The Evolution of Corporate Governance in Brazil

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Abstract. We use extensive hand collected surveys reporting governance practices in 2004, 2006, and 2009 to build a broad corporate governance index and analyze the evolution of corporate governance in Brazil and the association between governance and firm value. We find that corporate governance practices improved significantly over this period. This evolution is due to two main factors: 1) growth in Novo Mercado and Level II (NM&L2) listings, mainly through IPOs by new firms, and 2) improved practices at non-NM&L2 firms, principally adopting governance elements required for NM&L2 listing. Governance practices for firms already listed on NM&L2 were stable. Adoption of the elements of our governance index that are required for NM&L2 listing predicts higher firm value. In contrast, adoption of the remaining elements of our index does not predict firm value. Thus, governance changes appear to respond to investor preferences.

Keywords: Brazil, corporate governance, boards of directors, minority shareholders

JEL codes: G18, G30, G34, G39, K22, K29

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1 – Introduction

As Claessens and Yurtoglu (2013) note in a recent survey of emerging markets, "the dynamic aspects of corporate governance reform are not yet well understood." We might add that the evolution of corporate governance over time has rarely been studied. This paper is an effort to begin to fill that gap. We first provide descriptive evidence on the evolution of corporate governance in Brazil over 2004-2009, a period of rapid change. We then connect those changes in governance to changes in firm value, and provide evidence on *which* governance changes predict higher value.

Brazil is a good place to study changes in corporate governance because its economy went through major changes in the past decades which made it both more feasible and more attractive for firms to raise equity capital, including specific actions to change corporate governance. Economic changes include strong economic growth, achievement of macroeconomic stability, investment grade status for the government and many individual firms; major Brazilian firms becoming world-class competitors; revival of the stock market (including the rise of Novo Mercado); and development of pension funds, which became major investors in public company shares. Table 1 provides an overview of some of the major changes.

Significant changes were also observed in the stock market. Through the early 2000s, Brazil was seen as having relatively weak corporate governance. In a ranking of 49 countries based on 1997 corporate standards, Nenova (2003) placed Brazil 24th for investor rights, 43rd for enforcement of corporate law, and 40th for accounting standards. Moreover, Brazilian law allows for both voting and non-voting shares, and many Brazilian corporations are controlled by majority shareholders who own a majority of the corporation's voting shares, but a smaller economic interest.[1] Examples of expropriation of minority shareholders by controlling shareholders were common. Dyck and Zingales (2004) estimated the benefits of corporate control in 39 countries, based on the difference between trading prices and prices paid for control blocks. They found that Brazil had the greatest average control benefits, estimated at 65% of equity value.

In 2000, in response to a loss of trading volume to other markets, and the belief that loss of trading volume was related to weak protection for minority shareholders (including extensive use of non-voting shares, few outside directors, and low levels of disclosure), the São Paulo Stock Exchange (BM&FBovespa) created three high-governance listings (Novo Mercado, Level I and Level II). This contributed to a surge in initial public offerings, which had been nearly nonexistent until 2004; a leveling off in the number of listed companies, which had been shrinking; and sharply rising trading volume and liquidity (De Carvalho and Pennacchi, 2012). Most new listings were at

[1] As of 2000, 89% of Bovespa-listed corporations had issued non-voting shares, representing 54% of all shares listed on Bovespa and the vast majority of trading volume (Nenova (2005)).

one of the premium listing levels; some older companies also migrated their listings to a higher level. The proportion of companies listed on one of these premium markets has soared (see Table 2 below for details).[2]

In spite of these major changes in the economy and the stock market, little is known about how corporate governance standards have been changing, or how those changes affect firm value. This article aims at filling this gap by providing a picture of the evolution of corporate governance practices in Brazil. Our data comes from three extensive hand collected surveys conducted in 2005, 2007 and 2009 on their governance practices, roughly 2004, 2006, and 2009. Thus, the first survey comes at the beginning of the surge in IPOs in 2004; the third comes during the financial-crisis-related lull in new listings during 2008-2009. We supplement the surveys with financial and company information from CVM and Economatica.

One problem in describing corporate governance is that it is multifaceted – one can drown in details. To address this issue, we aggregate our governance information into six indices covering the main aspects of corporate governance: board structure, ownership, board procedures, related party transactions, shareholders rights and disclosure. The board structure index is subdivided into two subindices: one for board independence, the other for audit committee and fiscal board. Finally, we compute a broad index, Brazilian Corporate Governance Index (BCGI), as the average of these 6 indices. We focus on "private" Brazilian firms, and exclude government-controlled and foreign-controlled firms.

We find that corporate governance practices improved significantly in the 2004-2009 period. This evolution is due to two main factors: 1) growth in Novo Mercado and Level II (together, NM&L2) listings, mainly through the entry of new firms with high corporate governance practices (IPOs) and 2) improvement in the governance practices of the firms that were already listed, sometimes including migration to a higher listing level. Governance practices for firms with a NM&L2 listing were stable during that period. At the same time, many NM&L2 firms exceed the minimum requirements for these listing levels. There were broad improvements in governance for already listed firms (with a "Regular" or Level I listing, below, Reg&L1). Finally, firms with venture capital sponsors adopt better board procedures than other firms.

We also assess the relationship between governance and firm market value, measured by Tobin's *q*. We find that adoption of the NM&L2 governance elements by already listed firms predicts higher Tobin's *q*. In contrast, adoption of the remaining elements of BCGI has no predictive value. These findings, together with the evidence on governance changes, suggest that firms tend to adopt the governance elements that investors value.

[2] In 2008, Bovespa created a fifth "Bovespa Mais" market, which is similar to Novo Mercado but removes some requirements, principally the need for 25% free float**.** As of 2009, there was only one firm at this listing level, and none in our sample. Totals for all listed firms exclude this firm.

Some limitations of our research. First, any measure of corporate governance, including ours, is a "construct": We begin with opinions, often informed only by judgment with only limited evidence, about what should be considered to be "good" corporate governance. We discuss construct validity concerns in Black et al. (2014). We address the extent to which our Brazilian governance index from 2004 predicts higher share prices or changes in corporate behavior or performance in Black, de Carvalho and Gorga (2012). Second, the firms that responded to our surveys represent a large fraction of the market capitalization of all private firms on Bovespa, but may not be representative of smaller firms.

This article is organized as follows: Section 2 describes our sample and data. Section 3 describes our corporate governance indices. Section 4 presents our results on governance evolution. Section 5 presents regression results linking governance to firm market value. Part 6 discusses some implications of our results, and Section 7 concludes.

2 – Governance Surveys and Sample

We construct a Brazilian corporate governance index (BCGI) based on three surveys conducted along 2005, 2007 and 2009. They report practices of 2004, 2006 and 2008-2009. These surveys were sent to all companies listed on Bovespa, with supporting letters from BMF&Bovespa, the Brazilian Corporate Governance Institute (IBGC), and Fundacao Getulio Vargas. We also carried out extensive followup with each company to increase the response rate and obtain answers to questions initially left unanswered, or for which the answers were unclear.[3] We also used several additional data sources. The list of publicly traded companies, their market capitalization, and listing level comes from Bovespa, at www.bovespa.com.br/principal.asp. We obtain financial data from the Brazilian financial database Economatica, at www.economatica.com, and CVM, at www.cvm.gov.br. We updated this data as needed.

We have 116 respondent firms in 2004, 172 in 2006, and 177 in 2009. These numbers include firms controlled by the state, foreign parent company, and Brazilian private sector groups and individuals (Brazilian private firms or BPF). It is likely that governance characteristics differ between these three groups; we focus here on BPF. There were 83 BPFs in our 2004 sample, 141 in 2006, and 136 in 2009. The 83 BPFs in the 2004 sample corresponded to 27% of all BPFs listed in that year (83/313) and 62% of their market capitalization. The 2006 sample represent 48% of all BPF listed in that year (141/290) and 58% of their market capitalization. Finally, the 2009 represent 44% of BPFs (136/306) and 59% of their capitalization. Thus, our sample is reasonably representative of the overall Brazilian stock market, with a tilt toward larger firms. Black, De Carvalho and Gorga (2010) describe the 2005 survey. The 2007 and 2009 surveys have not

[3] The surveys are available from the authors on request, in both Portuguese and English translation.

previously been studied. Table 2, Panel A provides summary data on our sample by year for the BPF sample and the narrower sample used below in regression analyses.

The first principal goal of this paper is to examine changes in corporate governance patterns over the available time period. Observed changes in corporate governance can be due to changes within firms or change in the sample. To disentangle these two components, we sometimes focus on firms that responded to more than one survey. There were 36 "overlap" firms that were in the 2004 and 2006 samples, 29 that were in both 2004 and 2009, 81 firms that were in both 2006 and 2009, and 22 firms that responded the three surveys. In regressions, we drop financial firms and firms with incomplete data on covariates.

Bovespa provides four listing levels: Regular, Level I, Level II, and Novo Mercado. Novo Mercado has the highest standards and companies must have: only common shares (no non-voting preferred shares); a minimum of 25% free float (shares not controlled by the majority shareholders); a board of directors having non-staggered terms of two years or less; financial statements prepared following U.S. GAAP or IFRS; takeout rights for minority shareholders in a transfer of the controlling stake; in a freezeout or delisting, a tender offer must be made for minority shares at their economic values; trades by controlling shareholders and senior managers must be disclosed; and disputes with minority shareholders are settled by the Brazilian arbitration panel *Câmara de Arbitragem do Mercado* (CAM).[4] Novo Mercado's standards may be too strict for many Brazilian firms, including the many firms with non-voting shares.[5] Level II accommodates this by maintaining most of the Novo Mercado requirements, but allowing non-voting shares. The Level I listing standards focus primarily on improved disclosure standards, including provision of consolidated financial information on a quarterly frequency. The Regular level does not impose corporate governance requirements beyond those required by law. Below we often discuss Level II and Novo Mercado together.

Table 2, Panel B provides summary data on the market level where the BPF firms in each survey were listed, at year-ends 2004, 2006, and 2009. At the end of 2004, Novo Mercado (Level II) were still small, with total listings of 18 (10) firms, respectively. Combined, these levels grew to 82 (18) firms in 2006 and 103 (19) in 2009. Their combined representation in our sample also increased from 8% (7/83) to 50% (68/136) in 2006 and 49% (70/141) in 2009. As Panel B shows, firms with a Regular listing are under-represented in our sample; while Level 1 and Novo Mercado firms are over-represented in our sample in 2006 and 2009. For example, in 2009, Novo Mercado firms were 31% of all BPFs, but 45% of our sample, while Regular listing firms were 52% of BPF

[4] Arbitration Law 9307/96 requires that CAM reach a decision within 180 days.

[5] Brazilian corporate law permits companies to issue up to 50% non-voting shares. The limit was two-thirds prior to 2001; many companies still have more than 50% non-voting shares.

firms, but only 31% of our sample. The growth in NM&L2 firms was due principally to new listings through IPOs; there has also been some migration of firms from the regular market to higher levels. The number of firms with a Regular listing has been declining, from 316 in 2004 to 263 in 2009; the number of Level 1 firms has been roughly constant. Almost all IPOs have been on Novo Mercado or Level II.[6]

3 – Corporate Governance Indices

Our Brazil Corporate Governance Index (BCGI) is calculated as the raw average of six indices covering the main aspects of corporate governance: board structure, ownership, board procedures, related party transactions, shareholders rights and disclosure. Overall they include 41 firm attributes that are often believed to correspond to good governance, on which we have reasonably complete data, reasonable variation across firms, and sufficient difference from another index element to justify inclusion. Most elements are dichotomous (coded as "1" if a firm has the attribute and "0" otherwise). Black, De Carvalho and Gorga (2012) report that higher BCGI scores in 2004 predict higher Tobin's *q*. This provides providing evidence that BCGI as a whole is measuring something meaningful about firm governance. Table 3 describes the indices and their components. Our indices are:

Board Structure (7 elements): Board independence is often considered to be a core element of corporate governance (e.g., OECD, 2004; Dahya, Dimitrov and McConnell, 2008). The existence of an audit committee, staffed principally or entirely by independent directors, can help to ensure the integrity of financial reporting (e.g., Klein, 2002). In Brazil, the "fiscal board" plays a role in oversight of financial reporting similar to an audit committee, so our governance index considers this institution as well. We divide Board Structure index into two indices: Board Independence (4 elements, focusing on director independence and separation of the posts of CEO and board chairman) and Audit Committee and Fiscal Board (3 elements, focusing on the existence of the audit committee and fiscal board, and whether these organs include a minority shareholder representative).

Ownership Structure (5 elements): A "wedge" between cash flow rights and voting rights can provide incentives for self-dealing, and predicts lower firm value (Claessens, Djankov, Fan, and Lang, 2002). Several mechanisms can be used to create such a wedge. Many Brazilian firms do so by using dual-class structures, with insiders retaining voting common shares and outsiders holding primarily preferred shares, thus creating a wedge between the voting and economic rights of the controllers. Measures of this wedge are often included in an overall corporate governance index

[6] The National Association of Investment Banking and Fixed Income (ANBIMA) allows its members to only participate in IPOs of companies that are listed at least Level I of corporate governance, except in those IPOs of companies that have shares listed abroad. The ANBIMA regulation is available at www.anbima.com.br.

(e.g., Black, Jang, and Kim, 2006). The ownership structure index includes elements which measure the proportion of nonvoting shares in a firm's capital structure; the fractional ownership of voting shares by the largest shareholder; the wedge between this person's voting and economic rights; whether the control group is small (and hence more likely to be cohesive); and whether there are large outside blockholders who can monitor the controller.

Board Procedure (6 elements): Assessments of board procedures are a common component of broad corporate governance indices. Our index assesses whether a board meets at least 4 times per year, whether it regularly evaluates the CEO and other executives, whether board members receive materials in advance of board meetings, and whether the firm has a bylaw governing the board and a code of ethics.

Minority Shareholder Rights (7 elements): There is evidence that takeout rights are an important protection for minority shareholders in Brazil.[7] We extract from the survey elements involving takeout rights on a sale of control and freezeout rights at prices exceeding the legal minimum; shareholder rights for election of directors; a procedure for arbitration of disputes with shareholder; preemptive rights; and minimum free float of 25% of outstanding shares.

Related Party Transactions (4 elements): Related party transactions are an important governance issue in many emerging markets (e.g., Bae, Kang and Kim, 2002; Atanasov et al., 2010). However, from prior studies, it is unclear whether governance indices can capture the risk that these transactions pose to firm market value (e.g., Balasubramanian, Black and Khanna, 2010). We extract from the survey 4 elements relating to the existence of related party transactions and approval procedures for these transactions. This is the only index for which the value is not the sum of binary variables. If related party transactions are forbidden in the firm charter than the firm receives 5. If it is not forbidden but firm does not do, then firms receives 4. If firm does them, the value depends on the number of approvals requires (board, non-conflicted directors, or shareholders).

Disclosure (11 elements): Prior research finds that disclosure is associated with higher firm market value (e.g., Durnev and Kim, 2005). We extract from the survey 11 elements of disclosure as to which there is reasonable variation across firms. These include, among other things, whether the firm prepares financial statements that comply with international accounting standards (Brazil adopted IFRS in 2010-2011, after our sample period); prepares English language financial statements; provides financial disclosures, such as a statement of cash flows, that are common in

[7] Nenova (2005) and Carvalhal-da-Silva and Subramanyam (2007) report conflicting results on how 1997 and 2000 changes in Brazilian takeout rights affected the market value of the shares affected by the changes. Bennedsen, Nielsen and Nielsen (2012), report that some Brazilian firms voluntarily provide additional takeout rights to shareholders in connection with equity offerings.

other countries but were not required in Brazil; posts financial statements on a company web site; and discloses related party transactions.

Within each index, we give equal weight to each element. Thus, to compute Disclosure index, we sum all 11 elements, and then divide by 11. If a firm has a missing value for a particular element, we use its average score for the non-missing values to compute each index. To calculate BCGI, we sum the indices and divide by 6 (the number of indices). Figure 1 provides a graphical depiction of the changes over time in the mean values of each index and BCGI as a whole.

Table 4 provides Pearson correlation coefficients between BCGI and its component indices. In all sample years, BCGI correlates positively with each index; with coefficients from 0.47 to 0.81. Part of this correlation is by construction, because each index forms part of BCGI. We therefore also show the correlation of each index with its "index complement" (BCGI minus that index). The correlations between most indices are generally positive and statistically significant but moderate. The exceptions are Ownership Structure and Related Party Transactions indices, which correlate weakly with the other indices. This suggests that our indices capture different aspects of corporate governance.

4 – Evolution of Corporate Governance

4.1 – Evolution of Brazil Corporate Governance Index

Panel A of Table 5 shows the evolution of BCGI over the period 2004-2009. Corporate governance practices in Brazil, as measured by BCGI, have been improving over time. The average of BCGI in 2004 was 0.53. It jumped to 0.62 in 2006 and 0.63 in 2009. This increase is statistically significant at the 1% level. The improvement in governance was more pronounced for the Reg&L1 firms, for whom BCGI went from 0.51 in 2004 to 0.54 in 2006 and 0.56 in 2009. In contrast, for NM&L2 firms, the average BCGI score was higher, but there was no significant change between 2004 and 2009. Thus, the gap between the two groups shrank.

These changes reflect both changes in the sample, principally new listings (IPOs) in NM&L2, and changes in governance practices at individual firms over time. We can disentangle these two effects, at the cost of reduced sample size, by focusing on "overlap" firms that responded more than one survey. We do so in Panel B of Table 5. For all overlap firms, one sees improvement in governance between 2004 and 2006 (0.54 to 0.60) and over the whole period from 2004 to 2009 (0.55 to 0.63), but little change between 2006 and 2009 (0.63 to 0.64). This improvement is driven by Reg&L1 firms. The mean BCGI for these firms went from 0.50 in 2004 to 0.54 in 2006 and from 0.51 in 2004 to 0.57 in 2009. For NM&L2 firms, BCGI does not change significantly in any of the overlap groups, and indeed drops slightly from 2006 to 2009. The sample of firms that migrate from Reg&L1 to NM&L2 is too small to allow much analysis.

However, the seven overlap firms which later migrate were well above the Reg&L1 mean before migrating, and do not greatly change their governance when they migrate.

4.2 – Sources of governance changes

To understand what aspects of governance are changing, and driving the improvement in BCGI, we analyze the evolution of each index (Panel A of Table 6). There is improvement in the indices for Board Structure (from 0.45 in 2004 to 0.51 in 2009); Board Procedure (from 0.59 in 2004 to 0.71 in 2009); Ownership Structure (from 0.53 in 2004 to 0.60 in 2009); Minority Shareholder Rights (from 0.32 in 2004 to 0.49 in 2009); and Disclosure (from 0.63 in 2004 to 0.84 in 2009). The change in Board Structure index is driven by an increase in Board independence index (from 0.48 in 2004 to 0.56 in 2009). All of these changes are statistically significant (see Table 6). In contrast, the changes in Audit Committee & Fiscal Board subindex and in Related Party Transactions index are small and not statistically significant.

If we return to the details on each element provided in Table 3, the improvement in Board Structure comes principally from greater board independence. For example, the number of firms with at least one independent director went from 66% (55/83) in 2004 to 85% (116/136) in 2009. With regard to Audit Committee and Fiscal Board, there was growing use of audit committees: the proportion of firms with audit committee went from 16% (13/83) in 2004 to 33% (45/136) in 2009. But this was offset by declining use of a permanent or near-permanent fiscal board, from 66% in 2004 to 49% in 2009, leading to only limited change in the higher overall average for Audit committee & fiscal board subindex. The offsetting changes in use of audit committees and use of fiscal board are consistent with these institutions playing similar roles and acting as substitutes. Many firms use one or the other: by 2009, 67/% (92/136) have at least one of these institutions;. In contrast, only a few use both: this percentage is 15% (20/136) in 2009.

The improvement in Board Procedure reflects principally more firms adopting a system to evaluate CEO performance: from 33% (27/83) in 2004 to 53% (72/136) in 2009; adopting a system to evaluate other directors: from 40% (33/83) in 2004 to 66% (90/136) in 2009; and adopting a code of ethics: from 52% (72/136) in 2004 to 78% (106/136) in 2009. These changes occur gradually over our time period, with increases both from 2004 to 2006, and again from 2006 to 2009.

Ownership Structure scores rose for Ow.2, which captures the fraction of voting shares in overall capital structure: from 0.40 in 2004 to 0.64 in 2009 (offset by a related drop in fraction of common shares held by largest shareholder from 0.60 in 2004 to 0.50 in 2009); for ownership parity: from 0.81 in 2004 to 0.89 in 2009; and for Ow.4, which captures the size of the control group, from 0.26 in 2004 to 0.39 in 2009

For Minority Shareholder Rights, there is a large improvement from 2004 to 2006, but little change from 2006 to 2009. The main improvements come from a much higher proportion of firms ensuring that minority common shareholders will receive the economic value of their shares in a future freezeout offer: from 16% (13/83) of the firms in 2004 to 62% (84/136) in 2009; more firms providing greater takeout rights to minority shareholders than the legal minimum (80% of economic value for common shareholders; no requirement for preferred shareholders): from 34% (28/83) of the firms in 2004 to 65% (88/136) in 2009; and arbitration of disputes with shareholders: 8% (7/83) of the firms in 2004 to 62% (84/136) in 2009. These changes largely reflect the higher number of Novo Mercado/Level 2 firms in the sample, for which all three elements are required.

Disclosure index also increased sharply from 2004 to 2006, with little change from 2006 to 2009. The changes were mainly due to an increase in the number of firms with English language financial statements: from 51% (42/83) in 2004 to 74% (101/136) in 2009; with financial statements in IAS or US GAAP: 32% (27/83) in 2004 to 66% (90/136) in 2009; and which disclosed an annual agenda of corporate events: 44% (37/83) in 2004 to 76% (104/136) in 2009. These changes reflect the higher number of Novo Mercado/Level 2 firms in the sample, for which all three elements are required. There was little change over time in the proportion of Reg&L1 firms which satisfied these elements.[8]

Panel B divides the sample by listing levels. Once again, one can see that the changes in overall averages reflect a combination of (i) changes in the sample, especially a higher proportion of NM&L2 firms; and (ii) changes in governance practices at individual firms over time, with within-firm changes occurring primary at Reg&L1 firms. For NM&L2 firms, none of the within-group changes in indices means are significant, and the changes from 2004-2009 are negative for three of the six indices. For Reg&L1 firms, there is a statistically significant rise in mean values for Board Structure, Board Procedure and Disclosure indices.

If we look separately at the overlap firms within each subgroup (results not reported), the picture is similar to Table 6, Panel B: Reg&L1 firms improve their governance over our sample period, especially for Board Structure index and Board Procedure index. In contrast, Novo Mercado/Level 2 firms show no consistent pattern of governance changes over time. The overall rise in scores for Minority Shareholder Rights and Ownership Structure indices is driven by changes in the sample, rather than within-firm changes over time.

[8] In 2004, 26% of Reg&L1 firms provided IAS or US GAAP financials; this increased modestly to 30% in 2009. In 2004, 46% of Reg&L1 firms provided IAS or US GAAP financials; this was almost the same, at 47%, in 2009.

4.3 – Why Do Novo Mercado firms have higher governance scores?

We saw above that firms listed on Novo Mercado or Level II have higher governance scores, on average, than firms with a Regular or Level I listing. We explore here the sources of the differences. One natural question is whether NM&L2 firms score better only for aspects that are mandatory for these listing levels, or whether they go beyond the minimum needed to qualify for these higher listing levels. To answer this question, we calculated a narrow governance index, based on the elements that are *not* required for a NM&L2 listing.[9] We call this index "BCGI-non-NM." Table 7, Panel A replicates Table 5 for BCGI-non-NM. Both NM&L2 firms and Reg&L1 firms score reasonably well on this index. There are three main takeaway points from Panel A. First, NM&L2 firms often go beyond the minimum needed to qualify for a higher listing. Second, firms which decide not to seek a higher listing still go well beyond the minimum governance required by law. If we restrict attention to the elements of BCGI-non-NM elements, NM&L2 firms and Reg&L1 firms look similar. The NM&L2 firms score moderately better on BCGI-non-NM than the Reg&L1 firms, but the gap shrinks over our sample period. Third, there are only modest changes over time in the scores of each group. Still, these changes produce substantial convergence by 2009: the NM&L2 mean is 0.61, versus 0.54 for Reg&L1 firms.

In Panel B, we construct a second narrow index, limited to the elements of BCGI that *are* required for an NM&L2 listing; we call this index "BCGI-NM." The Reg&L1 firms improve substantially on this index, from 0.43 in 2004 to 0.55 in 2009. These changes, combined with the growing proportion of NM&L2 firms in our sample, drive an overall increase in BCGI-NM from 0.48 in 2004 to 0.78 in 2009. In big picture, the Reg&L1 firms increasingly adopt many of the measures which are mandatory for NM&L2 firms. In contrast, as we saw above, Reg&L1 firms make only modest changes in the non-NM&L2 governance elements.

4.4 – Principal Differences between NM&L2 and Reg&L1 Firms

We next take a closer look at the individual elements that drive the differences between NM&L2 and Reg&L1 firms. Table 8, Panel A reports the mean scores over time of Reg&L1 firms on the elements of the BCGI-NM index. It thus indicates which are often adopted by Reg&L1 firms, and which are rarely adopted.

For some elements, we have data on all firms from Bovespa, not just the firms in our sample. In Dec. 2008, of 426 listed firms, a total of 157 firms offered takeout rights above the

[9] The governance elements that are mandatory for Novo Mercado are indicated with an * in Table 3.

legal minimum, of which 41 were in Reg&L1. Reg&L1firms also rarely elect arbitration of disputes with shareholders; only 8 of the 124 firms that have adopted arbitration were in Reg&L1.

In Table 9, we assess, for the indices of BCGI, where there are important differences between NM&L2 firms and Reg&L1 firms, and how those differences changed over our sample period. The NM&L2 firms have higher scores for board independence in all three survey years.

However, they have higher overall Board Structure scores only in 2004 (when our sample includes only 7 NM&L2 firms). In 2006 and 2009, NM&L2 firms show lower scores for Audit Committee and Fiscal Board subindex, and similar scores on Board Structure index as a whole.

Firms listed on NM&L2 show consistently higher scores on Ownership Structure, Minority Shareholder Rights, and Disclosure indices. These differences are driven, in large measure, by the inclusion in these indices of elements that are required for NM&L2. Four of the 7 elements of Minority Shareholder Rights index and 6 of the 11 elements of Disclosure index are required for NM&L2. A listing on Novo Mercado (but not Level II) also requires that firms issue only common shares, not preferred shares; these firms will score higher on Ownership Structure index.

In contrast, the difference between the two groups is never significant for Related Party Transactions index. The difference for Board Procedure index shrinks to insignificance over our sample period.

4.5 - Private Equity and Venture Capital

The Brazilian Private Equity and Venture Capital (PEVC) industry has grown significantly since the early 2000s.[10] Table 1 shows that committed capital in PEVC rose from US$ 6 billion in 2004 to US$ 36 billion in 2009. In the same period 36% (42/115) of the IPOs were by companies with PEVC sponsors. One role that venture capital sponsors can play is to certify the quality of sponsored companies, which can facilitate IPOs (Megginson and Weiss, 1991; Barry et al., 1990); Gompers and Lerner, 1997). PEVC sponsors can also cause firms to adopt practices that mitigate agency conflicts between management/control and investors. Some of these practices may last after PEVC sponsors exit from their investments. We therefore compare governance practices between PEVC sponsored and non-sponsored IPO firms. This comparison is possible only for 2009 due to the small number of IPO firms, and even smaller number of PEVC sponsored IPOs, in 2004 and 2006.

In our 2009 sample, 46% of the IPO firms (24/52) had PEVC sponsors. Table 10 compares the two groups of firms. The only statistically significant difference is in board procedures, for which PEVC-sponsored firms have higher scores. These higher procedure scores translate into modestly higher, but not statistically significant, overall BCGI scores for these firms. The main differences in procedures are existence of a system to the evaluate CEO performance: 75% (18/24)

[10] De Carvalho, Gallucci-Netto and Sampaio (2012) review the evolution of the PEVC industry in Brazil.

of the PEVC sponsored firms versus 21% (6/28) of non-sponsored IPO firms; use of a system to evaluate other directors: 79% (19/24) of the sponsored firms versus 50% (14/28) of other IPO firms; and existence of a specific bylaw to govern the board: 75% (18/24) against 35% (10/28).

5 – Which Governance Elements Matter? The Value of Novo Mercado

One driver of higher BCGI scores was the rise of Novo Mercado/Level II. We also observed rising BCGI scores for firms which remained in the Regular/Level I markets, mainly from adopting elements that are required for NM&L2 firms. We address here the impact of governance change on firm value. First, do higher BCGI scores predict higher firm market value (proxied by Tobin's *q*)? If so, what are the sources of that effect? In particular, which governance elements drive the effect – the elements that are required for NM&L2, the remaining elements of BCGI, or some of both?

To explore these questions, we proceed as follows. Firstly, we investigate whether BCGI as a whole predicts Tobin's *q*, and find that it does. Next, we study the contribution to that effect of the BCGI elements that are required for NM&L2 listing, versus the remaining elements of BCGI. We find that the power of BCGI to predict Tobin's q is driven entirely by BCGI-NM. In contrast, BCGI-non-NM takes a small and statistically insignificant coefficient across specifications. This implies that Bovespa made sensible choices in creating the NM&L2 listing requirements.

5.1 – Regression Sample and Methodology

We obtain enough information to construct BCGI for 83 PFs in 2004, 141 in 2006, and 136 in 2009. For our regression analysis, we exclude financial firms, and firms with missing data on covariates or Tobin's *q*. This leaves us with an unbalanced panel of 59 firms in 2004; 76 in 2006 and 101 in 2009. Table 11 provides summary information on our principal variables.

Our dependent variable is *ln*(Tobin's *q*). Tobin's *q* is a standard dependent variable in governance-to-value studies. Other things equal, if governance affects firm market value, this should be reflected in Tobin's *q*. We take logs to reduce the influence of high-*q* outlier firms; we also exclude outliers, for which a studentized residual from regressing *ln*(*q*) on *BCGI* (year-by-year) > |1.96|. We regress *ln*(Tobin's *q*) on our governance indexes and an extensive set of covariates (see Black, de Carvalho, and Gorga, 2012, for details on the covariates). We use two econometric models. First, we use pooled OLS, in which we pool *BCGI* observations for all three sample years. The model is:

$$\ln(q_{i,t}) = \beta_0 + \beta_1 * BCGI_{i,t} + \boldsymbol{\beta}_2 * \mathbf{x}_{i,t} + g_t + \varepsilon_{i,t} \qquad (1)$$

$\ln(q_{i,t})$ is the natural logarithm of Tobin's q for firm i at the end of year t;
$x_{i,t}$ is a vector of firm characteristics;

CGI_{it} is a governance index (BCGI, BCGI-NM, or BCGI-non-NM) for firm i at time t;

g_t are year dummies; and

$\varepsilon_{i,t}$ is an error term (all standard errors are clustered on firm).

We also use a firm random effects (RE) model. Let f_i be firm effects, σ_ε and σ_f be the standard deviations of $\varepsilon_{i,t}$ and f_i, T be the number of periods, and define the random effects λ as:

$$\lambda = 1 - \frac{\sigma_\varepsilon}{\sqrt{\sigma_\varepsilon^2 + T * \sigma_f^2}}$$

λ provides a measure of whether RE estimates are closer to pooled OLS (λ = 0) or to a firm fixed effects (FE) model (λ = 0). Then define quasi-demeaned variables $\mathbf{x}_{i,t}^{qdm} = (\mathbf{x}_{i,t} - \lambda * \overline{\mathbf{x}}_i)$ and similar for other variables. The RE model is:

$$\ln(q_{i,t})^{qdm} = \beta_1 * CGI_{i,t}^{qdm} + \boldsymbol{\beta}_2 * \mathbf{x}_{i,t}^{qdm} + g_t^{qdm} + f_i^{qdm} + \varepsilon_{i,t}^{qdm} \qquad (2)$$

It is not feasible to use an FE specification because we have relatively few firms which respond to at least two surveys – our effective number of firms would drop 146 to 72. If we try, in unreported regressions, the coefficient on BCGI is similar to that with pooled OLS and RE, at .089, but statistically insignificant due to larger standard errors.

5.2 – Regression Results

Table 12 reports our full sample regression results. Odd numbered regressions show pooled OLS results, even numbered regressions show RE results. Both specifications produce similar results. In Regressions 1 and 2, we regress *ln*(Tobin's *q*) on BCGI and covariates. The coefficient on *BCGI* is positive and statistically strong. The RE coefficient of 0.133 implies that a one-standard deviation increase in BCGI predicts a 0.133 increase in ln(*q*), or about a 14% increase in Tobin's *q*.[11]

In the remaining regressions, we investigate the relative power of BCGI-NM and BCGI-non-NM to predict Tobin's *q*. In Regressions 3 and 4, we consider the non-NM&L2 elements. These have no significant predictive value. The coefficient on BCGI-non-NM is positive but much smaller than the coefficient on BCGI and is not statistically significant. Moreover, even this small positive coefficient could reflect omitted variable bias. BCGI-non-NM and BCGI-NM are positively correlated (correlation of 0.35, p-value < .01), and BCGI-NM predicts Tobin's *q*, so the coefficient in these regressions on BCGI-non-NM is upward biased.

In Regressions 5 and 6, BCGI-NM takes a positive and strongly significant coefficient. Finally, in Regressions 7 and 8, we include both BCGI-non-NM and BCGI-NM in the same

[11] The calculation is exp(0.133) -1 = 0.142.

regression. The coefficient on BCGI-NM remains positive and strongly significant, while the coefficient on BCGI-non-NM is now close to zero (consistent with the somewhat larger coefficients in Regressions 3 and 4 reflecting omitted variable bias). Table 12 thus provides evidence that the NM&L2 elements, and only those elements, predict higher Tobin's *q*.

It could still be the case that the non-NM&L2 elements are important for *non*-NM&L2 firms. To investigate this possibility, in Table 13, we split the sample into Reg&L1 and NM&L2 subsamples.[12] In Panel A, we study Reg&L1 firms, using the same specifications as in Table 12. We suppress the coefficients on control variables.

The results in Panel A are very similar to those for the full sample. BCGI-NM predicts higher Tobin's *q*. The coefficients in Regressions 5-8 are close to those for the full sample. In contrast, the coefficients on BCGI-non-NM, while positive, are small and not close to significant in Regressions 7 and 8.

For the subsample of NM&L2 firms, we cannot study the effect of BCGI-NM on Tobin's *q*. The BCGI-NM elements are mandatory for these firms, so all firms have the same score. We can, however, assess whether investors assign additional value to NM&L2 firms that adopt the non-NM elements of BCGI. We do so in Panel B. There is no evidence that investors assign additional value to NM&L2 firms that adopt these elements. Instead, in Panel B, Regressions 1 and 2, the coefficient on BCGI (for which variation is driven by the non-NM elements), is small and insignificant. In Regressions 3 and 4, we obtain similar results for BCGI-non-NM.

6. Discussion

6.1 - Incremental Governance Reforms: Time Trends and Value

Overall, Brazilian corporate governance improved substantially over our study period. We speculate here on some broader implications of these changes. First, while cause and effect cannot be established, Bovespa's creation of the Novo Mercado and Level II listing levels, and the overall improvement in governance, coincided with a wave of IPOs of Brazilian firms. Perhaps, an active IPO market requires (or is encouraged by) investor confidence that local firms will behave well. Any one firm has limited ability to generate this confidence. An overall sense of investor confidence is an externality for any one firm, which can be partly internalized by a stock exchange (Mahoney, 1997). The available evidence suggests that Bovespa succeeded in doing so with its higher listing levels.

In an environment in which equity offerings are viable, firms have incentives to improve governance incrementally. Bennedsen, Nielsen and Nielsen (2012) provide evidence that some Brazilian firms voluntarily provide tag-along rights (above the minimum required by Brazilian law)

[12] Note that 6 firms migrate from Reg&L1 to NM&L2 during our sample period; they will be included in different subsamples in different years.

when they issue shares. The incentives for firms to improve governance would be weaker if equity offerings are difficult.

In Table 7, we found that over time, many Reg&L1 firms adopt some NM&L2 governance elements. We find in the regressions in Tables 12 and 13 that investors assign value to these governance changes. We also found in Table 7 a much weaker tendency for NM&L2 firms to adopt the remaining elements of BCGI. Our regression results can explain these firm choices. There is no incremental gain in firm value from adopting the non-NM elements of BCGI.

6.2 – The Relative Values of Local Governance and Cross-Listing

If local governance is weak, firms might seek to piggyback on the perceived value of listing on a foreign exchange (see the review by Karolyi, 2013). Other things equal, as local markets and local corporate governance improve, the value of cross-listing should decline. We indeed observe that many Brazilian firms sought full ("Level 2 or 3") cross listings on the New York Stock Exchange in the 1990s. In contrast, the Brazilian IPOs during our sample period rarely did so. Instead, most sought only a "Level 4" cross-listing through U.S. Rule 144A. A rule 144A listing may improve access to foreign capital, and indeed foreign investors purchased a majority of the shares in most Brazilian IPOs (de Carvalho and Pennacchi, 2012). Yet a Rule 144A listing carries only minimal obligations to comply with U.S. securities laws. Apparently, newly public Brazilian firms felt that the costs of a full U.S. cross listing outweighed the remaining benefits.

7 - Conclusion

We study the evolution of corporate governance practices in Brazil over 2004-2009, relying on a series of three hand-collected surveys. Our time period is limited, but covers important developments in the Brazilian markets, including the revival of Bovespa, driven by a wave of new public offerings, almost all on the higher, NM&L2 listing levels. We study changes in a broad, overall Brazilian Corporate Governance Index – BCGI. BCGI is comprised of six indices covering major aspects of corporate governance (board structure, board procedure, related party transactions, ownership structure, shareholder rights and disclosure). We exclude government-controlled and foreign-controlled firms from our sample and examine firms controlled by Brazilian private sector groups or individuals (Brazilian "private" firms).

We show that corporate governance practices improved significantly in the 2004-2009 period. These changes reflect both changes in the sample and changes in governance practices at individual firms over time. The sample changes reflect the rise in NM&L2 listings. Changes at the firm level occurred mostly in firms listed on the Reg&L1 levels. Governance practices for firms already listed on NM&L2 were fairly stable during our sample period. On the whole, firms in both groups go well above the minimum listing requirements for their level. Finally, IPO firms with

PEVC sponsors look broadly similar to IPO firms without these sponsors; they score better on several board procedures, but not on the substantive aspects of governance.

Adoption of the NM&L2 governance elements predicts higher Tobin's q; adoption of the remaining elements of BCGI does not. Over our sample period, Reg&L1 firms adopt more of the NM&L2 elements. A few firms adopt all of them and migrate "upwards" to a L2 or NM listing. Yet firms already on NM&L2 do not increase their adoption of the non-NM elements of BCGI. Thus, Brazilian firms appear to respond to what investors value.

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Table 1. Brazilian Economic and Financial Market Evolution

All values are at the end of each year, except as indicated. Data on inflation and foreign investment were collected at the site of the IPEA. Data on pension funds were collected from the Brazilian Association of Private Pension (ABRAPP). Data on IPOs and volume were collected at the Stock Exchange of São Paulo (BM&FBovespa). Amounts in US $ billions. Market capitalization is at year-end. Sources: De Carvalho et al. (2006) and ABDI (2011).

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
GDP growth (%)	0.2	4.3	1.3	2.6	1.1	5.7	3.1	3.9	6.0	5.2	-0.3	7.5
Treasury Interest rate (%)	19.0	15.7	19.0	25.0	16.5	17.7	18.0	13.2	11.2	13.7	8.7	10.7
Inflation (%)	8.9	6.0	7.7	12.5	9.3	7.6	5.6	3.1	4.5	5.9	4.3	5.9
Pension Fund Assets	69	79	72	65	78	96	137	175	258	191	296	324
IPOS	1	1	0	1	0	7	9	26	62	5	6	11
Committed Capital in Private Equity	3.7	4.9	5.0	4.7	4.8	5.6	7.2	13.5	22.7	28.1	36.1	39.2
Number of firms listed at Bovespa	534	494	468	436	410	390	381	394	433	426	422	427
Number of firms on Novo Mercado and Level II	-	0	0	5	5	14	28	58	100	119	122	133
Bovespa Trading Volume	86	95	65	39	71	114	172	281	677	590	747	704
Market capitalization	212	199	169	111	220	317	460	703	1,284	589	1,324	1,522

Table 2. Sample description

Panel A: Sample characteristics

Total number of firms and market capitalization for all public firms (private) which responded to the 2004, 2006 and 2009 Brazil CG Surveys. Exchange rate as of December 31, 2009 is R$1.75 per US$1. Market capitalization and number of firms is measured at end of survey year (for "overlap" rows, at end of most recent survey year). Regression sample excludes financial firms and firms with incomplete data on Tobin's q or covariates.

	Number of Firms		**Market Capitalization (R$ billions)**	
	BPF sample	**Regression Sample**	**BPF sample**	**Regression Sample**
2004	83/313 = 27%	65/313 = 21/%	638 /1,027 = 62%	524/1,027 = 52%
2006	141/290 = 48%	84/290 = 29/%	1254 /2,157 = 58%	1023/2,157 = 47%
2009	136/306 = 44%	108/306 = 35/%	1291 /2,192 = 59%	1123 /2,192 = 51%
2004 & 2006	36/325 = 11%		734 /2,157 = 34%	
2004 & 2009	29/306 = 9%		528 /2,192 = 24%	
2006 & 2009	81/306 = 26%		708 /2,192 = 32%	
all 3 surveys	22/306 = 7%		460 /2,192 = 21%	

Panel B: Sample by listing level

Number of firms listed on the indicated Bovespa levels for (i) all listed firms, (ii) Brazilian private firms, and (iii) firms which responded to the 2004, 2006 or 2009 our surveys. Overlapping firms is the number of firms in the sample listed on the indicated Bovespa levels for firms that responded two or more surveys (for "overlap" rows, at first survey year).

Number of firms	**Regular**	**Level I**	**Level II**	**Novo Mercado**
		2004		
All listed firms	316 (83%)	37 (10%)	10 (2%)	18 (5%)
BPF firms	260 (83%)	30 (9%)	8 (3%)	15 (5%)
BPF Sample	56 (67%)	20 (24%)	2 (3%)	5 (6%)
Regression Sample	45(69%)	12(18%)	3(5%)	5(8%)
		2006		
All listed firms	293 (68%)	40 (9%)	18 (4%)	82 (19%)
BPF	159 (55%)	36 (12%)	17 (6%)	78 (27%)
Descriptive Sample	51 (35%)	22 (16%)	12 (9%)	56 (40%)
Regression Sample	37(44%)	12(14%)	7(8%)	28(33%)
		2009		
All listed firms	263 (62%)	37 (9%)	19 (5%)	103 (24%)
BPF	160 (52%)	32 (10%)	18 (6%)	96 (31%)
Descriptive Sample	43 (32%)	23 (17%)	9 (6%)	61 (45%)
Regression Sample	34(31%)	13(12%)	8(7%)	53(49%)
		Overlapping Firms (BPF sample)		
2004 & 2006	19 (53%)	12 (33%)	1 (3%)	4 (11%)
2004 & 2009	22 (27%)	14 (17%)	6 (7%)	39 (48%)
2006 & 2009	16 (55%)	7 (24%)	1 (3%)	5 (17%)
all 3 surveys	12 (55%)	5 (23%)	1 (5%)	4 (18%)

Table 3. Description of Indices and Elements

Description of indices and their elements, and average for each element in 2004, 2006 and 2009. Each component assumes either value one if criterion is satisfied or zero, otherwise. Indices are computed as average of elements of that index, except for Related Party Transaction (RPT) index. RPT index has five elements, and is defined to equal 1 if RPTs are forbidden in the bylaws, and 0.8 if RPTs are not forbidden but do not exist. If RPTs exist, RPT index = (sum of remaining three elements)/5. * indicates element that is required for listing on Novo Mercado or Level 2.

		Mean		
	Board Independence Subindex	**2004**	**2006**	**2009**
*BdIn.1	Board includes one or more independent directors	0.66	0.87	0.85
BdIn.2	Board has at least 30% independent directors	0.41	0.52	0.46
BdIn.3	Board has at least 50% independent directors	0.16	0.19	0.20
BdIn.4	CEO is NOT chairman of the board	0.70	0.70	0.75
	Audit Committee and Fiscal Board Subindex			
BdCm.1	Audit committee exists	0.16	0.28	0.33
BdCm.2	Permanent or near-permanent fiscal board exists	0.66	0.44	0.49
BdCm3	Company has either permanent fiscal board or audit committee which includes minority shareholder representative	0.41	0.50	0.51
	Ownership Index			
Ow.1	Fraction of common shares owned by largest shareholder	0.60	0.50	0.51
Ow.2	1.5*{[(common shares)/(common shares + preferred shares)] – 1/3}	0.40	0.62	0.63
Ow.3	Ownership parity = (1 – wedge). Wedge = (fraction of voting shares owned by largest owner) - (fraction of econ. ownership by largest owner). Econ. ownership by largest shareholder = (common + preferred shares owned)/(total common + preferred shares)	0.81	0.88	0.89
Ow.4	ln (no. of shareholders in control group). If firm has shareholder agreement, number of members of the agreement. If not, no. of 5% shareholders who together hold 50% of common shares. If no control group, or no agreement and all 5% shareholders hold < 50% of common shares, assume = 10	0.26	0.35	0.39
Ow.5	Firm has one or more outside 5% shareholders (the disclosure threshold)	0.60	0.50	0.59
	Board Procedure Index			
Pr.1	Firm had > 4 physical board meetings in last year	0.81	0.76	0.74
Pr.2	Firm has system to evaluate CEO performance	0.33	0.37	0.53
Pr.3	Firm has system to evaluate other executives	0.40	0.52	0.66
Pr.4	Board receives materials in advance of meeting	0.92	0.94	0.97
Pr.5	Firm has code of ethics	0.52	0.69	0.78
Pr.6	Specific bylaw to govern board	0.55	0.55	0.60
	Minority Shareholder Rights Index			
Sh.1	Annual election of all directors	0.37	0.43	0.31
Sh.2	Minority shareholders elect a director	0.40	0.42	0.40
*Sh.3	Freezeout offer to minority shareholders based on shares' economic value	0.16	0.57	0.62
*Sh.4	Takeout rights on sale of control exceed legal minimum	0.34	0.65	0.65
*Sh.5	Arbitration of disputes with shareholders	0.08	0.51	0.56
Sh.6	Firm has no authorized capital or provides preemptive rights	0.06	0.09	0.04
*Sh.7	Free float ≥ 25 % of total shares	0.84	0.84	0.82
	Related Party Transaction Index			
Rt.1	Related party transaction are forbidden in the bylaws	0.00	0.05	0.18
Rt.2	Firm does not have loans to insiders, significant sales to or purchases from insiders, or rent real property to or from insiders	0.69	0.72	0.51
Rt.3	Board must approve conflict of interest transaction with controller	0.87	0.26	0.28
Rt.4	Non-interested directors must approve conflict of interest transaction with controller	0.64	0.09	0.14
Rt.5	Shareholders must approve conflict of interest transaction with controller	0.12	0.00	0.04
	Disclosure Index			
Di.1	Related party transactions disclosed to shareholders	0.71	0.97	0.90
Di.2	Management has regular meetings with analysts	0.63	0.85	0.84
*Di.3	Firm discloses annual agenda of corporate events	0.45	0.74	0.76
*Di.4	English language financial statements	0.51	0.74	0.74
*Di.5	Financial statements include statement of cash flows	0.59	0.77	0.96
*Di.6	Quarterly financial statements are consolidated	0.83	0.95	0.96
*Di.7	Financial statements in IAS or US GAAP	0.33	0.65	0.66
Di.8	MD&A discussion in financial statements	0.83	0.83	0.82
Di.9	Annual financial statements on firm website	0.69	0.88	0.96
Di.10	Quarterly financial statements on firm website	0.60	0.85	0.92
Di.11	Auditor does not provide non-audit services	0.82	0.79	0.72

Figure 1. Changes over time in BCGI and component indices

Figure shows mean values of each index in 2004, 2006, and 2009

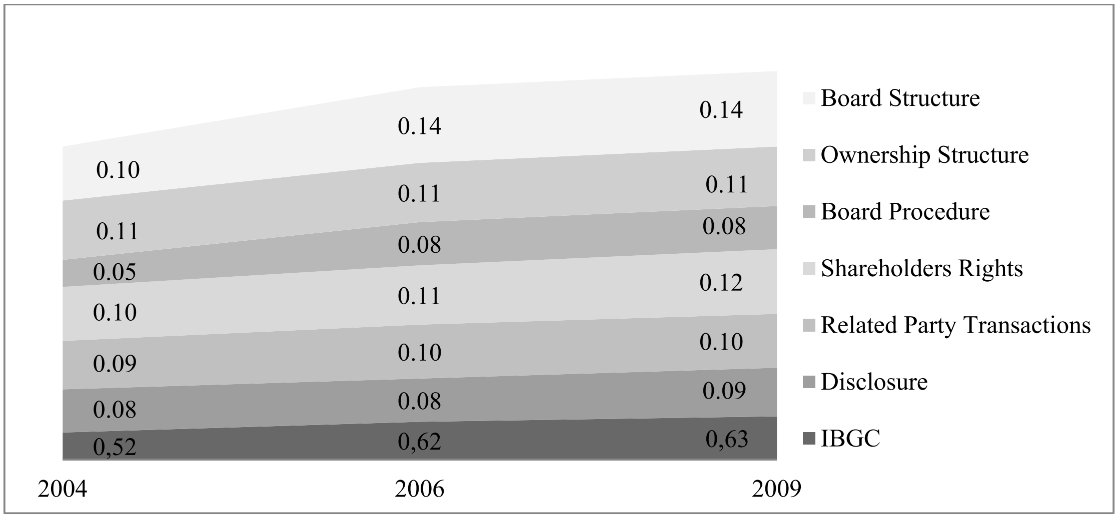

Table 4. Correlations between BCGI and component indices

Correlations between Brazilian Corporate Governance Index (BCGI) and its component indices for each survey year. Index complement is BCGI – (relevant indices). Significant coefficients, at 5% or less, are in **boldface**.

		Board Structure	Ownership Structure	Board Procedure	Shareholder Rights	Related Party Transactions	Disclosure
2004	***BCGI***	**0.59**	0.14	**0.64**	**0.60**	**0.45**	**0.79**
	Index complement	**0.33**	-0.05	**0.36**	**0.36**	0.15	**0.60**
	Board Structure		-0.09	**0.29**	**0.33**	0.02	**0.32**
	Ownership Structure			0.06	0.02	-0.08	-0.06
	Board Procedure				0.16	0.04	**0.44**
	Shareholders Rights					0.08	**0.40**
	Related Party						**0.34**
2006	***BCGI***	**0.52**	**0.31**	**0.46**	**0.75**	**0.44**	**0.67**
	Index complement	**0.28**	0.12	**0.21**	**0.52**	0.05	**0.47**
	Board Structure		-0.10	**0.37**	**0.11**	0.03	**0.17**
	Ownership Structure			-0.02	**0.29**	0.00	**0.14**
	Board Procedure				0.18	-0.13	**0.41**
	Shareholders Rights					**0.23**	**0.60**
	Related Party						0.02
2009	***BCGI***	**0.45**	**0.43**	**0.53**	**0.63**	**0.50**	**0.68**
	Index complement	**0.30**	**0.24**	**0.24**	**0.30**	0.03	**0.39**
	Board Structure		-0.10	**0.27**	**0.23**	0.03	**0.19**
	Ownership			0.00	**0.37**	0.13	**0.29**
	Board Procedure				0.06	0.05	**0.32**
	Shareholders Rights					-0.04	**0.63**
	Related Party						0.05

Table 5. Evolution of BCGI

Panel A: All Firms

Average value for the Brazilian Corporate Governance Index (BCGI) by year, its difference across years and markets in which firms are listed. Number of firms in the sample in parentheses. Significant differences, at 5% or less, are in **boldface**.

	2004	Difference 2004-2006	2006	Difference 2006-2009	2009	Difference 2004-2009
All Firms in sample	0.53 (83)	**0.09*** **	0.62 (141)	0.01	0.63 (136)	**0.10*** **
Novo Mercado & Level II (NM&L2)	0.71 (7)	-0.01	0.70 (68)	0.01	0.71 (70)	0.00
Regular & Level I (Reg&L1)	0.51 (76)	**0.03***	0.54 (73)	0.02	0.55 (66)	**0.04****
Difference in means (NM&L2 vs. Reg&L1)	**0.20*****		**0.17*****		**0.15*****	

Panel B: Only Overlapping Firms

Average value BCGI by year for firms that responded the survey in more than one year. Number of firms (in parenthesis) corresponds to the number of firms that responded the two surveys and (except for last row) did not migrate from a Reg&L1 to a NM&L2 listing. Last row includes only migrating firms. Significant differences, at 5% or less, are in **boldface**.

	2004 & 2006 overlap			2006 & 2009 overlap			2004 & 2009 overlap		
	2004	**2006**	**Difference**	**2006**	**2009**	**difference**	**2004**	**2009**	**difference**
All Firms	0.54	0.60	**0.06***	0.63	0.64	0.01	0.55	0.63	**0.08****
	(36)			(81)			(29)		
NM&L2 in both years	0.71	0.75	0.04	0.70	0.69	-0.01	0.72	0.77	0.05
	(5)			(45)			(6)		
Reg&L1 in both years	0.50	0.54	0.04	0.54	0.57	0.03	0.51	0.57	**0.06***
	(27)			(35)			(21)		
Migrating firms	0.61	0.62	0.01	0.69	0.71	0.02	0.72	0.73	0.01
	(4)			(1)			(2)		

*, **, and *** indicate significance levels at 10%, 5%, and 1% levels **(in boldface)**.

Table 6. Evolution of corporate governance Index

Panel A: All Firms

The sample consists of 83 Brazilian private firms in 2004, 141 in 2006 and 136 in 2009.

	2004	Difference 2004-2006	2006	Difference 2006-09	2009	Difference 2004-2009
Board Structure	0.45	0.05	0.50	-0.01	0.51	**0.06****
Board independence	0.48	**0.09****	0.57	-0.01	0.56	**0.08****
Audit committee and fiscal board	0.41	0.00	0.41	0.04	0.44	0.03
Ownership Structure	0.53	**0.06*****	0.59	0.01	0.60	**0.07*****
Board Procedure	0.59	**0.05***	0.64	**0.07****	0.71	**0.12*****
Minority Shareholder Rights	0.32	**0.18*****	0.50	-0.02	0.49	**0.17*****
Related Party Transactions	0.65	0.00	0.65	-0.01	0.64	-0.01
Disclosure	0.63	**0.19*****	0.82	0.02	0.84	**0.21*****

Panel B: By Listing Levels

Sample is same as panel A. Evolution of corporate governance index by listing levels.

	2004	Difference 2004-2006	2006	Difference 2006-09	2009	Difference 2004-2009
Regular Market and Level I						
Board Structure	0.44	0.05	0.49	0.01	0.50	**0.06***
Board independence	0.47	0.04	0.51	0.01	0.52	0.05
Audit committee and fiscal board	0.40	0.05	0.45	0.02	0.47	0.07
Ownership Structure	0.53	-0.01	0.52	-0.02	0.50	-0.03
Board Procedure	0.58	0.03	0.61	**0.09****	0.70	**0.12*****
Minority Shareholder Rights	0.28	0.03	0.31	-0.03	0.28	0.00
Related Party Transactions	0.65	-0.03	0.62	0.01	0.63	-0.02
Disclosure	0.61	**0.07****	0.68	0.03	0.71	**0.10*****
Novo Mercado and Level II						
Board Structure	0.59	-0.08	0.51	0.01	0.52	-0.07
Board independence	0.64	-0.01	0.63	-0.03	0.60	-0.04
Audit committee and fiscal board	0.52	-0.16	0.36	0.06	0.42	-0.10
Ownership Structure	0.60	0.06	0.66	0.03	0.69	0.09
Board procedure	0.69	-0.02	0.67	0.06	0.73	0.04
Shareholder rights	0.82	-0.11	0.71	-0.03	0.68	-0.14
Related party transactions	0.66	0.03	0.69	-0.04	0.65	-0.01
Disclosure	0.92	0.05	0.97	-0.01	0.97	0.05

*, **, and *** indicate significance levels at 10%, 5%, and 1% levels **(in boldface)**.

Table 7. BCGI-non-NM and BCGI-NM across years and markets

Panel A. "BCGI-non-NM" (26 elements *not* required for Novo Mercado)

Evolution of BCGI-non-NM Index (calculated by removing from BCGI the 10 elements that are required or Novo Mercado listing). Required elements are shown in Table 3.

	2004	Difference 2004-06	2006	Difference 2006-09	2009	Difference 2004-09
All Firms	0.52 (83)	**0.04****	0.56 (141)	0.00	0.57 (136)	**0.05****
NM&L2	0.62 (7)	-0.03	0.59 (68)	-0.01	0.61 (70)	-0.01
Reg&L1	0.51 (76)	0.03	0.54 (73)	0.01	0.54 (66)	0.03
Difference NM&L2 vs Reg&L1	**0.11*****		**0.05*****		**0.07****	

Panel B. "BCGI-NM" (10 elements required for Novo Mercado)

	2004	Difference 2004-06	2006	Difference 2006-09	2009	Difference 2004-09
All Firms	0.48 (83)	**0.27*****	0.75 (141)	0.03	0.78 (136)	**0.30*****
NM&L2	1.00 (7)	0.00	1.00 (68)	0.00	1.00 (70)	0.00
Reg&L1	0.43 (76)	**0.09****	0.52 (73)	0.03	0.55 (66)	**0.12*****
Difference NM&L2 vs N1&R	**0.57*****		**0.48*****		**0.45*****	

*, **, and *** indicate significance levels at 10%, 5%, and 1% levels **(in boldface)**.

Table 8. Elements within BCGI-NM: adoption by Reg&L1 firms

		2004	2006	2009
BdIn1	Board includes one or more independent directors	0.63	0.74	0.70
Sh3	Freezeout offer to minority shareholders based on shares' economic value	0.08	0.18	0.21
Sh4	Takeout rights on sale of control exceed legal minimum	0.28	0.33	0.27
Sh5	Arbitration of disputes with shareholders	0.00	0.05	0.09
Sh7	Free float ≥ 25 % of total shares	0.83	0.70	0.64
Di1	Related party transactions disclosed to shareholders	0.68	0.95	0.80
Di4	English language financial statements	0.39	0.49	0.52
Di5	Financial statements include statement of cash flows	0.46	0.49	0.47
Di6	Quarterly financial statements are consolidated	0.55	0.55	0.92
Di7	Financial statements in IAS or US GAAP	0.82	0.90	0.92

Table 9. Comparison of NM&L2 and L1&RM across indices and years

Evolution of sub-indices and differences between Novo Mercado/ Level II and Level I/ Regular Market firms.

		NM&L2	Reg&L1	Difference
Board Structure	2004	0.59	0.44	**0.15*****
	2006	0.51	0.49	0.02
	2009	0.52	0.50	0.02
Board independence	2004	0.64	0.47	**0.17*****
	2006	0.63	0.51	**0.08*****
	2009	0.60	0.52	**0.08***
Audit committee and fiscal board	2004	0.52	0.40	0.12
	2006	0.36	0.45	-0.09
	2009	0.42	0.47	-0.05
Ownership	2004	0.60	0.53	**0.07***
	2006	0.66	0.52	**0.14*****
	2009	0.69	0.50	**0.19*****
Board procedure	2004	0.69	0.58	0.11
	2006	0.67	0.61	**0.06***
	2009	0.73	0.70	0.03
Shareholder rights	2004	0.82	0.28	**0.54*****
	2006	0.71	0.31	**0.40*****
	2009	0.68	0.28	**0.40*****
Related party transactions	2004	0.66	0.65	0.01
	2006	0.69	0.62	0.07
	2009	0.65	0.63	0.02
Disclosure	2004	0.92	0.61	**0.31*****
	2006	0.97	0.68	**0.29*****
	2009	0.97	0.71	**0.26*****

*, **, and *** indicate significance levels at 10%, 5%, and 1% levels **(in boldface)**.

Table 10. Private Equity and Venture Capital Effect

Brazilian Corporate Governance Index average scores for IPO firms in the 2009 survey, divided into PEVC sponsored (24 firms) and non-sponsored (28 firms).

	BCGI	Board Structure	Ownership Structure	Board procedure	Shareholder rights	Related party transactions	Disclosure
PEVC	0.69	0.50	0.65	0.78	0.64	0.65	0.95
Non PEVC	0.66	0.47	0.68	0.57	0.65	0.65	0.96
Difference	0.03	0.03	-0.03	**0.21*****	-0.01	0.00	-0.01

Table 11. Non-governance Variables

Table describes and provides summary statistics for the principal non-governance variables used in this paper. Sample is 59 Brazilian private firms with governance data for 2004, 76 firms for 2006, and 101 firms for 2009, with sufficient data to compute Tobin's q and covariates. We exclude financial firms. Data is from Economatica unless otherwise stated. Tobin's q is measured at year ends. Monetary amounts in millions of Brazilian Reais.

Panel A. Variable definitions

Tobin's *q*	Computed as (book value of debt + market value of common and preferred shares)/(book value of assets). Market value is based on last trade during the year for firms with less than daily trading.
Assets	Total assets
Book Leverage	Total liabilities/(total assets)
Years listed	Number of years since original listing (as of 2006)
Sales growth	Arithmetic average growth
PPE-to-sales	Ratio of property, plant and equipment to sales.
Net income-to-assets	Ratio of net income to assets.
EBIT-to-sales	Ratio of earnings before income and taxes to sales.
Share turnover	Common + preferred shares traded/(common + preferred shares)
Ownership	Percentage share ownership by largest shareholder.
State ownership	Fractional ownership by the state
Business group dummy	1 if firm belongs to business group in year t, 0 otherwise.
ADR dummy	1 if firm has issued ADRs in the US; 0 otherwise.
Industry dummy variables	8 industry groups, plus residual *other* category for total of 9 groups.

Panel B. Summary Statistics

Variable	Mean	Median	Std. Dev.	Minimum	Maximum
BCGI	6.10	6.31	1.36	2.01	9.01
BCGI-NM	7.20	7.66	2.99	0.00	10.00
BCGI-non-NM	3.42	3.53	0.75	0.89	5.08
Tobin's *q*	1.39	0.81	3.60	0.00	38.00
***Ln*(Tobin's *q*)**	-0.22	-0.21	0.93	-2.65	3.64
Ln(assets)	13.94	13.93	1.97	7.47	19.96
Leverage	0.42	0.27	1.72	0.00	29.56
Years listed	2.28	2.39	0.92	0.00	3.83
Sales growth	0.69	0.80	0.56	-1.00	2.38
PPE/sales	0.88	0.41	1.47	0.01	8.68
Net income/assets	0.03	0.04	0.14	-0.97	0.53
EBIT/sales	0.15	0.08	0.58	-1.14	5.00
Share turnover	0.44	0.24	0.55	0.00	3.37
Ownership	0.52	0.52	0.27	0.00	1.00
State ownership	0.02	0.00	0.06	0.00	0.34
Business group dummy	0.11	0.00	0.31	0.00	1.00
ADR dummy	0.17	0.00	0.37	0.00	1.00

Table 12. Which rules predict Tobin's *q*: Full sample

Table shows coefficients for pooled OLS and firm random effects (RE) regressions of ln(Tobin's *q*) on corporate governance indices and covariates for 146 non-financial Brazilian private firms which responded to one or more of the 2004, 2006, and 2009 surveys. Indices are defined in text. Observations are excluded as outliers if a studentized residual from regressing *ln*(Tobin's *q*) on governance index (year-by-year for panel data) > ±1.96. All regressions include constant term and year dummies. *t*-statistics with firm clusters are in parentheses.

	(1) Pooled	(2) RE	(3) Pooled	(4) RE	(5) Pooled	(6) RE	(7) Pooled	(8) RE
Overall Index (BCGI)	**0.106*** (3.16)**	**0.114*** (3.03)**						
Non-Novo Mercado Index			0.027 (1.02)	0.025 (0.85)			0.013 (0.49)	0.008 (0.30)
Novo Mercado Index					**0.118*** (3.56)**	**0.124*** (3.30)**	**0.115*** (3.44)**	**0.122*** (3.35)**
Years Listed	**-0.134*** (-3.38)**	**-0.134*** (-3.52)**	**-0.148*** (-3.62)**	**-0.154*** (-3.91)**	**-0.104** (-2.51)**	**-0.099** (-2.46)**	**-0.104** (-2.53)**	**-0.100** (-2.50)**
Ln(Assets)	-0.025 (-1.05)	-0.039* (-1.65)	-0.013 (-0.55)	-0.027 (-1.15)	-0.023 (-0.95)	-0.038* (-1.65)	-0.024 (-0.98)	-0.038* (-1.65)
Book Leverage	**0.422*** (7.41)**	**0.362*** (6.08)**	**0.408*** (6.88)**	**0.347*** (5.19)**	**0.426*** (7.56)**	**0.368*** (6.53)**	**0.427*** (7.60)**	**0.368*** (6.50)**
Sales Growth (3 years)	0.017 (0.29)	0.033 (0.64)	0.036 (0.58)	0.050 (0.92)	0.011 (0.20)	0.041 (0.83)	0.010 (0.17)	0.039 (0.79)
PPE –to-sales	-0.013 (-1.20)	-0.015 (-1.35)	-0.011 (-1.01)	-0.013 (-1.14)	-0.014 (-1.32)	-0.014 (-1.35)	-0.015 (-1.34)	-0.015 (-1.36)
Net Income-to-Assets	0.682** (1.98)	0.347 (1.40)	0.648* (1.88)	0.319 (1.32)	0.655* (1.91)	0.328 (1.36)	0.667* (1.94)	0.332 (1.38)
EBIT-to-Sales	**0.006*** (3.23)**	**0.006*** (3.37)**	**0.006*** (2.99)**	**0.006*** (3.07)**	**0.007*** (3.34)**	**0.007*** (3.35)**	**0.007*** (3.35)**	**0.007*** (3.35)**
Share Turnover	0.039 (0.87)	0.031 (0.81)	0.075* (1.66)	0.057 (1.29)	0.029 (0.64)	0.018 (0.45)	0.028 (0.61)	0.018 (0.44)
Inside Ownership	-0.027 (-0.32)	0.005 (0.06)	-0.079 (-0.93)	-0.056 (-0.65)	-0.030 (-0.35)	0.010 (0.11)	-0.026 (-0.29)	0.012 (0.13)
ADR	**0.168** (2.03)**	**0.207** (2.55)**	**0.177** (2.14)**	**0.213*** (2.61)**	**0.167** (2.06)**	**0.203** (2.56)**	**0.168** (2.06)**	**0.204** (2.55)**
State Ownership	-0.168 (-0.46)	-0.079 (-0.25)	-0.044 (-0.12)	0.043 (0.13)	-0.051 (-0.13)	0.063 (0.19)	-0.078 (-0.20)	0.046 (0.14)
Business Group	**-0.200** (-2.21)**	**-0.163** (-1.97)**	**-0.208** (-2.29)**	**-0.161* (-1.93)**	**-0.181** (-2.01)**	**-0.138* (-1.66)**	**-0.185** (-2.03)**	**-0.141* (-1.68)**
Observations	236	236	236	236	236	236	236	236
Median RE λ		0.3285		0.3370		0.3487		0.3495
R^2	0.3536	0.4043	0.3184	0.3702	0.3559	0.4061	0.3536	0.4068

*, **, and *** indicate significance levels at 10%, 5%, and 1% levels **(in boldface)**.

Table 13: Which rules predict Tobin's *q*: Subsample results

Table shows coefficients for pooled OLS and firm random effects (RE) regressions of ln(Tobin's *q*) on corporate governance indices and covariates (coefficients omitted) for 146 non-financial Brazilian private firms which responded to one or more of the 2004, 2006, and 2009 surveys. Indices are defined in text. Observations are excluded as outliers if a studentized residual from regressing *ln*(Tobin's *q*) on governance index (year-by-year for panel data) > ±1.96. All regressions include constant term and year dummies. *t*-statistics with firm clusters are in parentheses.

Panel A: Regular and Level I Firms

	(1) Pooled	(2) RE	(3) Pooled	(4) RE	(5) Pooled	(6) RE	(7) Pooled	(8) RE
Overall Index (BCGI)	**0.108**** **(2.44)**	**0.116**** **(2.56)**						
Non-Novo Mercado Index			0.046 (1.32)	0.047 (1.38)			0.023 (0.66)	0.025 (0.74)
Novo Mercado Index					**0.109**** **(2.28)**	**0.106**** **(2.15)**	**0.100**** **(2.06)**	**0.096**** **(1.96)**
Covariates, constant	Y	Y	Y	Y	Y	Y	Y	Y
Observations	144	144	144	144	144	144	144	144
Median RE λ		0.1641		0.1699		0.1855		0.1881
R-squared	0.2912	0.3963	0.2560	0.3670	0.2796	0.3862	0.2761	0.3882

Panel B: Novo Mercado and Level II Firms

	(1) Pooled	(2) RE	(3) Pooled	(4) RE
Overall Index (BCGI)	0.033 (0.41)	-0.004 (-0.05)		
Non-Novo Mercado Index			-0.021 (-0.46)	-0.037 (-0.78)
Covariates, constant	Y	Y	Y	Y
Observations	92	92	92	92
Median RE λ		0.4513		0.4505
R-squared	0.3322	0.4720	0.3328	0.4721

*, **, and *** indicate significance levels at 10%, 5%, and 1% levels **(in boldface)**.