2005). The influence of institutional investors in corporate governance policies of Brazilian companies. Masters Dissertation. Federal University of Rio de Janeiro.

Pinto, A. C. F. (1984). Effects of economic regulation: the case of institutional investors. Doctoral Dissertation, Postgraduate School in Economics (EPGE) – Brazilian Institute of economics.

Punsuvo, F. R., Kayo, E. K. & Barros, L. A. B. C. (2007). Pension funds activism and corporate governance quality. *Accounting and Finance Magazine-USP*, 18 (45). https://doi.org/10.1590/s1519-70772007000400006

Schiehll, E. & Bellavance, F. (2009). Boards of Directors, CEO Ownership, and the Use of Non-Financial Performance Measures in the CEO Bonus Plan. *Corporate Governance: An International Review*, 17 (1), 90–106. https://doi.org/10.1111/j.1467-8683.2008.00723.x

Schiehll, E. & Martins, H. C. (2016). Cross-National Governance Research: A Systematic Review and assessment. *Corporate Governance: An International Review*, 24 (3), 181-199. https://doi.org/10.1111/corg.12158

Schiehll, E., Terra, P. R. S., & Victor, F. G. (2013). Determinants of voluntary executive stock option disclosure in Brazil. *Journal of Management and Governance*, 17 (2), 331–361. https://doi.org/10.1007/s10997-011-9179-0

Shleifer, A. & Vishny, R. W. (1997). A Survey of Corporate Governance. *Journal of Finance*, 52 (2), 737-783. https://doi.org/10.1111/j.1540-6261.1997.tb04820.x

Silveira, A. M. (2004). Corporate Governance and ownership structure: determinants and relationship with the performance of companies in Brazil, Doctoral Dissertation, University of São Paulo.

Thompson-Flôres, E. A. L. (2004). Corporate Governance in Brazil and the role of institutional investors, Doctoral Dissertation, PUC-Rio.

Tunay, K.B. & Yüksel, S. (2017). The relationship between corporate governance and foreign ownership of the banks in developing countries. *Contaduría y Administración*, 62 (5), 1627-1642. https://doi.org/10.1016/j.cya.2017.05.007

Wahab, E. A. A., How, J. & Verhoeven, P. (2008). Corporate governance and institutional investors: Evidence from Malaysia. *Asian Academy of Management Journal of Accounting and Finance*, 4 (2), 67-90.