Center for Financial Stability (Argentina)
IADB Research Network Project

Corporate Governance and Ownership: 
Measurement and Impact on Corporate Performance 
and Dividend Policies in Argentina (*)

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Abstract

The goal of this paper is twofold. First, we put together, for the first time, quantitative measures 
on the quality of the corporate governance and the ownership structure for 65 non-financial 
listed companies in Argentina with information for 2003-2004. A wide array of official and 
private sources were used to this purpose. In a nutshell, companies seem to be poorly governed 
vis-à-vis international practices. In turn, ownership appears to be quite concentrated at the level 
of the largest ultimate shareholder, but separation of control and cash flow rights prevails in less 
than half of the companies, with pyramiding being the main mechanism to create such wedge. 
Second, we put to the test the predictions of recent theories linking those measures with 
corporate performance and dividend policy in 2000-2003. Concerning performance, the results 
point to a sizable and robust effect of our governance measure on both the return on assets and 
Tobin’s q. Moreover, the separation of control and cash flow rights for the largest shareholder –
an indicator of the incentives to expropriate minority shareholders- hinders performance 
directly, and also attenuates the beneficial impact from good governance rules. When it comes 
to dividends, only our governance measure appears to exert a positive and marked effect on the 
cash dividend-to-cash flow ratio. However, the estimates prove to be fragile to the inclusion of 
some additional controls correlated to governance.

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Introduction

Since the 1970s a growing literature has developed linking corporate policies and performance with governance and ownership structures. While profusely studied within academic circles, these models did not gain a more widespread popularity until very recently. Corporate scandals around the world in the last years contributed to raise awareness among managers, investors and regulators, and an effort is under way in many countries to produce quantitative measures on ownership and governance, and to estimate their impact on the value and decision making process of firms.

The present study builds on this line of research by providing empirical evidence for Argentina on the role of governance and ownership on corporate performance and dividend policies in 1996-2003, with particular emphasis in the last years (2000-2003). Guided by this goal, we have assembled a unique set of corporate governance and ownership indicators for the available sample of 65 non-financial listed firms. The Argentine stock market is poorly developed, and so are the standards and practices of corporate governance, so it is of interest to assess whether the agency and information problems usually studied and found in more active markets have also a bearing on the functioning of a much thinner one. Equally relevant is to stress the focus of this work around the recent financial crisis in 2001-2002. In the midst of a deep financial crisis, financial distress and uncertainty are exacerbated, making the emergence of conflicts of interests and opportunistic incentives much more likely to arise. Henceforth, financial crises are a particularly appealing study case to assess the disciplining role of corporate governance on company´s insiders.

The paper is structured as follows: In Section 1, we present our working hypotheses. In Section 2, we portray the situation of corporate governance and ownership structure in Argentina as of 2003-2004, relying on a set of measures specifically built for this study. In Section 3, we investigate the empirical link between such measures and corporate performance, with Section 4 devoted to the link with dividend policies. Some concluding remarks close.

1. Literature review and working hypotheses

1.1 Corporate governance, ownership and performance

A great deal of attention has been given to understanding how corporate governance and ownership structures affect firm’s performance. Corporate governance can influence a firm’s performance whenever a conflict of interest arises between management and shareholders and/or between controlling and minority shareholders. In the management-shareholders conflict, the agency problem manifests itself in management’s low effort and unproductive investments, usually known as perquisites. In the controlling-minority shareholders conflict, the controlling ones use their power to benefit themselves at the expense of the minority shareholders, in what is called expropriation or private benefits of control. The root of both conflicts is the fact that the manager in the first case, and the controlling shareholders in the second one, receive only a portion of the firm’s net revenue, while they fully appropriate the resources diverted. Thus, it is conceivable that,
in light of this incentive structure, insiders will maximize their (pecuniary and non-
pecuniary) utility even when the firm as a whole will not.

Of course, the ability to fulfill these goals is conditioned to the power insiders have in
the company’s decision process. Managers will enjoy more power as they are part or act
in connivance with the board and the controlling shareholders. In turn, the power of
controlling shareholders relies in how effectively they can manipulate board decisions
by the way of voting majorities and other means – distortionary policies will then be
heightened as the ratio between voting to cash flow rights is higher (see La Porta et al.
(1999) and Claessens, Djankov, Fan and Lang (1999)). Outsiders have two main
instruments to counterbalance this power: the enforcement of adequate corporate
governance standards and the quality of the regulatory and legal environment, which
should discourage detrimental actions by insiders and, once committed, allow affected
stakeholders to challenge them through corporate and judicial channels.

While a wedge between control and cash flow rights are likely to harm minority
shareholders and corporate valuation, Jensen and Meckling (1976) and Morck, Shleifer
and Vishny (1988) make the point that concentrated ownership may actually have an
ambiguous effect: on one hand, there may be a beneficial effect on performance and
valuation (the so-called “incentive effect”) in that higher cash flows rights in the hands
of a few shareholders tends to reduce the free riding problem associated to dispersed
ownership when it comes to monitor and punish opportunistic managers; on the other
hand, the negative effect (the “entrenchment effect”) above mentioned may take place
whenever there is high concentration of control rights and/or separation between control
and cash flow rights.

International evidence has flourished in the last few years. Claessens et al. (op.cit.),
Klapper and Love (2002) and La Porta, Lopez-de-Silanes, Shleifer and Vishny (2002)
are prominent efforts in proving the nexus between corporate governance and
performance using cross-country data, while other studies look at individual countries,
like the U.S. (see Gompers, Ishii and Metrick (2003)), Korea (see Black, Jang and Kim
(2003)) and Germany (see Drobetz, Schillhoffer and Zimmermann (2003)). By aiming
to analyze the relationship between corporate governance and ownership structure with
performance (as measured by the return on assets and the Tobin’s q) in Argentina in
2000-2003, the present work forms part of the latter country-level line of research.

1.2 Corporate governance, ownership and dividend policies

The reasons why firms pay dividends or not has being under a heated debate for the last
five decades since the seminal paper by Lintner (1956). This and many subsequent
pieces of research convincingly established that firms aim to avoid drastic changes in
dividends over time. However, early dividend theories did not warrant such preference
for smoothing cash distributions. As a matter of fact, Miller and Modigliani (1961)
advanced the idea that, when financial markets are frictionless, investors are indifferent
between dividends and capital gains as far as they can substitute one for the other in
order to reach their desired level of cash dividends by selling or buying stock. The
usually observed differences in tax rates between dividends and capital gains rose as the
first argument against this dividend irrelevance proposition. It was at this time that
Black (1976) coined the label “dividend puzzle” to illustrate the astonishing contrast
between a theoretical body claiming either the irrelevance or the disadvantage of paying dividends and the indisputable fact that firms pay relatively high and stable dividends.

Since the early 1980s, a host of papers offer alternative and appealing approaches to disentangle this enigma, most of them rooted in information asymmetries between firm insiders and outsiders and bounded rationality of the latter (see Baker et al. (2003) for a survey and Bebczuk (2003) for a textbook presentation). One of such recent hypotheses is that firms pay dividends to credibly signal their quality to the market in order to mitigate the undervaluation that arises in an adverse selection context. By paying high and stable dividends, high-quality companies might distinguish themselves from low-quality competitors for funds (see for example Miller and Rock (1985)), which may be unable to mimic the first group –unlike poor-performance companies, profitable firms can replace the diminished retained earnings with the more expensive external funds. Another strand of literature focuses on the agency problems between managers and shareholders, making the point that higher dividends partially prevent managers from committing moral hazard at the expense of shareholders, by reducing the free cash flow at the disposal of those running the firm (see Jensen (1986)). Finally, other scholars have put forward behavioral explanations that support the investor preference for cash dividends, such as the psychological (but not necessarily rational from a purely financial standpoint) loss derived from the principal reduction of selling stock or the regret of liquidating stock just before its price rises.

The main insight of the asymmetric information theories is that insiders may be reluctant to pay dividends to outsiders. The underlying argument is as follows: for a given amount of cash flows generated by the firm, the controlling shareholders and managers must choose between fully appropriating those funds for themselves—the above mentioned private benefits of control- or distributing them equally among the universe of shareholders according to their cash flow rights. Consequently, the testable prediction of this theoretical body are that dividend disbursements will be higher: (i) the better the corporate governance standards are (that is, the better the protection to minority shareholders), (ii) the higher the concentration of cash flow rights, (iii) the lower the control rights, and (iv) the lower the separation between control and cash flow rights.

At this point, it is imperative to establish the explanatory power of this theoretical framework for financially developed as opposed to emerging markets. The model implicit in the theories just described is one where: (a) Ownership is highly dispersed, and dividend recipients are different from the company’s decision-makers. In this context, dividend policy is mostly driven by market value considerations, in which dividends are a device to mitigate potential conflicts of interest between insiders and outsiders. The ultimate goal of the dividend policy is to maximize the stock price so as to reduce the cost of equity in future stock issues; (b) Capital markets are efficient, in that stock prices fully capture any value-related corporate change; and (c) Firms do not appear to face important financial constraints in the present, as they enjoy some freedom to determine how much to distribute from their net earnings, filling the gap with other sources of funding, such as external equity or debt.

Nevertheless, one must realize that some of these assumptions behind these theories (particularly, the signalling approach) may not be entirely realistic for an emerging market like Argentina that exhibit: (i) high ownership concentration (leading minority
shareholders not to be a primary concern for the company’s officers); (ii) negligible primary or issuance stock market (defusing the main incentive mechanism for improving governance, namely, the ability to issue more valuable stock in the future); (iii) a questionable degree of market efficiency (even though the evidence is mixed (see Fernandez (2002) and Bebczuk (1997)), causing dividend announcements potentially not to be clearly reflected in stock prices; and (iv) current financial constraints at the firm level (see Bebczuk, Fanelli and Pradelli (2002)), owing to which meeting the cash dividend demand from outside shareholders may mean that good investment opportunities have to be passed up in response to the funding shortage. In other words, retained earnings may have no close (not even more onerous) substitutes at all.

For these reasons, at the time of searching for the determinants of dividend payments, we will bear in mind that, besides governance and ownership considerations, dividend, financing and investment policies are likely to be intertwined, regardless of whether the companies are governed by an owner-manager or display dispersed ownership with separation of management and property.
2. Corporate Governance and Ownership Structure in Argentina

This section describes the current status of corporate governance and ownership structure in Argentina to motivate the subsequent analytical work. Even though we are initially reporting information on the total 103 listed companies as of November 2003, the usable sample for econometric purposes was substantially reduced because: (i) We excluded listed financial institutions -because of the specificity of their line of business and their heavy regulation- and firms in general without complete information. This leaves 65 firms; and (ii) We were able to gather complete ownership information was assembled for only 54 firms out of these 65 companies.

As a preliminary remark, it must be said that the Argentina stock market is quite undeveloped, as shown in the following table:

Table 1

<table>
<thead>
<tr>
<th>Capital market indicators in Argentina and selected regions</th>
<th>Average 1997-2001, in percentage of GDP, unless stated otherwise</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Argentina</td>
</tr>
<tr>
<td>Domestic equity issues</td>
<td>0.23</td>
</tr>
<tr>
<td>Foreign equity issues</td>
<td>0.32</td>
</tr>
<tr>
<td>Number of listed companies (2000)</td>
<td>129</td>
</tr>
<tr>
<td>Change in number of listed companies (in %, 1990-2000)</td>
<td>-30.2</td>
</tr>
<tr>
<td>Value traded</td>
<td>4.7</td>
</tr>
<tr>
<td>Market capitalization</td>
<td>30.8</td>
</tr>
</tbody>
</table>

Source: Own calculations based on data from the International Federation of Stock Exchanges.

As apparent from the table, Argentina ranks lowest compared to other regions in terms of key variables such as domestic equity issues, value traded, market capitalization, number of listed companies and fraction of delistings.

Historically, listed firms have displayed very poor standards of corporate governance in Argentina. Nevertheless, a host of changes took place since the nineties that affected corporate governance standards in a priori positive fashion: the renewed access to foreign capital flows, a moderate growth of domestic capital markets, the privatization of public utilities, the emergence of the institutional investors industry (led by private pension funds), the growing importance of foreign capital in the financial and nonfinancial sector, and the foreign listing of some domestic companies. These features
induced the Government to issue the so-called Transparency Decree (Decreto de Transparencia, No. 677/2001), where a number of governance guidelines inspired by international best practices and standards were established for listed companies. However, modest progress has been actually achieved so far in spite of the well-intended goals of the reform. It is worth noting that the virtual inactivity of the primary stock markets, both before and after the 2001-2002 crisis, creates no incentives for firms to upgrade their governance practices.

To dispose of a quantitative and mostly objective measure of corporate governance, we are constructing, for the first time, a Corporate Governance Index for listed companies in Argentina. The work closely relates to others in this direction (see OECD (1999), Fremond and Capaul (2002), COSRA (2000), Klapper and Love (2002), Standard and Poor’s (2002), Gompers et al. (op.cit.), Black et al.(op.cit.), Drobetz et al. (op.cit.)). The CGI was designed to encompass two complementary measures: (a) A Transparency and Disclosure Index (TDI) based on public information on each company, reflecting their norms of transparency and disclosure, which are a crucial element of corporate governance. This information comes from a number of public information sources (balance sheets, annual reports, filings with domestic and foreign regulatory agencies, security issuance prospects, company’s internet websites, and the like); (b) A complete Corporate Governance Index (CGI) based on a questionnaire sent out to each company to be answered either electronically or personally. The TDI was designed and completed between August and November 2003, while progress on the CGI has been hindered due to the extremely low rate of response on the part of surveyed firms and thus will not be used in what follows.¹ We are confident that the TDI is a comprehensive measure of corporate governance that will be highly correlated with the whole CGI, as happened in other cases (see for example Black et al. (2003)), and we will be using it as our measure of corporate governance hereafter. Furthermore, the TDI has three distinctive advantages in that: (i) it is clearly objective and documented, (ii) in a country like Argentina where disclosure requirements are low and mostly limited to accounting information, it reflects voluntary rather than mandatory information, and thus it may display a desirable variability across firms, and (iii) it is not affected by the frequent low response rate in company surveys, which with a small universe of listed nonfinancial firms in Argentina can be a unsolvable obstacle to perform econometric analysis as a result of the very small final sample. Conversely, it has the limitation that it does not allow to know about corporate governance features that the company has decided not to disclose openly.

Next we discuss the most salient features and results from the TDI based on our usable sample of 65 listed firms. The TDI tries to assess how transparent corporate information is and how protected against expropriation outside investors are, thus providing a measure about the balance of power between insiders and outsiders. The items cover a broad range of governance topics, including the functioning of the executive organs, the communication with outside stakeholders, and the flow of information required for a proper monitoring of the firm by minority shareholders. The TDI comprises a total of 32 binary items, for each of them, the company is given a value of 1 if there is partial or total public information, and a value of 0 otherwise. We further divide the Index into three subindices: Board, Disclosure, and Shareholders. The subindex Board measure the structure, procedures and compensation of Board and Top Management members.

¹ Questionnaires were sent out in early March 2004, and after many reminders, only 9 responses were obtained as of November 2004.
The subindex Disclosure measures the degree to which the company informs relevant corporate facts to outside stakeholders. Finally, the subindex Shareholders measures the quality of information regarding the compensation to minority shareholders. The structure of the TDI, and the percentage of positive entries on each item, are presented in Table 2.

Following the methodology outlined in the seminal paper by La Porta et al. (op.cit.), we have also investigated the ownership structure of listed Argentine firms. The task proved to be quite challenging as a result of data limitations. Companies are not legally required to disclose their ownership structures. Accordingly, we needed to rely on an array of dispersed resources, such as annual reports, issuance prospects, filings with local and foreign regulators, the company’s and other websites, and newspapers and business magazines. The field work was developed between September 2003 and May 2004.

La Porta et al. (op.cit.), Claessens et al. (op.cit) and subsequent related research look for the ultimate owners of each firm in order to establish the degree of ownership concentration and the difference between cash flow and voting rights—this difference being explained by the use of pyramiding, deviations from the one share-one vote rule, and cross-holdings. After going through the different chains of ownership, four main types of ultimate owners will come up: families, the government, and widely held financial or nonfinancial corporations.

In the case of Argentina, as state enterprises have been privatized and there are no domestic widely held companies, we distinguish two types of ultimate ownership, namely, national families and foreign firms. For each firm, starting from their direct shareholders, we trace back the shareholders of these shareholders until finding an Argentine family or individual, or a foreign firm. In the latter case, we did not identify the ultimate owners because it was not especially relevant for the present work.

We have defined the following variables: (a) Cash flow rights of the main ultimate shareholder; (b) Control rights of the main ultimate shareholder on the company; (c) Voting-to-Cash Flow rights of the main ultimate shareholder; (d) No one share-one vote rule; (e) Pyramiding; (f) Cross-holdings; (g) Domestically-owned company; and (h) Widely held company. For the precise definitions of these variables, as well as of the other variables used along the present work, the reader is referred to Table 3.

Summary statistics on the TDI and ownership variables appear in Table 4. Out of 100, the average TDI is just 39.1, with a minimum of 18.8 and a maximum of 84.4, revealing a low average quality of corporate governance. The three subindices are equally low on average, with Disclosure showing the highest level (49.4 out of 100) and Board the lowest (28.4 out of 100). Concerning ownership, it is evident that property is quite concentrated, with the largest ultimate shareholder owning, on average, the 63.1% of votes and 56.9% of cash flows. Ownership structures are relatively simple, and deviations of control and cash flow rights of 2 percentage points or more occur in just 22 out of the 54 companies under study. For these 22 firms, the control-to-cash flow ratio is 1.74 (1.30 for the 54 firms). It is known that this wedge can be attained through deviations from the one share-one vote rule, pyramiding and cross-holdings. In the

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2 The only exception is that they must inform about changes involving more that 5% of capital, but even in these cases they are not obligated to present information on owners that not participate in such particular transaction.
Argentine case, pyramiding has been found in 20 company and dual class shares in 6 companies, with no cross-holdings detected in the sample. Argentine families and individuals are the largest ultimate owners in 25 firms (46% of the sample), and foreign firms are the largest ultimate owners in the remaining 29 firms (54%). No widely held companies exist in Argentina.

Table 5 contains the frequency of some of the measures just discussed. The TDI distribution is heavily skewed to the left, with a thick tail, as 60% of the sample is below a ranking of 37.5. The opposite applies to the distributions of control and cash flow rights, where only the first decile is below 30%. Likewise, the control-to-cash flow ratio is above unity in only the last three deciles. The pairwise correlation among governance and ownership indicators can be seen in Table 6. The TDI is strongly correlated with each of the subindices, and have a weak and negative association with the control and cash flow rights variables (which, owing to the lack of separation between them, do have a high correlation to each other). The TDI and the control-to-cash flow ratio show a positive and significant, but rather low, correlation.

Section 3: Determinants of corporate performance

We now turn to the determinants of corporate performance. The period of analysis is 2000-2003. As the severe, full-blown financial crisis unraveled at the beginning of 2002 may have affected the behavior and performance of firms, the sample was broken down to run separate cross-section regressions for the whole period, and for the 2000-2001 and 2002-2003 subperiods.

We follow previous studies by taking the return on assets (henceforth, ROA) and Tobin’s q as indicators of performance. The return on assets is an accounting measure of profitability and efficiency, while Tobin’s q captures market expectations about future earnings. Even though one would expect some correlation between them, this may not be always the case—as a matter of fact, the simple correlation in our sample is positive but not significant. In line with the arguments offered in Section 1, the key explanatory variables are the TDI (with a positive expected sign), the cash flow rights (positive), the control rights of the largest shareholder (negative), and the control-to-cash flow ratio (negative).

We include a set of controls in the regressions. We expect firm age to have a negative effect on performance as long as older firms may poorly managed under archaic rules dictated by members of the founding family. Firm size may have a negative effect if size is correlated with the exhaustion of growth opportunities, but may contrarily have a positive impact whenever size is correlated with more diversification, more economies of scale and scope, more professionalized management, and less severe financial constraints. The leverage ratio (debt to assets) can, on one hand, improve performance by limiting managerial misbehavior and by serving as a signal of high quality, but, on the other hand, a high leverage may lead to asset substitution and underinvestment (see Weill (2003) and Bebczuk (2003, op. cit)). Sales growth is a proxy for the product

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3 The decision not to go back in time comes from the fact that our governance and ownership indicators reflect the situation as of 2003-2004. Even though these variables change slowly over time (and thus we are assuming that they are valid for the whole period 2000-2003), we cannot be certain that they are an adequate representation for the 1990s.
demand faced by the firm and its productivity. We also postulate that ADR issuers may have comparatively better performance driven by the need to compete for funds with foreign firms. Additionally, firms are classified into four broad sectors (industry, utilities, other services, and primary products) that vary in productive technology and international tradeability. We use lagged values from the two years previous to the sample period of the debt ratio and the sales growth rate as regressors.

Tables 7 and 8 present summary statistics for the additional controls and their simple correlations with ROA, q, and the governance and ownership variables. On a visual inspection, the correlation between ROA and TDI (0.31) is the only significant one. Also worth mentioning is the high correlation between ln(Assets) and TDI -0.62-. Since this gives rise to multicollinearity, preventing us from correctly estimating the independent contribution of each of them, in the reported regressions we have replaced ln(Assets) for a dummy variable that takes the value 1 if the company is in the highest 20% in terms of average total assets in 2000-2001, and 0 otherwise.

3.1 Baseline results

Tables 9 and 10 show the regression of ROA and q, respectively, against the TDI without adding additional controls, while in Tables 11 and 12 appear the regressions with such controls (except the ownership variables, which are included later on). The overall assessment is that the TDI has a positive and highly significant effect on both ROA and q –besides, the estimated coefficients remain reasonably stable across specifications and time periods. The quantitative effect is also remarkable: looking at the estimates for the entire 2000-2003 period with controls, for a firm with the average TDI (39.13), an increase of 10 points in its TDI to 49.13 would translate into a jump of 2.62 percentage point in its ROA, that is, an increase of 1.9 percentage point from the 2000-2003 average ROA (0.73%). Assuming a worst-to-best improvement in TDI (18.75 to 84.38), the ROA increase would amount to 3.58 percentage points. Repeating the exercise for q (whose 2000-2003 average is 0.89), the magnitudes are much more modest but still noticeable: a 10-point improvement in TDI would induce q to go up by 0.059 and a worst-to-best improvement by 0.38. For both ROA and q, the TDI estimates are statistically more significant in the 2000-2001 than in the 2002-2003 subperiod, although the coefficient do not change much. In principle, the lost explanatory power might be blamed on the noise brought about by the financial crisis in the latter subperiod.

No control variable reaches acceptable levels of significance in the ROA equations. In the q equations, conversely, the size dummy enters positively at 5% and the leverage ratio at 10%. For 2002-2003, the industry and primary product dummies also become significant, which may be explained by the boost in profitability linked to the steep peso devaluation —meanwhile sales growth enters with a difficult to rationalize negative sign.

3.2 Robustness checks

In what follows we carry out a battery of robustness checks to test the validity of the previous empirical findings. We start by running individual regressions, keeping the same control set as before, of each of the subindices and other alternative governance measures. As apparent from Table 13, Board and Disclosure, but not Shareholders, have a positive and significant loading in the ROA equation for the whole 2000-2003. The
coefficient on Disclosure is the highest (0.00056) and is similar to that of the overall TDI—the ones on Board and Shareholders are 0.00038 and 0.00014, respectively. Again, results seem to be much stronger in 2000-2001 than in 2002-2003, and, as a matter of fact, all coefficients are significant in the former two-year period but not in the latter. Since it is to be expected that most governance provisions are interrelated and have some degree of commonality, we also use the first principal component of the three subindices to minimize such overlapping. In this case, as when we take the median TDI, the estimates stay significant. The q regressions from Table 14 reveal that Board is the highest and most significant subindex and that the median TDI is the only one lacking significance across all time periods.

We substitute ROA and q for the return on equity and the return on sales as dependent variable in Table 15. The TDI estimate is still significant, but only in 2000-2001. In Table 16 and 17 we introduce several interaction terms. The square TDI seeks to capture a possible non-linear effect of TDI. Although the coefficient is negative, suggesting a positive but decreasing effect, it is only significant, at 10%, for 2000-2001. The TDI-Size interaction is intended to measure whether in bigger firms, where management complexity may a priori create more acute agency problems, the role of a good governance is reinforced. By the same token, good governance may be more valuable in older firms where founding shareholders or their relatives may exert an excessive, value-reducing power. Growing firms (as proxied by the growth of sales) may need adequate governance standards to enhance their access to financing and to avoid overinvestment. Finally, highly leveraged firms may, on one hand, use require a proper governance as a disciplining device to mitigate the incentives towards overinvestment and excessive risk-taking, but, on the other hand, they have a less prominent role as far as fixed financial obligations and the associated default risk may, by themselves, be enough to mitigate the conflicts of interest between large and minority shareholders. With the exception of a striking negative TDI-Sales growth interaction in the q regressions, none of these additional terms are significant for the whole period. The individual TDI significance is unchanged, except when interacted with age.

3.3 Endogeneity checks

A recurring concern with econometric studies on corporate governance and performance is the potential presence of endogeneity. Specifically, if there exists a casual positive link from performance to governance, the estimated coefficient on governance would be upward biased, thus rendering the previous results anything but reliable. Among other reasons, good performance may encourage the adoption of a better governance framework because: (i) Implementing governance reforms is costly, so only profitable companies are capable of affording the associated expenses; (ii) There may be a multiple equilibria problem at work, in which there is a group of low-performance/bad governance companies, whose insiders reap substantial private benefits of control and struggle to perpetuate the statu quo, and a second high-performance/good governance group of companies that are aware of and enjoy the benefits of good governance rules, and hence have the incentives to continue along this path.

The use of an instrumental variable and the running of a simultaneous equation model are two popular devices to deal with endogeneity. An instrumental variable is one that is correlated with the endogenous explanatory variable but not with the dependent
variable. Meeting such binding conditions in financial economic studies is frequently hard. However, we propose two possible options. The first one is a dummy with value 1 if the company has set an Audit Committee as of May 2004, and 0 otherwise. Unlike other governance provisions, the creation of the Audit Committee was imposed by law (through the Decree 677/2001 cited in the Introduction) but the requirement, due by May 2004, was only compulsory for big firms. Small firms (according to a classification dictated by Resolution 408/1993 of the Ministry of the Economy that establishes maximum levels of assets, sales and employees by sector) were dispensed. In principle, as the Audit Committee is clearly part of a good governance framework and its creation was legally forced (and thus, by definition, exogenous with respect to firm performance), it stands out as a nice instrumental variable. Nevertheless, its use casts some doubt as we realize that its correlation with the TDI, yet statistically significant, is rather low (0.32), as shown in Table 18. Moreover, Table 19 shows that 60% of the firms with below-average TDI has an Audit Committee, and 20% of the above-average TDI companies does not, reinforcing the impression that this may not as good an instrument as we hoped for. This means that firms choose their own governance regimes for reasons other than this particular legal duty. Anyway, as can be seen in Tables 20 and 21, we rerun the baseline regressions with this instrument in lieu of the TDI, without finding any significant coefficient.

Next, we postulate yet another instrument: a trading intensity variable, defined as the number of days the stock was traded in 2001-2003 as a proportion of total trading days in that period. This variable ranges from 0 to 1. As we should expect that companies with good corporate governance are more attractive to -and thus more actively traded by- outside investors, the positive nexus between trading and governance is evidence – actually, Table 18 shows that the correlation with TDI is 0.5. Likewise, any accounting measure of performance, like ROA, should be independent from the stock trading activity. The baseline regressions presented in Table 22 suggest that this instrumental variable helps to overcome the governance endogeneity criticism.

The independence of trading and q is perhaps more questionable than before, as the price of intensely traded stocks (and q) may be higher than that of less liquid stocks. Anyway, we first repeat, in Table 23, the baseline q regressions, without obtaining significant estimates. Then, we confront the potential endogeneity caveat by running a two-stage least square simultaneous equations model, that is, treating Trading as an endogenous variable. From Tables 24 (ROA regressions) and 25 (q regressions), we get significant coefficients in all cases with the exception of q in 2002-2003. We go back to our original regressions and apply this same technique on ROA and TDI (Table 26) and q and TDI (Table 27). Again, the estimations support the claim that endogeneity does not drive our econometric results.

3.4 Ownership and Performance

Resuming the discussion in Section 1, we now report the results involving ownership variables displayed in Tables 28 and 29, where we show the estimated coefficients on TDI and the following indicators for the largest ultimate shareholder: control rights, cash flow rights, the control-to-cash flow rights ratio, and the nationality. Most

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4 Note that the median of Trading Intensity is 0.44, indicating that many stocks listed in Argentina are quite illiquid.

5 Note, by the way, that the usable sample drops from 54 and 46 observations for ROA and q, respectively. As TDI remains significant after such change, these regressions provide an additional robustness check for governance.
coefficients for both ROA and q equations, and for different sample periods, turn out to be non significant –results do not change before changes in the set of additional regressors. The exception is the ratio of control to cash flow rights, which enter with the expected negative and significant sign in the crisis period of 2002-2003 for both performance measures. A plausible explanation for this finding is that the conflicts of interest among shareholders are accentuated at times of financial distress and economic slump. Furthermore, the reigning macroeconomic instability (inflation, devaluation, abrupt relative price changes, and the like) allows controlling shareholders to expropriate minority shareholders and other stakeholders more easily, as the ability to monitor the company and its managers is seriously undermined in a scenario where balance sheets and conventional analytical tools become less informative. In this sense, we also introduce a Default dummy, with value 1 if the company defaulted on its debt as a result of the 2002-2003 crisis (which was the case of 9 out of the 65 companies), and 0 otherwise. The incentive to self-dealing and other forms of expropriation is heightened under these circumstances, so we would predict a negative sign on Default. However, the estimation leads to reject any noticeable effect.

Interaction terms of ownership variables with TDI were included in Tables 30 and 31 to test whether the power of TDI as a disciplining tool has anything to do with the power of controlling shareholders. Two contrasting hypotheses are sensible: (a) Good governance is more valuable in firms with more powerful insiders, as it helps to restrict the abusive actions that these insiders would otherwise commit; (b) Good governance is less valuable in firms with more powerful insiders, as governance rules, no matter how good they are, are circumvented or plainly disregarded by controlling shareholders. Regression outcomes lend some support to hypothesis (b) in that the separation of control and cash flow rights attenuate, but does not neutralize whatsoever, the impact of TDI on both ROA and q. For instance, in the third column of Table 30 (ROA in 2002-2003), the overall TDI loading goes down to 0.00048 (for a control-to-cash flow ratio of 1.74, the average for the 22 firms whose ratio exceeds 1.02) from 0.00058 (for no separation).

Section 4: Determinants of dividend policies

4.1 Summary statistics and additional regressors

We start by showing some summary measures of dividend activity, namely, the ratios of cash dividends to cash flow, earnings, and sales, even though we will use the first one as our dependent variable in the subsequent econometric work for it best reflects the decision to compensate shareholders out of the available firm revenues. From a visual inspection at Table 32, it can be observed that dividend ratios were more or less stable in 1996-2000, increased in 2001, and then shrank in 2002-2003. The change in 2001 is allegedly attributable to the financial crisis initiated in 2001 that induced firms to pay high dividends as a means of allowing shareholders to cover themselves from the expected devaluation and the fragility of the banking system by buying external assets. In turn, during 2002-2003, in the context of a marked contraction in sales and the balance sheet problems derived from the currency crisis, companies seem to have partially adjusted through dividend cuts. For comparison purposes, Faccio et al. (2001)

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6 It must be noted that, due to multicolinearity, the regressions do not include the ownership variables but their interactions with TDI.

show that, for 14 European and Asian countries in 1992-1996, the dividend to earnings, cash flow and sales ratios were 34%, 23.4% and 3.6%. For Argentina, in 1996-2003, these values were 31.9%, 12.9%, and 3.4%.

Our empirical strategy will consist in first identified some fundamental factors explaining dividends for the whole period 1996-2003 to subsequently concentrated in the 2000-2003 subsample, including at this stage additional governance and ownership variables. According to any standard textbook corporate model, we hypothesize the core explanatory variables should encompass: (a) The return on assets: The higher the net revenues, we should expect more dividends to be disbursed; (b) Tobin’s q: The better the future growth opportunities, the less convenient is to pay dividends whenever the firm has financial constraints to access to external sources of funds; (c) Debt to assets: Highly levered companies may prefer to pay less dividends (increasing equity financing) in order to contain default risk; (d) Logarithm of assets: Bigger firms tend to be more diversified and thus less risky, to have a more fluid access to credit and to have less investment opportunities, thus making them more willing to pay dividends.

In addition, we test the effect of the following empirical counterparts of variables put forward by modern dividend theories: (e) The lagged dividend to cash flow ratio: from the empirical finding by Lintner (op.cit.) and the more recent signalling models, we should presume that firms attempt to maintain stable dividends, creating a persistent pattern over time; the host of governance and ownership variables -whose predicted impact was discussed in Section 1.2-, namely: (f) The quality of corporate governance standards, (g) The cash flow rights of the largest shareholder, (h) The control rights of the largest shareholder, and (i) The separation between control and cash flow rights; (j) The nationality of the largest shareholder: It is sometimes presumed that foreign-owned firms are likely to have less stringent financial constraints and to overcome more easily situations of financial distress. This, coupled with an alleged desire of recovering the investment in as short a period as possible in macroeconomic and politically unstable countries, may induce these firms to pay higher dividends than domestically-owned companies; (k) A dummy variable for ADRs (American Depositary Receipts) issuers: Firms cross-listing in the U.S. may be induced to mimic the dividend policies of those firms they compete with for funds in foreign markets; (l) A default dummy, with value 1 if the company defaulted on its debt as a result of the 2002-2003 crisis, and 0 otherwise. The default should have a negative effect on dividends: whether controlling shareholders retain their power in the post-default scenario or covenants and legal mechanisms are in place to protect unpaid stakeholders, dividends are likely to be cut down. In the first case, controlling shareholders may feel themselves even more encouraged to expropriate minority shareholders and creditors, while in the second case, dividends will be reduced so as to meet debt obligations. Along with these controls, we add year and sector dummies.

Summary statistics on these explanatory variables are shown in Table 33. It must be highlighted that, while the return on assets strongly decreased since 2002, Tobin’s q went up, which should be associated to the bullish stock market in 2002-2003. Equally

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8 As explained in footnote 6, we are not certain that corporate and ownership characteristics in 2003-2004 are representative for the 1990s.
9 Actually, absent bankruptcy costs, firms find debt attractive as an insurance device, as it enables more risk sharing with creditors instead of forcing shareholders to absorb an expected negative shock entirely by themselves.
10 ADR issuance might also be an indicator of lax financial constraints because of the positive signal of being listed in more regulated foreign markets.
shocking is the increase in the leverage ratio in 2002, at the time that bank credit was being cut. In this case, the explanation has most likely to do with the revaluation in pesos of the dollar-denominated debt after the currency crisis. Tables 34 and 35 splits the whole sample into dividend payers and non-payers to test whether means are different. In line with some of the theoretical predictions, from Table 34 it is apparent that dividend-paying companies are larger and more profitable, and less levered, while Table 35 shows that they have better corporate governance –the mean difference tests for the other variables are inconclusive.

4.2 Econometric results

Table 36 presents the baseline econometric results for 1996-2003. Since the dependent variable (cash dividends to cash flow) is censored at zero, a pooled Tobit procedure was followed in the estimation. Size, leverage, q and ROA yield the expected signs at conventional confidence levels, both when they enter individually (except q) or jointly. Time dummies are significantly negative for 2002 and 2003, and utilities appear to pay more dividends than other sectors. As usual, endogeneity may cloud the reliability of the most econometric work. In principle, this may not be a critical issue here, since, at least a priori, dividend payments are decided by the firm right after each fiscal year has ended and when balance sheet variables are known. From this timeline structure, it is unlikely that year t dividends could cause changes in realized variables, such as earnings, sales, and the like. However, the leverage ratio and Tobin’s q may be suspected of endogeneity under certain conditions. Concerning leverage, this may be an endogenous variable if firms set in advance a stable dividend target to meet and adjust their debt ratio accordingly. This drawback can be ruled out by noting that, if that were the case, an expected positive bias should be expected between debt and dividends, while most regressions yield a negative and significant negative sign on debt. Therefore, this negative effect of debt is most unlikely driven by the alleged endogeneity of debt.11 As for Tobin’s q, endogeneity may be present as long as investors have a preference for high dividends and correctly anticipate the payout to be announced after each fiscal year. Again, this positive bias is unlikely to be behind the negative sign encountered in the regressions. As can be seen in Table 37, neither debt or q lose explanatory power after being instrumented. Following most capital structure theories, debt is instruments with tangibility, assets and ROA, as well as sector dummies, while q is instrumented with assets, the standard deviation of ROA and sector dummies.12

In Table 38 we test whether firms prefer to keep stable dividends over time, finding favorable evidence after including alternatively the lagged dividend-to-cash flow ratio and a dividend payment dummy that takes the value 1 if the company paid any cash dividends in the previous year, and 0 otherwise.

Before introducing our indicators of corporate governance and ownership, we check in Table 39 the validity of our previous model for the shortened sample 2000-2003, which confirms the robustness of the initial specification. Afterwards, we observe that the TDI enters with the predicted positive sign in the regressions reported in Table 40. Nevertheless, it is somewhat hard to claim an independent effect from TDI owing to the recurring problem of multicollinearity, which renders TDI to be non significant.

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11 This of course does not mean that endogeneity should be overlooked: even without knowing the direction and magnitude of the bias, it should be reminded that endogeneity of any one regressor may cause other regressors to have biased estimates unless no correlation exists among the whole set of independent variables.

12 Assets and ROA are excluded from this regression due to the ensuing multicollinearity.
whenever the whole control set is used in the estimation- the problem aggravates when
the controls are size and ROA, a result that should come as no surprise after the
discussion of Section 3. Focusing on the first column, where the only controls are the
time and sector dummies, the estimate suggests a sizable effect: a 10-point increase of
TDI brings about an increase of 0.128 in the dividend-to-cash flow ratio, implying a
twofold increase from the 1996-2003 average (0.129). Combined with the last comment
in this paragraph, this a priori large impact makes advisable to treat these results with
cautions. From Table 41, another striking result emerges: all TDI subindices are
significant –solely with time and sector controls- but Shareholders, the one that should
be most related to dividend policies. Finally, none of the ownership variable, as well as
the nationality and default dummies, appear to be significantly correlated to dividends.
Conclusions

The goal of this paper was twofold. First, we put together, for the first time, quantitative measures on the quality of the corporate governance and the ownership structure in 65 non-financial listed companies in Argentina with information for 2003-2004. A wide array of official and private sources were used to this purpose. In a nutshell, companies seem to be poorly governed vis-à-vis international practices. In turn, ownership appears to be quite concentrated at the level of the largest ultimate shareholder, but separation of control and cash flow rights prevails in less than half of the companies, with pyramiding being the main mechanism to create such wedge. Second, we put to the test the predictions of recent theories linking those measures with corporate performance and dividend policy in 2000-2003. Concerning performance, the results point to a sizable and robust effect of our governance measure on both the return on assets and Tobin’s q. Moreover, the separation of control and cash flow rights for the largest shareholder –an indicator of the incentives to expropriate minority shareholders- hinders performance directly, and also attenuates the beneficial impact from good governance rules. When it comes to dividends, only our governance measure appears to exert a positive and marked effect on the cash dividend-to-cash flow ratio. However, the estimates prove to be fragile to the inclusion of some additional controls correlated to governance.

Any policy recommendation emerging from this research should internalize that corporate governance upgrading entails the consideration of both the private and the public interest. Controlling shareholders will not be inclined in this direction unless the incremental benefits (acting as regular shareholders) outweigh the loss of their private benefits of control. The evidence reported here on the ROA-governance nexus should be hopefully taken into account by insiders. Less apparent are the benefits from higher q. Historically, stock issuance has been almost negligible in Argentina, so a topic for future research is whether stock prices and returns play any role at all in enhancing the access to market and bank debt.

But corporate governance is, at the same time, a public policy issue in that uninformed minority shareholders should be legally protected against expropriation. Raising awareness among investors and businesses about it is a first, obvious step that should be taken by the authorities to stimulate a cultural change in this area. Likewise, our poor TDI scores suggest that disclosure requirements frequently found in other emerging and developed markets should be put in place. Nevertheless, legal reforms that are not supported to some extent by the very companies that must apply those rules may not come to fruition –the mixed and rather disappointing outcome from the 2001 reforms in Argentina is a case in point. A compulsory, full-fledged regime of strict governance provisions may be self-defeating as long as some companies may ultimately decide to delist –delisting is another chronic problem of the Argentine stock exchange that forms part of the future research agenda. This conclusion comes from the observation that implementing a proper governance framework is costly and time-consuming, and some expected benefits may not easily materialize. Thus, a balance between the adequate protection of minority shareholders and the incentive structure of controlling shareholders should be attained in designing corporate governance reforms.
References


OECD (1999), Principles of Corporate Governance.


Table 2
Structure of the Transparency and Disclosure Index (TDI)

The Transparency and Disclosure Index (TDI) measures a broad set of corporate governance features for 65 listed firms in Argentina using public information in August 2003 to May 2004. Public sources include Annual Reports, fillings with national and foreign regulators, internet sources, and business publications. For each feature, the company is given a value 1 if there is partial or total public information, and 0 otherwise. The subindex Board measure the structure, procedures and compensation of Board and Top Management members. The subindex Disclosure measures the degree to which the company informs relevant corporate facts to outside stakeholders. Finally, the subindex Shareholders measures the quality of information regarding the compensation to minority shareholders.

<table>
<thead>
<tr>
<th>Item</th>
<th>% of firms with public information on each item</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Board structure and procedures</strong></td>
<td></td>
</tr>
<tr>
<td>Independency criteria for directors</td>
<td>73.8</td>
</tr>
<tr>
<td>Years in office of present Directors</td>
<td>18.5</td>
</tr>
<tr>
<td>Code of Conduct for Directors</td>
<td>6.2</td>
</tr>
<tr>
<td>Manager and director fees</td>
<td>52.3</td>
</tr>
<tr>
<td>Form of manager and director fee payment (cash, stock, stock options)</td>
<td>12.3</td>
</tr>
<tr>
<td>Rationale of manager and director fees</td>
<td>30.8</td>
</tr>
<tr>
<td>Information on whether manager and director fees are performance-based</td>
<td>26.2</td>
</tr>
<tr>
<td>Shareholdings of managers and directors</td>
<td>15.4</td>
</tr>
<tr>
<td>Number and percentage of independent directors</td>
<td>86.2</td>
</tr>
<tr>
<td>Details on the nomination process of new directors</td>
<td>12.3</td>
</tr>
<tr>
<td>Report on issues by dissident directors</td>
<td>0.0</td>
</tr>
<tr>
<td>Composition of the different Board committees</td>
<td>33.8</td>
</tr>
<tr>
<td>Details on activities of the different Board committees</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>B. Disclosure</strong></td>
<td></td>
</tr>
<tr>
<td>Bio of main company officers</td>
<td>13.8</td>
</tr>
<tr>
<td>Bio of Directors</td>
<td>20.0</td>
</tr>
<tr>
<td>Calendar of future events</td>
<td>3.1</td>
</tr>
<tr>
<td>English-translated corporate website</td>
<td>29.2</td>
</tr>
<tr>
<td>Financial indicators for the last 5 years</td>
<td>98.5</td>
</tr>
<tr>
<td>Strategic plan and projections for the following years</td>
<td>47.7</td>
</tr>
<tr>
<td>Publication of Board meeting resolutions</td>
<td>89.2</td>
</tr>
<tr>
<td>Publication of shareholders meeting resolutions</td>
<td>93.8</td>
</tr>
<tr>
<td>Details on the appointment process of new directors</td>
<td>10.8</td>
</tr>
<tr>
<td>Details on attendance of minority and controlling shareholders in shareholders’ meetings</td>
<td>10.8</td>
</tr>
<tr>
<td>Reports on issues raised by dissident shareholders</td>
<td>30.8</td>
</tr>
<tr>
<td>Year of hiring of the external auditor</td>
<td>96.9</td>
</tr>
<tr>
<td>Report of the external auditor</td>
<td>98.9</td>
</tr>
<tr>
<td><strong>C. Shareholders</strong></td>
<td></td>
</tr>
<tr>
<td>Details of corporate ownership (principal shareholders)</td>
<td>56.9</td>
</tr>
<tr>
<td>Type and amount of outstanding shares</td>
<td>98.5</td>
</tr>
<tr>
<td>Document on internal corporate governance standards</td>
<td>3.1</td>
</tr>
<tr>
<td>Dividend policy in the past 5 years</td>
<td>20.0</td>
</tr>
<tr>
<td>Projected dividend policy for the following years</td>
<td>27.7</td>
</tr>
<tr>
<td>Rationale of the past and/or future dividend policy</td>
<td>35.4</td>
</tr>
</tbody>
</table>

Source: Own elaboration from public sources.
### Variable Definitions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Corporate Governance Variables</strong></td>
<td></td>
</tr>
<tr>
<td>Transparency and Disclosure Index (TDI)</td>
<td>See Table 2</td>
</tr>
<tr>
<td>TDI-Board</td>
<td>See Table 2</td>
</tr>
<tr>
<td>TDI-Disclosure</td>
<td>See Table 2</td>
</tr>
<tr>
<td>TDI-Shareholders</td>
<td>See Table 2</td>
</tr>
<tr>
<td>Audit Committee Dummy</td>
<td>This variable takes the value 1 if the company set an Audit Committee as of May 2004, and 0 otherwise.</td>
</tr>
<tr>
<td>Trading Intensity</td>
<td>Number of days the stock was traded in 2001-2003 as a proportion of total trading days in that period. This variable ranges from 0 to 1.</td>
</tr>
<tr>
<td><strong>Corporate Ownership Variables</strong></td>
<td></td>
</tr>
<tr>
<td>Control rights of the main ultimate shareholder</td>
<td>It is the weakest link, in terms of voting rights, of the main ultimate shareholder along his control chain, based on a 20% cutoff (see the definition of Widely Held below)</td>
</tr>
<tr>
<td>Cash flow rights of the main ultimate shareholder</td>
<td>It is the product of all voting rights of the main ultimate shareholder along the control chain.</td>
</tr>
<tr>
<td>No one share-one vote rule dummy</td>
<td>This variable takes the value 1 if there are shares having higher voting power than others (at any link of the control chain) of the main ultimate shareholder, and 0 otherwise.</td>
</tr>
<tr>
<td>Pyramid dummy</td>
<td>This variable takes the value 1 if the main ultimate shareholder exerts its control through other companies along the control chain, and 0 otherwise.</td>
</tr>
<tr>
<td>Cross-holding dummy</td>
<td>This variable takes the value 1 if the company owns shares in its main ultimate shareholder or in firms that belong to his control chain, and 0 otherwise.</td>
</tr>
<tr>
<td>Domestically-owned dummy</td>
<td>This variable takes the value 1 if the main ultimate shareholder is an Argentine individual or family, and 0 if it is a company located abroad. Ultimate ownership of such foreign companies is not analyzed in this paper.</td>
</tr>
<tr>
<td>Widely held</td>
<td>This variable takes the value 1 if there are no ultimate shareholder with at least 20% of control rights, and 0 otherwise.</td>
</tr>
<tr>
<td>Other Dependent and Control Variables</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Return on Assets (ROA)</td>
<td>Earnings before interest and taxes to total assets</td>
</tr>
<tr>
<td>Return on Equity (ROE)</td>
<td>Earnings before interest and taxes to total equity</td>
</tr>
<tr>
<td>Return on Assets (ROS)</td>
<td>Earnings before interest and taxes to sales</td>
</tr>
<tr>
<td>Tobin’s q</td>
<td>It is the market value of equity plus the book value of liabilities to book value of assets</td>
</tr>
<tr>
<td>Dividends to cash flow</td>
<td>Cash dividends to (total earnings plus depreciation)</td>
</tr>
<tr>
<td>Dividends to earnings</td>
<td>Cash dividends to total earnings</td>
</tr>
<tr>
<td>Dividends to sales</td>
<td>Cash dividends to sales</td>
</tr>
<tr>
<td>Ln(Age)</td>
<td>Logarithm of the company’s age as of 2003</td>
</tr>
<tr>
<td>Ln(Assets)</td>
<td>Logarithm of the company’s total assets</td>
</tr>
<tr>
<td>Size dummy</td>
<td>This variable takes the value 1 if the company is in the highest 20% in terms of average total assets in 2000-2001, and 0 otherwise.</td>
</tr>
<tr>
<td>Debt to assets</td>
<td>Total debt to assets</td>
</tr>
<tr>
<td>Sales growth</td>
<td>Percentage sales growth</td>
</tr>
<tr>
<td>ADR dummy</td>
<td>This variable takes the value 1 if the company issued American Depositary Receipts before or during the period under analysis, and 0 otherwise.</td>
</tr>
<tr>
<td>Industry dummy</td>
<td>This variable takes the value 1 if the company belongs to the industrial sector, and 0 otherwise. The activity classification is taken from the Buenos Aires Stock Exchange.</td>
</tr>
<tr>
<td>Utilities dummy</td>
<td>This variable takes the value 1 if the company supplies utilities, and 0 otherwise. The activity classification is taken from the Buenos Aires Stock Exchange.</td>
</tr>
<tr>
<td>Primary products dummy</td>
<td>This variable takes the value 1 if the company produces agricultural products, livestock, minerals, or other commodities, and 0 otherwise. The activity classification is taken from the Buenos Aires Stock Exchange.</td>
</tr>
<tr>
<td>Services dummy</td>
<td>This variable takes the value 1 if the company provides services not included in the other three categories, and 0 otherwise. The activity classification is taken from the Buenos Aires Stock Exchange.</td>
</tr>
</tbody>
</table>
Table 4

Corporate Governance and Ownership: Descriptive Statistics

The table shows the mean, standard deviation, minimum and maximum values of the corporate governance and ownership variables, whose definitions are provided in Table 1.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Observ.</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Corporate Governance Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TDI</td>
<td>65</td>
<td>39.13</td>
<td>14.53</td>
<td>18.75</td>
<td>84.38</td>
</tr>
<tr>
<td>TDI-Board</td>
<td>65</td>
<td>28.40</td>
<td>17.41</td>
<td>0.00</td>
<td>76.92</td>
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<tr>
<td>TDI-Disclosure</td>
<td>65</td>
<td>49.35</td>
<td>13.79</td>
<td>23.08</td>
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<td>TDI-Shareholder</td>
<td>65</td>
<td>40.26</td>
<td>22.03</td>
<td>0.00</td>
<td>100.00</td>
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<tr>
<td>Audit Committee Dummy</td>
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<tr>
<td>Trading Intensity</td>
<td>64</td>
<td>0.46</td>
<td>0.35</td>
<td>0.00</td>
<td>1.00</td>
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<tr>
<td><strong>Corporate Ownership Variables</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control Rights Main Ultimate Shareholder</td>
<td>54</td>
<td>63.14</td>
<td>23.24</td>
<td>20.75</td>
<td>99.14</td>
</tr>
<tr>
<td>Cash Flow Rights Main Ultimate Shareholder</td>
<td>54</td>
<td>56.90</td>
<td>26.58</td>
<td>4.31</td>
<td>99.14</td>
</tr>
<tr>
<td>Control-to-Cash Flow Rights</td>
<td>54</td>
<td>1.30</td>
<td>0.74</td>
<td>1.00</td>
<td>5.43</td>
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<tr>
<td>Control-to-Cash Flow Rights &gt;1.02</td>
<td>22</td>
<td>1.74</td>
<td>1.03</td>
<td>1.03</td>
<td>5.43</td>
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<tr>
<td>No One Share-One Vote Dummy</td>
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<td>0.11</td>
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<tr>
<td>Pyramid Dummy</td>
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<td>0.37</td>
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</tr>
<tr>
<td>Cross-holding Dummy</td>
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<td>0.00</td>
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<tr>
<td>Widely Held Dummy</td>
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<td>0.00</td>
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<td></td>
</tr>
<tr>
<td>Domestically-owned Dummy</td>
<td>54</td>
<td>0.46</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Own Elaboration based on public sources.
Table 5

Corporate Governance and Ownership: Deciles

<table>
<thead>
<tr>
<th>Decile</th>
<th>TDI</th>
<th>Control Rights</th>
<th>Cash Flow Rights</th>
<th>Control-to-Cash Flow Rights</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>25.0</td>
<td>25.7</td>
<td>20.3</td>
<td>1.0</td>
</tr>
<tr>
<td>20</td>
<td>28.1</td>
<td>42.6</td>
<td>26.0</td>
<td>1.0</td>
</tr>
<tr>
<td>30</td>
<td>31.3</td>
<td>51.6</td>
<td>42.6</td>
<td>1.0</td>
</tr>
<tr>
<td>40</td>
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</table>

Table 6

Corporate Governance and Ownership: Correlation Matrix

Correlations statistically significant at 5% or less in bold face

<table>
<thead>
<tr>
<th></th>
<th>TDI</th>
<th>TDI-B</th>
<th>TDI-D</th>
<th>TDI-S</th>
<th>Control Rights</th>
<th>CF Rights</th>
<th>Control-to-CF</th>
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<td>TDI</td>
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<tr>
<td>TDI-Board</td>
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</tr>
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<td>TDI-Disclosure</td>
<td>0.8617</td>
<td>0.6441</td>
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<td></td>
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</tr>
<tr>
<td>TDI-Shareholder</td>
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<td>0.6023</td>
<td>0.5722</td>
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</tr>
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<td>-0.2544</td>
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</tr>
<tr>
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<td>-0.1303</td>
<td>-0.1855</td>
<td>-0.2387</td>
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<tr>
<td>Control-to-CF</td>
<td>0.2649</td>
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<td>0.2003</td>
<td>0.2624</td>
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Table 7

Performance and Control Variables: Descriptive Statistics

The table shows the mean, standard deviation, minimum and maximum values of the performance and some control variables, whose definitions are provided in Table 2.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Observ.</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Minimum</th>
<th>Maximum</th>
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<td>ROA</td>
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<td>0.0073</td>
<td>0.0265</td>
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<td>0.0650</td>
</tr>
<tr>
<td>Q</td>
<td>56</td>
<td>0.8882</td>
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<td>0.3742</td>
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<td>Age</td>
<td>59</td>
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<td>28.4</td>
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<td>2900000</td>
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<td>0.158</td>
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<td>16.440</td>
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<td>ADR Dummy</td>
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</tr>
<tr>
<td>Industry Dummy</td>
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</tr>
<tr>
<td>Utilities Dummy</td>
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<tr>
<td>Primary Prod.</td>
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<td>0.215</td>
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</table>

Table 8

Performance and Explanatory Variables: Correlation Matrix

Correlations statistically significant at 5% or less in bold face

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<th>2</th>
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<th>6</th>
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<tr>
<td>Q</td>
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<td></td>
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</tr>
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<td>-0.20</td>
<td>1.00</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control Rights</td>
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<td>-0.05</td>
<td>-0.21</td>
<td>0.92</td>
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<td></td>
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<tr>
<td>Control-to-CF</td>
<td>6</td>
<td>-0.09</td>
<td>-0.07</td>
<td>0.26</td>
<td>-0.56</td>
<td>-0.33</td>
<td>1.00</td>
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<td></td>
<td></td>
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<tr>
<td>Ln(Age)</td>
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<td>-0.07</td>
<td>0.02</td>
<td>-0.08</td>
<td>0.15</td>
<td>0.00</td>
<td>-0.04</td>
<td>1.00</td>
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<td></td>
<td></td>
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<td>Ln(Assets)</td>
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<td>0.29</td>
<td>-0.19</td>
<td>0.62</td>
<td>-0.11</td>
<td>-0.05</td>
<td>0.19</td>
<td>-0.42</td>
<td>1.00</td>
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<tr>
<td>Debt / Assets</td>
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<td>0.01</td>
<td>-0.18</td>
<td>-0.05</td>
<td>0.10</td>
<td>0.12</td>
<td>-0.01</td>
<td>-0.07</td>
<td>0.14</td>
<td>1.00</td>
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<td>10</td>
<td>-0.10</td>
<td>-0.03</td>
<td>0.00</td>
<td>-0.19</td>
<td>-0.25</td>
<td>-0.05</td>
<td>0.18</td>
<td>-0.14</td>
<td>-0.18</td>
<td>1.00</td>
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</tr>
<tr>
<td>ADR dummy</td>
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<td>0.59</td>
<td>-0.34</td>
<td>-0.17</td>
<td>0.47</td>
<td>-0.26</td>
<td>0.50</td>
<td>-0.11</td>
<td>-0.09</td>
<td>1.00</td>
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</tr>
<tr>
<td>Industry</td>
<td>12</td>
<td>0.22</td>
<td>-0.03</td>
<td>-0.10</td>
<td>-0.10</td>
<td>-0.18</td>
<td>-0.14</td>
<td>0.20</td>
<td>-0.22</td>
<td>-0.06</td>
<td>-0.11</td>
<td>-0.23</td>
<td>1.00</td>
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</tr>
<tr>
<td>Utilities</td>
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<td>-0.13</td>
<td>0.21</td>
<td>-0.06</td>
<td>0.06</td>
<td>0.05</td>
<td>-0.75</td>
<td>0.43</td>
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<td>-0.08</td>
<td>0.44</td>
<td>-0.44</td>
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<tr>
<td>Primary Prod.</td>
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<td>-0.16</td>
<td>0.17</td>
<td>-0.16</td>
<td>0.22</td>
<td>0.13</td>
<td>-0.19</td>
<td>0.34</td>
<td>-0.19</td>
<td>-0.05</td>
<td>0.21</td>
<td>-0.18</td>
<td>-0.37</td>
<td>-0.32</td>
</tr>
</tbody>
</table>
Table 9
ROA and TDI without additional controls

ROA and TDI without additional controls. OLS results for the whole period (2000-2003) and two subperiods (2000-20001 and 2002-2003). ROA is an average from quarterly data for each period. TDI (on a 0-100 scale) is the same for all periods, and is based on public corporate information for 2003.

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>Reg 1</th>
<th>Reg 2</th>
<th>Reg 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDI</td>
<td>0.0005344</td>
<td>0.0005029</td>
<td>0.0005647</td>
</tr>
<tr>
<td></td>
<td>(3.11)***</td>
<td>(3.82)***</td>
<td>(2.18)**</td>
</tr>
<tr>
<td>Constant</td>
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<td>-0.0146024</td>
<td>-0.0148466</td>
</tr>
<tr>
<td></td>
<td>(-1.91)*</td>
<td>(-2.32)**</td>
<td>(-1.36)</td>
</tr>
<tr>
<td>Adjusted R^2</td>
<td>0.1283</td>
<td>0.125</td>
<td>0.0816</td>
</tr>
<tr>
<td>No. of observations</td>
<td>65</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td>F Statistic (p-value)</td>
<td>9.7(0.000)</td>
<td>14.63(0.000)</td>
<td>4.77(0.032)</td>
</tr>
</tbody>
</table>

**Notes:**
T statistics based on robust standard errors in parenthesis
* Significant at 10%
** Significant at 5%
*** Significant at 1%
Table 10

Q and TDI without additional controls

Q and TDI without additional controls. OLS results for the whole period (2000-2003) and two subperiods (2000-20001 and 2002-2003). Q is an average from quarterly data for each period. Outlier observations with q>2.5 were dropped. TDI (on a 0-100 scale) is the same for all periods, and is based on public corporate information for 2003.

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>Reg 1</th>
<th>Reg 2</th>
<th>Reg 3</th>
</tr>
</thead>
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<tr>
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<td>(4.12)***</td>
<td>(1.78)*</td>
</tr>
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<td>0.5999676</td>
<td>0.4675686</td>
<td>0.733983</td>
</tr>
<tr>
<td></td>
<td>(6.53)***</td>
<td>(5.36)***</td>
<td>(7.33)***</td>
</tr>
<tr>
<td>Adjusted R^2</td>
<td>0.0818</td>
<td>0.2098</td>
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<tr>
<td>No. of observations</td>
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<td>53</td>
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<tr>
<td>F Statistic (p-value)</td>
<td>10.75(0.002)</td>
<td>16.95(0.000)</td>
<td>3.18(0.08)</td>
</tr>
</tbody>
</table>

**Notes:**
- T statistics based on robust standard errors in parenthesis
- * Significant at 10%
- ** Significant at 5%
- *** Significant at 1%
Table 11

ROA and TDI with controls

ROA and TDI with controls. OLS results for the whole period (2000-2003) and two subperiods (2000-20001 and 2002-2003). ROA is an average from quarterly data for each period. TDI (on a 0-100 scale) is the same for all periods, and is based on public information for 2003. Size dummy is a dummy variable with value 1 for firms in the upper 20% of firms according to total assets, and 0 otherwise. Sales growth is the average quarterly sales growth in the two years previous to the sample period. Industry, Utilities, and Primary Product dummies show the productive sector each firm belongs. The definition of the remaining variables can be found in the text.

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>Reg 1</th>
<th>Reg 2</th>
<th>Reg 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDI</td>
<td>0.0005449</td>
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<tr>
<td></td>
<td>(2.61)**</td>
<td>(3.13)***</td>
<td>(1.79)*</td>
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<td>Ln(Age)</td>
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<td>-0.0072887</td>
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<tr>
<td></td>
<td>(-2.11)**</td>
<td>(-2.63)**</td>
<td>(-1.03)</td>
</tr>
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<td>Size dummy</td>
<td>0.0069701</td>
<td>0.0099801</td>
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<tr>
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<td>(0.54)</td>
<td>(0.327)</td>
<td>(-0.23)</td>
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<td>Debt to Assets</td>
<td>-0.0008561</td>
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<td>0.0042438</td>
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<tr>
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<td>(-0.06)</td>
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<td>(0.22)</td>
</tr>
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<td>Sales growth</td>
<td>4.20E-06</td>
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<tr>
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<td>(0.12)</td>
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<td>(-0.74)</td>
</tr>
<tr>
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<td>-0.0025899</td>
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<td>-0.0009633</td>
</tr>
<tr>
<td></td>
<td>(-0.41)</td>
<td>(-0.58)</td>
<td>(-0.1)</td>
</tr>
<tr>
<td>Industry dummy</td>
<td>0.0015554</td>
<td>-0.0053865</td>
<td>0.008823</td>
</tr>
<tr>
<td></td>
<td>(0.25)</td>
<td>(-1.04)</td>
<td>(0.94)</td>
</tr>
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<td>-0.0171923</td>
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</tr>
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<tr>
<td></td>
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<td>(2.37)</td>
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</tr>
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</tr>
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<td>No. of observations</td>
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<td>62</td>
<td>59</td>
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<td>2.51(0.000)</td>
<td>4.35(0.000)</td>
<td>3.72(0.000)</td>
</tr>
</tbody>
</table>

Notes:
T statistics based on robust standard errors in parenthesis
* Significant at 10%
** Significant at 5%
*** Significant at 1%
Table 12
Q and TDI with controls

Q and TDI with controls. OLS results for the whole period (2000-2003) and two subperiods (2000-20001 and 2002-2003). Q is an average from quarterly data for each period. Outlier observations with q>2.5 were dropped. TDI (on a 0-100 scale) is the same for all periods, and is based on public information for 2003. Size dummy is a dummy variable with value 1 for firms in the upper 20% of firms according to total assets, and 0 otherwise. Sales growth is the average quarterly sales growth in the two years previous to the sample period. Industry, Utilities, and Primary Product dummies show the productive sector each firm belongs. The definition of the remaining variables can be found in the text.

<table>
<thead>
<tr>
<th></th>
<th>Reg 1</th>
<th>Reg 2</th>
<th>Reg 3</th>
</tr>
</thead>
<tbody>
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<tr>
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<td>(2.11)**</td>
<td>(3.28)***</td>
<td>(2.62)**</td>
</tr>
<tr>
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<td>0.6112416</td>
</tr>
<tr>
<td></td>
<td>(1.72)*</td>
<td>(3.01)***</td>
<td>(1.98)*</td>
</tr>
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<td></td>
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<td>(0.32)</td>
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</tr>
<tr>
<td>ADR dummy</td>
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<tr>
<td></td>
<td>(-0.42)</td>
<td>(0.05)</td>
<td>(-0.21)</td>
</tr>
<tr>
<td>Industry dummy</td>
<td>0.1298286</td>
<td>-0.0183625</td>
<td>0.2894743</td>
</tr>
<tr>
<td></td>
<td>(1.59)</td>
<td>(-0.25)</td>
<td>(2.78)***</td>
</tr>
<tr>
<td>Utilities dummy</td>
<td>0.0997021</td>
<td>-0.0471228</td>
<td>0.0802948</td>
</tr>
<tr>
<td></td>
<td>(0.56)</td>
<td>(-0.53)</td>
<td>(0.65)</td>
</tr>
<tr>
<td>Primary production dummy</td>
<td>0.1634207</td>
<td>-0.0760166</td>
<td>0.3223821</td>
</tr>
<tr>
<td></td>
<td>(1.13)</td>
<td>(-0.9)</td>
<td>(3.25)***</td>
</tr>
<tr>
<td>Constant</td>
<td>0.2775962</td>
<td>0.6843045</td>
<td>0.3910209</td>
</tr>
<tr>
<td></td>
<td>(0.62)</td>
<td>(3.69)***</td>
<td>(1.21)</td>
</tr>
<tr>
<td><strong>Adjusted R^2</strong></td>
<td>0.0448</td>
<td>0.3784</td>
<td>0.247</td>
</tr>
<tr>
<td>No. of observations</td>
<td>54</td>
<td>53</td>
<td>50</td>
</tr>
<tr>
<td>F Statistic (p-value)</td>
<td>5.24(0.000)</td>
<td>25.83(0.000)</td>
<td>14.94(0.000)</td>
</tr>
</tbody>
</table>

**Notes:**
T statistics based on robust standard errors in parenthesis
* Significant at 10%
** Significant at 5%
*** Significant at 1%
Table 13

ROA and alternative TDI measures

Each line of the table displays, for the three sample periods, the estimated coefficient (and robust t statistic) on alternative TDI measures, namely, the three subindices defined in the text (Board, Disclosure, Shareholders) -each measured, as the TDI, on a 0-100 scale-, the principal component of these three subindices, and the median overall TDI. For each of the 15 OLS regressions, the controls are all the same as in the baseline regressions with controls. Outlier observations with q larger than 2.5 were dropped.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TDI-Board</td>
<td>0.0003798</td>
<td>0.0003804</td>
<td>0.0004233</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.72)**</td>
<td>(3.13)***</td>
<td>(1.55)</td>
<td></td>
</tr>
<tr>
<td>TDI-Disclosure</td>
<td>0.0005578</td>
<td>0.0003138</td>
<td>0.0007863</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.38)**</td>
<td>(1.95)*</td>
<td>(2.14)**</td>
<td></td>
</tr>
<tr>
<td>TDI-Shareholders</td>
<td>0.0001353</td>
<td>0.0002087</td>
<td>0.0000662</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.22)</td>
<td>(2.11)**</td>
<td>(0.43)</td>
<td></td>
</tr>
<tr>
<td>TDI-Principal component</td>
<td>0.005078</td>
<td>0.0045892</td>
<td>0.0057355</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.5)**</td>
<td>(3.03)***</td>
<td>(1.7)*</td>
<td></td>
</tr>
<tr>
<td>TDI-Median</td>
<td>0.0116517</td>
<td>0.0137146</td>
<td>0.0152886</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.84)*</td>
<td>(2.51)**</td>
<td>(1.74)*</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
T statistics based on robust standard errors in parenthesis
* Significant at 10%
** Significant at 5%
*** Significant at 1%
### Table 14

**Q and different TDI measures**

Each line of the table displays, for the three sample periods, the estimated coefficient statistic on alternative TDI measures, namely, the three subindices defined in the text (Board, Disclosure, Shareholders) - each measured, as the TDI, on a 0-100 scale -, the principal component of these three subindices, and the median overall TDI. For each of the 15 OLS regressions, the controls are all the same as in the baseline regressions with controls. Outlier observations with q larger than 2.5 were dropped.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TDI-Board</td>
<td>0.0040451</td>
<td>0.0056068</td>
<td>0.004756</td>
</tr>
<tr>
<td></td>
<td>(2.41)**</td>
<td>(2.22)**</td>
<td>(1.89)*</td>
</tr>
<tr>
<td>TDI-Disclosure</td>
<td>0.0030108</td>
<td>0.0042696</td>
<td>0.004586</td>
</tr>
<tr>
<td></td>
<td>(1.82)*</td>
<td>(1.84)*</td>
<td>(2.44)**</td>
</tr>
<tr>
<td>TDI-Shareholders</td>
<td>0.0034545</td>
<td>0.0016843</td>
<td>0.0005941</td>
</tr>
<tr>
<td></td>
<td>(2.19)**</td>
<td>(0.84)</td>
<td>(0.35)</td>
</tr>
<tr>
<td>TDI-Principal component</td>
<td>0.0536123</td>
<td>0.0536887</td>
<td>0.0449033</td>
</tr>
<tr>
<td></td>
<td>(2.69)**</td>
<td>(2.16)**</td>
<td>(1.91)*</td>
</tr>
<tr>
<td>TDI-Median</td>
<td>0.1124944</td>
<td>0.1500073</td>
<td>0.1172497</td>
</tr>
<tr>
<td></td>
<td>(1.3)</td>
<td>(1.33)</td>
<td>(1.42)</td>
</tr>
</tbody>
</table>

**Notes:**
- T statistics based on robust standard errors in parenthesis
- * Significant at 10%
- ** Significant at 5%
- *** Significant at 1%
Table 15

TDI and alternative dependent variables

The table shows the estimated coefficient (and t statistic) on TDI on ROE and ROS for the different sample periods, maintaining the same control set as in the baseline regressions. Outlier observations with ROE lower than -0.1 and higher than 0.1, as well as those with ROS lower than -0.4 and higher than 0.4, were dropped.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>TDI coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROE 2000-I/2003-IV</td>
<td>-0.0005923</td>
</tr>
<tr>
<td></td>
<td>(-0.3)</td>
</tr>
<tr>
<td>ROE 2000-I/2001-IV</td>
<td>0.0008095</td>
</tr>
<tr>
<td></td>
<td>(2.23)**</td>
</tr>
<tr>
<td>ROE 2002-I/2003-IV</td>
<td>-0.0013538</td>
</tr>
<tr>
<td></td>
<td>(-0.33)</td>
</tr>
<tr>
<td>ROS 2000-I/2003-IV</td>
<td>0.0137516</td>
</tr>
<tr>
<td></td>
<td>(1.31)</td>
</tr>
<tr>
<td>ROS 2000-I/2001-IV</td>
<td>0.0040811</td>
</tr>
<tr>
<td></td>
<td>(3.45)**</td>
</tr>
<tr>
<td>ROS 2002-I/2003-IV</td>
<td>0.0055915</td>
</tr>
<tr>
<td></td>
<td>(1.44)</td>
</tr>
</tbody>
</table>

**Notes:**
T statistics based on robust standard errors in parenthesis
* Significant at 10%
** Significant at 5%
*** Significant at 1%
Table 16

ROA, TDI, and Interaction Regressors

OLS results for the whole period (2000-2003) and two subperiods (2000-20001 and 2002-2003). ROA is an average from quarterly data for each period. TDI (on a 0-100 scale) is the same for all periods, and is based on public information for 2003. For each of the OLS regressions, the controls are all the same as in the baseline regressions.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TDI</td>
<td></td>
<td>0.0019735</td>
<td>0.0018288</td>
<td>0.0022953</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.83)*</td>
<td>(2.39)**</td>
<td>(1.38)</td>
</tr>
<tr>
<td>TDI^2</td>
<td></td>
<td>-0.0000156</td>
<td>-0.0000147</td>
<td>-0.000018</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-1.35)</td>
<td>(-1.76)*</td>
<td>(-1.07)</td>
</tr>
<tr>
<td>TDI</td>
<td></td>
<td>0.0005612</td>
<td>0.000504</td>
<td>0.0006386</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.59)**</td>
<td>(3.09)**</td>
<td>(1.68)*</td>
</tr>
<tr>
<td>TDI*Size dummy</td>
<td></td>
<td>-0.0001358</td>
<td>-0.000189</td>
<td>-0.0000769</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-0.17)</td>
<td>(-0.33)</td>
<td>(-0.07)</td>
</tr>
<tr>
<td>TDI</td>
<td></td>
<td>0.0003824</td>
<td>0.0000265</td>
<td>0.0007522</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.07)</td>
<td>(0.1)</td>
<td>(1.52)</td>
</tr>
<tr>
<td>TDI*Age</td>
<td></td>
<td>2.69E-06</td>
<td>7.52E-06</td>
<td>-2.12E-06</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.62)</td>
<td>(1.94)*</td>
<td>(-0.4)</td>
</tr>
<tr>
<td>TDI</td>
<td></td>
<td>0.0005546</td>
<td>0.0004673</td>
<td>0.0006774</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.52)**</td>
<td>(2.93)**</td>
<td>(1.85)*</td>
</tr>
<tr>
<td>TDI*Sales Growth</td>
<td></td>
<td>-5.89E-06</td>
<td>8.54E-06</td>
<td>-0.0013834</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-0.46)</td>
<td>(0.9)</td>
<td>(-0.82)</td>
</tr>
<tr>
<td>TDI</td>
<td></td>
<td>0.000442</td>
<td>0.0004291</td>
<td>0.0001384</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.39)</td>
<td>(1.79)*</td>
<td>(0.27)</td>
</tr>
<tr>
<td>TDI*Debt to assets</td>
<td></td>
<td>6.47E-04</td>
<td>3.28E-04</td>
<td>0.0026687</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.40)</td>
<td>(0.32)</td>
<td>(0.97)</td>
</tr>
</tbody>
</table>

Notes:
T statistics based on robust standard errors in parenthesis
* Significant at 10%
** Significant at 5%
*** Significant at 1%
Table 17

Q, TDI, and Interaction Regressors

OLS results for the whole period (2000-2003) and two subperiods (2000-20001 and 2002-2003). Q is an average from quarterly data for each period (observations with q larger than 2 were dropped). TDI (on a 0-100 scale) is the same for all periods, and is based on public information for 2003. For each of the OLS regressions, the controls are all the same as in the baseline regressions.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TDI</td>
<td>0.0162038</td>
<td>0.0080394</td>
<td>0.0158863</td>
</tr>
<tr>
<td></td>
<td>(1.2)</td>
<td>(0.85)</td>
<td>(1.54)</td>
</tr>
<tr>
<td>TDI^2</td>
<td>-0.0001113</td>
<td>-0.0000283</td>
<td>-0.0001148</td>
</tr>
<tr>
<td></td>
<td>(-0.89)</td>
<td>(-0.32)</td>
<td>(-1.23)</td>
</tr>
<tr>
<td>TDI</td>
<td>0.00637</td>
<td>0.0059362</td>
<td>0.0055036</td>
</tr>
<tr>
<td></td>
<td>(2.21)**</td>
<td>(2.67)**</td>
<td>(1.96)*</td>
</tr>
<tr>
<td>TDI*Size dummy</td>
<td>-0.0038428</td>
<td>-0.0041979</td>
<td>-0.0033814</td>
</tr>
<tr>
<td></td>
<td>(-0.88)</td>
<td>(-1.12)</td>
<td>(-0.94)</td>
</tr>
<tr>
<td>TDI</td>
<td>0.0055717</td>
<td>0.0052771</td>
<td>0.0119218</td>
</tr>
<tr>
<td></td>
<td>(0.95)</td>
<td>(1.94)*</td>
<td>(3.32)**</td>
</tr>
<tr>
<td>TDI*Age</td>
<td>5.27E-06</td>
<td>2.21E-06</td>
<td>-0.0001216</td>
</tr>
<tr>
<td></td>
<td>(0.05)</td>
<td>(0.06)</td>
<td>(-3.19)*****</td>
</tr>
<tr>
<td>TDI</td>
<td>0.0066752</td>
<td>0.0054413</td>
<td>0.0050741</td>
</tr>
<tr>
<td></td>
<td>(2.39)**</td>
<td>(2.55)**</td>
<td>(2.08)**</td>
</tr>
<tr>
<td>TDI*Sales Growth</td>
<td>-0.0004031</td>
<td>-0.0000196</td>
<td>0.0107459</td>
</tr>
<tr>
<td></td>
<td>(-3.06)*****</td>
<td>(-0.15)</td>
<td>(0.52)</td>
</tr>
<tr>
<td>TDI</td>
<td>0.0061942</td>
<td>0.0041172</td>
<td>0.0029627</td>
</tr>
<tr>
<td></td>
<td>(1.42)</td>
<td>(1.24)</td>
<td>(0.82)</td>
</tr>
<tr>
<td>TDI*Debt to Assets</td>
<td>-0.0018984</td>
<td>0.0079738</td>
<td>0.0110808</td>
</tr>
<tr>
<td></td>
<td>(-0.1)</td>
<td>(0.58)</td>
<td>(0.74)</td>
</tr>
</tbody>
</table>

**Notes:**
- T statistics based on robust standard errors in parenthesis
- * Significant at 10%
- ** Significant at 5%
- *** Significant at 1%
### Table 18

**TDI and Instruments: Correlation Matrix (p-values in parenthesis)**

<table>
<thead>
<tr>
<th></th>
<th>TDI</th>
<th>Audit Committee</th>
<th>Trading Intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TDI</strong></td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Audit Committee</strong></td>
<td>0.3235 (0.0086)</td>
<td>1.00 (0.000)</td>
<td></td>
</tr>
<tr>
<td><strong>Trading Intensity</strong></td>
<td>0.4961 (0.000)</td>
<td>0.2615 (0.0369)</td>
<td>1.00</td>
</tr>
</tbody>
</table>

### Table 19

**TDI and Audit Committee**

<table>
<thead>
<tr>
<th></th>
<th>Number of companies</th>
<th>Companies with Audit Committee as of May 2004</th>
<th>%</th>
<th>Companies without Audit Committee as of May 2004</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under the mean TDI</td>
<td>25</td>
<td>15</td>
<td>0.6</td>
<td>10</td>
<td>0.4</td>
</tr>
<tr>
<td>Above the mean TDI</td>
<td>40</td>
<td>32</td>
<td>0.8</td>
<td>8</td>
<td>0.2</td>
</tr>
</tbody>
</table>
Table 20

ROA and instrumented TDI - 1

ROA and TDI instrumented by a dummy with value 1 if the company set an Audit Committee by May 2004, and 0 otherwise. OLS results for the whole period (2000-2003) and two subperiods (2000-2001 and 2002-2003). ROA is an average from quarterly data for each period. TDI (on a 0-100 scale) is the same for all periods, and is based on public information for 2003. Size dummy is a dummy variable with value 1 for firms in the upper 20% of firms according to total assets, and 0 otherwise. Debt to assets and sales growth are the average values in the two years previous to the sample period. Industry, Utilities, and Primary Product dummies show the productive sector each firm belongs. The definition of the remaining variables can be found in the text.

<table>
<thead>
<tr>
<th>dependent variable: ROA</th>
<th>Reg 1</th>
<th>Reg 2</th>
<th>Reg 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit Committee dummy</td>
<td>0.0074097</td>
<td>0.0073925</td>
<td>0.0068299</td>
</tr>
<tr>
<td>Ln(Age)</td>
<td>-0.0134309</td>
<td>-0.0190526</td>
<td>-0.0061978</td>
</tr>
<tr>
<td>Size dummy</td>
<td>0.0161318</td>
<td>0.0179824</td>
<td>0.0152943</td>
</tr>
<tr>
<td>Debt to Assets</td>
<td>-0.0030793</td>
<td>-0.0067102</td>
<td>0.0080932</td>
</tr>
<tr>
<td>Sales growth</td>
<td>0.0000305</td>
<td>0.0000244</td>
<td>0.0000284</td>
</tr>
<tr>
<td>ADR dummy</td>
<td>0.0039853</td>
<td>0.0021294</td>
<td>0.0072043</td>
</tr>
<tr>
<td>Industry dummy</td>
<td>0.0006866</td>
<td>-0.0061985</td>
<td>0.0065186</td>
</tr>
<tr>
<td>Utilities dummy</td>
<td>-0.0181698</td>
<td>-0.0206342</td>
<td>-0.0170627</td>
</tr>
<tr>
<td>Primary production dummy</td>
<td>-0.0091878</td>
<td>-0.0093779</td>
<td>-0.0116324</td>
</tr>
<tr>
<td>Constant</td>
<td>0.0567039</td>
<td>0.0803922</td>
<td>0.0264863</td>
</tr>
<tr>
<td>Adjusted R^2</td>
<td>0.0833</td>
<td>0.2559</td>
<td>-0.0124</td>
</tr>
<tr>
<td>No. of observations</td>
<td>62</td>
<td>62</td>
<td>59</td>
</tr>
<tr>
<td>F Statistic (p-value)</td>
<td>2.41(0.023)</td>
<td>3.53(0.018)</td>
<td>2.89(0.008)</td>
</tr>
</tbody>
</table>

Notes:
- T statistics based on robust standard errors in parenthesis
- * Significant at 10%
- ** Significant at 5%
- *** Significant at 1%
Table 21

Q and instrumented TDI - 1

Q and TDI instrumented by a dummy with value 1 if the company set an Audit Committee by May 2004, and 0 otherwise. OLS results for the whole period (2000-2003) and two subperiods (2000-20001 and 2002-2003). Q is an average from quarterly data for each period, with observations with \( q > 2.5 \) being dropped. TDI (on a 0-100 scale) is the same for all periods, and is based on public information for 2003. Size dummy is a dummy variable with value 1 for firms in the upper 20% of firms according to total assets, and 0 otherwise. Debt to assets and sales growth are the average values in the two years previous to the sample period. Industry, Utilities, and Primary Product dummies show the productive sector each firm belongs. The definition of the remaining variables can be found in the text.

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>Reg 1</th>
<th>Reg 2</th>
<th>Reg 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit Committee dummy</td>
<td>0.0914799</td>
<td>0.0212256</td>
<td>0.0721781</td>
</tr>
<tr>
<td></td>
<td>(0.94)</td>
<td>(0.27)</td>
<td>(0.79)</td>
</tr>
<tr>
<td>Ln(Age)</td>
<td>0.0489119</td>
<td>-0.0536834</td>
<td>-0.0061637</td>
</tr>
<tr>
<td></td>
<td>(0.44)</td>
<td>(-1.12)</td>
<td>(-0.08)</td>
</tr>
<tr>
<td>Size dummy</td>
<td>0.3157161</td>
<td>0.3513834</td>
<td>0.3409853</td>
</tr>
<tr>
<td></td>
<td>(3.37)**</td>
<td>(4.89)**</td>
<td>(4.81)**</td>
</tr>
<tr>
<td>Debt to Assets</td>
<td>0.4007899</td>
<td>0.6328171</td>
<td>0.6283064</td>
</tr>
<tr>
<td></td>
<td>(1.56)</td>
<td>(3.12)**</td>
<td>(1.98)*</td>
</tr>
<tr>
<td>Sales growth</td>
<td>0.0111238</td>
<td>0.0002571</td>
<td>-0.0244969</td>
</tr>
<tr>
<td></td>
<td>(1.28)</td>
<td>(0.4)</td>
<td>(3.00)**</td>
</tr>
<tr>
<td>ADR dummy</td>
<td>0.0192992</td>
<td>0.0876515</td>
<td>0.0390336</td>
</tr>
<tr>
<td></td>
<td>(0.19)</td>
<td>(1.01)</td>
<td>(0.45)</td>
</tr>
<tr>
<td>Industry dummy</td>
<td>0.1226179</td>
<td>-0.0230723</td>
<td>0.2747842</td>
</tr>
<tr>
<td></td>
<td>(1.44)</td>
<td>(-0.27)</td>
<td>(2.6)**</td>
</tr>
<tr>
<td>Utilities dummy</td>
<td>0.0925812</td>
<td>-0.0641266</td>
<td>0.0403118</td>
</tr>
<tr>
<td></td>
<td>(0.47)</td>
<td>(-0.61)</td>
<td>(0.31)</td>
</tr>
<tr>
<td>Primary production dummy</td>
<td>0.1207204</td>
<td>-0.1074663</td>
<td>0.287079</td>
</tr>
<tr>
<td></td>
<td>(0.92)</td>
<td>(-1.18)</td>
<td>(2.79)**</td>
</tr>
<tr>
<td>Constant</td>
<td>0.3922566</td>
<td>0.8290745</td>
<td>0.5387381</td>
</tr>
<tr>
<td></td>
<td>(0.84)</td>
<td>(4.04)**</td>
<td>(1.53)</td>
</tr>
<tr>
<td>Adjusted R^2</td>
<td>0.0019</td>
<td>0.3051</td>
<td>0.2114</td>
</tr>
<tr>
<td>No. of observations</td>
<td>54</td>
<td>53</td>
<td>50</td>
</tr>
<tr>
<td>F Statistic (p-value)</td>
<td>4.75(0.000)</td>
<td>10.46(0.000)</td>
<td>11.55(0.000)</td>
</tr>
</tbody>
</table>

Notes:
T statistics based on robust standard errors in parenthesis
* Significant at 10%
** Significant at 5%
*** Significant at 1%
## Table 22

**ROA and instrumented TDI - 2**

ROA and TDI instrumented by the number of days the stock was traded in 2001-2003 as a proportion of total trading days in that period. OLS results for the whole period (2000-2003) and two subperiods (2000-2001 and 2002-2003). ROA is an average from quarterly data for each period. TDI (on a 0-100 scale) is the same for all periods, and is based on public information for 2003. Size dummy is a dummy variable with value 1 for firms in the upper 20% of firms according to total assets, and 0 otherwise. Debt to assets and sales growth are the average values in the two years previous to the sample period. Industry, Utilities, and Primary Product dummies show the productive sector each firm belongs. The definition of the remaining variables can be found in the text.

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>Reg 1</th>
<th>Reg 2</th>
<th>Reg 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trading intensity</td>
<td>0.0226526</td>
<td>0.0166014</td>
<td>0.0275019</td>
</tr>
<tr>
<td></td>
<td>(2.41)**</td>
<td>(2.21)**</td>
<td>(2.21)**</td>
</tr>
<tr>
<td>Ln(Age)</td>
<td>-0.0128632</td>
<td>-0.0188721</td>
<td>-0.0046144</td>
</tr>
<tr>
<td></td>
<td>(-2.01)**</td>
<td>(-2.55)**</td>
<td>(-0.79)</td>
</tr>
<tr>
<td>Size dummy</td>
<td>0.0157303</td>
<td>0.0178951</td>
<td>0.0128666</td>
</tr>
<tr>
<td></td>
<td>(1.24)</td>
<td>(1.76)*</td>
<td>(0.82)</td>
</tr>
<tr>
<td>Debt to Assets</td>
<td>-0.0028025</td>
<td>-0.0052206</td>
<td>-0.002014</td>
</tr>
<tr>
<td></td>
<td>(-0.22)</td>
<td>(-0.37)</td>
<td>(-0.11)</td>
</tr>
<tr>
<td>Sales growth</td>
<td>0.0000696</td>
<td>0.0000454</td>
<td>-0.0008165</td>
</tr>
<tr>
<td></td>
<td>(1.49)</td>
<td>(0.69)</td>
<td>(-1.34)</td>
</tr>
<tr>
<td>ADR dummy</td>
<td>-0.0010195</td>
<td>-0.0006629</td>
<td>-0.0007127</td>
</tr>
<tr>
<td></td>
<td>(-0.16)</td>
<td>(-0.12)</td>
<td>(-0.08)</td>
</tr>
<tr>
<td>Industry dummy</td>
<td>-0.0033118</td>
<td>-0.0068267</td>
<td>0.0068321</td>
</tr>
<tr>
<td></td>
<td>(-0.05)</td>
<td>(-1.19)</td>
<td>(0.76)</td>
</tr>
<tr>
<td>Utilities dummy</td>
<td>-0.0197598</td>
<td>-0.022072</td>
<td>-0.0151192</td>
</tr>
<tr>
<td></td>
<td>(-1.52)</td>
<td>(-1.43)</td>
<td>(-1.27)</td>
</tr>
<tr>
<td>Primary production dummy</td>
<td>-0.0087352</td>
<td>-0.0085473</td>
<td>-0.0100722</td>
</tr>
<tr>
<td></td>
<td>(-1.13)</td>
<td>(-1.12)</td>
<td>(-1.00)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.0511846</td>
<td>0.0780842</td>
<td>0.0161284</td>
</tr>
<tr>
<td></td>
<td>(1.93)*</td>
<td>(2.66)***</td>
<td>(0.61)</td>
</tr>
</tbody>
</table>

| Adjusted R²^2                 | 0.1843              | 0.3038              | 0.097               |
| No. of observations           | 62                  | 62                  | 59                  |
| F Statistic (p-value)         | 2.31(0.0289)        | 3.30(0.003)         | 3.11(0.0049)        |

**Notes:**

T statistics based on robust standard errors in parenthesis

* Significant at 10%
** Significant at 5%
*** Significant at 1%
Table 23

Q and instrumented TDI - 2

Q and TDI instrumented by the number of days the stock was traded in 2001-2003 as a proportion of total trading days in that period. OLS results for the whole period (2000-2003) and two subperiods (2000-20001 and 2002-2003). Q is an average from quarterly data for each period, with observations with q>2.5 being dropped. TDI (on a 0-100 scale) is the same for all periods, and is based on public information for 2003. Size dummy is a dummy variable with value 1 for firms in the upper 20% of firms according to total assets, and 0 otherwise. Debt to assets and sales growth are the average values in the two years previous to the sample period. Industry, Utilities, and Primary Product dummies show the productive sector each firm belongs. The definition of the remaining variables can be found in the text.

<table>
<thead>
<tr>
<th>Dependent Variable: q</th>
<th>Reg 1</th>
<th>Reg 2</th>
<th>Reg 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanatory Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trading intensity</td>
<td>0.1475558</td>
<td>0.162527</td>
<td>0.0539047</td>
</tr>
<tr>
<td></td>
<td>(1.23)</td>
<td>(1.71)*</td>
<td>(0.32)</td>
</tr>
<tr>
<td>Ln(Age)</td>
<td>0.058925</td>
<td>-0.0440313</td>
<td>-0.0010606</td>
</tr>
<tr>
<td></td>
<td>(0.55)</td>
<td>(-0.96)</td>
<td>(-0.02)</td>
</tr>
<tr>
<td>Size dummy</td>
<td>0.3259083</td>
<td>0.3544764</td>
<td>0.3329817</td>
</tr>
<tr>
<td></td>
<td>(3.49)***</td>
<td>(4.71)***</td>
<td>(4.68)***</td>
</tr>
<tr>
<td>Debt to Assets</td>
<td>0.4891212</td>
<td>0.678535</td>
<td>0.6023629</td>
</tr>
<tr>
<td></td>
<td>(1.87)*</td>
<td>(3.24)***</td>
<td>(1.76)*</td>
</tr>
<tr>
<td>Sales growth</td>
<td>0.0010972</td>
<td>0.0005232</td>
<td>-0.0279415</td>
</tr>
<tr>
<td></td>
<td>(1.41)</td>
<td>(0.82)</td>
<td>(-3.89)***</td>
</tr>
<tr>
<td>ADR dummy</td>
<td>0.0213244</td>
<td>0.0528989</td>
<td>0.0443844</td>
</tr>
<tr>
<td></td>
<td>(0.27)</td>
<td>(0.68)</td>
<td>(0.5)</td>
</tr>
<tr>
<td>Industry dummy</td>
<td>0.1194046</td>
<td>-0.0301275</td>
<td>0.2787291</td>
</tr>
<tr>
<td></td>
<td>(1.46)</td>
<td>(-0.37)</td>
<td>(2.47)***</td>
</tr>
<tr>
<td>Utilities dummy</td>
<td>0.0753059</td>
<td>-0.0790928</td>
<td>0.0525054</td>
</tr>
<tr>
<td></td>
<td>(0.38)</td>
<td>(-0.8)</td>
<td>(0.43)</td>
</tr>
<tr>
<td>Primary production dummy</td>
<td>0.1269966</td>
<td>-0.1172584</td>
<td>0.2890851</td>
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<tr>
<td></td>
<td>(0.88)</td>
<td>(-1.32)</td>
<td>(2.97)***</td>
</tr>
<tr>
<td>Constant</td>
<td>0.3284477</td>
<td>0.7309922</td>
<td>0.5457764</td>
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<tr>
<td></td>
<td>(0.88)</td>
<td>(3.55)***</td>
<td>(1.79)*</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.0084</td>
<td>0.3478</td>
<td>0.2034</td>
</tr>
<tr>
<td>No. of observations</td>
<td>54</td>
<td>53</td>
<td>50</td>
</tr>
<tr>
<td>F Statistic (p-value)</td>
<td>5.44(0.000)</td>
<td>8.25(0.000)</td>
<td>13.70(0.000)</td>
</tr>
</tbody>
</table>

**Notes:**

T statistics based on robust standard errors in parenthesis  
* Significant at 10%  
** Significant at 5%  
*** Significant at 1%
Table 24

ROA and instrumented TDI - 3

ROA and TDI instrumented by the number of days the stock was traded in 2001-2003 as a proportion of total trading days in that period. Simultaneous equations, two-stage least squares results for the whole period (2000-2003) and two subperiods (2000-20001 and 2002-2003). ROA is an average from quarterly data for each period. TDI (on a 0-100 scale) is the same for all periods, and is based on public information for 2003. Size dummy is a dummy variable with value 1 for firms in the upper 20% of firms according to total assets, and 0 otherwise. Debt to assets and sales growth are the average values in the two years previous to the sample period. Industry, Utilities, and Primary Product dummies show the productive sector each firm belongs. The definition of the remaining variables can be found in the text.

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>Reg 1</th>
<th>Reg 2</th>
<th>Reg 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trading intensity</td>
<td>0.03329259</td>
<td>0.0336572</td>
<td>0.0362385</td>
</tr>
<tr>
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<td>(2.67)***</td>
<td>(3.00)***</td>
<td>(2.21)**</td>
</tr>
<tr>
<td>Ln(Age)</td>
<td>-0.0122023</td>
<td>-0.0177749</td>
<td>-0.0038782</td>
</tr>
<tr>
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<td>(-2.15)**</td>
<td>(-3.44)***</td>
<td>(-0.52)</td>
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<tr>
<td>Size dummy</td>
<td>0.0151937</td>
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<td>0.0119782</td>
</tr>
<tr>
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<td>(1.26)</td>
<td>(1.54)</td>
<td>(0.76)</td>
</tr>
<tr>
<td>Debt to Assets</td>
<td>-0.0048806</td>
<td>-0.0086707</td>
<td>-0.0056449</td>
</tr>
<tr>
<td></td>
<td>(-0.3)</td>
<td>(-0.58)</td>
<td>(-0.25)</td>
</tr>
<tr>
<td>Sales growth</td>
<td>0.0001003</td>
<td>0.0000965</td>
<td>-0.0010055</td>
</tr>
<tr>
<td></td>
<td>(0.65)</td>
<td>(0.69)</td>
<td>(-0.62)</td>
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<td>-0.0047888</td>
<td>-0.0069207</td>
<td>-0.004062</td>
</tr>
<tr>
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<td>(-0.56)</td>
<td>(-0.9)</td>
<td>(-0.39)</td>
</tr>
<tr>
<td>Industry dummy</td>
<td>-0.0009418</td>
<td>-0.0078727</td>
<td>0.0067239</td>
</tr>
<tr>
<td></td>
<td>(-0.13)</td>
<td>(-1.16)</td>
<td>(0.68)</td>
</tr>
<tr>
<td>Utilities dummy</td>
<td>-0.0200141</td>
<td>-0.0224943</td>
<td>-0.0143434</td>
</tr>
<tr>
<td></td>
<td>(-1.76)*</td>
<td>(-2.18)**</td>
<td>(-0.95)</td>
</tr>
<tr>
<td>Primary production dummy</td>
<td>-0.0093844</td>
<td>-0.0096251</td>
<td>-0.0109994</td>
</tr>
<tr>
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<td>(-1.15)</td>
<td>(-1.3)</td>
<td>(-0.92)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.0457066</td>
<td>0.0689897</td>
<td>0.0107811</td>
</tr>
<tr>
<td></td>
<td>(1.78)*</td>
<td>(2.95)***</td>
<td>(0.32)</td>
</tr>
</tbody>
</table>

| No. of observations  | 62             | 62             | 59             |
| F Statistic (p-value)| 2.39(0.0169)   | 4.00(0.000)    | 3.11(0.0049)   |

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>Reg 1</th>
<th>Reg 2</th>
<th>Reg 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>-85.38953</td>
<td>-61.35452</td>
<td>-347.0445</td>
</tr>
<tr>
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<td>(-0.3)</td>
<td>(-0.49)</td>
<td>(-0.05)</td>
</tr>
<tr>
<td>Ln(Age)</td>
<td>-0.7979982</td>
<td>-0.8943496</td>
<td>-0.4816984</td>
</tr>
<tr>
<td></td>
<td>(-2.28)</td>
<td>(-0.47)</td>
<td>(-0.05)</td>
</tr>
<tr>
<td>Size dummy</td>
<td>0.562959</td>
<td>0.4527009</td>
<td>1.940962</td>
</tr>
<tr>
<td></td>
<td>(0.39)</td>
<td>(0.69)</td>
<td>(0.05)</td>
</tr>
<tr>
<td>Debt to Assets</td>
<td>-1.23197</td>
<td>-1.187541</td>
<td>-0.7518376</td>
</tr>
<tr>
<td></td>
<td>(-0.31)</td>
<td>(-0.51)</td>
<td>(-0.04)</td>
</tr>
<tr>
<td>Sales growth</td>
<td>-0.0001216</td>
<td>-0.0010667</td>
<td>-0.0074015</td>
</tr>
<tr>
<td></td>
<td>(-0.01)</td>
<td>(-0.13)</td>
<td>(-0.01)</td>
</tr>
<tr>
<td>ADR dummy</td>
<td>0.1654736</td>
<td>0.0372771</td>
<td>1.063816</td>
</tr>
<tr>
<td></td>
<td>(0.24)</td>
<td>(0.09)</td>
<td>(0.06)</td>
</tr>
<tr>
<td>Industry dummy</td>
<td>0.3423447</td>
<td>-0.1430586</td>
<td>3.664325</td>
</tr>
<tr>
<td></td>
<td>(0.32)</td>
<td>(-0.23)</td>
<td>(0.05)</td>
</tr>
<tr>
<td>Utilities dummy</td>
<td>-1.261479</td>
<td>-1.020256</td>
<td>-3.892124</td>
</tr>
<tr>
<td></td>
<td>(-0.28)</td>
<td>(-0.46)</td>
<td>(-0.05)</td>
</tr>
<tr>
<td>Primary production dummy</td>
<td>-0.52888</td>
<td>-0.3714552</td>
<td>-2.641563</td>
</tr>
<tr>
<td></td>
<td>(-0.25)</td>
<td>(-0.38)</td>
<td>(-0.05)</td>
</tr>
<tr>
<td>Constant</td>
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<td>-1.096079</td>
<td>-19.84085</td>
</tr>
<tr>
<td></td>
<td>(-0.5)</td>
<td>(-0.57)</td>
<td>(-0.05)</td>
</tr>
</tbody>
</table>

| No. of observations  | 62             | 62             | 59             |
| F Statistic (p-value)| 0.17(0.9968)   | 0.46(0.859)    | 1.48(0.1648)   |
### Table 25

**Q and instrumented TDI - 3**

Q and TDI instrumented by the number of days the stock was traded in 2001-2003 as a proportion of total trading days in that period. Simultaneous equations, two-stage least squares results for the whole period (2000-2003) and two subperiods (2000-2001 and 2002-2003). Q is an average from quarterly data for each period, with observations with \( q > 2.5 \) being dropped. TDI (on a 0-100 scale) is the same for all periods, and is based on public information for 2003. Size dummy is a dummy variable with value 1 for firms in the upper 20% of firms according to total assets, and 0 otherwise. Debt to assets and sales growth are the average values in the two years previous to the sample period. Industry, Utilities, and Primary Product dummies show the productive sector each firm belongs. The definition of the remaining variables can be found in the text.

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>Reg 1</th>
<th>Reg 2</th>
<th>Reg 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trading intensity</td>
<td>0.4245126</td>
<td>0.2596319</td>
<td>0.1694634</td>
</tr>
<tr>
<td></td>
<td>(2.17)**</td>
<td>(2.06)**</td>
<td>(0.97)</td>
</tr>
<tr>
<td>Ln(Age)</td>
<td>0.081148</td>
<td>-0.0376675</td>
<td>0.0088241</td>
</tr>
<tr>
<td></td>
<td>(0.74)</td>
<td>(-0.51)</td>
<td>(0.09)</td>
</tr>
<tr>
<td>Size dummy</td>
<td>0.3250673</td>
<td>0.3547198</td>
<td>0.3206486</td>
</tr>
<tr>
<td></td>
<td>(1.64)</td>
<td>(2.80)**</td>
<td>(1.89)**</td>
</tr>
<tr>
<td>Debt to Assets</td>
<td>0.5390622</td>
<td>0.6970512</td>
<td>0.5697884</td>
</tr>
<tr>
<td></td>
<td>(1.87)*</td>
<td>(3.64)***</td>
<td>(2.13)**</td>
</tr>
<tr>
<td>Sales growth</td>
<td>0.0016901</td>
<td>0.0007299</td>
<td>-0.0296899</td>
</tr>
<tr>
<td></td>
<td>(0.7)</td>
<td>(0.45)</td>
<td>(-1.74)*</td>
</tr>
<tr>
<td>ADR dummy</td>
<td>-0.0570218</td>
<td>0.0259441</td>
<td>0.0086105</td>
</tr>
<tr>
<td></td>
<td>(-0.42)</td>
<td>(0.29)</td>
<td>(0.08)</td>
</tr>
<tr>
<td>Industry dummy</td>
<td>0.1070389</td>
<td>-0.0347431</td>
<td>0.2721128</td>
</tr>
<tr>
<td></td>
<td>(0.86)</td>
<td>(-0.42)</td>
<td>(2.4)**</td>
</tr>
<tr>
<td>Utilities dummy</td>
<td>0.0622098</td>
<td>-0.08604</td>
<td>0.0623413</td>
</tr>
<tr>
<td></td>
<td>(0.28)</td>
<td>(-0.57)</td>
<td>(0.32)</td>
</tr>
<tr>
<td>Primary production dummy</td>
<td>0.1106005</td>
<td>-0.1247664</td>
<td>0.2825339</td>
</tr>
<tr>
<td></td>
<td>(0.79)</td>
<td>(-1.32)</td>
<td>(2.19)**</td>
</tr>
<tr>
<td>Constant</td>
<td>0.1231897</td>
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| No. of observations   | 54             | 53             | 50             |
| F Statistic (p-value) | 1.37(0.2132)   | 4.14(0.02)     | 2.43(0.0171)   |

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| No. of observations   | 54             | 53             | 50             |
| F Statistic (p-value) | 0.97(0.4726)   | 2.88(0.051)    | 2.05(0.045)    |
### Table 26

**ROA and TDI: Simultaneous equations**

ROA and TDI. Simultaneous equations, two-stage least squares results for the whole period (2000-2003) and two subperiods (2000-20001 and 2002-2003). ROA is an average from quarterly data for each period. TDI (on a 0-100 scale) is the same for all periods, and is based on public information for 2003. Size dummy is a dummy variable with value 1 for firms in the upper 20% of firms according to total assets, and 0 otherwise. Debt to assets and sales growth are the average values in the two years previous to the sample period. Industry, Utilities, and Primary Product dummies show the productive sector each firm belongs. The definition of the remaining variables can be found in the text.

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<th>Reg 3</th>
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<td>(1.97)*</td>
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Table 27
Q and TDI: Simultaneous equations

Q and TDI. Simultaneous equations, two-stage least squares results for the whole period (2000-2003) and two subperiods (2000-2001 and 2002-2003). Q is an average from quarterly data for each period, with observations with q>2.5 being dropped. TDI (on a 0-100 scale) is the same for all periods, and is based on public information for 2003. Size dummy is a dummy variable with value 1 for firms in the upper 20% of firms according to total assets, and 0 otherwise. Debt to assets and sales growth are the average values in the two years previous to the sample period. Industry, Utilities, and Primary Product dummies show the productive sector each firm belongs. The definition of the remaining variables can be found in the text.

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<th>Reg 3</th>
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Table 28

ROA, TDI, and ownership variables

Each line of the table displays, for the three sample periods, the estimated coefficient (and t statistic) on TDI and alternative ownership measures: (a) Domestically-owned: Dummy variable with value 1 if the main ultimate shareholder is an Argentine family, and 0 if the main ultimate shareholder is a foreign company; (b) Control rights of the main ultimate shareholder on the company; (c) Cash flow rights of the main ultimate shareholder on the company; and (d) Control-to-Cash Flow rights of the main ultimate shareholder. Default is a dummy variable with value 1 if the company declared default in 2002, and 0 otherwise. For each of the OLS regressions, the controls are all the same as in the baseline regressions.

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<td>(2.55)**</td>
<td>(1.41)</td>
</tr>
<tr>
<td>Control-to-Cash flow</td>
<td>-0.0039524</td>
<td>0.0003507</td>
<td>-0.0073614</td>
</tr>
<tr>
<td>rights</td>
<td>(-1.89)*</td>
<td>(0.24)</td>
<td>(-2.27)**</td>
</tr>
<tr>
<td>TDI</td>
<td>0.000621</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.69)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Default</td>
<td>-0.0040768</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-0.32)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
T statistics based on robust standard errors in parenthesis
* Significant at 10%
** Significant at 5%
*** Significant at 1%
Table 29
Q, TDI, and ownership variables

Each line of the table displays, for the three sample periods, the estimated coefficient (and t statistic) on TDI and alternative ownership measures: (a) Domestically-owned: Dummy variable with value 1 if the main ultimate shareholder is an Argentine family, and 0 if the main ultimate shareholder is a foreign company; (b) Voting rights of the main ultimate shareholder on the company; (c) Cash flow rights of the main ultimate shareholder on the company; and (d) Control-to-Cash Flow rights of the main ultimate shareholder. Default is a dummy variable with value 1 if the company declared default in 2002, and 0 otherwise. For each of the OLS regressions, the controls are all the same as in the baseline regressions. Outlier observations with q>2.5 were dropped.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TDI</td>
<td>0.0069655</td>
<td>0.006129</td>
<td>0.0053619</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.84)***</td>
<td>(3.80)***</td>
<td>(2.54)**</td>
<td></td>
</tr>
<tr>
<td>Domestically-owned</td>
<td>-0.1360339</td>
<td>-0.0098623</td>
<td>0.0533931</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-1.09)</td>
<td>(-0.17)</td>
<td>(-0.03)</td>
<td></td>
</tr>
<tr>
<td>TDI</td>
<td>0.0072879</td>
<td>0.0054797</td>
<td>0.005555</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.47)**</td>
<td>(2.9)***</td>
<td>(2.45)**</td>
<td></td>
</tr>
<tr>
<td>Control rights</td>
<td>0.0016564</td>
<td>-0.0010065</td>
<td>-0.0002549</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.71)</td>
<td>(-0.93)</td>
<td>(-0.15)</td>
<td></td>
</tr>
<tr>
<td>TDI</td>
<td>0.0068515</td>
<td>0.0057205</td>
<td>0.0056454</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.71)***</td>
<td>(3.27)***</td>
<td>(2.49)**</td>
<td></td>
</tr>
<tr>
<td>Cash flow rights</td>
<td>0.0014618</td>
<td>-0.0009766</td>
<td>-0.0001199</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.75)</td>
<td>(-1.01)</td>
<td>(-0.08)</td>
<td></td>
</tr>
<tr>
<td>TDI</td>
<td>0.0064649</td>
<td>0.0060841</td>
<td>0.0057941</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3.01)***</td>
<td>(3.64)***</td>
<td>(2.61)**</td>
<td></td>
</tr>
<tr>
<td>Control-to-Cash flow rights</td>
<td>-0.0659882</td>
<td>-0.0039019</td>
<td>-0.0761783</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-1.27)</td>
<td>(-0.12)</td>
<td>(-2.35)**</td>
<td></td>
</tr>
<tr>
<td>TDI</td>
<td></td>
<td>0.0049681</td>
<td></td>
<td>(1.97)*</td>
</tr>
<tr>
<td>Default</td>
<td></td>
<td>-0.0483392</td>
<td></td>
<td>(-0.34)</td>
</tr>
</tbody>
</table>

Notes: T statistics based on robust standard errors in parenthesis
* Significant at 10%
** Significant at 5%
*** Significant at 1%
Table 30

ROA, TDI, and Ownership: Interaction Regressors

OLS results for the whole period (2000-2003) and two subperiods (2000-20001 and 2002-2003). ROA is an average from quarterly data for each period. TDI (on a 0-100 scale) is the same for all periods, and is based on public information for 2003. The alternative ownership measures: (a) Domestically-owned: Dummy variable with value 1 if the main ultimate shareholder is an Argentine family, and 0 if the main ultimate shareholder is a foreign company; (b) Control rights of the main ultimate shareholder on the company; (c) Cash flow rights of the main ultimate shareholder on the company; and (d) Control-to-Cash Flow rights of the main ultimate shareholder. For each of the OLS regressions, the controls are all the same as in the baseline regressions.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TDI</td>
<td>0.0005468</td>
<td>0.0003577</td>
<td>0.0007089</td>
</tr>
<tr>
<td></td>
<td>(2.28)**</td>
<td>(2.34)**</td>
<td>(1.80)*</td>
</tr>
<tr>
<td>TDI* Control-to-Cash flow</td>
<td>-0.000078</td>
<td>-0.000318</td>
<td>-0.0001345</td>
</tr>
<tr>
<td></td>
<td>(-1.98)*</td>
<td>(-0.12)</td>
<td>(-2.30)**</td>
</tr>
<tr>
<td>TDI</td>
<td>0.0003855</td>
<td>0.0003033</td>
<td>0.0005016</td>
</tr>
<tr>
<td></td>
<td>(1.58)</td>
<td>(1.93)*</td>
<td>(1.2)</td>
</tr>
<tr>
<td>TDI* Control Rights</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.00000</td>
</tr>
<tr>
<td></td>
<td>(0.53)</td>
<td>(0.8)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>TDI</td>
<td>0.0003764</td>
<td>0.0003089</td>
<td>0.0004644</td>
</tr>
<tr>
<td></td>
<td>(1.52)</td>
<td>(1.98)*</td>
<td>(1.09)</td>
</tr>
<tr>
<td>TDI* Cash flow Rights</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.00000</td>
</tr>
<tr>
<td></td>
<td>(0.64)</td>
<td>(0.71)</td>
<td>(0.25)</td>
</tr>
<tr>
<td>TDI</td>
<td>0.0003309</td>
<td>0.0002463</td>
<td>0.0004327</td>
</tr>
<tr>
<td></td>
<td>(1.42)</td>
<td>(1.94)*</td>
<td>(1.08)</td>
</tr>
<tr>
<td>TDI* Domestically-owned</td>
<td>0.0001984</td>
<td>0.0002064</td>
<td>0.0001157</td>
</tr>
<tr>
<td></td>
<td>(1.62)</td>
<td>(2.33)**</td>
<td>(0.58)</td>
</tr>
</tbody>
</table>

Notes:
T statistics based on robust standard errors in parenthesis
* Significant at 10%
** Significant at 5%
*** Significant at 1%
### Table 31

**Q, TDI, and Ownership: Interaction Regressors**

OLS results for the whole period (2000-2003) and two subperiods (2000-20001 and 2002-2003). Q is an average from quarterly data for each period, with observations with q larger than 2.5 being dropped. TDI (on a 0-100 scale) is the same for all periods, and is based on public information for 2003. The alternative ownership measures: (a) Domestically-owned: Dummy variable with value 1 if the main ultimate shareholder is an Argentine family, and 0 if the main ultimate shareholder is a foreign company; (b) Control rights of the main ultimate shareholder on the company; (c) Cash flow rights of the main ultimate shareholder on the company; and (d) Control-to-Cash Flow rights of the main ultimate shareholder. Default is a dummy variable with value 1 if the company declared default in 2002, and 0 otherwise. For each of the OLS regressions, the controls are all the same as in the baseline regressions.

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>Dependent Variable: q</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDI</td>
<td>0.0081147</td>
</tr>
<tr>
<td></td>
<td>(3.06)***</td>
</tr>
<tr>
<td>TDI* Control-to-Cash flow</td>
<td>-0.0011564</td>
</tr>
<tr>
<td></td>
<td>(-1.73)*</td>
</tr>
<tr>
<td>TDI</td>
<td>0.0051433</td>
</tr>
<tr>
<td></td>
<td>(2.19)**</td>
</tr>
<tr>
<td>TDI* Control Rights</td>
<td>0.000031</td>
</tr>
<tr>
<td></td>
<td>(0.73)</td>
</tr>
<tr>
<td>TDI</td>
<td>0.0052544</td>
</tr>
<tr>
<td></td>
<td>(2.32)**</td>
</tr>
<tr>
<td>TDI* Control Rights</td>
<td>0.000026</td>
</tr>
<tr>
<td></td>
<td>(0.72)</td>
</tr>
<tr>
<td>TDI</td>
<td>0.0081607</td>
</tr>
<tr>
<td></td>
<td>(2.61)**</td>
</tr>
<tr>
<td>TDI* Domestically-owned</td>
<td>-0.0030955</td>
</tr>
<tr>
<td></td>
<td>(-1.01)</td>
</tr>
</tbody>
</table>

**Notes:**
- T statistics based on robust standard errors in parenthesis
- * Significant at 10%
- ** Significant at 5%
- *** Significant at 1%
### Table 32

**Dividend measures by year, 1996-2003**

The table shows, with yearly figures for 1996-2003, the mean and standard deviation of three alternative dividend measures whose definitions appear in Table 1.

<table>
<thead>
<tr>
<th>Year</th>
<th>Dividends to cash flow</th>
<th>Dividends to earnings</th>
<th>Dividends to sales</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Std. Dev.</td>
<td>Mean</td>
</tr>
<tr>
<td>1996</td>
<td>0.153</td>
<td>0.222</td>
<td>0.245</td>
</tr>
<tr>
<td>1997</td>
<td>0.189</td>
<td>0.385</td>
<td>0.354</td>
</tr>
<tr>
<td>1998</td>
<td>0.152</td>
<td>0.207</td>
<td>0.283</td>
</tr>
<tr>
<td>1999</td>
<td>0.126</td>
<td>0.206</td>
<td>0.702</td>
</tr>
<tr>
<td>2000</td>
<td>0.153</td>
<td>0.210</td>
<td>0.387</td>
</tr>
<tr>
<td>2001</td>
<td>0.189</td>
<td>0.576</td>
<td>0.466</td>
</tr>
<tr>
<td>2002</td>
<td>0.021</td>
<td>0.065</td>
<td>0.038</td>
</tr>
<tr>
<td>2003</td>
<td>0.050</td>
<td>0.152</td>
<td>0.074</td>
</tr>
<tr>
<td>Average</td>
<td>0.129</td>
<td>0.253</td>
<td>0.319</td>
</tr>
</tbody>
</table>

### Table 33

**Balance sheet variables by year, 1996-2003**

The table shows, with yearly figures for 1996-2003, the mean and standard deviation of the balance sheet regressors whose definitions appear in Table 2.

<table>
<thead>
<tr>
<th>Year</th>
<th>Ln(Assets) Mean</th>
<th>Std. Dev.</th>
<th>ROA Mean</th>
<th>Std. Dev.</th>
<th>Tobin's q Mean</th>
<th>Std. Dev.</th>
<th>Debt to assets Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>12.843</td>
<td>1.846</td>
<td>4.146</td>
<td>7.773</td>
<td>0.829</td>
<td>0.328</td>
<td>0.179</td>
<td>0.120</td>
</tr>
<tr>
<td>1997</td>
<td>12.968</td>
<td>1.716</td>
<td>4.636</td>
<td>7.027</td>
<td>0.911</td>
<td>0.307</td>
<td>0.181</td>
<td>0.126</td>
</tr>
<tr>
<td>1998</td>
<td>13.169</td>
<td>1.794</td>
<td>5.608</td>
<td>6.276</td>
<td>0.876</td>
<td>0.331</td>
<td>0.215</td>
<td>0.154</td>
</tr>
<tr>
<td>1999</td>
<td>13.285</td>
<td>1.767</td>
<td>5.102</td>
<td>6.149</td>
<td>0.840</td>
<td>0.293</td>
<td>0.229</td>
<td>0.159</td>
</tr>
<tr>
<td>2000</td>
<td>13.450</td>
<td>1.771</td>
<td>4.738</td>
<td>5.910</td>
<td>0.850</td>
<td>0.278</td>
<td>0.256</td>
<td>0.173</td>
</tr>
<tr>
<td>2001</td>
<td>13.529</td>
<td>1.590</td>
<td>4.467</td>
<td>6.302</td>
<td>0.766</td>
<td>0.219</td>
<td>0.214</td>
<td>0.163</td>
</tr>
<tr>
<td>2002</td>
<td>13.254</td>
<td>1.474</td>
<td>2.353</td>
<td>6.618</td>
<td>0.777</td>
<td>0.215</td>
<td>0.300</td>
<td>0.254</td>
</tr>
<tr>
<td>2003</td>
<td>13.082</td>
<td>1.698</td>
<td>2.846</td>
<td>7.982</td>
<td>0.914</td>
<td>0.249</td>
<td>0.246</td>
<td>0.220</td>
</tr>
</tbody>
</table>
**Table 34**

**Mean difference tests for balance sheet variables**

The table shows the means of the balance sheet variables used in the estimation and whose definitions appear in Table 2, broken down into dividend payers and non-dividend payers. The sample covers a maximum of 613 observations over 1996-2003. Figures accompanied with two stars [**] (with three stars [***]) imply that such mean value is statistically different than the mean of the other group at 5% (1%).

<table>
<thead>
<tr>
<th></th>
<th>Mean (Dividend Payers)</th>
<th>Mean (Non-Dividend Payers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ln(Assets)</td>
<td>13.46298***</td>
<td>12.18412</td>
</tr>
<tr>
<td>ROA</td>
<td>8.083471***</td>
<td>1.415236</td>
</tr>
<tr>
<td>q</td>
<td>2.852988</td>
<td>1.950592</td>
</tr>
<tr>
<td>Debt to assets</td>
<td>0.1465031</td>
<td>0.2207027***</td>
</tr>
</tbody>
</table>

**Table 35**

**Mean difference tests for corporate governance and ownership**

The table shows the means of the corporate governance and ownership variables used in the estimation and whose definitions appear in Table 2, broken down into dividend payers and non-dividend payers. Figures accompanied with two stars [**] (with three stars [***]) imply that such mean value is statistically different than the mean of the other group at 5% (1%).

<table>
<thead>
<tr>
<th></th>
<th>Mean (Dividend Payers)</th>
<th>Mean (Non-Dividend Payers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDI</td>
<td>44.08***</td>
<td>37.43</td>
</tr>
<tr>
<td>TDI-Board</td>
<td>35.2***</td>
<td>26.07</td>
</tr>
<tr>
<td>TDI-Disclosure</td>
<td>52.91***</td>
<td>48.19</td>
</tr>
<tr>
<td>TDI-Shareholders</td>
<td>44.19**</td>
<td>38.77</td>
</tr>
<tr>
<td>Control rights</td>
<td>61.95</td>
<td>63.63</td>
</tr>
<tr>
<td>Control-to-cash flow rights</td>
<td>1.258</td>
<td>1.32</td>
</tr>
<tr>
<td>Domestically-owned</td>
<td>0.548</td>
<td>0.425</td>
</tr>
<tr>
<td>ADR</td>
<td>0.277</td>
<td>0.197</td>
</tr>
</tbody>
</table>
Table 36
Cash Dividends to Cash Flow: Balance Sheet Determinants

Pooled Tobit results for yearly data 1996-2003 and a maximum of 65 non-financial listed firms. The yearly cash dividends are those announced once the company’s fiscal year has ended, and the accounting variables (including the cash flow used to scale dividends) are calculated from such fiscal year’s statements. Variable definitions can be found in Table 2. Observations with percentage ROA smaller than -20 and higher than 20, and those with q>2.5, are dropped.

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>Reg 1</th>
<th>Reg 2</th>
<th>Reg 3</th>
<th>Reg 4</th>
<th>Reg 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ln(Assets)</td>
<td>0.139721</td>
<td>0.0496856</td>
<td>0.1179684</td>
<td>0.049259</td>
<td>0.3582527</td>
</tr>
<tr>
<td></td>
<td>(4.12)**</td>
<td>(4.98)***</td>
<td>(1.03)</td>
<td>(4.84)***</td>
<td>(-3.14)***</td>
</tr>
<tr>
<td>ROA</td>
<td>0.045929</td>
<td>0.0500902</td>
<td>0.0090711</td>
<td>0.0086075</td>
<td>0.105616</td>
</tr>
<tr>
<td></td>
<td>(3.68)***</td>
<td>(3.13)</td>
<td>(0.49)</td>
<td>(0.94)</td>
<td>(-1.07)</td>
</tr>
<tr>
<td>q</td>
<td>-0.3582527</td>
<td>-0.0844999</td>
<td>0.0090711</td>
<td>0.0163188</td>
<td>0.01395932</td>
</tr>
<tr>
<td></td>
<td>(-3.86)***</td>
<td>(-0.76)</td>
<td>(0.08)</td>
<td>(0.15)</td>
<td>(-0.97)</td>
</tr>
<tr>
<td>Debt to Assets</td>
<td>-1.027093</td>
<td>-1.0849999</td>
<td>0.0090711</td>
<td>0.0163188</td>
<td>0.01395932</td>
</tr>
<tr>
<td></td>
<td>(-3.68)***</td>
<td>(-2.76)</td>
<td>(0.08)</td>
<td>(0.15)</td>
<td>(-0.97)</td>
</tr>
<tr>
<td>Dummy 1997</td>
<td>0.1065076</td>
<td>0.0228356</td>
<td>0.0461027</td>
<td>0.0591087</td>
<td>0.0086075</td>
</tr>
<tr>
<td></td>
<td>(0.14)</td>
<td>(0.18)</td>
<td>(0.38)</td>
<td>(0.51)</td>
<td>(0.94)</td>
</tr>
<tr>
<td>Dummy 1998</td>
<td>-0.0238291</td>
<td>-0.0174689</td>
<td>0.0073206</td>
<td>0.0500902</td>
<td>0.0086075</td>
</tr>
<tr>
<td></td>
<td>(-0.24)</td>
<td>(-0.18)</td>
<td>(0.07)</td>
<td>(0.49)</td>
<td>(0.09)</td>
</tr>
<tr>
<td>Dummy 1999</td>
<td>-0.1866945</td>
<td>-0.1490408</td>
<td>-0.0844999</td>
<td>-0.1106561</td>
<td>0.0163188</td>
</tr>
<tr>
<td></td>
<td>(-1.66)*</td>
<td>(-1.46)</td>
<td>(-0.39)</td>
<td>(-0.76)</td>
<td>(-1.07)</td>
</tr>
<tr>
<td>Dummy 2000</td>
<td>-0.0747963</td>
<td>0.0010548</td>
<td>-0.0445119</td>
<td>0.0090711</td>
<td>0.0163188</td>
</tr>
<tr>
<td></td>
<td>(-0.64)</td>
<td>(0.01)</td>
<td>(-0.39)</td>
<td>(0.08)</td>
<td>(0.15)</td>
</tr>
<tr>
<td>Dummy 2001</td>
<td>-0.1883885</td>
<td>-0.0994918</td>
<td>-0.1483344</td>
<td>-0.1316112</td>
<td>-0.1395932</td>
</tr>
<tr>
<td></td>
<td>(-1.27)</td>
<td>(-0.67)</td>
<td>(-0.95)</td>
<td>(-0.86)</td>
<td>(-0.97)</td>
</tr>
<tr>
<td>Dummy 2002</td>
<td>-0.6337873</td>
<td>-0.4875134</td>
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<td>(-2.82)***</td>
<td>(-3.29)***</td>
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<td>(-2.34)**</td>
<td>(-2.07)**</td>
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<td>0.0579242</td>
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| Observations          | 355            | 355            | 355            | 355            | 355            |
| Companies             | 65             | 65             | 65             | 65             | 65             |
| Method                | Pooled Tobit   | Pooled Tobit   | Pooled Tobit   | Pooled Tobit   | Pooled Tobit   |
| Wald Test (p-value)   | 61.14 (0.000)  | 83.16 (0.000)  | 47.04 (0.000)  | 64.18 (0.000)  | 83.77 (0.000)  |
| Obs. left-censored at zero | 221          | 221            | 221            | 221            | 221            |

Notes:
T statistics based on robust standard errors in parenthesis
* Significant at 10%
** Significant at 5%
*** Significant at 1%
Table 37

Cash Dividends to Cash Flow and instrumented q and debt

Pooled Tobit results for yearly data 1996-2003 and a maximum of 65 non-financial listed firms. Q is instrumented with ln(Assets), the standard deviation of ROA in the previous three years and sector dummies. Debt to assets is instrumented with ln(Assets), tangibility (Fixed to total assets), ROA and sector dummies. The yearly cash dividends are those announced once the company's fiscal year has ended, and the accounting variables (including the cash flow used to scale dividends) are calculated from such fiscal year's statements. Variable definitions can be found in Table 2. Observations with percentage ROA smaller than -20 and higher than 20, and those with q>2.5, are dropped.

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### Explanatory Variables

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**Notes:**
- T statistics based on robust standard errors in parenthesis
- * Significant at 10%
- ** Significant at 5%
- *** Significant at 1%
Table 38
Cash Dividends to Cash Flow: Balance Sheet Determinants and Lagged Dividends

Pooled Tobit results for yearly data 1996-2003 and a maximum 65 non-financial listed firms. The yearly cash dividends are those announced once the company’s fiscal year has ended, and the accounting variables (including the cash flow used to scale dividends) are calculated from such fiscal year’s statements. Variable definitions can be found in Table 2. Observations with percentage ROA smaller than -20 and higher than 20, and those with q>2.5, are dropped. The lagged dividend-to-cash flow is the level of such variable in the previous fiscal year (negative values are dropped). The Dividend Payment dummy takes the value 1 if the company paid any cash dividends in the previous year, and 0 otherwise.

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<td>(2.13)**</td>
<td>(3.68)***</td>
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<td>(-3.24)***</td>
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**Notes:**
T statistics based on robust standard errors in parenthesis
* Significant at 10%
** Significant at 5%
*** Significant at 1%
Table 39
Cash Dividends to Cash Flow: Balance Sheet Determinants and Lagged Dividends, 2000-2003

Pooled Tobit results for yearly data 1996-2003 and a maximum 65 non-financial listed firms. The yearly cash dividends are those announced once the company's fiscal year has ended, and the accounting variables (including the cash flow used to scale dividends) are calculated from such fiscal year's statements. Variable definitions can be found in Table 2. Observations with percentage ROA smaller than -20 and higher than 20, and those with q>2.5, are dropped. The lagged dividend-to-cash flow is the level of such variable in the previous fiscal year (negative values are dropped). The Dividend Payment dummy takes the value 1 if the company paid any cash dividends in the previous year, and 0 otherwise.

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Notes:
T statistics based on robust standard errors in parenthesis
* Significant at 10%
** Significant at 5%
*** Significant at 1%
Table 40
Cash Dividends to Cash Flow: TDI and Balance Sheet Determinants

Pooled Tobit results for yearly data 1996-2003 and a maximum of 65 non-financial listed firms. The yearly cash dividends are those announced once the company's fiscal year has ended, and the accounting variables (including the cash flow used to scale dividends) are calculated from such fiscal year's statements. Variable definitions can be found in Table 2. Observations with percentage ROA smaller than -20 and higher than 20, and those with q>2.5, are dropped. The lagged dividend-to-cash flow is the level of such variable in the previous fiscal year (negative values are dropped). The Dividend Payment dummy takes the value 1 if the company paid any cash dividends in the previous year, and 0 otherwise. The Transparency and Disclosure Index, TDI, (on a 0-100 scale) is the same for all periods, and is based on public corporate information for 2003.

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<th>Reg 3</th>
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<td>(0.61)</td>
<td>(1.28)</td>
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<td>(1.7)*</td>
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<tr>
<td>(-2.81)**</td>
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</tr>
<tr>
<td>(2.05)**</td>
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<tr>
<td><strong>Dividend payment dummy</strong></td>
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<tr>
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<td>-0.2116032</td>
<td>-0.2043868</td>
<td>-0.183809</td>
<td>-0.250894</td>
<td>-0.249116</td>
<td>-0.2507685</td>
<td>-0.3370484</td>
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<td>(-1.16)</td>
<td>(-1.1)</td>
<td>(-1.08)</td>
<td>(-1.39)</td>
<td>(-1.42)</td>
<td>(-1.43)</td>
<td>(-2.1)**</td>
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<tr>
<td>Dummy 2002</td>
<td>-0.7647883</td>
<td>-0.7536246</td>
<td>-0.6860092</td>
<td>-0.7772802</td>
<td>-0.7136279</td>
<td>-0.7302962</td>
<td>-0.698561</td>
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<tr>
<td>(-2.95)**</td>
<td>(-2.92)**</td>
<td>(-2.56)**</td>
<td>(-2.97)**</td>
<td>(-2.80)**</td>
<td>(-2.90)**</td>
<td>(-2.76)**</td>
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<tr>
<td>Dummy 2003</td>
<td>-0.4772231</td>
<td>-0.4793895</td>
<td>-0.5116594</td>
<td>-0.4400478</td>
<td>-0.5004413</td>
<td>-0.4372529</td>
<td>-0.183171</td>
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<tr>
<td>(-2.05)**</td>
<td>(-2.09)**</td>
<td>(-2.24)**</td>
<td>(-1.94)*</td>
<td>(-2.18)**</td>
<td>(-1.77)*</td>
<td>(-0.81)</td>
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<tr>
<td>Industry dummy</td>
<td>0.541146</td>
<td>0.5440326</td>
<td>0.3917792</td>
<td>0.5797464</td>
<td>0.6272566</td>
<td>0.5081307</td>
<td>0.4650673</td>
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<tr>
<td>(1.74)*</td>
<td>(1.77)*</td>
<td>(1.49)</td>
<td>(1.81)*</td>
<td>(1.97)**</td>
<td>(1.64)</td>
<td>(1.56)</td>
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<tr>
<td>Utilities dummy</td>
<td>0.3550852</td>
<td>0.0895996</td>
<td>0.0774173</td>
<td>0.4046428</td>
<td>0.5186541</td>
<td>0.2047834</td>
<td>0.0988843</td>
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<tr>
<td>(1.48)</td>
<td>(0.34)</td>
<td>(0.38)</td>
<td>(1.64)</td>
<td>(2.19)**</td>
<td>(0.85)</td>
<td>(0.42)</td>
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<tr>
<td>Primary product dummy</td>
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<td>0.361681</td>
<td>0.4170981</td>
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<td>0.2543225</td>
<td>0.207235</td>
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<tr>
<td>(1.13)</td>
<td>(1.16)</td>
<td>(1.47)</td>
<td>(1.06)</td>
<td>(0.98)</td>
<td>(0.80)</td>
<td>(0.73)</td>
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<tr>
<td>Constant</td>
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<td>-2.869526</td>
<td>-1.072923</td>
<td>-0.9308687</td>
<td>-0.665306</td>
<td>-1.196013</td>
<td>-1.132951</td>
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<tr>
<td>(-2.32)**</td>
<td>(-2.39)**</td>
<td>(-2.45)**</td>
<td>(-1.89)*</td>
<td>(-1.53)</td>
<td>(-2.41)**</td>
<td>(-2.42)**</td>
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<td></td>
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<td></td>
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<tr>
<td>Observations</td>
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<td>171</td>
<td>171</td>
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<td>65</td>
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<tr>
<td>Method</td>
<td>Pooled Tobit</td>
<td>Pooled Tobit</td>
<td>Pooled Tobit</td>
<td>Pooled Tobit</td>
<td>Pooled Tobit</td>
<td>Pooled Tobit</td>
<td>Pooled Tobit</td>
</tr>
<tr>
<td>Wald Test (p-value)</td>
<td>15.2 (0.034)</td>
<td>15.96 (0.043)</td>
<td>25.69 (0.0012)</td>
<td>15.75 (0.046)</td>
<td>21.88 (0.0055)</td>
<td>19.02 (0.0148)</td>
<td>28.38 (0.004)</td>
</tr>
<tr>
<td>Obs. left-censored at zero</td>
<td>125</td>
<td>125</td>
<td>125</td>
<td>125</td>
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<td>125</td>
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</tr>
</tbody>
</table>

**Notes:**
T statistics based on robust standard errors in parenthesis
* Significant at 10%
** Significant at 5%
*** Significant at 1%
### Table 41

**Cash Dividends to Cash Flow and TDI, 2000-2003**

Each line of the table displays, for the two sample periods (2000-2003 y 2002-2003), the estimated coefficient (and robust t statistic) on alternative TDI measures, namely, the three subindices defined in the text (Board, Disclosure, Shareholders) -each measured, as the TDI, on a 0-100 scale-, the principal component of these three subindices, and the median overall TDI. For each (pooled Tobit) regression, the controls are time and sector dummies.

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>TDI</td>
<td>0.0127588</td>
<td>0.0129488</td>
</tr>
<tr>
<td></td>
<td>(2.28)**</td>
<td>(1.83)*</td>
</tr>
<tr>
<td>TDI-Board</td>
<td>0.0105979</td>
<td>0.0136402</td>
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<tr>
<td></td>
<td>(2.22)**</td>
<td>(1.96)**</td>
</tr>
<tr>
<td>TDI-Disclosure</td>
<td>0.0112709</td>
<td>0.006726</td>
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<tr>
<td></td>
<td>(2.03)**</td>
<td>(1.16)</td>
</tr>
<tr>
<td>TDI-Shareholder</td>
<td>0.0046088</td>
<td>0.0032187</td>
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<td></td>
<td>(1.40)</td>
<td>(0.78)</td>
</tr>
<tr>
<td>TDI-Principal component</td>
<td>0.120073</td>
<td>0.1154215</td>
</tr>
<tr>
<td></td>
<td>(2.23)**</td>
<td>(1.77)*</td>
</tr>
<tr>
<td>TDI median</td>
<td>0.4375427</td>
<td>0.4679927</td>
</tr>
<tr>
<td></td>
<td>(1.73)*</td>
<td>(1.73)*</td>
</tr>
</tbody>
</table>

**Notes:**
- T statistics based on robust standard errors in parenthesis
- * Significant at 10%
- ** Significant at 5%
- *** Significant at 1%
Table 42

Cash Dividends to Cash Flow and TDI, 2000-2003

Each line of the table displays, for the two sample periods (2000-2003 and 2002-2003), the estimated coefficient (and robust t statistic) on alternative ownership measures: (a) Domestically-owned: Dummy variable with value 1 if the main ultimate shareholder is an Argentine family, and 0 if the main ultimate shareholder is a foreign company; (b) Control rights of the main ultimate shareholder on the company; and (c) Control-to-Cash Flow rights of the main ultimate shareholder. ADR is a dummy variable with value 1 if the company issued an American Depositary Receipt, and 0 otherwise. Default is a dummy variable with value 1 if the company declared default in 2002, and 0 otherwise. For each (pooled Tobit) regression, the controls are time and sector dummies.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestically-owned</td>
<td>0.3128624</td>
<td>0.0056998</td>
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</tr>
<tr>
<td></td>
<td>(1.27)</td>
<td>(0.03)</td>
<td></td>
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<td>Control rights</td>
<td>0.0043601</td>
<td>-0.0021286</td>
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</tr>
<tr>
<td></td>
<td>(0.96)</td>
<td>(-0.56)</td>
<td></td>
</tr>
<tr>
<td>Cash flow rights</td>
<td>0.0029718</td>
<td>-0.0010807</td>
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</tr>
<tr>
<td></td>
<td>(0.81)</td>
<td>(-0.34)</td>
<td></td>
</tr>
<tr>
<td>Control-to-cash flow rights</td>
<td>0.0107172</td>
<td>0.0087633</td>
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</tr>
<tr>
<td></td>
<td>(0.11)</td>
<td>(0.1)</td>
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</tr>
<tr>
<td>ADR</td>
<td>0.0570934</td>
<td>0.1517129</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.32)</td>
<td>(0.76)</td>
<td></td>
</tr>
<tr>
<td>Default</td>
<td></td>
<td>0.0453669</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.14)</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
- T statistics based on robust standard errors in parenthesis
- * Significant at 10%
- ** Significant at 5%
- *** Significant at 1%