

Financial Indicators and Corporate Governance of Brazilian Firms: An Analysis from the Perspective of Financial Constraint

Indicadores Financeiros e Governança Corporativa de Companhias Brasileiras: uma Análise sob a Ótica da Restrição Financeira

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Abstract

In markets characterized by informational asymmetry and agency conflicts at different levels, good corporate governance practices become essential in an attempt to minimize the impacts of financial constraints and provide companies with greater access to external resources at lower costs. This study aimed to verify whether some conventional financial indicators of firms listed in the main segments of B3 (New Market, Level 2, Level 1 and Traditional Market) support the governance status attributed to them by the respective segment in order to effectively classify them as more or less financially constrained. For this purpose, panel data from a sample of 266 Brazilian public companies were analyzed through hypothesis testing from 2009 to 2014. The results showed that companies belonging to a differentiated level of corporate governance (New Market, Level 2, Level 1) presented significantly higher values to all indicators than those listed in Traditional segment. Among the differentiated levels of corporate governance, New Market was the one, which differed more from the Traditional segment, presenting significantly higher values for all financial indicators. The most solid and more favorable economic and financial situation of companies with differentiated corporate governance practices analyzed in the present study seems to support their governance status, confirming them as more secure to new external investments and therefore less financially constrained.

Keywords: Corporate governance. Financial constraint. Financial indicators.

Resumo

Em mercados caracterizados por assimetria informacional e conflitos de agência em diferentes níveis, boas práticas de governança corporativa tornam-se essenciais na tentativa de minimizar os impactos das restrições financeiras e propiciar às empresas maior acesso a recursos externos com

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custos menores. O objetivo deste estudo foi verificar se alguns indicadores financeiros convencionais das empresas listadas nos principais segmentos da B3 (Novo Mercado, Nível 2, Nível 1 e Tradicional) suportam o status de governança atribuído a elas pelo respectivo segmento, de modo a efetivamente classificá-las como mais ou menos restritas financeiramente. Para isso, um painel de dados de uma amostra de 266 companhias abertas brasileiras, durante o período de 2009 a 2014, foi analisado por meio de testes de hipóteses. Os resultados demonstraram que empresas pertencentes a algum nível diferenciado de governança corporativa (Novo Mercado, Nível 2 e Nível 1) apresentaram, para todos os indicadores, valores significativamente maiores do que aquelas listadas no segmento Tradicional. Dentre os níveis diferenciados de governança corporativa, o Novo Mercado foi o que mais se diferenciou do segmento Tradicional, apresentando valores significativamente maiores para todos os indicadores financeiros. A situação econômico-financeira mais sólida e favorável das empresas com práticas diferenciadas de governança corporativa, analisadas no presente estudo, parece respaldar seu status de governança, identificando-as como mais seguras a novos investimentos externos e, portanto, menos restritas financeiramente.

Palavras-Chave: Governança corporativa. Restrição financeira. Indicadores financeiros.

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1 Introduction

For some considerable time, the dynamics of financial decisions was supported by the perfect market hypothesis by Modigliani and Miller (1958). Such approach is based on premises of classical economics in which the market operates in an efficient way and the economic agents have equal access to the capital market and to all the necessary information for the decision-making. From such point of view, the financial structure becomes irrelevant for the investment decision as in efficient markets and certainty environments internal and external resources are perfect substitutes.

When the internal resources are insufficient, companies with profitable investment opportunities are compelled to make use of external resources (Myers & Majluf, 1984). Nonetheless, as opposed to what Modigliani and Miller (1958) supposed, markets have inefficiencies. Market imperfections, characterized by informational asymmetry, agency costs, adverse selection and transaction costs, increase the cost of external

financing and consequently discourage the granting of credit concession and the issue of new stocks.

Thus, the existence of financial constraints that affect the investment decisions is in evidence, as it subjects the project implementation to the availability of internally generated resources, allegedly cheaper when related to the external ones. Such assumption is based on the *pecking order* theory by Myers and Majluf (1984). Initially, all forms of equity, including internal resources, would have higher costs than the third party capitals due to the inherent risk to the business itself. However, in the presence of informational asymmetry or agency conflicts in any level (majority shareholders *versus* minority ones, shareholders *versus* managers, shareholders *versus* creditors, etc.), Myers and Majluf (1984) consider that the debt or new stock issues tend to become costlier for the company.

There are basically two reasons for such cost difference between internal and external resources. Firstly, the presence of informational asymmetry and transaction costs leads to the probability of adverse selection, which, in turn, causes the capital suppliers to require higher awards to make up for their “ignorance” (Myers & Majluf, 1984, p.188) concerning the unavailable information and the costs to monitor the managers’ actions. (Jensen & Meckling, 1976). This award may increase the cost of new debt and stock issues of companies (external resources) above the opportunity cost of the internal financing by the existing shareholders. Secondly, in the presence of agency conflicts, mainly between managers and shareholders, the internal resources, known to be cheaper, tend to be left to the discretions of the managers, who use them inadequately in unprofitable projects. Jensen (1986) discusses such fact in his free cash flow theory.

In the presence of a market characterized by informational asymmetry and agency conflicts in different levels, good corporate governance practices become essential in the attempt to minimize the

impacts of financial constraints and to provide companies with greater access to external resources with lower costs.

Corporate governance consists of a set of mechanisms and principles, which governs the decision-making process of a company and reflects the way they are directed, monitored and incentivized. By having transparency, equity, accountability and corporate responsibility as basic principles, the good governance practices aim to obtain and to ensure the reliability in a given company in order to preserve and to optimize its value, to facilitate its access to capital and to contribute to its longevity (Brazilian Institute of Corporate Governance, IBGC, 2015)

With the purpose of incentivizing good governance practices in Brazilian companies, Brasil, Bolsa, Balcão (B3), former BM&FBovespa, created the differentiated segments of corporate governance (New Market, Level 2 and Level 1) as listing options in 2000, complementing the existing Traditional segment. Each of the segments reflects a different degree of governance adopted by companies. According to pre-established criteria by B3, New Market comprises the stocks of companies with better governance practices, followed by Level 2 and finally Level 1.

In theory, companies with better levels of corporate governance offer stronger protection to their investors, by means of a more professional, responsible, transparent and fair management for all the interested parties (majority and minority shareholders, executives and third parties). Such mechanisms would be able to minimize the impacts of financial constraints, reducing the degree of information asymmetry and of agency conflicts and consequently making the source of external resources more accessible to companies (Francis, Hasan, Song & Waisman, 2013). On the assumption of this reality, companies belonging to New Market would have less financial constraints than the Level 2 ones and these, in turn, less constraints than the Level 1 ones, as they would have greater access to external resources with lower costs.

Yet, the potential fundraising of external resources at lower costs should not be analyzed only from the perspective of governance status. The economic and financial indicators, which portray the company operational performance, are expected to demonstrate favorable conditions to credit access, either via debt or via new stock issue. Hence, it is relevant to analyze if the economic and financial indicators of the companies, which belong to each B3 governance level corroborate its governance status and allow, in fact, greater access to sources of less costly external resources.

Thus, the objective of the present paper was to verify if conventional financial indicators of the companies belonging to the main segments of B3 listing (New Market, Level 2, Level 1 and Traditional Market) support its governance status attributed by the respective segment, so that they are effectively classified as more or less financially constrained.

The paper is divided into five parts. In addition to the introduction, the theoretical framework, which approaches the informational asymmetry and the agency conflicts as main causes of financial constraints, as well as the role of corporate governance in the mitigation of the impacts of such constraints, is in the second part. The third part presents the methodology of the study and the research procedures. In the fourth part, the results are presented and discussed and finally the last part shows the conclusions of the studies.

2 Theoretical Framework

2.1 Information Asymmetry, Agency Conflicts and Financial Constraints

The studies about the influence of the financing decisions on investment decisions have the study by Modigliani and Miller (1958) as their milestones. The authors defend that, under certain conditions, the capital structure is irrelevant for the investment decisions, the company value being measured by the quality of its projects and not by the way they are financed. The theory by Modigliani and Miller (1958) states that the company value does depend on the ratio of equity and of third parties used

to finance their investments, as the weighted average cost of capital always remains unchanged when facing the capital structure changes. Under such point of view, the decision to invest is subject to the projects, which present a positive net present value in their cash flows (when they are discounted at a determined interest rate, that represents this weighted average cost of capital). It will be totally independent of the kind of resource – internal or external – raised in order to carry out the investment (Modigliani & Miller, 1958). Internal resources are regarded as the profits retained in the company by the existing shareholders, whereas the external ones refer to third party liabilities or new stock issues.

However, the market conditions the authors refer to so that it happens are strongly contested. Some are highlighted among them: (i) all the economic agents have an equal access to the necessary information to perform the transaction (full rationality); and (ii) any investor is capable of raising resources in the financial market at the same interest rates that the companies are (possibility of arbitration).

Such characteristics of a perfect and efficient market, assumed by Modigliani and Miller (1958), make the internal and external resources perfect substitutes (Fazzari, Hubbard & Petersen, 1988) and the offer of funds in the financial market perfectly elastic. “Being the offer of funds perfectly elastic, the company has the interest rates of the market as opportunity cost, in which it can lend and borrow any amount...” (Aldrighi & Bisinha, 2010, p.26), what means to say that the investment decisions do not depend on the form of financing internal or external. The debt instrument, the stock issues or the profit withholding itself will have their costs tied to a market interest rate that reflects the opportunity cost of the capital owners.

Such scenario is improbable in the real world (Stein, 2003). Contrary to what Modigliani and Miller (1958) supposed, the markets have imperfections and the financial structure may be determinant in investment decisions for companies that operate in these markets and face uncertainty

environments. Market imperfections such as agency conflicts and information asymmetry may increase the cost of external financing and cause quantitative credit rationing (Jensen & Meckling, 1976; Myers & Majluf, 1984; Jensen, 1986), by exposing the companies to different financial constraint degrees. The higher the difference between the cost of external and internal resources or the external credit access difficulty, the higher the degree of financial restriction.

Due to the existence of possible financial constraints, the investment decisions may depend on financial factors, such as the availability of resources internally generated, the debt level and the access degree to the sources of external resources (Fazzari *et al.*, 1988). Demarzo, Fishman, He and Wang (2012) and Francis *et al.* (2013) mention that the financial constraints basically derive from two factors: informational asymmetry and agency conflicts.

The information asymmetry was discussed by Akerlof (1970) to explain how the economic agent uncertainty about the quality of the traded goods in the markets tends to undermine its good functioning. In general, the informational asymmetry results from the fact that not all the market participants have access to the same necessary information for the decision-making. Managers or *insiders* generally have private information concerning the company cash flows or their investment opportunities, which makes it rather difficult or even impossible for the providers of external resources to evaluate the company investment project quality (Fazzari *et al.*, 1988).

Myers and Majluf (1984) argue that external investors, who are aware of their lack of knowledge of the company quality projects, tend to require greater awards to make up for the level of the risk taken. This award may increase the external resource cost above the opportunity cost of the internal financing. This idea is corroborated by Fazzari *et al.* (1988, p.142), who state that, as a result of information asymmetry, “the cost of a new debt or stock issue may substantially differ from the opportunity of the

internal financing generated by cash flow and withheld profits”. The difference of costs between internal and external financing caused by informational asymmetry is explained by Aldrighi and Bisinha (2010) as follows:

... since the project risks and the abilities and intentions of the entrepreneur are private information to him, the potential financier only agrees to lend at the market interest rate the amount which can be covered by guarantees. Any third party fund raising exciding these guarantees would have an increase in its cost as an award for the risk, this increase would be higher with the imperfection degree of the financial market (the informational asymmetry degree) (Aldrighi & Bisinha, 2010, p. 26)

In addition to causing cost differences between the internal and external resources, the information gap problem among the market participants may also lead to capital rationing in competitive markets. The higher the company risk is in terms of availability of information concerning its investment opportunities, the lower its capacity of new debts. This causes companies with higher availability of internal resources (cheaper) to depend less on external financing (more expensive) to implement their investment projects, being considered by the creditors and by the investors as of lower risk.

Another imperfection of the capital markets and which causes the appearance of financial constraints is consisted of the agency conflicts, highlighting the studies by Jensen and Meckling (1976) and Jensen (1986). Agency problems derive from the interest misalignment among the several agents involved in an organization (shareholders, executives and creditors).

Harris and Raviv (1991) basically present two kinds of interest conflicts which may have an impact on how a company finances its investments. The first one is the conflict between shareholders and managers that arises when the managers transfer the company internal resources to projects of their own interest, several times sacrificing the objective of the company value maximization. From the managers' point of

view, the resources internally generated are extremely cheap and, thus, the managers tend to spend more than the expected on unprofitable projects (Francis *et al.*, 2010). Jensen (1986) describes this problem as the agency cost of free cash flow. The inadequate allocation of the free cash flow reduces the availability of cheaper internal funds and forces the company to look for external resources with higher costs which is exposed to financial constraint situations. One of the ways to minimize the equity agency cost would be to increase the debt in order to reduce the available cash flow for the managers' arbitrary use (Jensen, 1986). However, the debt increase may lead the company to another kind of cost: the debt agency cost.

The debt agency cost derives from the interest conflicts between the shareholders and the creditors and it arises because the debt agreements incentivize the shareholders to invest in riskier projects, with the probability of higher returns, but with low probability of success (Jensen & Meckling, 1976). That is due to the fact that the project success provides higher gains to the shareholders, whereas its failure implies in higher costs for the creditors. Consequently, the higher the participation of third party capital in the capital structure of the company, the higher the shareholders' incentive to accept higher risk investments, as they will be subject to higher returns and lower costs. This weakens the creditor because it generates higher profits to shareholders and it keeps the interest payment to the creditor unchanged. Summing up, the conflict arises because the success of risky investment directly beneficiates the shareholder, whereas its failure implies in greater losses for the creditors.

The debt agency cost is a by-product of the information asymmetry among the agents. As the creditors do not have the adequate information about the company investments, they can anticipate this kind of shareholders' behavior, increasing the company risk and consequently demanding greater awards for its capital (Harris & Raviv, 1991). The greater awards required by third parties also aim to compensate them concerning the monitoring and controlling costs of the shareholders and

managers in the allocation of investment resources (Jensen & Meckling, 1976). Thus, the debt cost rises above the internal resource cost, exposing the company to situations of financial constraints.

It is noteworthy that, on the assumption that the higher the risk taken, the higher the capital cost, the debt (external resource) would initially have a lower cost than the internal resources would (equity as withheld profits). This is due to the fact that such resources involve a clearly distinct risk dynamics. Whereas the creditor directly has a credit risk, the shareholder takes the business risk, which tends to be greater than the credit risk. However, Jensen and Meckling (1976) and Myers and Majluf (1984) argument that in the presence of information asymmetry and agency conflicts in different levels (majority shareholders *versus* minority shareholders, shareholders *versus* managers, shareholders *versus* creditors etc.), the external resource costs have a higher increase than the internal resource costs do.

2.2 Corporate Governance and Financial Constraints

Faced with an imperfect market, characterized by information asymmetry and agency conflicts, good corporate governance practices assume an important role for the financial decisions. According to Francis *et al.* (2013), governance mechanisms may minimize the impacts of financial constraints faced by companies, reducing the information asymmetry degree and the agency conflicts and consequently making the capital market more accessible. In fact, various studies present evidence that the governance quality facilitates the access of organizations to external resource sources with lower costs and it increases their investment levels (Cicogna, Toneto & Valle, 2007; Harford, Mansi & Maxwell, 2008; Chen, Huang & Chen, 2009; Leuz, Lins & Warnock, 2010; Claessens & Yurtoglu, 2013; Albanez & Valle, 2009; Francis *et al.*, 2013; Barros, Silva & Voese, 2015).

Conceptually, corporate governance has innumerable definitions. Although it is not a relatively new issue, it has gained more importance

with the appearance of modern corporations in which there is a separation between ownership and management. Shleifer and Vishny (1997) consider corporate governance from the perspective of investor protection, in which governance mechanisms have the purpose to ensure that the capital providers obtain an adequate return to their investments. Better governance practices imply in lower risks for the creditors and thus enables the companies to raise external capital with the lowest possible cost. Claessens and Yurtoglu (2013) also add the corporate governance concern about solving collective problems of several investors and about the minimization of interest conflicts among the several rights holders.

The Securities Exchange Commission (Comissão de Valores Mobiliários, CVM, 2002, p.1), Brazilian capital market regulating body, defines corporate governance as a “set of practices that aim to optimize the company performance by means of protection of rights of all interested parties, such as investors, employees and creditors, facilitating the access to capital”. The Brazilian Institute of Corporate Governance IBGC, (2015) defines it as the system by which the organizations are directed, monitored and incentivized, fundamentally characterized by equity, accountability and corporate responsibility, aiming to maximize the company value and to facilitate its access to the external capital.

In summary, corporate governance may be described as a set of principles and practices that guide the decision-making process of the companies so as to adequately serve the interests of the several agents involved in the corporations (controlling shareholders, minority shareholders, managers, employees, creditors, providers, etc.). This convergence of interests aims to minimize potential conflicts among them and to maximize the company value.

Santana (2001) points out the benefits that the corporate governance practices offer the companies and the investors. For the companies, institutional image improvement, greater visibility, greater access to external resources and lower cost of capital are pointed out. For the

investors, greater accuracy in the assets pricing, greater and better follow up and inspection of the company stocks, greater security as to their shareholding rights, more secure and diversified investments, stronger and more competitive companies, risk reduction for the country and economy dynamism.

In view of such issues and with the purpose of incentivizing good corporate governance practices in the Brazilian companies, B3 created three new listing segments for companies that voluntarily commit to go beyond the minimal requirements of the Brazilian legislation complied with by the current Traditional segment in 2000. For these companies, classified as holders of differentiated levels of corporate governance, New Market (NM), Level 2 and Level 1 became available. Companies which belong to NM include the highest pattern of governance, followed by the companies of Level 2 and finally of Level 1.

The main objectives of these new segments are to decrease informational asymmetry and the agency conflicts between investors and companies, by means of transparency concerning the disclosed information, to reduce the capital cost of the companies and to increase their investment levels. Several studies show that the adhesion to the differentiated levels of B3 corporate governance is associated to the raising of higher volumes of external resources (Cicogna, Toneto & Valle, 2007) and to the performance increase and market value of the companies (Silveira, Barros & Famá, 2006; Lameira, Ness, Silva, Motta & Klotze, 2010; Correia, Amaral & Louvet, 2011; Catapan & Colauto, 2014). Some studies also present evidence of higher levels of stock liquidity for companies that migrate to the differentiated segments of corporate governance (Martins, Silva & Nardi, 2006; Camargos & Barbosa, 2006; Michalischen & Paiva, 2009; Procianoy & Verdi, 2009).

In theory, companies with better levels of corporate governance offer a stronger protection to their investors, by means of a more professional, responsible, transparent and fair management to all the interested parties

(majority shareholders, minority ones, executives and third parties). The differentiated segments of B3 corporate governance, requiring stricter management and transparency patterns, try to portray the companies, which have greater possibilities of minimizing informational asymmetry impact and the agency conflicts, allowing *a priori* greater access to external resources with lower costs and thus reducing the financial constraint degree that they are subject to.

However, even with all the effort towards the greater engagement of the Brazilian companies in the adoption of better governance practices, there are reports in the literature that the adherence to differentiated segments of B3 corporate governance does not seem to influence the governance quality of the companies (Silveira & Barros, 2008). Among the various possible determinants of the governance quality of the Brazilian companies, the adherence to B3 differentiated levels was not significant in any of the models tested by the authors. The authors also suggest that the size of the companies and the control structure are the main determinants of the governance level. Attention is drawn to the fact that the study by Silveira and Barros (2008) was carried on 2002 data, when the adherence to the differentiated levels of governance were still quite incipient.

Hence, it is expected that the governance status of these companies, supported by B3 itself and that would enable greater access to external capital and higher investments, is supported by solid financial indicators which demonstrate its operational performance and its growing capacity and corroborate such differentiated management status.

3 Methodology

In order to check the performance of some company financial indicators listed in B3 different governance segments, *panel data* were analyzed from 2009 to 2014. The study sample consisted of the open Brazilian companies listed in each of the main B3 segments – New Market (NM), Level 2 (N2), Level 1 (N1) and Traditional Market (TRAD). All the

companies, which were listed in these segments, were considered, being 2015 the base year, the time of the data collection for the research. The financial companies were excluded from the sample due to its operational, financial and regulatory peculiarities. Following the exclusions, the sample included 266 companies, distributed into four groups: New Market (114 companies), Level 2 (13 companies), Level 1 (21 companies) and Traditional Market (118 companies).

The financial data of the analyzed companies, which are necessary to the calculations of the variables used in the statistical tests, were collected from the Economática database and correspond to the following indicators: Costly Debt (FinDebt); Interest Coverage Index (IntCov); Current Liquidity (CurLiq); Slack (Slack); Net Margin (NetMar); and Sales Growth (SalGrow) (Table 1).

Cleary (1999) believes that the classification of the position of financial constraint according to traditional financial indexes has an intuitive appeal, because it represents a direct measurement of the premium paid by bank loans. The present paper assumes that, due to good corporate governance practices, the financial constraint degree of the companies belonging to New Market is potentially lower than those of companies in Level 2, and the latter lower than those of companies in Level 1, and these lower than those of companies in Traditional Market (Financial constraint degree: $NM < N2 < N1 < TRAD$).

The variables in Table 1 were selected for being conventional financial indicators which are directly related to the company capacity to obtain external resources and which possibly influence the financial constraint degree that it is subject to.

Thus, by considering the two extremes of governance, New Market as the largest one and Traditional Market as the smallest one, it is expected that companies listed in New Market present better financial indicators than those listed in the Traditional Market.

Table 1. Indicators used in the research

Indicator	Calculation	Expected behavior among the listing segments	Relationship with the financial constraint degree
Costly debt (FinDebt)	[financial debt ÷ total assets]	NM < N2 < N1 < TRAD	The higher the costly debt, the higher the financial constraint degree
Interest coverage index (IntCov)	[operational profit ÷ financial expenses]	NM > N2 > N1 > TRAD	The higher the interest coverage index, the lower the financial constraint degree
Current liquidity (CurLiq)	[current assets ÷ current liabilities]	NM > N2 > N1 > TRAD	The higher the current liquidity, the lower the financial constraint degree.
Slack – access to credit (Slack)	[(cash + short-term investments + 0,5 inventory + 0,7 account receivable – shot-term financial debt ÷ net fixed assets] The index is a measure of the unused credit line and the calculation is based on the traditional credit line calculation, which allows the company to borrow from third parties up to 50% of its inventories and 70% of “good” receivable accounts (Cleary, 1999). The net fixed assets is used for scale adjustment.	NM > N2 > N1 > TRAD	The higher the slack (higher access to credit), the lower the financial constraint degree.
Net margin (NetMar)	[net income ÷ net sales]	NM > N2 > N1 > TRAD	The higher the net margin, the lower the financial constraint degree.
Sales growth (SalGrow)	[net sales percentage change]	NM > N2 > N1 > TRAD	The higher the net sales growth, the lower the financial constraint degree.

Such hypothesis would confirm the best governance status of New Market in order to classify the company belonging to this segment as more

secure and, therefore, more accessible to new external investments concerning the companies listed in N2, N1 and in Traditional Market.

The data analysis was performed by means of hypothesis test in order to verify if there are any differences in each financial indicator among the groups. These differences were analyzed by means of nonparametric tests, as the data did not present normal distribution when they were analyzed by the Kolmogorov-Smirnov and Shapiro-Wilk normality tests. For this reason, the tested values refer to the observed medians for each indicator.

First of all, the performance of each variable among the companies with differentiated levels of governance and the companies of the Traditional segment was analyzed. Thus, the companies belonging to New Market, N2 and N1 were grouped in a single group (GOV) and compared with the Traditional Market (TRAD). The differences between the two groups were analyzed by using Mann-Whitney test (Hair, Black, Babin, Anderson & Tatham, 2009). Afterwards, the groups were separately compared (NM x N2 x N1 x TRAD) in order to verify which segments differentiated the most from one another. The differences among the four groups were analyzed by means of Kruskal. Wallis test and Dunn multiple comparison post-test among peers (Hair *et al.*, 2009).

All the statistical procedures were performed on the SPSS software (*Statistical Package for the Social Sciences*, version 20). For all the analyses, $p < 0,05$ values were considered statistically significant.

The following hypotheses were established for each analyzed variable:

$H_0: mdGOV = mdTRAD;$
 $H_1: mdGOV \neq mdTRAD$

$H_0: mdNM = mdN2 = mdN1 = mdTRAD$
 $H_1: \text{at least one group has } md \text{ different from the other group}$

being md the median; GOV consists of three differentiated levels of governance (NM + N2 + N1); NM the New Market; N2 the Level 2; N1 the Level 1 and TRAD the Traditional segment.

4 Results and Discussion

The financial indicator analysis demonstrated significant differences among the analyzed groups. According to the results demonstrated in Panel B of Table 2, the comparison among the three differentiated governance segments (GOV) which represent the companies listed in any differentiated level of corporate governance (NM + N2 + N1) and the Traditional segment (TRAD) demonstrated that there was significant difference ($p < 0,001$) for all the analyzed financial indicators. These results were also found when New Market (NM) and Traditional segments were compared (TRAD), which consist of the best and worst governance segments, respectively.

Table 2 demonstrates the median and interquartile values obtained from the company financial indicators in the different segments (Panel A) and the results from statistical comparison tests of each financial indicator among the different listing segments (Panel B).

The companies that adopt differentiated governance practices (GOV) presented significantly higher values for all the indicators when they were compared to the companies listed in the Traditional segment (Figure 1). Except for the Costly Debt indicator, these results corroborate the expected performance that the companies with better corporate governance practices present a more solid economic and financial situation.

Specifically with regard to the Costly Debt indicator, the expected performance was that the values of the companies with differentiated levels of governance were lower regarding the Traditional segment companies. This is due to the fact that the low debt level may reflect higher liquidity and lower financial risk. However, although the high debt may represent higher risk of financial difficulties, as the company cash flow becomes more committed to the payment of fixed financial expenses. Some studies consider that a higher debt degree may express higher access to external resources and, hence, lower degree of financial constraint (Cicogna, Toneto & Valle, 2007; Aldrighi & Bisinha, 2010), which is consonant with the situation of the companies with better corporate governance practices (GOV).

Table 2. Financial indicators and statistical test results

Panel A	Median (IQR 25%-75%)					
	NM	N2	N1	GOV (NM + N2 + N1)	TRAD	
FinDebt	29,5 (17,7–40,7)	40,1 (24,4–47,7)	25,6 (14,6–37,7)	29,6 (17,8–41,2)	23,3 (7,9–39,0)	
CurLiq	1,8 (1,2–2,3)	1,3 (1,0–2,0)	1,7 (1,1–2,4)	1,7 (1,1–2,3)	1,2 (0,7–1,9)	
IntCov	1,7 (0,6–3,8)	1,7 (0,8–3,2)	1,5 (0,7–3,0)	1,6 (0,3–3,6)	0,9 (-0,1–2,8)	
Slack	1,0 (0,2–5,1)	0,6 (0,1–3,5)	0,4 (0,1–1,0)	0,7 (0,1–3,3)	0,3 (-0,1–1,1)	
NetMar	7,6 (1,0–13,9)	6,0 (1,0–14,4)	5,9 (1,5–11,9)	7,1 (1,1–13,7)	3,8 (-4,6–10,9)	
SalGrow	13,3 (2,4–28,3)	9,9 (2,4–20,9)	9,4 (-0,5–17,3)	12,2 (2,1–25,0)	6,4 (-4,1–17,0)	
Panel B	Medians (Sig. <i>p</i>)					
	FinDebt	CurLiq	IntCov	Slack	NetMar	SalGrow
TRAD x GOV	23,3 x 29,6 (0,000)***	1,2 x 1,7 (0,000)***	0,9 x 1,6 (0,000)***	0,3 x 0,7 (0,000)***	3,8 x 7,1 (0,000)***	6,4 x 12,2 (0,000)***
TRAD x NM	23,3 x 29,5 (0,000)***	1,2 x 1,8 (0,000)***	0,9 x 1,7 (0,000)***	0,3 x 1,0 (0,000)***	3,8 x 7,6 (0,000)***	6,4 x 13,3 (0,000)***
TRAD x N2	23,3 x 40,1 (0,000)***	1,2 x 1,3 (0,551)	0,9 x 1,7 (0,042)*	0,3 x 0,6 (0,084)	3,8 x 6,0 (0,115)	6,4 x 9,9 (0,179)
TRAD x N1	23,3 x 25,6 (1,000)	1,2 x 1,7 (0,000)***	0,9 x 1,5 (0,166)	0,3 x 0,4 (1,000)	3,8 x 5,9 (0,143)	6,4 x 9,4 (1,000)
NM x N2	29,5 x 40,1 (0,004)**	1,8 x 1,3 (0,038)*	1,7 x 1,7 (1,000)	1,0 x 0,6 (1,000)	7,6 x 6,0 (1,000)	13,3 x 9,9 (1,000)
NM x N1	29,5 x 25,6 (0,913)	1,8 x 1,7 (1,000)	1,7 x 1,5 (1,000)	1,0 x 0,4 (0,003)**	7,6 x 5,9 (1,000)	13,3 x 9,4 (0,015)*
N2 x N1	40,1 x 25,6 (0,001)**	1,3 x 1,7 (0,602)	1,7 x 1,5 (1,000)	0,6 x 0,4 (1,000)	6,0 x 5,9 (1,000)	9,9 x 9,4 (1,000)

Median and interquartile values (Panel A) and significance levels obtained from Mann-Whitney (GOV x TRAD) and Kruskal-Wallis/Dunn statistical tests (NM x N2 x N1 x TRAD) (Panel B) for the financial indicators of 266 companies listed in different B3 segments: New Market – NM (n = 114); Level 2 – N2 (n = 13); Level 1 – N1 (n = 21); Governance differentiated segments – GOV (n = 148) and Traditional Market – TRAD (n = 118). FinDebt: Costly debt; CurLiq: Current liquidity; IntCov: Interest coverage rate; Slack: Access to credit (Slack); NetMar: Net margin; SalGrow: Sales growth. * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

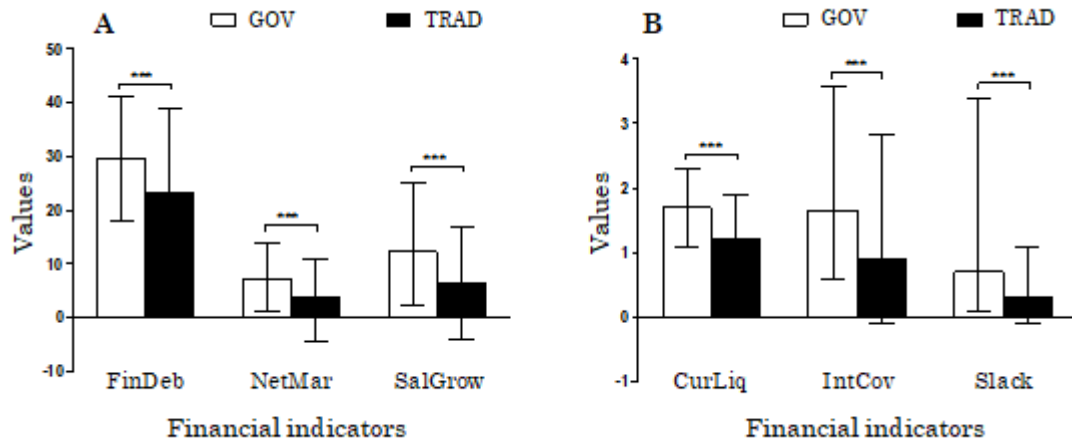


Figure 1. Governance practices and Traditional Segment

Profile of financial indicators of 266 companies listed in different B3 segments: Three governance segments (New Market + Level 2 + Level 1) – GOV (n = 148) and Traditional Market – TRAD (n = 118).

FinDeb: Costly debt; NetMar: Net margin; SalGrow: Sales growth; CurLiq: Current liquidity; IntCov: interest coverage rate; Slack: Access to credit (Slack). The bars represent median and interquartile (25% - 75%). *** $p < 0,001$.

For the Current Liquidity, Interest Coverage, Slack, Net Margin and Sales Growth indicators, the highest values presented by the companies of governance differentiated segments indicate, respectively, greater capacity of short-term payment, greater generation of cash for interest payment, greater access to credit lines (new debts), greater profitability and greater growth. Such superior performance reflects a more favorable economic and financial situation, which confirms the governance status of these companies, ratifying them as more secure to new external investments and, therefore, financially less constrained. In order to verify which corporate governance segments (NM, N2 or N1) have more impact on the observed differences concerning the Traditional (TRAD) segment, the comparison was separately performed among the four groups of segments (Figure 2).

For all the financial indicators, the New Market presented significantly greater values than the Traditional Market, demonstrating to be the segment which stands out more than the other three governance differentiated levels and the one which differs more from the Traditional segment. Except for the Costly Debt indicator, these results also corroborate

the expected behavior that the New Market companies present more solid financial indicators than the companies of the Traditional segment do, therefore being classified as more secure, more accessible to the market and show themselves to be financially less constrained.

Contrary to the expected, the Costly Debt indicator presented higher values for the New Market once again regarding the Traditional Market. However, this result can be interpreted as a greater access signalling to external resources of the companies that adopt differentiated practices of corporate governance (Cicogna, Toneto & Valle, 2007; Aldrighi & Bisinha, 2010). The Level 1 was the most similar governance segment to the Traditional Market one in all the financial analysed indicators, except for the Current Liquidity, with a significantly higher value for the Level 1 companies. As to the Costly Debt, Interest Coverage, Slack, Net Margin and Sales Growth indicators, there were no significant differences between Level 1 and Traditional Market.

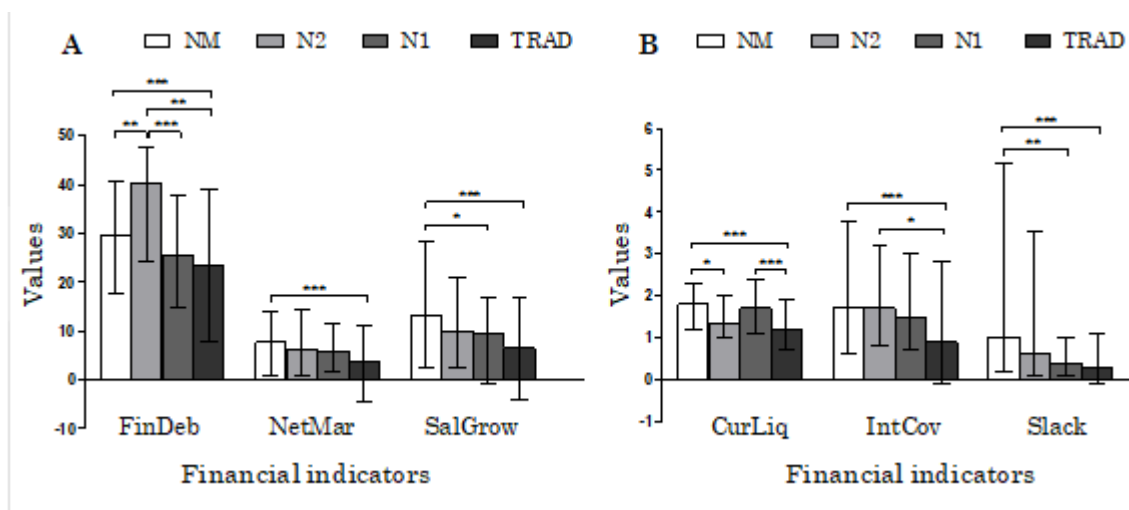


Figure 2. New Market and Traditional Market

Financial indicator profile of 266 companies listed in different B3 segments: New Market – NM (n = 114); Level 2 – N2 (n = 13); Level 1 – N1 (n = 21) and Traditional Market – TRAD (n = 118).

FinDeb: Costly DEbt; NetMar: Net margin; SalGrow: Sales Growth; CurLiq: Current liquidity; IntCov: Interest coverage rate; Slack: Access to credit (Slack). The bars represent median and interquartile (25%-75%). * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

These results allow us to reflect on the fact that the fulfillment of Level 1 additional requirements, mainly the ones related to the improvement of information disclosure and to a greater dispersed shareholding, are probably not sufficient, from the economic and financial point of view, to differentiate them from the companies belonging to the Traditional segment whose practices consist of what is required by the Brazilian legislation.

Among all the analyzed financial indicators, four (Net Margin, Sales Growth, Interest Coverage and Slack) presented an approximate behavior regarding the expected one, with decreasing values among the segments (NM > N2 > N1 > TRAD), although more expressive significant differences have been observed only between the extremes, while significant specific differences occurred between the intermediate segments.

5 Conclusions

The goal of the present paper was to identify possible behavior differences in some conventional financial indicators for the companies belonging to the B3 different listing segments (New Market, Level 2, Level 1 and Traditional Market). The chosen indicators were Costly Debt, Interest Coverage, Slack, Net Margin and Sales Growth. The data were analyzed by means of hypothesis test organized in a panel structure (from 2009 to 2014).

The results demonstrated that the companies belonging to some B3 differentiated corporate governance level presented significantly higher values than those listed in the Traditional segment for all the indicators. Such superior performance reflects a more solid and more favorable economic and financial situation that supports the governance status of these companies, ratifying them as more secure to new external investments and, thus, financially less constrained.

Among the differentiated levels of corporate governance (New Market, Level 2 and Level 1), New Market was the one which differed more from the Traditional segment, presenting significantly greater values for all

the financial indicators. The results allow us to conclude that the lowest financial constraint degree expected for the companies with better corporate governance practices, due to a greater possibility of mitigating the problems of informational asymmetry and agency conflicts, is supported by the best financial status of these companies, ratifying their potential to access costlier external resources and to minimize the financial constraint degree which they are subject to.

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