CORRUPTION AND CORPORATE GOVERNANCE: A CROSS-NATIONAL STUDY

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Abstract

This paper examines the importance of country-level corruption in explaining the variation of firm-level corporate governance. Analysis of firm-level corporate governance data and country level corruption data on over 400 companies in 26 countries confirms the hypothesis that corruption has a statistically significant negative impact on the quality of a firm's corporate governance. One standard deviation increase in country-level corruption is associated with a 0.5 to 0.7 standard deviation decrease in firm-level corporate governance scores.

Keywords: corporate governance; corruption; investor protection; valuation.

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I. Introduction

Considered by the World Bank as the "single greatest obstacle to economic and social development," country-level corruption has recently reemerged as a prominent subject among politicians and academics. Previous research has linked corruption to lower levels of investment and growth (Mauro, 1995), less foreign direct investment (Wei, 1997), lower stock values (Lee and Ng, 2002), higher borrowing cost for firms and governments in developing countries (Ciocchini et al., 2004), and higher child mortality and student dropout rates (Gupta et al., 2001).

As of the time of this writing, however, the literature has failed to directly address political corruption's potential to explain a considerable portion of the wide variance in corporate governance scores observed across nations. This paper focuses specifically on the role of corruption – governance on the macro level – in undermining firm-level corporate governance.

At the country-level, corruption distorts policymaking and undermines legal enforcement, an essential prerequisite for good corporate governance (La Porta et al. 1997, 1998). Bribery, for example, can lead to the "capture" of key state institutions by private interests seeking to skew the policy-making process in favor of particular firms, often leading to weaker regulation and investor protection, less information transparency, and higher country risk. Furthermore, corruption may reduce investment opportunities by increasing operating costs in a country; as argued by Durnev and Kim (2005), firms with fewer investment opportunities are more likely to have poorer corporate governance structures.

Using firm-level corporate governance and country-level corruption data on over 400 companies in 26 countries, the paper empirically examines the hypothesis that corruption negatively impacts corporate governance. For this task, a cross-national study is performed in order to investigate the extent to which corruption affects the corporate governance of an individual firm. The data suggests that the quality of corporate governance – especially in relation to board responsibility and transparency – tends to diminish in countries with relatively high levels of corruption on the national stage.

In fact, we find that country-level corruption accounts for a substantial proportion of firm-level corporate governance scores. A one standard deviation increase in corruption is associated with a 0.44 standard deviation decrease in corporate governance for both the CLSA composite score and S&P governance rating. This is true even after we control for country-level of economic development (i.e., GDP per capita), systematic risk (i.e., beta), industry-level growth, profit margin, and firm-level controls for R&D and market capitalization.

The following sections are organized as follows: In Sections 2 and 3, we briefly review the vast literature on corporate governance and corruption and discuss the theoretical relationship between the two concepts. In Section 4, we address the research design and models. In Section 5, we discuss the data source. Section 6 reports the empirical findings. Finally, in Section 7, we conclude with a discussion of the implications of our findings.

II. Corporate Governance

In the wake of recent accounting scandals in the United States, corporate governance has taken on new relevance in the business world. From the local newsstand to company boardrooms across the nation, the topic has reemerged as a dominant factor in the way businesses are organized and executed. For all its ubiquity, however, corporate governance and its leading determinants are still incompletely understood.

Research has focused primarily on industry-level and firm-level factors that influence the quality of corporate governance. For instance, Gillan et al. (2002) found that an industry's investment opportunities, product uniqueness, competitive environment, information environment, and leverage helped to explain the corporate governance structures of its firms. On the other hand, recent research on corporate governance has implied that country characteristics may be more important for corporate governance than firm characteristics. In particular, Doidge, Karolyi, and Stulz (2004) demonstrated that economic development and legal protections for minority investors had a notable influence on the costs and benefits of implementing measures to improve a firm's governance and transparency.

Corporate governance is, by definition, the process by which outside suppliers of equity to corporations secure protection of their rights as shareholders and receive a fair return.[91] It has two dimensions: internal governance, which deals with the structure of corporate governance (e.g., board structure, financial transparency, and executive accountability), and external governance, which refers to country-level governance factors such as legal infrastructure, legal enforcement, information infrastructure, and market infrastructure. Needless to say, these two dimensions are interdependent. Macro-level governance builds a basic environment for micro-level governance; most internal governance methods can only be effective within a particular external framework.

On the other hand, the needs created by internal governance stimulate the modification and improvement of external governance. Since investors are more willing to finance the entrepreneur when protected, corporate governance plays a material role in influencing the real economy. As a result, country-level or firm-level sources of outside investor protection, i.e., whether by courts, government agencies, or market participants themselves, figure prominently into the extent to which financial development is successful (La Porta et al., 1999).

Much recent research has focused on investor protection and corporate finance. For example, La Porta et al. (1999) pointed out that the nature of investor protection is deeply rooted in the legal structure of each country and in the origin of its laws. They found that common law countries had the strongest protection of outside investors, whereas French civil law countries had the weakest protection; German civil law and Scandinavian countries fell in between. As for the quality of enforcement, La Porta et al. argued that the generally richer Scandinavian and German legal origin countries had the strongest enforcement. They also found that successful governance should combine significant legal protection and concentration of ownership. Their empirical results suggest that better shareholder protection and higher incentives from cash flow ownership are associated with higher valuation. Similarly, Shleifer and Wolfenzon (2002) found that in a country with better shareholder protections, firms are larger, more valuable, and pay higher dividends.

As Doidge, Karolyi, and Stulz (2004) demonstrated, these shareholder protections are only one of several salient country-level factors influencing corporate governance. Their paper showed, for instance, that both economic development and legal protections for minority investors had considerable influence on the costs and benefits of implementing measures to improve a firm's governance and transparency. While it did not specifically examine the relationship between corruption and corporate governance, the work of Doidge, Karolyi, and Stulz (2004) shed new light on the critical interaction between firm-level governance and country-level characteristics.

Nonetheless, these studies are mainly concerned with macro-level protection, which is only one dimension of corporate governance. To this end, several researchers have devised firm-level corporate governance indices (either self-built or borrowed) to identify leading determinants of corporate governance. For instance, Gillan et al. (2002) emphasized their research on industrylevel factors found to play an important role in corporate governance. In particular, they concluded that an industry's investment opportunities, product uniqueness, competitive environment, information environment, and leverage helped to explain the corporate governance structures of its firms.

Durnev and Kim (2005) extended the work of Gillan et al. (2002) to the firm-specific attributes that affect corporate governance. They concluded that firms with profitable investment opportunities, more reliance on external financing, and more concentrated ownership of cash flow have a higher quality of governance, more disclosure, and higher valuation and investments. As a corollary, Gompers, Ishii, and Metrik (2001) studied the relationship between corporate governance and stock price, returns, and

[91] Organization for Economic Co-Operation and Development (OECD) definitions. The OECD principles of corporate governance are: responsibility, accountability, fairness, and transparency. The OECD principles are organized into five sections: (1) the right of shareholders; (2) the equitable treatment of shareholders; (3) the role of stakeholders in corporate governance; (4) disclosure and transparency; and (5) the responsibilities of the board.

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corporate performance. They found that firms with weaker shareholder protection earn significantly lower returns, are valued less, generally have poor operating performance, and are engaged in greater capital expenditure and takeover activity.

Based on these studies, it is clear that there are several country-level, industry-level, and firmlevel factors that markedly contribute to overall corporate governance. While considerable concern has been expressed recently over the slow growth, lagging productivity, and loss of investment that corruption brings to a country, little is known about the degree to which corruption actually affects corporate governance. We seek to examine the link between corruption and corporate governance in the current paper.

III. Corruption and Its Effects

Corruption, defined as the misuse of public office for private gain, has long been known to impede economic development and undermine political legitimacy (Elliott, 1997). Prior studies have confirmed that at the macro-level, corruption lowers economic growth (Mo, 2000; Mauro, 1995), generates capital outflow during financial liberalization (Rivera-Batiz, 2001), and reduces investment and government expenditure on education, transfer payments, and social insurance (Mauro, 1998). Some records indicate that corruption also plagues countries whose economies have performed relatively well (e.g., the economies of South Korea, Japan, Mexico, and Italy).

While the evidence suggests that pervasive and uncontrolled corruption is usually economically debilitating (Elliott, 1997), corruption may also stabilize a political situation that is repressive and unjust, in which all but a wealthy elite lack the resources to protect themselves from exploitation.

At the firm-level, companies are often involved in the active or passive bribery of government officials or legislators; accordingly, the enforcement of public policy and legal rules is reduced, thus deteriorating the minority shareholder's interest. Due to corruption, legislators tend to twist the explanation of public policies or conceal market information in order to benefit those companies which pay the highest bribes. Consequently, these particular companies enjoy more freedom, per se, to change the "illegal" into "legal," thus gaining an unjust competitive advantage in the marketplace.

From a judicial perspective, corruption refers to "legal capture," defined as the sale of arbitration or criminal court decisions; it entails the collusion of controlling shareholders with the actual trial in order to spare or reduce the punishment of expropriation. It is easy to imagine that in these cases, especially in common law countries where legal rules are usually made by judges, judges would use their discretion to narrow the interpretation of fiduciary duty and sanction expropriation, rather than prohibiting it. As political conditions make the practice of said corruption less risky, controlling shareholders will tend to divert more often from the rule of law, once again undermining corporate governance.

To illustrate this relationship, consider an entrepreneur who is a controlling shareholder of a corporation. He has incentive to divert provided that the marginal benefit of diversion is larger than its marginal cost, i.e., being caught and paying for punishment. Suppose *K* is the entrepreneur's level of diversion activity. Lower K represents better corporate governance. Since the marginal benefit of diversion is diminishing, the total level of diversion is K^{α}, where $0<\alpha<1$. The punishment is *P* and the probability of being caught is φ, which is a function of diversion and corruption (assuming that higher diversion is tantamount to greater chances of being caught, while a higher level of corruption implies a lower probability of being punished). Regardless of the production level and financial activity of the corporation, the entrepreneur's payoff with respect to expropriation should be:

$$\Pi = (1-\phi)k^{\alpha} - \phi P \quad (1)$$

Assume corruption is *C*, which negatively affects the probability of being caught φ; that is, bribing a certain party – either government official or judicial officer – should reduce the probability of being caught. It then follows that $\phi_K' > 0, \phi_C' < 0$

To get an optimal rate of diversion *K*, one must maximize the entrepreneur's payoff function (1), yielding the first order condition below:

$$\frac{d\Pi}{dK} = \alpha(1-\phi)K^{\alpha-1} - (K^{\alpha}+P)\phi_K' = 0 \quad (2)$$

Since φ is a function of both *K* and *C* (i.e,$\varphi=\varphi(K,C)$), one must find the function's total differential, resulting in the following equation:

$$\Delta\phi = \phi_K' dK + \phi_C' dC \quad (3)$$

Finally, we assume the second-order derivatives ($KK\ \varphi$) and cross-derivative ($KC\ \varphi$) to be zero. This implies that taking the total differential of equation (2) and rearranging it with equation (3) produces the following relationship:

$$\frac{dK}{dC} = \frac{K^{\alpha-1}\alpha\phi_C'}{K^{\alpha-2}[\alpha(1-\phi)(\alpha-1) - 2K\alpha\phi_K']} > 0 \quad (4)$$

This implies that, at a certain level of payoff, a marginal increase in corruption will lead to an increase in diversion, which is associated with our intuition that corruption would erode the rights of minority shareholders and thus negatively impact the quality of corporate governance. The 1999 Business Environment and Enterprise Performance Survey (BEEPS) was designed to provide a microeconomic perspective on the cost and benefits to firms associated with corruption and different levels of governance (Hellman et al., 2002). In addition, the South Korea President spoke at the OECD forum to address the link between corporate governance and corruption. Still yet, these are mostly descriptive accounts, either summarizing the result of a subset of

questions from the BEEPS relating to governance and corruption, or focusing on the result of case studies for individual firms. The quantitative analysis does not reach a qualitative conclusion about the exact nature of the elusive connection between the two concepts. This paper empirically investigates whether corruption serves as a hindrance to corporate governance; the results confirm our hypothesis, suggesting country-level corruption has a statistically significant negative impact on the quality of a firm's corporate governance, especially on board responsibility and transparency of board structure.

IV. Research Design and Methods

In this section, we present the model design for corporate governance, based on previous research results.

4.1 Quantifying corporate governance

The model presented in this paper helps to clarify the relationship between corruption and corporate governance as well as the extent to which country-level, industry-level, and firm-level factors together impact the quality of corporate governance. The dependent variable, corporate governance, is regressed on the country-level, industry-level, and firm-level variables. Based on former research, it is known that firms that have better macro protection, reside in more developed economies, and have access to a relatively large number of investment opportunities tend to have better corporate governance (Gillan et al., 2002).

Therefore, the macro-level variables are: corruption (employed as a proxy of legal protection), country-level stock market beta (employed as a proxy for country risk) and inflation (employed as the proxies of macro investment opportunity), and GDP per capita (representatives of economic development in a given country).

In order to quantify industry investment opportunity, this paper employs both the median of the industry's long-term growth-rate and the harmonic mean of the industry's PB ratio. This approach relies on the assumption that a higher industry growth rate implies a higher expected rate of return on investment, indicating more profitable investment opportunities in that industry, which, as discussed above, positively affect corporate governance.

This study also applies some firm-level variables of corporate governance. For example, firm size (i.e, the logarithm form of total assets) is a key attribute of micro corporate governance, especially because it is believed that larger firms tend to have longer histories, a more mature board structure, and greater transparency (Gillan et al., 2002). Another firm-level variable is research and development expenditure (R&D), in large part because firms with more R&D tend to have faster technical reform and greater investment opportunity.

This model design does not, in fact, attempt to capture and include all possible variables that could impact the quality of corporate governance; rather, it is designed to provide a basic framework for analyzing corporate governance by including different scale level factors and testing their collective impact on corporate governance. The hope is that in doing so, useful empirical results for further research will be established.

V. Data

5.1 Corporate governance scores

The twin difficulties of defining the nature of corporate governance and gaining access to the relevant data on individual firms make it challenging to quantify corporate governance. Fortunately, both Credit Lyonnais Securities Asia (CLSA) and Standard and Poor's (S&P) have succeeded in constructing their own corporate governance scores and transparency rankings, respectively. Our indices of corporate governance are drawn from their findings.[92]

(a) CLSA corporate governance scores

In March 2001, CLSA issued a report on the quality of corporate governance in 495 companies across global emerging markets. The corporate governance scoring was done through a questionnaire filled out by analysts in each country for the companies covered. The questionnaire was designed such that all questions would have strictly binary answers (i.e., yes or no); it assessed the companies on 57 main issues divided into seven key criteria believed to constitute good corporate governance: management discipline, transparency, board independence, accountability, board responsibility, fairness, and social awareness. The first six criteria were all given an equal weight of 15% and the last, social awareness, was given a lower weight of 10%.

Each criterion was given a score stated as a percentage; finally, a composite weighted average score was built. The survey was conducted in 2000; accordingly, other financial data used for this paper are drawn no later than June 2000. Appendix B gives detailed information about the questionnaire.

(b) S&P Transparency and Disclosure rankings

A high level of corporate disclosure is often regarded as one of the leading indicators of good corporate governance. In 2002, S&P completed a study designed to evaluate the levels of disclosure for companies and released a report for the evaluation of 550 companies across the globe. The study, primarily based upon the information contained in company annual reports, evaluates a firm's level of transparency and disclosure by searching for the inclusion of 98 possible information items (i.e., "attributes"), which are grouped into three categories: ownership structure and investor relations (28

[92] These two data sources are also employed by Durnev and Kim (2005).

attributes), financial transparency and information disclosure (35 attributes), and board and management structure and process (35 attributes). To ensure objectivity, each attribute was equally weighted in importance and accounted for on a binary basis simply indicating whether or not the given attribute was included.

The overall ranking assigned to each company reflected the total number of the 98 possible attributes included in a company's annual report and accounts. Individual rankings for each of the three sub-categories are calculated in a similar way with reference to the maximum possible number of attributes for each sub-category. Using those scores, companies were then ranked on a decile basis. The current Transparency and Disclosure (T&D) ranking report includes 150 companies in Japan, as well as 400 other companies in emerging markets. For detail of the 98 attributes in the T&D ranking report, please refer to Appendix C.

While the T&D study focuses on disclosure, it does not endeavor to assess the quality of the information provided. The study is not designed to control the accuracy of disclosure and it is not meant to identify forensically any disclosure that may be incorrect or fraudulent. Furthermore, their study is based on the information disclosed in key public documents; it does not, however, include all other forms of company disclosure that may exist. Finally, while transparency and disclosure are key components of corporate governance, the S&P's T&D rankings are not complete proxies for corporate governance. Therefore, the current paper uses the T&D rankings as a complementary proxy for corporate governance.

5.2 Corruption index

In this study, the average of two annual issues (1999 and 2000) of the Corruption Perception Index (CPI), prepared by Transparency International, is used as the corruption variable. The CPI reflects comprehensive information from up to 12 individual surveys and ratings. A country must be covered by at least three surveys to be included in the CPI. The Transparency International CPI is based on 1 to 10 scaling; the more corrupt a country is, the lower its CPI score. In this paper, we recover the original meaning of the CPI corruption score by subtracting the CPI from 10, so that the measure of corruption ranges from 9 (extremely corrupt) to 0 (extremely clean).[93]

For detailed information about the CPI, please refer to the Transparency International website (www. transparency.org). Table 1 also reports the correlation between the corruption index and corporate governance proxies. It is expected that corruption and corporate governance would impact firm performance in opposite directions.

[93] This change is the same as in Lee & Ng (2002).

5.3 Other financial variables

To avoid endogeneity and remain in accordance with the corporate governance indices, the averages of other firm-level and country-level financial data from 1999 and 2000 are also used to provide the financial variables in both models. The initial accounting data are drawn from the Worldscope database.

Total market capitalization is based on the closing market price as of June 30 each year for each firm. Moreover, we require the availability of the following data items, measured as of the most recent fiscal year end: total common equity, total long-term and short-term debt, operating income, total assets, research and development expenditure, fiscal year-end date, and currency denomination.[94] In addition, we require each firm to have a one-year-ahead and two-year-ahead consensus earnings forecast in the I/B/E/S International database as of the June statistical period each year. We derive a long-term forecast growth rate from these two earnings forecast (see Appendix D). Furthermore, to minimize the effect of outliers we windsorize the accounting variables at both the 1st and 99th percentiles. After filtering out companies from CLSA dataset or S&P report for which the above accounting metrics are unavailable, 323 companies in the CLSA dataset and 451 companies in the S&P report remain.

5.4 Description of key variables

In our regression models, corporate governance indices (CG) are the dependent variables. Based on former studies of corporate governance, we have selected the following key variables in our models (the summary and description of these variables are also available in Appendix D): R&D: Total research and development expenditures divided by total sales. R&D is a measure capable of reflecting greater investment opportunity, which is highlighted by Durnev et al. (2005) as a probable determinant of corporate governance. Accordingly, it is anticipated that R&D positively impacts the quality of corporate governance in an individual firm.

Firmsize: The logarithm of total assets. As mentioned earlier, firm size is expected to be positively correlated with corporate governance (Gillan et al., 2002; Durnev and Kim, 2005). Since big companies tend to have greater levels of transparency and disclosure, this measure is used as a control variable in CG regression.

PM_it: The median of profit margin for all firms with the same two-digit SIC code. Regarded as a proxy of industry-level investment opportunity, it is used as an industry-level variable in CG regression.

[94] To ensure that the accounting variables are available to the public and are reflected in firm price, the market price in June is matched to accounting data from a fiscal year that ended in the prior January or earlier.

LTG_it: The median of the long-term growth rate forecast for all firms with the same SIC code. The long-term growth rate forecast is based on I/B/E/S estimates, which is computed as the percentage implicit in the two-year-ahead forecast relative to the one-year-ahead forecast. This variable controls industry-wide factors and is expected to reflect industry-level investment opportunity. The long-term growth rate forecast is employed in the CG regression.

LTG_ct: The median of long-term growth rate forecasts for all firms in a given country. It controls country-wide factors and is expected to reflect country risk, investment opportunity, and, hence, corporate governance.

Inflation and GDP/cap: These two macro variables are used as control variables in CG regression. Since inflation reflects a country's stability and country risk, it is expected that the variable impacts country-level governance; on the other hand, GDP/cap, a measure of the wealth level of a country, is believed to be correlated with corruption (Treisman, 2001). This paper expects GDP/cap to have a material effect on the quality of a firm's corporate governance.

Beta: Country-level systematic risk. This measure refers to the beta of the country stock index relative to the Morgan Stanley Capital Index (MSCI) world stock index. We employ it as a control variable of country risk. This measure is only used in the regression of CG.

Acctstand and Antidir: Accounting standard and anti-director index. Acctstand is a measure of the quality of financial reporting in a country, based on whether or not the company included 90 items in its annual reports. Antidir is a variable designed to capture shareholder rights by tracking the inclusion or omission of six shareholders rights within a given country. These variables are featured in La Porta et al. (1998) as measures of the level of corporate governance and protection of minority shareholder rights. In this paper, both measures are employed as instrumental variables of corporate governance indices to conduct the robustness test.

VI. Empirical results

This section reports results of the data analysis. Beginning with the descriptive statistics of the dataset, we then analyze their correlation and, lastly, report the regression results.[95] To see a detailed computation of this measure, please see Appendix B.

6.1 Summary statistics

Tables 1 and 2 report the summary of key variables in the two datasets, respectively. The mean and median of each variable are calculated. The variables are, as mentioned above, divided by three categories: firm-level, industry-level, and country-level. Table 1 reports the statistics of the companies included in the CLSA dataset, including 323 companies in emerging markets. The first set of variables includes the overall CLSA corporate governance composite scores, the corruption level, and the PB valuation. The second set of variables includes the firm-level variables (i.e., Leverage, ROE, and R&D). The third set is composed of the industry-level variables, namely the long-term analyst growth rates, price-tobook ratios, and profit margin. The last set of variables includes the country-level variables: beta, GDP growth, and corruption.

Relatively speaking, companies in Latin America had high corporate governance scores but low valuation; most Latin American countries were in the process of structural adjustment in 2000, which led to an increase in the quality of corporate governance associated with capital liquidity in global markets but would take time to have an effect on individual firm performance. Conversely, Asia and Russia had relatively high corruption scores, especially since Russia was still in significant economic and political transition during the period in which the data was collected.

Table 2 reports the statistics of the companies included in the S&P dataset. All of the variables are similar to Table 1 except for S&P Transparency & Disclosure rankings. It appears that the companies in Australia and Singapore have the best transparency, while companies in Latin America have relatively worse transparency, which might be related to their lower valuations.

6.2 Correlation Results

Tables 3 reports the correlations between key variables for the 130 companies common to both the S&P and CLSA datasets. The first four variables – from the S&P dataset – are Ranking, S&P Transparency, Ownership and Board. The next eight variables – from the CLSA dataset – are Discipline, Transparency, Independence, Accountability, Responsibility, Fairness, Social, and Composite. For the sake of clarity, these eight CLSA variables are italicized in the table. The last variable is country-level corruption (from Transparency International). Table values in the upper triangle are Spearman rank correlation coefficients, while table values

in the lower triangle are Pearson correlation coefficients. The bold numbers in the table indicate that the coefficients of correlation between two variables are statistically significant at 10% level. In general, we find that the corporate governance measures across the CLSA scores and S&P rankings are positively correlated. The correlation of the CLSA composite scores and S&P rankings is about 30%. Individual components in each survey are positively correlated in a similar fashion. Within each dataset, the corporate governance attributes are generally

[95] To see a detailed computation of this measure, please see Appendix B.

positively correlated to each other. However, the correlations range widely, showing that there are different dimensions of corporate governance being captured by these different variables.

As the two datasets emphasize different aspects of corporate governance and the two surveys were conducted using different methodologies, they are not perfectly correlated to one another. Most of the correlations fall between the 10% and 40% level and are statistically significant.[96] Most importantly, we find that corporate governance have a statistically significant negative correlation with the corruption index. The CLSA composite score is negatively correlated with corruption at close to 40%, while the S&P ranking is negatively correlated to corruption at 30%. These results confirm the current paper's primary conjecture: country-level corruption is intimately related to firm-level corporate governance.

(c) Consistency of the two data sources

Tables 4 and 5 show the correlation of firm-level, industry-level, and country-level variables used for all companies in each dataset. In particular, Table 4 shows the results for the 323 companies in the CLSA dataset, while Table 5 shows the results for the 451 companies in the S&P ranking report.

From Table 4, it is clear that corporate governance is negatively and significantly correlated with the corruption index. The negative correlation between the corporate governance score and the corruption level is 38%. In Table 5, the negative correlation between the S&P ranking and corruption level is about 50%.

Other variables in the correlation table show similarly reasonable relationships. For instance, higher PB is associated with higher profitability (ROE), long-term forecast industry growth (LTG_it), and industry valuation (PB_it). Overall, these results show that the quality of a firm's corporate governance is highly correlated with the corruption level in its home country. It would be useful to confirm these univariate results in a multivariate setting in which other known control variables for corporate governance are included.

6.3 Regression Results

Table 6 reports the regression results of the corporate governance model for the CLSA dataset. The CLSA corporate governance scores are designated as dependent variables, and a total of eight regression estimates are shown in the table. Due to the availability of different control variables in the dataset, the number of observations was reduced to 300. Again, we find that corruption stands out as a significant player in explaining the quality of corporate governance. Higher corruption is associated with a lower CLSA composite score, with a coefficient of -2.96 and a t-statistic of -3.66. This implies that a one standard deviation increase in corruption is associated with a 0.46 standard deviation decrease in corporate governance.[97] This is comparable to the univariate result of a negative 38% correlation between the corruption scores and corporate governance scores found in Table 4. Furthermore, except for social awareness and board accountability, the relationship between corruption and each corporate governance score is negative, suggesting country-level corruption does, indeed, negatively impact corporate governance.

In general, many of the country-level variables studied had a significant impact on corporate governance. Country risk in terms of country beta and inflation, for instance, had a negative relationship with most corporate governance scores, while country-level investment opportunity (i.e., LTG_ct, or country-level long-term growth forecast) showed positive effects on corporate governance attributes. This suggests that in a country with lower country risk and higher investment opportunity, the quality of corporate governance is markedly better.

Interestingly, GDP per capita, which represents the economic development of a country, had an ambiguous impact on corporate governance. Overall, the results indicated a negative relationship between country development and two aspects of corporate governance, implying that boards tend to be less disciplined and less concerned with fairness in more wealthy countries. Consistent with Doidge, Karolyi, and Stulz (2004), the firm-level variables (i.e., R&D and firm size) mostly yielded insignificant coefficients after controlling for country-level and industrylevel factors. It seems, then, that neither expenditure on research and development nor fire size displays a distinct effect on the composite corporate governance score.

Relative to country-level and firm-level control variables, industry-level variables LTG_it and PM_it appear to play an insignificant role in the regressions. It is reasonable that in emerging markets, in which the development of different industries is usually quite unbalanced, the level of investment opportunity at the industry level would not have much of an impact on corporate governance.

Table 7 reports the results from the S&P dataset, which are consistent with those from the CLSA dataset. Again, corruption has a considerable negative impact on transparency and disclosure. Higher corruption is associated with a lower S&P governance rating, with a coefficient of -0.47 and a t-statistic of -

[96] It is noteworthy that the social awareness score in the CLSA dataset is negatively correlated with the S&P's T&D ranking. As a result, it remains unclear whether or not social awareness should be included as an appropriate standard of corporate governance. It is not necessarily surprising, for instance, if companies do not disclose information regarding their social awareness.

[97] As Table 1 illustrates, the cross-national standard deviation of corruption is 1.88, while the standard deviation for corruption scores is 12.08. Each standard deviation change in corruption implies a 5.56 (=1.88 x 2.96) decrease in corporate governance scores, which represents 0.46 (=5.56/12.08) of a standard deviation change in corporate governance scores.

5.24. This implies that a one standard deviation increase in corruption is associated with a 0.74 standard deviation decrease in corporate governance.[98] This is a larger effect compared to the result in the CLSA dataset, and is also larger than the univariate result of a negative 50% correlation between the corruption score and the corporate governance scores found in Table 5. Overall, it appears that a company in a country with higher corruption will tend to have less transparency and disclosure at the level of an individual firm.

There are several other regression results worth noting. For instance, firm size positively impacted a firm's transparency, suggesting that bigger companies are more inclined to disclose information to outside users. Interestingly enough, inflation did not seem to have any statistically significant impact on a firm's disclosure. A final key implication from the regression results is that a company in a wealthier country will be more likely to have greater transparency and disclosure, while companies in faster growing countries will tend to have less transparency and disclosure of information.

In summary, we find that country-level corruption accounted for a substantial proportion of the cross-sectional variation of firm-level corporate governance scores. This demonstrates that a country's level of corruption has significant consequence for the corporate governance of its firms. To improve the quality of corporate governance, then, it is not necessarily wasteful to expend resources combating corruption. Due to the limited availability of reliable corporate governance indices and company financial data for firms in developing markets, however, there is certainly room for improvement of the analysis performed in this study. For example, both the CLSA and S&P data on corporate governance are based on questionnaires that are not equipped to ensure the accuracy and authenticity of their observations. More refined results will be 8 feasible once corporate governance indices are enhanced and sufficient data is accumulated over time.

VII. Conclusion

Corporate governance has recently become a hot topic in both academic research and business reality. Former studies have attempted to identify leading determinants of corporate governance, suggesting that either firm-level, industry-level, or country-level factors are critical to determining its quality (Durnev and Kim, 2005; Gillan et al, 2002). The current paper seeks to eliminate those distinctions of variable scale by reconciling the three into a single conceptualization of corporate governance and its influences.

Corruption, too, has drawn the attention of researchers for years. While Lee and Ng (2002) showed that corruption negatively impacts a firm's valuation, there remained a clear need to investigate its relationship with corporate governance. This paper examined that relationship by introducing corruption as one of the determinants of corporate governance. The results indicate that corruption is, indeed, inversely related to the quality of a firm's corporate governance. From our results, we can conclude both firm-level and country-level variables have a measurable impact on the quality of corporate governance in emerging markets. Among those variables, corruption accounts for a substantial portion of the variation in corporate governance scores. Therefore, it is logical to embrace the notion that one must fight corruption at the country level in order to make significant improvements in the quality of corporate governance at the firm level.

[98] As Table 2 shows, the cross-country standard deviation of corruption for countries represented in the S&P dataset is 1.52, while the standard deviation for corporate governance scores is 2.41. Each standard deviation change in corruption implies a 1.13 (= 2.41*0.47) decrease in the corporate governance score, which represents 0.74 (=1.13/1.52) of a standard deviation change in corporate governance scores.

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Appendix A: CLSA Corporate Governance Scores[99]

The CLSA corporate governance scores are based on how analysts rated companies in 2000 on 57 elements under seven major aspects of corporate governance. The following is a summary of those attributes:

1. Discipline

1.1 Explicit public statement placing priority on corporate governance
1.2 Management incentives toward a higher share price
1.3 Sticking to clearly defined core business
1.4 Having an appropriate estimate of cost of equity
1.5 Having an appropriate estimate of cost of capital
1.6 Conservatism in issuance of equity or dilutive instruments
1.7 Ensuring debt is manageable, use only for projects with adequate returns
1.8 Returning excess cash to shareholders
1.9 Discussion in annual report on corporate governance

2. Transparency

2.1 Disclosure of financial targets, e.g, three- and five- year ROE/ROA
2.2 Timely release of annual report
2.3 Timely release of semi-annual financial announcement
2.4 Timely release of quarterly results
2.5 Prompt disclosure of results with no leakage ahead of announcement
2.6 Clear and informative results disclosure
2.7 Accounts presented according to IGAAP

[99] Drawn from Durnev and Kim (2005).

2.8 Prompt disclosure of market-sensitive information
2.9 Accessibility of investors to senior management
2.10 Website where announcement are updated promptly

3. Independence

3.1 Board and senior management treatment of shareholders
3.2 Chairman who is independent from management
3.3 Executive management committee comprised differently from the board
3.4 Audit committee chaired by independent director
3.5 Remuneration committee chaired by independent director
3.6 Nominating committee chaired by independent director
3.7 External auditors unrelated to the company
3.8 No representatives of banks or other large creditors on the board

4. Accountability

4.1 Board plays a supervisory rather than executive role
4.2 Non-executive directors demonstrably independent
4.3 Independent, non-executive directors at least half of the board
4.4 Foreign nationals presence on the board
4.5 Full board meeting at least every quarter
4.6 Board members able to exercise effective scrutiny
4.7 Audit committee that nominates and reviews work of external auditors
4.8 Audit committee that supervises internal audit and accounting procedures

5. Responsibility

5.1 Acting effectively against individuals who have transgressed
5.2 Record on taking measures in cases of mismanagement
5.3 Measures to protect minority interests
5.4 Mechanisms to allow punishment of executive/management committee
5.5 Share trading by board members fair and fully transparent
5.6 Board small enough to be efficient and effective

6. Fairness

6.1 Majority shareholders treatment of minority shareholders
6.2 All equity holders right to call general meetings
6.3 Voting methods easily accessible (e.g, through proxy voting)
6.4 Quality of information provided for general meetings
6.5 Guiding market expectation on fundamentals
6.6 Issuance of ADRs or placement of shares fair to all shareholders
6.7 Controlling shareholder group owning less than 40% of company
6.8 Portfolio investors owning at least 20% of voting shares
6.9 Priority given to investor relations
6.10 Total board remuneration rising no faster than net profit

7. Social awareness

7.1 Explicit policy emphasizing strict ethical behavior
7.2 Not employing the under-aged
7.3 Explicit equal employment policy
7.4 Adherence to specified industry guidelines on sourcing of materials
7.5 Explicit policy on environment responsibility
7.6 Abstaining from countries where leaders lake legitimacy

Appendix B: S&P Transparency and Disclosure Rankings10

S&P rankings are based on transparency and disclosure, which is evaluated by searching for the inclusion of 98 possible information items (i.e., "attributes") in a company's annual financial reports. These attributes are then grouped into three subcategories: 1.) ownership structure and investor relations (28 attributes), 2.) financial transparency and information disclosure (35 attributes), and 3.) board and management structure and process (35 attributes).

I. Ownership Structure and Investor Relations

Does the company disclose:

1. Number of issued and outstanding ordinary shares?
2. Number of issued and outstanding other shares (preferred, non-voting)?
3. Par value of each ordinary share?
4. Par value of each other shares (preferred, non-voting)?
5. Number of authorized but unissued & outstanding ordinary shares?
6. Number of authorized but unissued & outstanding other shares?
7. Par value of authorized but unissued & outstanding ordinary shares?
8. Par value of authorized but unissued & outstanding other shares?
9. Top one shareholder?
10. Top three shareholders?
11. Top five shareholders?
12. Top ten shareholders?
13. Description of share classes provided?
14. Review of shareholders by type?
15. Number and identity shareholders holding more than 3%?
16. Number and identity of shareholders holding more than 5%?
17. Number and identity of shareholders holding more than 10%?
18. Percentage of cross-ownership?

19. Existence of a corporate governance charter or code of best practice?
20. Corporate governance charter/ Code of best practice itself?
21. Details about its Articles of Association (e.g, changes)
22. Voting rights for each voting or non-voting share?
23. Way that shareholders nominate directors to board?
24. Way that shareholders convene an EGM?
25. Procedure for putting inquiry rights to the board?
26. Procedure for putting proposals at shareholders meetings?
27. Review of last shareholders meeting (e.g, minutes)?
28. Calendar of important shareholders dates?

10 Drawn from Durnev and Kim (2002).

II. Financial Transparency and Information Disclosure

Does the company disclose:

1. Its accounting policy?
2. The accounting standard it uses for its accounts?
3. Accounts according to the local accounting standards?
4. Accounts according to an internationally recognized accounting standard (IAS/US GAAP)?
5. Its balances sheet according to international accounting standard (IAS/US GAAP)?
6. Its income statement according to international accounting standard (IAS/US GAAP)?
7. Its cash flow statement according to international standard (IAS/US GAAP)?
8. A basic earning forecast of any kind?
9. A detailed earnings forecast?
10. Financial information on a quarterly basis?
11. A segment analysis (broken down by business line)?
12. The name of its auditing firm?
13. A reproduction of the auditors' report?
14. How much it pays in audit fees to the auditor?
15. Any non-audit fees paid to auditor?
16. Consolidated financial statements (or only the parent/holding Co.)?
17. Methods of asset valuation?
18. Information on method of fixed asset depreciation?
19. A list of affiliates in which it holds a minority stake?
20. A reconciliation of its domestic accounting standards to IAS/US GAAP?
21. The ownership structure of the affiliates?
22. Details of the kind of business it is in?
23. Details of products or services produced/provided?
24. Output in physical terms (number of users, etc.)?
25. Characteristics of assets employed?
26. Efficiency indicators (ROA, ROE, etc.)?
27. Any industry-specific ratios?
28. A discussion of corporate strategies?
29. Any plans for investment in the coming year(s)?
30. Detailed information about investment plans in the coming year(s)?
31. An output forecast of any kind?
32. An overview of trends in its industry?
33. Its market share for any or all of its businesses?
34. A list/ register of related party transactions?
35. A list/register of group transactions?

III. Board and management structure and process

Does the company disclose:

1. A list of board members (names)?
2. Details about directors (other than name/title)?
3. Details about current employment/position of directors provided?
4. Details about previous employment/positions provided?
5. When each of the directors joined the board?
6. Classification of directors as an executive or an outside director?
7. A chairman's name?
8. Detail about the chairman (other than name/title)?
9. Details about role of the board of the directors at the company?
10. A list of matters reserved for the board?
11. A list of board committees?
12. The existence of an audit committee?
13. The names of the audit committee?
14. The existence of a remuneration/compensation committee?
15. The names on the remuneration/compensation committee?
16. Existence of a nomination committee?
17. The names on the nomination committee?
18. The existence of other internal audit functions besides the audit committee?
19. The existence of a strategy/investment/finance committee?
20. The number of shares in the company held by directors?
21. A review of the last board meeting (e.g, minutes)?

22. Whether they provide director training?
23. The decision-making process of director's pay?
24. The specifics of director's pay (e.g, the salary levels, etc.)?
25. The form of directors' salaries (e.g, cash, shares, etc)?
26. The specifics on performance-related pay for directors?
27. The decision-making of manager's (not board) pay?
28. The specifics of manager's (not on board) pay (e.g, salary levels, etc.)
29. The form of manager' (not on board) pay?
30. The specifics of performance-related pay for managers?
31. The list of senor managers (not on the board of directors)?
32. The backgrounds of senior managers?
33. The details of CEO's contract?
34. The number of shares held by the senior managers?
35. The number of shares held in other affiliated companies by managers?

Appendix C: The Derivation of Country Beta

The market beta (beta) refers to the beta of the country stock index relative to the Morgan Stanley Capital Index (MSCI) world stock index. To compute beta, we use the two-factor model:

$$r\,i,t - r\,f = \alpha + \beta\,(r\,m,t - r\,f) + \beta\,e\,\Delta\,e + \mu\,I,t$$

The dependent variable is the monthly dollar return on the stock market index where the firm is located. We use returns on Morgan Stanley Capital Index (MCSI) country indices as proxies for country stock returns in industrial (developing countries). The two factors on the right-hand side of the regression are 1) the market factor ($r\,m,t - r\,f$), which is the excess dollar returns of the value weighted MSCI world market portfolio, and 2) the currency factor Δe, which is the return in the US dollar in the other six countries in the G7 (weighted by the relative stock-market capitalization). An increase in the index implies US dollar depreciated against the basket of currencies. The rolling 60-month index return is used. Beta is the estimated coefficient of first factor.

Appendix D: Description of Key Variables

Variable	Description	Calculation and Source
Corporate governance Scores		
CLSA CG Scores	Source: 2001 CLSA corporate governance scores. Range: 1-100	
Composite	Weighted average CLSA CG scores 15%*(Discipline +Transp +Indep +Account +Resp +Fairness) +10%*Social.	
Discipline	Marginal incentives and discipline towards value maximizing actions	
Transparency	Measure of timeliness and accuracy of financial information disclosure	
Independence	Measure of Board independence	
Accountability	Measure of board accountability	
Responsibility	Measure of enforcement and management accountability	
Fairness	Measure of minority shareholder protection	
Social	Measure of social awareness	
S&P Transparency and Disclosure Ranking	Source: 2002 S&P T&D Ranking. Range: 1-10	
Overall Ranking	Aggregate S&P T&D ranking.	
Ownership	Measure of transparency of ownership structure and investor relations	
Financial Transparency	Measure of financial transparency and information disclosure	
Board	Measure of transparency of board and management structure.	
Corruption	Corruption index	Transparency International's measure of degree as perceived by business people, risk analyst and the general public. Range: 0 (highly clean)—9 (highly corrupt).
PB (Valuation Multiple)	Price-to-book	PB=Market value of equity/Total common equity
Other firm-level Variables	Source: Worldscope database 1995-2000	
ROE	Return on Equity	ROE=Net income before extraordinary items*100/Total common equity
LTG	Forecasted earnings growth rate	Computed from I/B/E/S. LTG=(Forecasted earnings_{t+2}- Forecasted earnings_{t+1})*100/Forecasted earnings_{t+1}
LEV	Book leverage	LEV=Total debt*100/(Total Asset-Total debt)
R&D	Research and development expenditure-to-net sales	R&D= Research and Development expenditure*100/Net sales
Industry-level variables		
PB_it	Industry PB ratio	Harmonic mean of the PB ratio for firms in the industry (based on 2-digit SIC code)
LTG_it	Industry forecasted growth rate	The median of forecasted growth rate in the industry
PM_it	Industry profit margin	The median of profit margin in the industry PM=Operating Income*100/ net sales
Country-level Variables		
LTG_ct	Country forecasted growth rate	The median of forecasted growth rate in the country
Beta	Country stock beta	The 5-year rolling beta for return on the country stock indices versus the MSCI world stock returns
Inflation	Annual inflation rate	Annual Inflation rate as compiled from International Financial Statistics data by the PRS group
GDP/cap	GDP per capita	Annual GDP per capita as compiled from International Financial Statistics by the PRS group
Acctstand	Accounting standard	Measures the quality of financial reporting in a country, based on the inclusion of 90 items in seven categories. Sources: La Porta et al. (1998)
Antidir	Anti-director rights	Range 0-6. An index is formed by adding 1 when (1) the country allows shareholders to mail their proxy vote for the firm, (2) shareholders are not required to deposit their shares prior to the general shareholders' meeting, (3)cumulative voting or proportional representation of minorities mechanism is in place, (4) an oppressed minorities mechanism is in place (5)the minimum percentage of share capital that entitles a shareholder to call for an extraordinary shareholders' meeting is less than or equal to 10 percent, or (6) shareholders have preemptive rights that can be waived only by a shareholder's vote. Source: La Porta et al. (1998)

Table 1. Summary of CLSA Dataset

		Key Variables		Firm-level		Industry-level			Country-level	
Country	Statistic	Composite	Corrupt	PB	R&D	LTG_it	PM_it	Beta	GDP/cap	Obs.
Argentina	mean	67.27	6.67	1.05	0	15.48	4.85	1.76	7913.33	3
	median	66.7	6.75	0.62	0	14.78	4.22	1.76	8000	
Chile	mean	60.98	2.78	1.76	0.03	14.62	6.33	0.8	4825.75	10
	median	61	2.85	1.87	0	13.77	5.77	0.8	4847.5	
China	mean	48.43	6.78	0.99	0.12	12.19	7.85		794.44	9
	median	48.4	6.75	0.81	0	10.81	5.97		790	
Colombia	mean	57.75	6.95	0.76	0	13.75	3.91	-0.15	2517.5	2
	median	57.75	6.95	0.76	0	13.75	3.91	-0.15	2517.5	
Czech republic	mean	51.4	5.55	2.04	0	19.59	7.53		5432.5	1
	median	51.4	5.55	2.04	0	19.59	7.53		5432.5	
Greece	mean	57.15	5.1	5.6	0	14.07	10.91	0.77	11687.5	2
	median	57.15	5.1	5.6	0	14.07	10.91	0.77	11687.5	
Hong Kong	mean	58.89	2.3	5.57	0.24	14.64	9.87	1.82	25036.4	41
	median	61.2	2.3	2.15	0	14.07	7.53	1.82	25122.5	
Hungary	mean	60.4	4.8	5.64	0.17	19.59	7.53		4827.5	1
	median	60.4	4.8	5.64	0.17	19.59	7.53		4827.5	
India	mean	57.41	7.15	11.59	0.6	16.42	7.05	0.58	475.83	48
	median	55.1	7.15	4.98	0.25	14.07	6.75	0.58	475	
Indonesia	mean	37.43	8.3	4.86	0.02	14.95	6.82	1.78	457.14	14
	median	36.5	8.3	3.28	0	15.11	6.75	1.78	457.5	
Malaysia	mean	57.61	5.05	2.92	0.04	13.84	7.78	1.36	3395.14	35
	median	59.6	5.05	2.49	0	13.66	6.86	1.36	3395	
Mexico	mean	64.65	6.68	2.11	0	17.74	6.1	1.77	4376.25	2
	median	64.65	6.68	2.11	0	17.74	6.1	1.77	4376.25	
Pakistan	mean	33.97	7.8	1.99	0.03	13.97	7.9	0.9	475	11
	median	30.7	7.8	1.67	0	13.55	7.01	0.9	475	
Peru	mean	51.9		0.35	0	14.07	10.91			1
	median	51.9		0.35	0	14.07	10.91			
Philippines	mean	44.71	6.8	2.24	0.01	15.07	10.56	1.3	940	17
	median	40.7	6.8	2.55	0	14.07	7.53	1.3	940	
Russia	mean	15.4	7.75	3.64	0	14.45	5.97		1642.5	1
	median	15.4	7.75	3.64	0	14.45	5.97		1642.5	
Singapore	mean	64.49	0.9	3.89	0.13	13.91	8	1.19	22241.91	34
	median	64.5	0.9	1.7	0	14.07	5.18	1.19	22197.5	
South Africa	mean	67.84	5	4.3	0.08	16.39	11.3	0.64	3174.77	22
	median	67.7	5	2.03	0	15.72	7.53	0.64	3175	
South Korea	mean	45.17	6.09	2.11	0.46	17.42	5.44	0.68	7880.31	16
	median	43.45	6.1	1.36	0.3	14.85	5.12	0.68	7772.5	
Taiwan	mean	53.36	4.47	5.9	3.16	19.49	6.32	1.21	12667.33	29
	median	51.9	4.45	5.17	0.43	21.53	5.17	1.21	12547.5	
Thailand	mean	57.68	6.8	4.27	0	17.8	6.26	1.9	1971.67	12
	median	55.5	6.8	3.39	0	19.32	6.23	1.9	1960	
Turkey	mean	43.44	6.29	4.39	0.25	14.97	11.44	0.36	3062.25	10
	median	38.9	6.3	3.94	0.05	14.45	5.97	0.36	3067.5	
Venezuela	mean	52.9	7.33	0.26	0	17.25	5.79	0.45	4302.5	2
	median	52.9	7.33	0.26	0	17.25	5.79	0.45	4302.5	
Average	mean	55.16	5.03	4.96	0.46	15.57	8.02	1.09	8378.87	323
	median	49.55	5.57	2.58	0.06	14.88	6.51	1	5856.04	
Standard Dev.	mean	12.36	1.89	2.5	0.67	2.11	2.19	0.59	6823.12	
	median	13.04	1.89	1.62	0.12	2.58	1.73	0.59	6824.1	

Table 2. Summary of S&P Dataset

		Key Variables		Firm-level		Industry-level		Country-level		
Country	Statistic	Rank	Corrupt	PB	R&D	LTG_it	PM_it	Beta	GDP/cap	Obs.
Argentina	mean	3	6.75	1.29	0	13.73	7.93	1.76	8000	7
	median	3	6.75	1.31	0	14.54	7.53	1.76	8000	
Australia	mean	7	1.51	3.35	0.58	15.23	6.43	1.14	19779	24
	median	7	1.5	3	0	14.54	6.75	1.14	19765	
Chile	mean	4	2.85	1.87	0.03	14.16	6.33	0.8	4848	12
	median	3	2.85	1.82	0	14.43	4.17	0.8	4848	
China	mean	5	6.78	1.07	0.09	12.27	7.2		795	13
	median	6	6.75	0.93	0	12.7	6.09		790	
Colombia	mean	2	6.95	0.61	0	13.06	5.07	-0.15	2518	1
	median	2	6.95	0.61	0	13.06	5.07	-0.15	2518	
Hong Kong	mean	5	2.3	2.68	0	12.1	11.02	1.82	25123	20
	median	5	2.3	1.74	0	10.24	11.08	1.82	25123	
India	mean	4	7.15	9.49	0.46	16.68	7.03	0.58	476	37
	median	4	7.15	2.22	0.04	15.06	6.7	0.58	475	
Indonesia	mean	4	8.3	4.16	0.03	14.48	6.59	1.78	457	10
	median	4	8.3	2.76	0	15.11	4.81	1.78	458	
Japan	mean	6	3.8	3.08	2.1	15.79	5.93	0.95	31206	145
	median	6	3.8	2.24	0.78	15.01	5.17	0.95	31198	
Malaysia	mean	5	5.06	2.63	0.01	14.62	8.24	1.36	3395	47
	median	5	5.05	1.97	0	14.07	6.64	1.36	3395	
Mexico	mean	3	6.65	2.17	0	15.99	6.62	1.77	4298	10
	median	3	6.65	1.58	0	15.41	6.39	1.77	4298	
New Zealand	mean	6	0.6	0.72	0.12	17.36	4.56	0.87	14175	1
	median	6	0.6	0.72	0.12	17.36	4.56	0.87	14175	
Pakistan	mean	4	7.8	1.55	0.03	13.75	7.61	0.9	475	9
	median	4	7.8	1.67	0	13.55	7.01	0.9	475	
Peru	mean	3	5.55	1.83	0	15.22	8.29	0.99	2428	6
	median	3	5.55	1.87	0	15.39	7.62	0.99	2428	
Philippines	mean	3	6.8	2.4	0	12.64	9.59	1.3	940	9
	median	3	6.8	2.68	0	13.06	10.91	1.3	940	
Singapore	mean	7	0.9	4.44	0.14	14.97	12.95	1.19	22245	8
	median	7	0.9	3.57	0	13.3	7.8	1.19	22198	
South Korea	mean	5	6.09	2.25	0.98	15.58	6.83	0.68	7884	31
	median	6	6.1	2.05	0.09	14.07	5.17	0.68	7773	
Sri Lanka	mean	5		1.25	0	13.06	5.07		855	1
	median	5		1.25	0	13.06	5.07		855	
Taiwan	mean	2	4.45	4.97	2.03	18.87	5.12	1.21	12569	33
	median	2	4.45	3.66	0.61	18.49	5.17	1.21	12548	
Thailand	mean	5	6.8	2.92	0	16.69	8.62	1.9	1977	25
	median	6	6.8	1.85	0	15.78	7.53	1.9	1960	
Venezuela	mean	2	7.35	0.48	0	15.78	6.7	0.45	4220	1
	median	2	7.35	0.48	0	15.78	6.7	0.45	4220	
Overall	mean	5	4.76	3.45	0.97	15.49	7.03	1.09	15122	451
	median	4.31	5	1.88	0.09	13.87	6.3	1.06	8089.74	
Std. Dev.	mean	1.47	2.43	1.99	0.65	1.79	2.08	0.53	9449.52	
	median	1.61	2.43	0.84	0.21	1.75	1.88	0.53	9444.46	

Table 3. Correlation Between Corporate Governance Attributes For Common Companies in S&P Rankings and CLSA Scores
This table reports the pairwise correlation between corporate governance variables from the S&P Transparency and Disclosure Rankings and CLSA corporate governance scores. The upper triangle reports the Spearman rank correlation coefficients; the lower triangle reports the Pearson correlation coefficients. We compute the correlation for 130 common companies in both datasets. The P-value of the coefficient is also reported.

	S&P Rankings				CLSA Corporate Governance Scores								Corruption
Variable	**Ranking**	**Ownership**	**S&P Transparency**	**Board**	***Discipline***	***CLSA Transp***	***Indep***	***Account***	***Resp***	***Fairness***	***Social***	***Composite***	**Corrupt**
Ranking	**1.0000**	**0.6892**	**0.8047**	**0.9099**	0.0466	**0.3614**	0.0795	**0.2906**	**0.3710**	**0.2117**	-0.1382	**0.2793**	**-0.2629**
		0.0000	0.0000	0.0000	0.5987	0.0000	0.3685	0.0008	0.0000	0.0156	0.1167	0.0013	0.0037
Ownership	**0.7590**	**1.0000**	**0.4631**	**0.5884**	-0.0373	**0.3255**	0.0742	0.1031	**0.2246**	**0.2252**	**-0.2519**	**0.2105**	-0.1379
	0.0000		0.0000	0.0000	0.6737	0.0002	0.4014	0.2431	0.0102	0.0100	0.0038	0.0166	0.1330
S&P Transparency.	**0.8226**	**0.5403**	**1.0000**	**0.6542**	0.0919	**0.3483**	-0.0342	**0.1765**	**0.3714**	0.1116	**-0.1944**	**0.1900**	**-0.2264**
	0.0000	0.0000		0.0000	0.2981	0.0000	0.6992	0.0445	0.0000	0.2060	0.0267	0.0310	0.0129
Board	**0.8965**	**0.6262**	**0.6533**	**1.0000**	0.0914	**0.3323**	**0.1627**	**0.3494**	**0.3226**	**0.2601**	-0.0227	**0.3547**	**-0.2501**
	0.0000	0.0000	0.0000		0.3011	0.0001	0.0644	0.0000	0.0002	0.0028	0.7979	0.0000	0.0059
Discipline	0.0630	-0.0246	0.1026	0.1122	**1.0000**	**0.2217**	**0.3602**	**0.2249**	**0.3139**	**0.2402**	**0.1683**	**0.5833**	-0.0862
	0.4765	0.7815	0.2456	0.2036		0.0113	0.0000	0.0101	0.0003	0.0059	0.0556	0.0000	0.3492
CLSA Transparency	**0.3492**	**0.3208**	**0.3329**	**0.3339**	**0.2283**	**1.0000**	**0.2272**	**0.3661**	**0.4193**	**0.2945**	-0.0215	**0.5764**	**-0.4294**
	0.0000	0.0002	0.0001	0.0001	0.0090		0.0093	0.0000	0.0000	0.0007	0.8080	0.0000	0.0000
Indep	0.0497	0.0513	-0.0315	**0.1708**	**0.3504**	**0.1886**	**1.0000**	**0.1982**	**0.3935**	**0.4248**	**0.1766**	**0.7171**	**-0.3384**
	0.5743	0.5620	0.7224	0.0520	0.0000	0.0316		0.0238	0.0000	0.0000	0.0444	0.0000	0.0002
Account	**0.2852**	0.1215	**0.1515**	**0.3582**	**0.2511**	**0.3784**	**0.1973**	**1.0000**	**0.2369**	0.0184	**0.2264**	**0.4942**	-0.1251
	0.0010	0.1686	0.0852	0.0000	0.0040	0.0000	0.0244		0.0067	0.8355	0.0096	0.0000	0.1734
Resp	**0.3772**	**0.2381**	**0.3702**	**0.3325**	**0.3393**	**0.4152**	**0.4005**	**0.2775**	**1.0000**	**0.3857**	0.0909	**0.6903**	**-0.5076**
	0.0000	0.0064	0.0000	0.0001	0.0001	0.0000	0.0000	0.0014		0.0000	0.3039	0.0000	0.0000
Fairness	**0.2076**	**0.2051**	0.1213	**0.2423**	**0.1857**	**0.2812**	**0.4161**	0.0123	**0.3525**	**1.0000**	0.1039	**0.6380**	-0.0280
	0.0178	0.0192	0.1692	0.0055	0.0344	0.0012	0.0000	0.8891	0.0000		0.2395	0.0000	0.7616
Social	-0.1305	**-0.2196**	**-0.1976**	0.0171	**0.2151**	0.0299	**0.1997**	**0.2593**	0.1223	0.0813	**1.0000**	**0.3023**	0.0377
	0.1389	0.0120	0.0242	0.8469	0.0140	0.7352	0.0227	0.0029	0.1656	0.3580		0.0005	0.6824
Composite	**0.2963**	**0.1870**	**0.2057**	**0.3835**	**0.5982**	**0.5809**	**0.7228**	**0.5362**	**0.7050**	**0.6233**	**0.3820**	**1.0000**	**-0.3581**
	0.0007	0.0338	0.0193	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0001
Corrupt	**-0.3057**	**-0.1793**	**-0.2786**	**-0.2963**	-0.0936	**-0.4056**	**-0.2657**	**-0.1635**	**-0.5508**	-0.0653	0.0004	**-0.3908**	**1.0000**
	0.0007	0.0501	0.0021	0.0010	0.3093	0.0000	0.0034	0.0744	0.0000	0.4786	0.9961	0.0000	

Table 4. Correlation Among Key Variables in CLSA Dataset

This table reports the pairwise correlation for key variables in the CLSA dataset. The upper triangle reports the Spearman correlation estimates; the lower triangle reports the Pearson correlation coefficients. The P-value of the coefficient is also reported.

Variable	**Composite**	**Corrupt**	**PB**	**R&D**	**LTG it**	**PM it**	**GDP/cap**	**Beta**
Composite	**1.0000**	**-0.3719**	**0.1208**	-0.0856	0.0099	-0.0367	**0.2819**	0.0205
		0.0000	0.0294	0.1239	0.8591	0.5098	0.0000	0.7197
Corrupt	**-0.3875**	**1.0000**	0.0492	**0.1589**	0.0442	-0.0164	**-0.9212**	**-0.3195**
	0.0000		0.3784	0.0042	0.4286	0.7695	0.0000	0.0000
PB	**0.1844**	0.0664	**1.0000**	**0.2604**	**0.3155**	-0.0873	-0.0643	0.0105
	0.0008	0.2343		0.0000	0.0000	0.1155	0.2488	0.8539
R&D	0.0514	-0.0174	**0.0914**	**1.0000**	**0.1633**	**-0.3145**	**-0.1396**	**-0.3732**
	0.3563	0.7552	0.0999		0.0031	0.0000	0.0122	0.0000
LTG_it	0.0592	**0.0967**	**0.3293**	**0.2883**	**1.0000**	**-0.3229**	0.0122	-0.0275
	0.2877	0.0827	0.0000	0.0000		0.0000	0.8276	0.6287
PM_it	-0.0539	-0.0626	-0.0889	**-0.1111**	**-0.3250**	**1.0000**	-0.0216	0.0521
	0.3331	0.2620	0.1093	0.0454	0.0000		0.6983	0.3595
GDP/cap	**0.2518**	**-0.8906**	-0.0300	0.0666	-0.0511	0.0504	**1.0000**	**0.4314**
	0.0000	0.0000	0.5912	0.2331	0.3600	0.3662		0.0000
Beta	0.0013	**-0.3311**	**-0.0949**	-0.0337	-0.0724	0.0167	**0.4819**	**1.0000**
	0.9814	0.0000	0.0948	0.5544	0.2028	0.7692	0.0000	

Table 5. Correlation Among Key Variables in S&P Dataset

This table reports the pairwise correlation for key variables in the S&P dataset. The upper triangle reports the Spearman correlation estimates; the lower triangle reports the Pearson correlation coefficients. The P-value of the coefficient is also reported.

Variable	Ranking	Corrupt	PB	R&D	LTG_it	PM_it	GDP/cap	Beta
Ranking	**1.0000**	**-0.5247**	0.0602	**0.1592**	-0.0339	-0.0382	**0.5256**	**-0.1388**
		0.0000	0.1990	0.0006	0.4691	0.4150	0.0000	0.0036
Corrupt	**-0.4536**	**1.0000**	**-0.1054**	**-0.1675**	0.0224	**0.1098**	**-0.8119**	-0.0328
	0.0000		0.0252	0.0004	0.6357	0.0197	0.0000	0.4942
PB	0.0249	**0.0777**	**1.0000**	**0.1960**	**0.3447**	0.0204	**0.1283**	0.0028
	0.5957	0.0995		0.0000	0.0000	0.6629	0.0063	0.9536
R&D	**0.0989**	**-0.1482**	0.0527	**1.0000**	**0.2251**	**-0.2088**	**0.3401**	**-0.3411**
	0.0348	0.0016	0.2618		0.0000	0.0000	0.0000	0.0000
LTG_it	-0.0576	0.0140	**0.2982**	**0.1996**	**1.0000**	**-0.2931**	0.0522	-0.0386
	0.2189	0.7668	0.0000	0.0000		0.0000	0.2682	0.4202
PM_it	0.0034	0.0060	-0.0510	**-0.1182**	**-0.3503**	**1.0000**	**-0.1736**	**0.1269**
	0.9431	0.8997	0.2769	0.0116	0.0000		0.0002	0.0078
GDP/cap	**0.5279**	**-0.7252**	-0.0618	**0.3115**	0.0344	**-0.1026**	**1.0000**	**-0.1347**
	0.0000	0.0000	0.1897	0.0000	0.4654	0.0292		0.0047
Beta	**-0.1151**	0.0290	**-0.1147**	**-0.1690**	**-0.0914**	**0.1658**	**-0.1799**	**1.0000**
	0.0159	0.5453	0.0163	0.0004	0.0560	0.0005	0.0002	

Table 6. OLS Regression of CG Scores on CLSA Dataset

This table reports the results of regressions:

$$CG_{I,t} = \alpha_t + \beta_{I,t} * \text{corruption}_{I,t} + \sum_{j=1}^{n} \delta_{j,t} Z_{j,I,t} + \sum_{h=1}^{n} d_{h,t} D_{h,I,t} + \sum_{l=1}^{n} c_{l,t} * C_{l,I,t} + \varepsilon_{i,t}$$

where CG *i,t* represents CLSA corporate governance scores for firm i, Z*j,i,t* is the jth characteristic of firm i in time t: the n firm-level variables are firm size and R&D; similarly, D*h, i,t* is the hth industry-level variable for firm i in time t, the n industry-level variables represent industry investment opportunity, median of long-term growth forecast LTG_it, and median of profit margin within the industry PM_it. C*l,i,t* is the lst country-level control variable for firm I; the n countrylevel variables are country risk (beta), inflation, median of country growth forecast LTG_ct, GDP per capita GDP_cap, and anti-director index (antidir). The t-statistics are reported in parenthesis. Bold numbers indicates a 10% level of statistical significance.

Dependent Variables: CG

	Composite	Discipline	Transp	Indept	Accountability	Responsibility	Fairness	Social
Intercept	**84.2411**	**112.0480**	**64.1382**	**126.2815**	-0.2907	**86.8893**	**165.3000**	**12.4443**
	(6.07)	**(5.36)**	**(3.29)**	**(4.23)**	(-0.01)	**(3.92)**	**(5.70)**	**(5.56)**
Corruption	**-2.9635**	**-4.3887**	**-3.0081**	**-5.1072**	0.9989	**-5.0956**	**-6.1795**	**4.4143**
	(-3.66)	**(-3.60)**	**(-2.65)**	**(-2.94)**	(0.73)	**(-3.95)**	**(-3.65)**	**(3.41)**
R&D	-0.0123	0.2554	0.1474	1.1814	-0.4393	-1.1269	-0.5352	0.8994
	(0.03)	(0.40)	(0.24)	(1.28)	(-0.60)	(-1.65)	(-0.60)	(1.31)
Firm Size	-0.5081	-0.0298	0.9443	-1.0017	**2.3446**	**-2.3491**	**-2.9863**	-0.3767
	(-1.04)	(-0.04)	(1.38)	(-0.96)	**(2.84)**	**(-3.03)**	**(-2.94)**	(-0.48)
LTG_it	-0.0267	0.0503	-0.1269	0.3918	0.1618	-0.2914	0.3719	-0.5245
	(0.14)	(0.18)	(-0.49)	(0.99)	(0.52)	(-0.99)	(0.96)	(-1.78)
PM_it	-0.0815	**-0.03350**	-0.1551	0.1162	-0.0402	0.0063	-0.0003	-0.1816
	(-0.78)	**(-2.12)**	(-1.05)	(0.52)	(-0.23)	(-0.04)	(0.00)	(-1.08)
Beta	-0.2493	-3.3582	2.9692	-7.3569	1.1947	3.5774	6.6136	-8.1802
	(-0.12)	(-1.06)	(1.00)	(-1.62)	(0.33)	(1.06)	(1.50)	(-2.43)
Inflation	**-23.1279**	-4.6285	**24.1246**	**-41.1425**	**-47.6982**	-11.3257	**-41.8625**	**-46.9839**
	(-3.83)	(-0.51)	**(2.84)**	**(-3.16)**	**(-4.65)**	(-1.17)	**(-3.31)**	**(-4.85)**
LTG_ct	**0.2289**	0.2103	-0.2173	-0.1133	0.6425	0.2657	0.2382	0.7254
	(-2.45)	(1.50)	(-1.66)	(-0.57)	(4.08)	(1.79)	(1.23)	(4.88)
GDP_cap	-1.2963	**-5.2398**	0.7700	-2.1222	1.5291	-0.0558	**-5.8571**	3.3315
	(-1.06)	**(-2.86)**	(0.45)	(-0.81)	(0.74)	(-0.03)	**(-2.30)**	(1.71)
antidir	-0.5685	-1.5843	-1.2398	**-4.5349**	0.0271	1.4295	**-4.7909**	**5.5339**
	(-0.54)	(-1.00)	(-0.84)	**(-2.01)**	(0.02)	(-0.85)	**(-2.18)**	**(3.29)**
Adj R-sq	0.1910	0.0767	0.1721	0.1313	0.1089	0.2588	0.1342	0.2199
Obs.	322	322	322	322	322	322	322	322

Table 7. OLS Regression of CG on S&P Dataset

This table reports the results of regressions:

$$CG_{I,t} = \alpha_t + \beta_{i,t} * \text{corruption}_{I,t} + \sum_{j=1}^{n} \delta_{j,t} * Z_{j,I,t} + \sum_{h=1}^{n} d_{h,t} * D_{h,I,t} + \sum_{l=1}^{n} c_{l,t} * C_{l,I,t} + \varepsilon_{i,t}$$

where CG *i,t* is one of the S&P T&D rankings for firm i, Z*j,i,t* is the jth characteristic of firm i in time t: the n firmlevel variables are firm size and R&D; similarly, D*h, i,t* is the hth industry-level variable for firm i in time t, the n industry-level variables represent industry investment opportunity, median of long-term growth forecast LTG_it, and median of profit margin within the industry PM_it. C*l,i,t* is the lst country-level control variable for firm I; the n country-level variables are country risk (beta), inflation, median of country growth forecast LTG_ct, GDP per capita GDP_cap, and anti-director rights index (antidir). The t-statistics are reported in parenthesis. Bold numbers indicates a 10% level of statistical significance.

Dependent Variables: CG

	Overall Ranking	**Ownership**	**Transparency**	**Board**
Intercept	**11.3420**	**18.0164**	**8.6022**	**9.0939**
	(6.07)	**(8.52)**	**(5.56)**	**(3.75)**
Corruption	**-0.4703**	**-0.5633**	**-0.2485**	**-0.5104**
	(-5.24)	**(-5.55)**	**(-3.35)**	**(-4.39)**
R&D	-0.0392	-0.0774	0.0213	-0.0181
	(-0.81)	(-1.41)	(-0.53)	(-0.29)
Firm Size	0.0240	-0.0439	0.0609	0.0402
	(0.38)	(-0.62)	(1.18)	(0.50)
LTG_it	-0.0129	-0.0048	-0.0163	-0.0116
	(-0.56)	(-0.19)	(-0.86)	(-0.39)
PM_it	0.0118	0.0202	0.0196	-0.0001
	(0.68)	(1.04)	(1.38)	(-0.00)
Beta	-0.1748	-0.4624	-0.0825	-0.3053
	(-0.68)	(-1.59)	(-0.39)	(-0.92)
Inflation	-0.1827	-2.1913	1.0386	-1.3376
	(-0.11)	(-1.16)	(0.75)	(-0.62)
LTG_ct	**-0.0274**	**-0.0870**	-0.0142	-0.0134
	(-2.47)	**(-6.94)**	(-1.55)	(-0.93)
GDP_cap	**-0.4531**	**-0.9401**	-0.1901	-0.3155
	(-3.09)	**(-5.68)**	(-1.57)	(-1.66)
antidir	0.0011	0.2244	0.0845	0.0704
	(0.01)	(-1.40)	(0.72)	(0.38)
Adj R-sq	0.1593	0.2402	0.1093	0.1513
Observations	305	305	305	305