



# **Which Does More to Determine the Quality of Corporate Governance in Emerging Economies, Firms or Countries?**

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# **Which Does More to Determine the Quality of Corporate Governance in Emerging Economies, Firms or Countries?**

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## **ABSTRACT**

Scholars of corporate governance have debated the relative importance of country and firm characteristics in understanding corporate governance variation across emerging economies. Using panel data and a number of model specifications, we shed new light on this debate. We find that firm characteristics are as important as and often meaningfully more important than country characteristics in explaining governance ratings variance. These results suggest that over recent years firms in emerging economies had more capability to rise above home-country peer firms in corporate governance ratings than has been previously suggested. In fact, 16.8% percent of firms in emerging economies have been able to exceed the 75<sup>th</sup> percentile of corporate governance ratings in developed economies and 45.5% of firms in emerging economies have been able to exceed the 50<sup>th</sup> percentile of corporate governance ratings in developed economies.

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## I. Introduction

The corporate governance literature since Shleifer and Vishny (1997) has shown both that country-level governance institutions matter for determining financial and economic development (La Porta et al., 1998; Wurgler, 2000; Beck, Levine, and Loayza, 2000; Acemoglu, Johnson, Robinson, 2001), but also that firms can differentiate themselves from their peers in the eyes of outside investors by borrowing foreign institutions (Coffee, 2002; Doidge et al, 2009; Siegel, 2005). But then which has been more important over time in determining the overall quality of corporate governance in emerging economies, the country-level effects or the firm-level effects? In other words, to what extent have emerging economy firms overcome the “weak institutions” problem through their own firm-level efforts to differentiate themselves from their peers? And to what extent have emerging economy firms attained the high quality corporate governance of the best-governed firms in developed economies?

Several papers have taken up these questions with mixed results. A number of scholars argue that the weak institutions in emerging economies are the strongest influence on or even the sole determinant of corporate governance practices of local firms (Krishnamurti, Sevic, and Sevic, 2006; Doidge, Karolyi, and Stulz, 2007; Klapper and Love, 2004). Doidge, Karolyi, and Stulz (2007) find that country variables explain 39-73% of the governance choices of firms, while firm variables explain only 4-22% of governance variance. Moreover, they argue that firm characteristics explain almost none of the governance variation in “less-developed countries” because the costs of adopting good governance outweigh the benefits in such locations. At the same time, other studies see important roles for both firm and country characteristics in determining local governance (Klapper, Laeven, and Love, 2006; Sawicki, 2009). Durnev and Kim (2005) go yet further to argue that three firm variables may be more important than country

variables. Specifically, Durnev and Kim (2005) find that investment opportunities, external financing, and ownership structure play an important role.

This debate in academic literature is kept fresh by the statistics on the corporate governance practices of firms in emerging economies. We find that, comparing the average scores of firms across the globe from the CLSA (Credit Lyonnais Securities Asia) corporate governance scores, 16.8% of firms in emerging economies have average governance scores above the 75<sup>th</sup> percentile for developed economy firms and 45.5% of emerging economy firms have scores above the 50<sup>th</sup> percentile for developed economy firms. Looking at corporate governance scores from the Risk Metrics Group, we see that 9% of emerging economy firms exceed the 75<sup>th</sup> percentile and 46.1% of emerging economy firms exceed the 50<sup>th</sup> percentile for developed economy firms. Overall, this suggests that firms in emerging economies had the capacity to rise above their home country institutions and peer firms to achieve world class corporate governance.

The ongoing debate as to the importance of firms and countries in determining corporate governance practices in the literature, as well as the number of firms in emerging economies who achieved world class governance, motivates this current study. There is such a substantive difference between the results in papers such as Doidge, Karolyi, and Stulz (2007) and Durnev and Kim (2005) that the situation begs for a more definitive empirical analysis. We aim to provide clarity as how to some firms in economies with weak institutions were able to achieve corporate governance ratings at the highest end of the spectrum and, in the process, we hope to shed further light on this firm-versus-country debate.

In this paper we use new data from three unique sources, Credit Lyonnais Securities Asia (CLSA), RiskMetrics, and FTSE. Single years of these data were all used in previous studies of

this question. Such cross-sectional analysis has been shown to be unreliable for studies of governance when using OLS and fixed effects regressions (Black, Love, and Rachinsky, 2006). We update this cross-sectional analysis by using panel data spanning 4-11 years. We also use new methodology in order to provide a stronger assessment of the roles firms and countries play in determining corporate governance. For each analysis we apply three main sets of regressions that use first, OLS with observable variables and fixed effects, second, random effects, and third, Nested ANOVA. With this data and empirical analysis we find that, under the most conservative judgments, firms are as important as countries in explaining corporate governance in emerging economies. We often find that firms are more important than countries, especially when we consider firm fixed effects, which previous studies have not explored. Therefore, our results cohere with those of Durnev and Kim (2005) who found an important role for investment opportunities, external financing, and ownership structure, but extend their work to show the additional importance of unobservable firm characteristics, seen in firm fixed effects. Our results contradict the most recent contribution to this debate from Doidge, Karolyi, and Stulz (2007) who argue that firm characteristics play little to no role in explaining corporate governance in emerging economies.

Our study targets corporate governance practices in emerging economies. We understand corporate governance as those measures that fuel growth by providing investors an assurance of a return on their investment, a definition offered by Shleifer and Vishny (1997). Corporate governance involves mechanisms that govern the actions of and interactions between firm managers, shareholders, board members, and stakeholders in an attempt to address issues such as principal-agent conflicts. High quality corporate governance controls these individuals, through regulation or firm policy, and protects investors. It is for this reason that investors are more

willing to offer valuable financing or pay a higher equity price for firms with better governance (Chen, Chen and Wei, 2009). High quality corporate governance, thus, is valuable not just for investors but also for firms who may rely on external financing for valuable growth opportunities. It can also help firms capitalize on opportunities in a variety of ways. Black and Khanna (2007) show how firm-level variables (growth and cross-listing) were able to amplify the firm value growth following corporate governance adoption in India (Black and Khanna, 2007). Similarly, Bae and Goyal (2010) show that when South Korea officially liberalized their equity market, firm-level variation in governance was strongly associated with greater stock price increase, foreign ownership and higher rates of physical capital accumulation.

The implementation of corporate governance mechanisms is typically conveyed to potential investors through ratings by third-party research organizations. We use data from three of these third-party organizations: CLSA, Risk Metrics, and FTSE. These organizations monitor the behavior of firms across the world and score them on specific governance measures such as the independence of the board of directors and poison pill policies, etc. Individual scores are aggregated to form single scores for each firm in a given year. Ratings are especially useful in emerging economies when other signals of firm value are opaque and where potential investors may lack the cultural knowledge to understand local practices. Corporate governance ratings have been shown to increase, causally, a firm's value (Black, Jang, and Kim, 2006). Improving ratings should, therefore, be important to firms in emerging economies.

Emerging economies provide an ideal setting to explore the importance of firm and country characteristics in corporate governance because of their unique institutional structures. Typically, emerging economies are characterized by weak institutions such as poorly enforced regulatory systems, corruption, and minimal democracy. The effect of such incomplete

institutions, however, is not fully understood. Weak institutions can impact a country's growth, and along with it, the ability of local firms to compete globally (La Porta et al, 1998; Wurgler, 2000; Beck, Levine, and Loayza, 2000; Acemoglu, Johnson, Robinson, 2001). Thus, institutions can restrict firm growth if barriers to competitiveness such as corruption are too strong. An alternative perspective sees institutions as important, but not as an impenetrable barrier to growth. This work finds other explanations for poor development, such as human capital and ethnicity (Gennaioli et al, 2013; Michalopoulos and Papaioannou, 2014). If institutions affect, but do not constrain firms entirely, it is possible that institutions can afford firms considerable latitude to move independently from home country peer firms. In effect, when there are no rules and firms cannot opt out of in favor of other foreign rules, then firms are free to make their own decisions. Firms then will try to improve (or even worsen) the quality of their firm-level corporate governance. Firms' capacity to adopt or borrow institutions from foreign locations has been shown to be a powerful predictor of firm success and growth (Coffee, 2002; Reese and Weisbach, 2002; Siegel, 2005, 2009; Doidge et al., 2009).

Our analysis provides evidence that firms in emerging economy were able to distinguish themselves above and beyond their home country peers in corporate governance ratings during the last decade. Both firm and country conditions are important for firms' corporate governance performance. Across our main two data sets we see that firm characteristics explain 33-50% of the corporate governance ratings' variance, and country characteristics explain roughly 11-28% of the variance in emerging economies.<sup>2</sup> Conservatively, this allows us to say that firms and

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<sup>2</sup> This range comes from the regressions that involve both observable and unobserved firm and country characteristics in the form of fixed effects (OLS), random effect regressions, and nested ANOVA regressions. Firm effects contributed the least in the random effects model using the CLSA corporate governance score as the dependent variable. Firm effects explained the most variance in the random effects model using the Industry Corporate Governance Quotient (CGQ) as the dependent variable. We excluded results from the regressions using only observable characteristics without fixed effects because they explained far less of the variance overall.

countries are equally important in explaining governance performance. In many models firm variables explain more of the governance variation than do country variables.

The results for developed economies are markedly different—firm characteristics explain only 15-19% of governance ratings variance in developed economies while country characteristics explain 46-57%.<sup>3</sup> The difference between the variance explained by countries and firms in developed economies is significant throughout all of our datasets. Therefore, in emerging economies, firm variables explain approximately the same amount and sometimes significantly more of the governance variance than do country variables. For developed economies, in contrast, country variables explain significantly more of the variation in corporate governance ratings than do firm variables.

Within this general finding, we see a strong role for unobservable firm-level characteristics in explaining corporate governance in emerging economies. Captured in the firm fixed effects, the unobservable behavior of firms explains the most governance variation of any potential source including observable firm characteristics such as sales growth, observable country characteristics such as gross domestic product per capita, and unobservable country characteristics in fixed effects. The importance of unobservable firm characteristics suggests that the key mechanism behind emerging economy firm governance improvement is not something we can readily capture. While the exact source of the firm governance improvement is unclear, a recent International Finance Corporation survey identified several firm governance practices of particular interest to investors in emerging economies (Khanna and Zyla, 2012). These specific governance practices included both easy to capture variables such as board independence, but also hard to quantify concepts such as the willingness of management to meet

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<sup>3</sup> Country effects explained the most variance in the ANOVA model, using the Industry Corporate Governance Quotient (CGQ) as the dependent variable. Country characteristics explained the least variance in the random effects regression using the Index CGQ as the dependent variable.



with investors and the motivations of controlling group or management. Amorphous factors, received as impressions made by investors in emerging economy firms may speak to the unobservable firm characteristics driving the importance of firm fixed effects in our results.

Our findings are important for both investors and firms in emerging economies. Investors will be able to observe corporate governance variation within countries and identify valuable investment opportunities. Also, firms should enjoy a sense of agency in their prospects for growth, unhampered by an environment with weak and incomplete governance institutions or low financial market development. During the last decade we show that these firms were able to use various processes to differentiate themselves from their home country institutions and peer firms.

The remainder of this paper is organized as follows. Section II explains the three data sources we used as well as the various methods we employ to prove our results. Section III explains the results of our models. Section IV goes through our various robustness tests of our results. Section V concludes.

## **II. Data and Methods**

We implement our analysis using two main data sets. The first data set comes from the Corporate Lyonnais Securities Asia (CLSA), an independent research firm that tracked corporate governance measures at emerging economy firms during the last decade (2000-2010). The second data set is from the RiskMetrics Group, which gave industry and Index Corporate Governance Quotient (CGQ) scores from 2003-2009. Both of these data sets have been used in previous investigations of the importance of countries and firms for corporate governance practices in emerging economies. We also conduct our analysis on a third data set from FTSE's

ISS Corporate Governance Index from 2005-2008, as a robustness test of our two main data sets. A precursor of the FTSE corporate governance scores was also used in previous studies, although the methodology and the score summary statistics are somewhat different. We did not include the S&P data used in previous studies, as S&P did not continue to give ratings beyond a single year for more than a few firms and thus our panel data approach would have been limited to one year. Other firm variables besides the corporate governance scores come from Thomson Reuters' Worldscope database.

The CLSA corporate governance data was shared with investors annually in the company's "CG Watch" reports. These reports highlighted emerging economy firms who had exceptional governance ("CG Stars") or firms which had fallen in their scores since the previous year. CLSA gave us complete access to all of their historical ratings data: 10 years of data from 2000-2010. Each firm's corporate governance score is composed of ratings on 57 different sub-measures (plus or minus a few depending on the year). These 57 sub-measures fall into the categories of discipline, transparency, independence, accountability, responsibility, fairness, and social awareness. In the final year of the CG Watch reports, CLSA included a measure for environmental friendliness, "Clean and Green." Depending on the year, 475-1000+ firms were ranked along these metrics and given an aggregate corporate governance score, computed as the average of all the smaller measure scores. These scores compose 4,448 observations, 91% of which are from emerging economies.

Over the ten years that CLSA tracked corporate governance for emerging economy firms, the methods by which the rankings were gathered changed only slightly. Each year, the points awarded to each firm were determined by its answers to a lengthy survey conducted by CLSA. Initially, each survey question was answered simply with *yes* or *no*; a single point was awarded

for each yes and a zero for each no. Later, three more options were added: largely (0.75 points), somewhat (0.5 points), and marginally (0.25 points). Points for each category were then combined and weighted to produce the firm's final score. The exact weighting of each category changed only slightly over the years. In 2000, the first year the scores were computed, discipline accounted for 10% of the score while transparency, independence, accountability, responsibility, fairness, and social awareness each accounted for 15%. In 2007, when the Clean and Green category was introduced, responsibility was absorbed into another category; each of the remaining categories accounted for 15% of the final score while Clean and Green represented 10%.

The exact questions also changed over the years, increasing in number from 53 to 87; several were dropped and replaced with others. An example of a typical survey question is: "Does the company publish its full-year results within three months of the end of the financial year?" The summary statistics for the aggregate corporate governance measures and the firm and country variables appear in Table 1 Panel A, and the correlations between the variables appear in Panel B.

[Insert Table 1 about here]

We winsorized a number of variables in this data set to remove outliers, bringing in variables values at the 1<sup>st</sup> and 99<sup>th</sup> percentile when appropriate. Not all variables required winsorizing. The CLSA variables that have been winsorized are identified in Table 1, Panel A.

Our second data set comes from the RiskMetrics Group in connection with ISS Governance's Governance Risk Indicators (GRId). This data is the Corporate Governance Quotient (CGQ), called a quotient because the published scores given to firms compare them to other firms in the same index or industry. From 2003-2009, CGQ data ranked the corporate

governance performance of over 2,200 companies worldwide, including all companies in the S&P 500, Russell 3000, MSCI's Europe, Asia and Far East and the S&P/TSX Composite, FTSE All-World Developed, and FTSE All-Share indices. Corporate governance ratings were computed using 63 different issues in four categories: board of directors, audit, antitakeover, and compensation/ownership. These 63 scores are combined into a single aggregate score for each firm. The aggregate score is then compared to the scores of other companies in the same index to produce the firm's index CGQ or to companies in the same industry to produce the firm's industry CGQ. We implement our analysis using both versions of the CGQ. The source data for the raw company scores in the CGQ rankings comes from public disclosures (SEC EDGAR filings for U.S. companies), press releases, and corporate websites. It is compiled by RiskMetrics analysts. The summary statistics for these variables along with other firm and country variables appear in Table 1, Panel C and the correlations between these variables appear in Panel D.

As in the CLSA data, we winsorized several variables included in the CGQ regressions at the 1<sup>st</sup> and 99<sup>th</sup> percentiles to remove outliers. A complete list of the CGQ variables that have been winsorized can be found in Table 1, Panel C<sup>4</sup>.

Although there are similarities in the processes by which firm corporate governance scores are assembled in the CLSA and CGQ data, the methods are different enough to ensure that our results are confirming a trend and not merely repeating results on similar data. The first major difference between the CLSA corporate governance score and the RiskMetrics CGQs is

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<sup>4</sup> We considering winsorizing R&D Intensity, which is measured as R&D expenditure as a % of sales, due to the 10 or so observations that lie above 100% and go up to 1000%. However, upon closer examination we concluded that these observations were nearly all from small (with 200 or fewer employees) start-up firms almost entirely from the pharmaceutical and biotechnology industry. These firms had very low sales for the years where their R&D Intensity is above 100. As well, they were exclusively based in Germany or Canada with one observation coming from the United Kingdom and another from Hong Kong. Thus, they should not impact our emerging economy observations and we chose to not winsorize.

that the CGQ scores are all relative. Thus, a CGQ score of 40 means that that firms' corporate governance performance is better than 40% of its peers. For the Index CGQ, firms are compared to a relevant market index such as the S&P 500, Mid-Cap 400, Small-Cap 600, Russell 3000, or the CGQ Universe. For the Industry CGQ, firms are compared to an industry peer group based on the S&P GICS (Global Industry Classification System) of 24 industry groups. The CLSA scores are not computed relative to any market index or peer industry group.

A second, major way the two scores differ is in the design of the governance questions. The CGQ data did not initially include emerging economies and only started to do so in 2003. Prior to that, the corporate governance quotients were computed only for US companies. As such, the questions used to evaluate firms relate to issues that dominate US corporate governance concerns such as the charter and bylaws. The CLSA questions focus instead on issues relevant to emerging economies such as transparency and corruption. This can be seen by comparing the categories of questions. For the CLSA data, the categories are discipline, transparency, independence, accountability, responsibility, fairness, social awareness, and clean and green. For the CGQ scores, the categories are board of directors, audit, antitakeover, and compensation/ownership.

In addition to our two main data sets, we also explored trends in data from FTSE & ISS's Corporate Governance Index. Our main intention in including this data was to ensure a thorough comparison with results from previous studies that found different conclusions (Doidge, Karolyi, and Stulz (2007)).

FTSE calculated a corporate governance index for firms around the world from 2005-2008 called the FTSE ISS Corporate Governance Index (CGI) Series. This index was composed of countries from their Developed CGI, Europe CGI, Euro CGI, Japan CGI, UK CGI, and the US

CGI. Scores for the index were calculated several times a month for all companies. We used the average from an entire year's worth of scores. This yielded one unique score for each company for each year. The FTSE data was heavily dominated by developed economy firms. Only 6.2% of the observations come from emerging economies and only three countries are represented: Hong Kong, Singapore, and Thailand. The developed economies, on the other hand, are well represented. Summary statistics and correlations for these data can be found in Appendix 7.

Throughout much of our analysis, we differentiate between emerging and developed economies due to the unique trends for the two types of markets. To operationalize the categories of emerging and developed economies, we relied on a definition established in previous research by Lim and Tsutsui (2012). This work identifies developed economies as any country that had OECD membership in 1990; emerging economies are those that were not members of the OECD by 1990. The CGQ data also included several small, island nations such as Bermuda and the Cayman Islands. These countries are commonly understood as tax havens and have no OECD membership in 1990, so they were all classified as emerging.<sup>5</sup> The breakdown of the countries between emerging and developed economies can be found in Appendix 1 where the CLSA and CGQ data is separated. Some countries in our "emerging" economies list have since joined the OECD, such as South Korea and Mexico. We preserved these as emerging economies throughout the data set in spite of their changed status during those years.

There was a number of competing emerging economies lists published by other analyst groups. Specifically, we considered lists published by FTSE, S&P, Internet Securities, Inc., and Dow Jones. We considered the list of countries commonly called "The Next Eleven/BRIC"

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<sup>5</sup> Robustness tests of our results where we run our models on data that excludes the tax havens can be found in Appendix 6.

countries, but rejected the list as it is determined not only by economic growth, but also by increasing political importance. This explains why Iran is a member of the Next Eleven, but on no other emerging economies lists. In the end, we chose the OECD membership definition for its ability to classify all countries in our data set as either emerging or developed. It is also the most moderate of the lists, with close to the mean number of emerging economies across lists, and it avoids many of the outliers present in other lists.

The nationality of firms, or their home country, was determined by the firm's location in the data. Thus, we take the location originally listed by the corporate governance reporting organization, CLSA, RiskMetrics, or FTSE. Firms with headquarters in a given country are listed in that country. We also have several international subsidiaries of multinational firms in our data set. These subsidiaries are given a unique location from their headquarters if they operated independently and were traded under different tickers from their parent company in the other location. We confirmed the independence of international subsidiaries by using the Directory of Corporate Affiliations (DCA). No firms or subsidiaries in our data set changed location during the years of the data. We return to question the importance of being a multinational in our results later in the robustness checks.

### *Empirical Design*

We estimate the sources of corporate governance ratings variation using a combination of ordinary least squares, random effects, and nested ANOVA models. For our OLS models we apply variance decomposition methods, which have been used in a variety of settings. For example, papers have looked at the contribution of firm and industry in shaping performance of firms (Bowman and Helfat (2001), McGahan and Porter (1997) and Rumelt (1991)) and at the importance of CEO's on firm performance (Lieberson and O'Connor (1972), Wasserman et al.

(2001), and Crossland and Hambrick (2007)). Given that our data is hierarchical, with firms nested inside countries, we run our variance decomposition models sequentially. This means that we add in sets of explanatory variables in each model and subtract earlier Adjusted- $R^2$  amounts from the current Adjusted- $R^2$  amount. Sequential analysis of Adjusted- $R^2$  allows us to isolate the additional contribution to variance explained from a particular set of explanatory variables. In our setting, this allows us to identify the importance of different firm and country characteristics. We use the adjusted version of  $R^2$  because we have a large number of firm fixed effects and we do not want the sheer number of variables to skew our analysis.

Our Nested ANOVA models similarly rely on a sequential analysis of the Adjusted- $R^2$  models, as our OLS models did. This version of ANOVA is called “Nested” because it accounts for the fact that the nominal variables (the subgroups, or firms in our study) is found in combination with only one of the higher level nominal variables (countries in our study). Thus, it is simply an extension of basic one-way ANOVA that includes the hierarchical structure of the subgroups. The ordering of our subgroups gives us the ordering of our regressions: first we look at the contribution to variance explained by years, then we include countries, and then firms.

One of the drawbacks to sequential variance decomposition is that the outcome relies on the order of variables included. At times, this order can be up for debate and the variance explained may not actually be due to the new set of variables added. However, the hierarchy within our data is clear: firms are located inside countries. Yet, to be sure of our results, we also run a random effects model, which accounts for the hierarchy in the data in a single model.<sup>6</sup> Random effects models are a type of hierarchical linear models (HLM), which were introduced to the strategy literature by McNamara, Deephouse, and Luce (2003). It has been used in several studies since to analyze nested, or hierarchical data because of its ability to recognize that

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<sup>6</sup> We employ Stata's *xtmixed* command to run this random effects model.



members of lower-level groups (firms, in this paper) may not be independent from each other (Hofmann (1997)).

Random effects allows us to model the total variance into three main components: the contribution of countries, the contribution of firms nested within countries, and the residual, or the unexplained leftover variance. Instead of putting dummies into the regression, as the fixed effects models do, random effects regression models the variance structure and then uses maximum likelihood methods to estimate the model. Sometimes, random effects models are called “mixed models” because they include both fixed effects and random effects parts. The fixed effects components are the regressors included in addition to the country, firm, and residual random effects. For our model, the fixed effects component is simply the year fixed effects. The random portions are how country means vary from the overall data mean, and then how much firm means vary from country means. The greatest advantage of this random effects approach is that it does not rely on the sequence of factors as they included—it is a single, simple model to estimate hierarchical data. The use of these methods together has been preceded by other work. Short et al. (2007) also analyze hierarchical data and similarly rely on the three methods we employ here: variance decomposition, ANOVA, and hierarchical linear models (HLM), albeit with several on our exact approach.

Our OLS sequential variance decomposition models explore two distinct types of variables, observable and unobservable. We call the first set observable because these are specific, quantifiable variables that we can tie to firm and country characteristics. Observable firm characteristics include log of assets or the sales growth over the last two years; observable country characteristics include the GDP per capita in the country and the stock market capitalization/GDP. The second set of variables are unobservable because we cannot connect

them to specific firm or country activities. Instead, we capture them using firm and country fixed effects. We include unobservable characteristics, or fixed effects, along with observable characteristics in several of our models. All firm and country variables included in the models change over time so that they are not collinear with our firm fixed effects.

We improve on existing work by including a variety of observable firm characteristics that have not been explored in previous studies. The variables that have been looked at before were appropriate but somewhat limited in number, a fact that could explain their narrow ability to explain governance variance. This limited, original set of firm variables are: *Sales Growth*, *Financial Dependence*, which measures dependence on external financing, *Closely Held Shares*, *Log(Assets)*, and *Cash/Assets*. In order to have a more robust understanding of what observable firm characteristics are contributing to governance, we identified and included 20 additional firm variables. These variables are intuitively relevant for understanding governance choices. The full list of these variables, along with their summary statistics and correlations, can be found in Table I for the CLSA and CGQ data and Appendix 7 for the FTSE data. Some examples include: *R&D intensity* (measured as R&D expenditure as a % of sales), *return on assets*, and *foreign sales*. The observable country characteristics included match those used in previous studies such as Doidge, Karolyi, Stulz (2007). Specifically, we used *Antidirector x Legal*, which interacts the country's Revised Anti-director Rights Index with the Rule of Law in the country, *GDP per capita*, and *Stock Market Cap/GDP*.

### *Model Details*

Our regression equation that looks just at observable country characteristics (Model 2) can be written out as:

$$\begin{aligned}
\text{MODEL 2: } \text{Score}_{i,t} &= \beta_0 + \beta_1(\text{Antidirector Rights Index} \times \text{Rule of Law})_{i,t} \\
&+ \beta_2(\text{GDP per capita})_{i,t} + \beta_3\left(\frac{\text{Stock Market Cap}}{\text{GDP}}\right)_{i,t} + \gamma_t + \varepsilon_{i,t}
\end{aligned}$$

The dependent variable is always the relevant corporate governance score for the company  $i$  in year  $t$ . Year fixed effects are captured in  $\gamma_t$ . Our next model, Model 3, looks at the additional Adjusted- $R^2$  contributed by observable firm characteristics—specifically those observable firm characteristics that have been explored in previous work. Thus, for Model 3 we include both observable country and 5 observable firm characteristics:

$$\begin{aligned}
\text{MODEL 3: } \text{Score}_{i,t} &= \beta_0 + \beta_1(\text{Antidirector Rights Index} \times \text{Rule of Law})_{i,t} \\
&+ \beta_2(\text{GDP per capita})_{i,t} + \beta_3\left(\frac{\text{Stock Market Cap}}{\text{GDP}}\right)_{i,t} + \beta_4(\text{SalesGrowth})_{i,t} \\
&+ \beta_5(\text{Financial Dependence})_{i,t} + \beta_6(\text{Closely Held Shares})_{i,t} \\
&+ \beta_7(\text{Log(Assets)})_{i,t} + \beta_8\left(\frac{\text{Cash}}{\text{Total Assets}}\right)_{i,t} + \gamma_t + \varepsilon_{i,t}
\end{aligned}$$

In Model 4 we simply add the 20 additional firm variables. In Model 5 we switch to look at fixed effects. First we look just at all stable characteristics of countries, represented here with a unique intercept for each country ( $\alpha_j$ ). In Model 6 we add the observable country characteristics we had in Model 2. In Model 7 we include firm fixed effects, or a unique intercept for each firm ( $\rho_i$ ):

$$\begin{aligned}
\text{MODEL 7: } \text{Score}_{i,t} &= \beta_0 + \beta_1(\text{Antidirector Rights Index} \times \text{Rule of Law})_{i,t} \\
&+ \beta_2(\text{GDP per capita})_{i,t} + \beta_3\left(\frac{\text{Stock Market Cap}}{\text{GDP}}\right)_{i,t} + \alpha_j + \rho_i + \gamma_t + \varepsilon_{i,t}
\end{aligned}$$

In Models 8 and 9 we add the firm variables we had in Models 3 and 4 respectively. Finally, in Model 10 we evaluate our data using random effects, giving a unique intercept for each country as well as a unique intercept for each firm. Here, we separate the variance of our observations

into three portions simultaneously, the country variance ( $U_j$ ), the firm variance ( $U_{j,i}$ ), and the remaining variance ( $\varepsilon_{j,i,t}$ ).

$$\text{MODEL 10: } \text{Score}_{i,t} = \beta_0 + \gamma_t + U_j + U_{j,i} + \varepsilon_{j,i,t} .$$

### III. Results

Our results consistently show that in emerging economies firms are anywhere from equal in importance to significantly more important than countries in explaining corporate governance ratings variance. This finding is consistent regardless of which data set and model specification we use. Over the three main dependent variables (*CLSA cgscore*, *Index CGQ*, and *Industry CGQ*) firm characteristics in emerging economies explain 33-50% of the ratings' variance while country characteristics explain only 11-28%.

#### *Emerging Economies*

The results from the CLSA emerging markets data are found in Table II. Model 2 shows that by adding country variables on top of years we can explain an additional 5% of the ratings variance. Adding the limited set of firm variables does not add any explanation of variance in Model 3, but the contribution of firms changes when we include the expanded set of firm variables in Model 4. Here, all observable firm characteristics explain 8% of the ratings variance, an overall greater figure than the 5% explained by countries.

[Insert Table II about here]

In Models 5-9 we build in the unobservable country and firm characteristics using fixed effects. Model 6 looks at all country characteristics, observable and unobservable and finds that only 15% of the ratings variance is explained. In Model 7, however, we see a 40% jump in

variance explained, by including firm fixed effects, which capture both firm and country fixed effects. Including the observable firm characteristics in Model 8 on top of the firm and country fixed effects contributes only a little to variance explained. In Model 9 where we look at all unobservable and observable firm characteristics, firms contribute 42% on top of what countries explain. The sample size for Model 9, as well as for Model 4, is small due to the fact that we include so many firm variables. These variables have a number of missing observations, dropping our number of observations down to 779.

The random effects model, Model 10 confirms that firms are more important in emerging economies using a single model. The country random effect explains 26.8% of the variance while firms explain 37.33%. The results from the random effects model is not significantly different, given the standard errors are too large, however, we can reliably say that statistically the variance explained by firms and countries is equal. In Panel B we find the Nested ANOVA results, which were consistent with the strongest results from Panel A. Analyzed sequentially, we see that firms explain 41.4% while countries explain only 11.7% of ratings variance. Overall, the picture from Table II is consistent: firm characteristics explain roughly equal to significantly more ratings variance than countries in emerging markets data from CLSA.

The emerging economy results from the CGQ data, found in Table III, are analyzed similarly. In this table Panel A and C use the Index CGQ while Panels B and D use the Industry CGQ. Both dependent variables show the same pattern as the one found in the CLSA data: firm characteristics in emerging economies explain as much as or more corporate governance variance than countries.

[Insert Table III about here]

In Panels A and B we find the results from the OLS and random effects regressions. First, we look at the observable firm and country variables in Models 1-4. In Model 2, observable country variables explain 10% and 8% of Index and Industry CGQ variance, respectively. The limited set of firm variables contribute little in Model 3, as can be seen by the negative contributions to Adjusted- $R^2$ . In Model 4, however, the full set of firm variables contributes more. The Index CGQ variance gets an additional 10% explained while the Industry CGQ gets an additional 13% explained. When we analyze the results in Models 5-9 that include the unobservable characteristics we again see firms explaining more of the variance and an especially strong role for firm fixed effects. Unobservable and observable country characteristics in Model 6 explain 19% and 15% of the Index CGQ and Industry CGQ respectively while firm characteristics, both unobservable and observable in Model 9, explain 34% and 38% of the variance.

The random effects results in Model 10 show that firms in emerging economies explain 37.84% while countries explain only 28.33% for the Index CGQ variance. For the Industry CGQ, firms explain 50.4% and countries explain 10.98% of the variance. The results are statistically significant for the Industry CGQ only. The results from the Nested ANOVA regressions are in Panels C and D of Table III. The additional variance explained by firms is 34.62% for the Index CGQ and 40.52% for the Industry CGQ. For countries, the additional variance explained is only 16.15% and 11.54%, respectively.

### *Developed Economies*

In contrast to emerging economies, we find a greater importance for country characteristics than firm characteristics in explaining governance variance. The developed

economy results from the CGQ data can be found in Table IV. In this table we see that, regardless of methodology used, country characteristics explain more governance variance than do firm characteristics.

[Insert Table IV about here]

Panels A and B of Table IV present the OLS and random effects models for the Index and Industry CGQ's developed economies. In Models 1-4 the observable country characteristics explain substantial amounts of governance variance. In Model 2 country variables alone explain 38% of the variance for the Index CGQ and 42% of the Industry CGQ. Both the limited and the additional firm characteristics found in Models 3 and 4 explain far less of the variance, from 1-5%. In Models 5-9 we include the unobservable country and firm characteristics in developed economies and again the same pattern emerges. In Models 6 unobservable and observable country characteristics explain 56% and 57% of the variance for the Index and Industry CGQ, while unobservable and observable firm characteristics in Model 9 explain only 13% and 11% respectively.

In Model 10 of Panels A and B the random effects results from developed economies are shown. Here we find significant results for both the Index and the Industry CGQ showing that countries explain more of the variance than firms. These calculations yield similar results for both outcome variables. Firms explain around 19% of variance while countries explain 46-48% of the governance variance. In the Nested ANOVA models countries explain around 56% of the variance for both the Index and Industry CGQ while firm explain around 15% for both. In summary, firm characteristics explain 1-15% of the variance in developed economies while countries explain substantially more, 38-57%.

#### **IV. Robustness Tests**

We test our results further using a variety of robustness checks. The tests specifically explore the importance of multinationals, corrupt regime relationships, county dominance, the distribution of emerging and developed economy scores, the importance of industry, and finally how our methodology and results cohere with two additional data sets that cover country governance indicators and firm governance practices.

In the CLSA and the CGQ data there are a number of multinational firms. These firms either have independent subsidiaries in markets that enable them to be evaluated as local firms or their headquarters are in the given country. Multinationals are traded under unique tickers, but still they often bear the name of a multinational company and may have involvement with other subsidiaries and/or the headquarters. To understand the importance of being a multinational in an emerging economy, we match all companies in the CLSA data set to those firms listed in the Directory of Corporate Affiliations (DCA). We then look at whether these firms are multinationals and how many subsidiaries their parent company has. In the CLSA data, roughly 28% of the observations come from multinationals. The number of subsidiaries varies from 0 to 91; the average number of subsidiaries being 1.7 with a standard deviation of 7.6.

Using our DCA matching to distinguish multinationals and single-market firms, we run our models for both sets of firms in emerging economies. The results from these models can be found in Appendix 2. Across the board, we see that the effect of firm characteristics is stronger for emerging economy multinationals. For non-multinationals in emerging economies, company characteristics are still slightly more important than country characteristics, but the effect is smaller than for emerging economy firms. This result fits well with the intuition that firm characteristics are an important part of understanding corporate governance ratings in emerging



economies. Firms in multiple markets may have to comply with all relevant sets of government regulations regarding governance, even if they have largely independent subsidiaries. As well, it could be that corporate governance improvements are being driven by corporate headquarters, even in markets with weak local institutions. Further research may explain this phenomenon.

We also consider the possibility that firms in emerging economies may not be motivated to improve their corporate governance if they benefit from close ties to a corrupt regime. If this were the case, our results might not reflect the capacity of firms to improve corporate governance in order to access capital. To test this possibility, we run all models and include an SEC compliance variable using the annual lists of SEC-compliant companies from the SEC. This dummy variable is coded 1 if firms are determined by the SEC to be subject to SEC compliance and 0 if not. The original source is the annual SEC lists of compliant non-U.S. companies for each year. The variable captures firms that opted into the supposedly tougher U.S. regulatory regime. SEC compliance, therefore, should capture firms that are looking to improve their financing possibilities through better governance rather than connections with a corrupt regime. Firm-year observations with SEC compliance account for roughly 10%, or 383 observations, of the CLSA data and 12%, or 1,832 observations, of the CGQ data.

To test the importance of SEC compliance, we first look at the variable's significance across models. We see that the SEC compliance variable is never significant for the emerging economy-heavy CLSA data, and is only significant occasionally for the developed economy-heavy CGQ data. We then compare the explanatory power of our models with and without the SEC compliance variable. In all cases, including or excluding this variable does not change our results significantly. The Adjusted- $R^2$  of the models changes by less than one one-hundredth of a point when we include the SEC compliance variable. Therefore, we can be confident that firms

in our sample are not abandoning corporate governance improvements in favor of ties to corrupt regimes.

In dividing the data into emerging and developed economies, there is a risk that a specific country or type of country was responsible for the different trends in the CGQ data and in developed economies. The CGQ methodological design, after all, was initially designed to look just at U.S. companies. To test this question, we run our models again, this time excluding countries individually, then two at a time, three at a time and then four at a time. We examine these results to see if excluding certain countries affects the relative importance of countries as compared to firms. We look first at developed economies. We find that no combination of countries remove countries as the more important predictor of corporate governance ratings. Yet, certain combinations do weaken the effect. Specifically, excluding Japan and the United Kingdom together show the most dramatic decrease in the relative importance of countries. When the models are run on all developed economies without the UK and Japan, the firm effect is larger. These two countries are also the two largest sets of observations in the developed economies data set. Japan composes 4,145 observations of the 13,977 developed economy observations, while the United Kingdom is another 3,022. Interestingly, their average scores differ considerably. For the Index score, Japan has an average score of 28.3 while the average score for the UK is up at 83.7.

As a test of our findings about developed economies, we run the models on all developed economy observations except for the UK and Japan for both the Index CGQ as well as the Industry CGQ. These results can be found in Appendix 3. We see that the importance of countries drops and the importance of firms rise only slightly. To determine if there was a pattern where the worst firms in the UK and Japan are rated higher than elsewhere, perhaps

because of analyst biases, we look at the skewness and kurtosis of other countries. Looking only initially at the Index CGQ we find that the average skewness for all developed economies is -0.01 while the average kurtosis is 1.8. The United Kingdom has the longest left tail for its distribution at -1.7. Most other countries hovered between -0.5 and 0. Japan was slightly positive at 0.7. The kurtosis was somewhat starker, however. Most developed economies' skew ranges between 1 and 3. Japan is close at 3.2, but the United Kingdom is up at 9.0. This suggests that the distribution for the UK firms could be driven by infrequent, extreme, and positive deviations from the average. In other words, the United Kingdom is getting the highest scores of any country. Whether this is because UK firms include some of the corporate governance stars or whether analysts are biased towards particular UK firms is difficult to tell from this analysis. Still, the results here do not present a refutation of our overall findings. The relative importance of country effects for developed economies remains even in our restricted data set without the UK and Japan.

In evaluating our main models there is the possibility to be ruled in or ruled out that emerging economy firms were only able to rise above their country averages over the last decade in just a few instances. Thus, as a robustness check, we consider whether developed economy firms are simply at the corporate governance quality frontier while emerging economy firms range from the lowest to the highest governance performance. To explore this possibility, we compare the means and variances for all of our corporate governance scores. We find that the mean for developed economy firms is higher, but not significantly higher than it is for emerging economies. Specifically, for the CLSA data, the mean for emerging economies is 54 while it is 58 for developed economies. In the CGQ data, the mean for emerging economies' index scores

is 48, while the developed economies' mean is 50. Thus, the average corporate governance ratings of firms in emerging and developed economies do not differ substantially.

In addition to emerging and developed economies having roughly similar mean scores, the distribution of scores in the two types of countries also suggests that firms in emerging economies are capable of rising to world-class governance ratings in more than just a few cases. To show this, we look at the scores of two of our most well populated emerging economies in the CLSA data set: India and Hong Kong. Details of their summary statistics can be found in Appendix 1. India has 571 observations while Hong Kong has 719. These countries have roughly average country scores for emerging economies at 52.3 for India and 55 for Hong Kong. However the standard deviation in the scores for these countries is similar to the standard deviation for developed economies. Hong Kong and India standard deviations are around 13 while developed economy scores (with observations greater than 7) have an average standard deviation of 15. Although there are no India observations in the CGQ data, the Hong Kong scores are similar. The mean Index CGQ is 39.6 and the standard deviation for Hong Kong, 19.2, is only slightly lower than the developed economy standard deviation average, 29. These scores show that the corporate governance scores for developed and emerging economies range between the best and the worst. Neither set of economies has a monopoly on the corporate governance quality frontier; emerging economy firms are generally able to achieve the highest corporate governance scores in many cases.

An additional concern in our main models is the importance of industry in determining governance. Many industries have specific codes of conduct that specify varying levels of compliance to governance best practices. To test the importance of industry we run our nested ANOVA models using two- and three-digit SIC codes as an intermediate level of analysis

(results from these robustness tests can be found in Appendices 4 and 5). First, we explore the importance of industry in our CLSA data. In these tables, industry is never more important than firm effects, even when combined with the country effects. Looking at the 3-digit SIC codes, and the Adjusted- $R^2$ , we find that industry explains 11.55% of the variance, countries explain 9.89%, and firms explain 31.59%. Thus, firms almost always explain more of the variance than countries, even when industry effects are included.

We next run the same analysis on the Index and Industry CGQs. The results show that industry is somewhat important, especially for emerging economies when we look at the more specific, three-digit SIC codes. Here, combining industry and country effects overpowers firm effects. However, when looking at our main question of interest, the importance of firms relative to countries in explaining emerging economy corporate governance, we see that the firm effects remain dominant.

In our analysis we use the revised anti-director rights index as a way to measure investor protection. The anti-director rights index was introduced by La Porta et al. in their paper “Law and Finance” (La Porta, Lopez, Shleifer, and Vishny (1998)) and has since been used by many papers. In spite of revisions to the index, it has still come under criticism in recent years (Spamann (2010)). To address concerns regarding the use of this measure, we also explore the Worldwide Governance Indicators (WGI), a project of the World Bank and Daniel Kaufmann at the Brookings Institution (Kaufmann, Kraay, and Mastruzzi (2008)). The six indicators that compose the WGI are Voice and Accountability, Political Stability and Absence of Violence, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. Each indicator has been measured from a variety of sources for 215 economies from 1996-2011, with the exception of 2001. We use values from 2000 in place of missing 2001 data.

We explore two questions using data from the WGI. First, we look at whether the relative importance of firm and country differs for countries that rank better on the indicators. Of the countries in our CLSA dataset that are covered by the WGI, Australia, the United Kingdom, and Singapore are three countries that had rankings near the top of several indicators. We compare the results for these three countries with three countries that consistently ranked near the bottom of the WGI and find that there was little difference between the two groups over the importance of countries and firms in explaining governance variance. Second, we look at whether the relative importance of firms and countries in explaining governance variance changes as countries improve their corporate governance. During the last decade almost all countries improved their scores on the governance indicators. The average score for government effectiveness, for example, rose from 0.62 in 2001 to 1.24 in 2010 and control of corruption, similarly, rose from 0.43 to 0.85. Given this steady rise in governance performance on the part of countries, we explore the relative importance of country and firm in individual years over that time span. The results from these tests show no discernible pattern. Although the numbers change from year to year there is no steady increase or decrease for relative country and firm importance.

Finally, to account for any potential carry-over methodology from the original FTSE ISS data used by Doidge, Karolyi, and Stulz, we run our analysis on this new FTSE data. To get a clear, fast, and reliable picture of the FTSE data we just look at the random effects and Nested ANOVA results, both of which use all 607 emerging economy observations. The random effects results show that firms explain 31% of the ratings variance while countries explain 17%. The Nested ANOVA results show that firms explain 32% of the ratings variance while countries explain only 16%. The random effects results show that countries contribute significantly more

to the variance explained than firms do; countries explain 53% of the variance while firms explain only 24%. Here we see that countries explain 66% while firms explain 18% of the variance. Therefore, our empirical approach, when applied to the FTSE data, yields results that cohere with the pattern found in the other data sets.

## **V. Discussion and Conclusion**

In order to compare our results more closely to those in the Doidge, Karolyi, and Stulz (2007) paper, for one final look, we attempt to recreate their results from just the 2001 CLSA data. Because Rule of Law data was not listed for 2001, we used Rule of Law values from 2000, and where that did not exist, 2002. In general, our summary statistics for the 2001 data and the Doidge et al. paper are nearly identical, and for countries that have fewer observations the scores are actually identical. Differences between our data are likely explained by the fact that Doidge et al. have only a subset of the data we acquired for 2001; they have 376 observations while we have 494. Remaining differences may be due to winsorizing of the several variables. Using this 2001 data we first replicate their results, which are nearly identical. We then run our methodological approach of OLS, random effects, and Nested ANOVA. This revised approach gives results that cohere with our overall analysis: firms are anywhere from comparable to meaningfully more important than countries variables in emerging economies.

Doidge et al. (2007) find much of the same and concluded that this result was due to lower variance among CLSA countries than in other data sets. We theorize that the difference in conclusions could be for several, other reasons. First, the other data sets Doidge et al. used were dominated by developed economies, making hypotheses about emerging economies hard to test. For example, 1159 of the 1217 FTSE observations are from developed economies. Second, their

models do not account for the nested nature of the data by first looking at countries and then adding in firms. Third, they only look at unobservable country characteristics by including country fixed effects and do not use firm fixed effects to capture unobservable firm characteristics. And lastly, the results we find for 2001 differed slightly from the trend we found over the entire decade that data was gathered. This suggests that 2001 could have been a unique year and those time trends were not accounted for using the cross-sectional data.

Our results are more comparable to those found in Durnev and Kim (2005), which showed that investment opportunities, need for external financing, and concentration of cash flow ownership rights were more important than country characteristics. We include measures either similar to or identical to these three in our study. The importance Durnev and Kim place on firm characteristics coheres well with our findings in the current study. However, our current study is a necessary update and addition to the debate. First, we rely on different data. Where Durnev and Kim (2005) uses cross-sectional data from CLSA and S&P in 2000, we use panel data covering several years from CLSA, CGQ, and FTSE. Second, we explore the importance of firm fixed effects and random effects. Durnev and Kim (2005) look solely at the three specific variables cited and compare them to country random effects. Finally, we employ several different regression estimation techniques, such as random effects and ANOVA to ensure that our results are not due to model specifications. Therefore, our paper provides stronger evidence that firms are playing a greater role than countries. Moreover, our contribution to the debate was necessary given the counter-argument made in Doidge, Karolyi, and Stulz (2007). Doidge et al. leave the discussion at the counter-intuitive conclusion that countries are more important. The results found here swing the pendulum back towards the importance of firm characteristics, and, in effect, are intended to meaningfully clarify the debate.



The importance of firm fixed effects in our results suggests that the key mechanism behind emerging economy firm governance improvement is unobservable firm characteristics. Surveys such as the one recently completed by the academics Khanna and Zyla of the International Finance Corporation allow us to conjecture as to what exactly might be contained in the firm fixed effects (Khanna and Zyla, 2012). Khanna and Zyla report that investors in emerging economies place a high value on culture, personality, and subjective measures such as the willingness of management to meet with investors and the motivations of the controlling group or management. These same types of values may be behind the ratings given to the emerging economy firms that rose above their peer country firms and weak institutional environment. Future research, both quantitative and qualitative, could work to identify better what processes are driving these emerging economy firms to improve their corporate governance.

Differences between our CLSA data and the CGQ data imply that there are unique attributes to the different institutional and financial environments in emerging and developed economies. Much attention has already been given to emerging economies; future research could explore the mechanisms driving country importance in developed economies. Future research could also work to locate and test an exogenous shock to any of the firm and country characteristics here to try to identify causality. Currently, our results are sufficient to show a strong correlation and relationship, but only to hint at causality. By using panel data over 10 years, our results provide a stronger suggestion of causality, but a natural experiment and subsequent analysis of corporate governance ratings would be better evidence. Such a study could be undertaken at the country level, as shocks to the variables listed here across multiple countries or regions would be unlikely. Instrumental variable analysis could also shed light on

this debate, as it has already been used to understand firm value reactions to corporate governance (Black, Jang, Kim, 2006).

In conclusion, the results from our multiple specifications of firm and country characteristics provide strong evidence that firm-level variables play an important role in explaining corporate governance ratings in emerging economies. Prior work by Doidge, Karolyi, and Stulz (2007) and others stated that country effects were dominant. However, by looking at panel data and allowing unobservable firm characteristics to explain variation of firms' corporate governance ratings with fixed effects, random effects, and Nested ANOVA models, we show that firm effects in emerging economies are as important, and often more important, than country effects in explaining corporate governance ratings. Moving forward, this suggests that firms in emerging economies have the capability to rise above home country institutions that may be incomplete and/or to distinguish themselves from their peer firms, improve corporate governance ratings, and hopefully attract greater levels of capital and grow. While the country in which the firm is based is still important, there is agency beyond location for firms.

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**Table 1**

The following table gives the summary statistics for the Credit Lyonnais Securities Asia (CLSA) data and its companies. This dataset encompasses 10 years of CLSA tracking corporate governance performance of firms in emerging economies. Only data used in our models is included in the summary statistics below. The first variable is the CLSA given corporate governance score. The next three variables are the three observable country characteristics used in our analysis. *Antidirector x Legal* captures the interaction of the Revised Antidirector Rights Index and the Rule of Law in that country. The following firm variables include the observable firm characteristics included in previous studies (sales growth, financial dependence (EBITDA based), closely held shares (as a percent of total shares), log(assets), and cash to assets ratio). The remaining variables described below are additional observable firm characteristics used to capture the complex interaction between firms and corporate governance in emerging economies. The following variables below have been winsorized at the 1st/99th percentiles to remove outliers: Corporate Governance Score, 2yr Sales Growth, Financial Dependence, Closely Held Shares, Cash/Total Assets, Antidirector x Legal, GDP per capita, Fixed Assets/Total Assets, Current Ratio, Leverage, Tobin's Q, Foreign Sales, Foreign Sales Growth, PE Ratio, Price to Book Ratio, Quick Ratio, Return on Assets, Capital Expenditure, Cash Dividend Coverage Ratio, 3yr Dividend Growth, 5yr Income Growth, 5yr Sales Growth, Short-Term Debt, 5yr Assets Growth, and Total Debt.

**Panel A: CLSA Variable Descriptions**

<b>Variable</b>	<b>Median</b>	<b>Mean</b>	<b>St Dev.</b>	<b>Min</b>	<b>Max</b>	<b>Observations</b>
Corporate Governance Score	55.10	54.03	14.78	5.38	83.92	3,973
2yr Sales Growth	15.13	21.97	39.88	-46.02	224.62	3,684
Financial Dependence	-1.19	-2.11	3.04	-20.20	2.34	2,512
Closely Held Shares	52.71	50.32	23.74	0.67	97.52	3,359
Log (Assets)	14.66	14.74	1.79	9.16	21.63	3,703
Cash/Total Assets	0.12	0.17	0.15	0.00	0.75	3,168
Antidirector x Legal	2.47	3.03	3.40	-2.97	8.39	3,336
GDP per capita	4,458.56	12,822.31	13,543.81	468.96	40,238.14	3,345
Stock Market Cap / GDP	90.01	164.08	178.68	6.84	617.05	3,345
Fixed Assets/Total Assets	0.32	0.34	0.25	0.00	0.89	3,697
SEC Compliance	0.00	0.10	0.30	0.00	1.00	3,825
Current Ratio	1.48	2.00	1.67	0.25	10.45	3,090
Leverage	0.50	0.51	0.24	0.01	0.96	3,605
Tobins Q	0.98	1.46	1.56	0.07	9.22	3,550
Foreign Sales	0.00	16.51	29.26	0.00	100.00	3,973
Foreign Sales Growth	0.00	3.05	26.52	-74.86	177.97	3,973
PE Ratio	13.51	17.93	26.92	-37.02	210.57	3,674
Price-to-book Ratio	1.80	2.72	2.99	0.22	19.13	3,693
Quick Ratio	1.01	1.48	1.48	0.15	9.35	3,134
Return on Assets	7.24	8.60	8.54	-16.93	38.40	3,696
R&D Intensity (expenditure as a % of sales)	0.00	0.13	1.08	0.00	42.69	3,825
CapitalExpenditure	5.59	8.27	9.20	0.02	54.64	3,642
Cash Dividend Coverage Ratio	4.28	8.67	16.76	-4.55	132.04	2,762
3yr Dividend Growth	10.06	10.06	40.34	-100.00	131.31	3,056
5yr Income Growth	16.56	21.98	29.29	-37.09	140.17	2,695
5yr Sales Growth	16.76	21.73	23.38	-14.48	141.87	3,147
Short-Term Debt	119.43	999.67	3,087.63	0.00	22,892.03	3,744
5yr Assets Growth	14.89	20.20	22.06	-12.77	117.55	3,123
Total Debt (%)	48.05	81.70	107.70	0.00	640.75	3,808

Panel B: CLSA Variable Correlations

The following table displays the correlations among the variables in the CLSA data set. This data set encompasses 10 years of corporate governance scores for firms in emerging economies. Correlation are marked with an \* for 5%, \*\* for 1%, and \*\*\* for 0.1% significance.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1 Corporate Governance Score	1																												
2 Sales Growth	-0.06***	1																											
3 Financial Dependence	-0.04*	-0.01	1																										
4 Closely Held Shares	-0.13***	0.01	0.10***	1																									
5 Log(Assets)	0.03	-0.06***	0.09***	-0.07***	1																								
6 Cash/Total Assets	0.04**	0.09***	-0.17***	-0.03	-0.29***	1																							
7 Antidirector x Legal	0.17***	0.05***	0.04*	-0.07***	0.04**	0.12***	1																						
8 GDP per capita	0.13***	0.06***	0.05**	-0.07***	0.08***	0.18***	0.93***	1																					
9 Stock Market Cap / GDP	0.03*	0.10***	0.05**	0.08***	-0.03*	0.17***	0.69***	0.73***	1																				
10 Fixed Assets/Total Assets	-0.08***	-0.04**	0.31***	0.14***	-0.06***	-0.39***	-0.04**	-0.06***	-0.08***	1																			
11 SEC Compliance	0.09***	0.02	0.13***	-0.01	0.17***	0.05***	-0.04**	-0.01	-0.09***	0.15***	1																		
12 Current Ratio	0.03	0.04*	-0.15***	-0.02	-0.30***	0.52***	0.08***	0.11***	0.13***	-0.34***	-0.02	1																	
13 Leverage	-0.02	-0.02	-0.05**	-0.03*	0.44***	-0.25***	-0.16***	-0.18***	-0.19***	-0.22***	-0.03	-0.52***	1																
14 Tobins Q	0.09***	0.16***	-0.08***	0.03*	-0.34***	0.26***	0.01	-0.01	0.02	0.01	0.02	0.12***	-0.23***	1															
15 Foreign Sales	0.06***	0.04***	0.03	-0.04**	0.00	0.04*	0.31***	0.33***	0.26***	-0.03*	0.01	0.04**	-0.13***	0.04**	1														
16 2yr Foreign Sales Growth	0.02	0.05***	0.02	-0.01	0.05***	-0.02	0.06***	0.06***	0.06***	-0.01	0.02	-0.04**	0.03*	-0.02	0.17***	1													
17 PE Ratio	-0.01	0.05***	-0.02	0.00	-0.03*	0.03*	-0.02	-0.02	0.03*	-0.02	0.01	0.00	0.01	0.18***	-0.01	0.04***	1												
18 Price-to-book Ratio	0.09***	0.18***	-0.09***	0.08***	-0.22***	0.18***	-0.01	-0.04**	0.04**	-0.11***	-0.02	-0.03	0.04***	0.73***	0.00	-0.01	0.22***	1											
19 Quick Ratio	0.05***	0.04*	-0.08***	-0.03	-0.28***	0.63***	0.11***	0.14***	0.16***	-0.28***	0.03	0.91***	-0.53***	0.15***	0.05***	-0.03*	0.01	0.00	1										
20 Return on Assets	0.09***	0.20***	-0.03	0.09***	-0.33***	0.26***	-0.03	-0.03*	0.03	0.02	0.00	0.22***	-0.37***	0.57***	0.05***	-0.01	0.01	0.47***	0.23***	1									
21 R&D Intensity (as a % of sales)	0.02	0.01	-0.03	-0.04	-0.06***	0.11***	-0.01	-0.01	-0.05***	-0.04	0.06***	0.13***	-0.07***	0.06***	0.05***	0.00	-0.02	0.02	0.15***	0.03	1								
22 CapitalExpenditure	-0.04***	0.26***	0.17***	0.02	-0.12***	-0.10***	-0.02	-0.02	0.00	0.44***	0.11***	-0.15***	-0.09***	0.17***	0.06***	0.02	0.09***	0.13***	-0.11***	0.19***	0.02	1							
23 Cash Dividend Coverage Ratio	-0.06***	0.12***	0.07***	-0.05***	0.12***	-0.08***	-0.07***	-0.08***	-0.14***	0.01	0.07***	-0.05***	0.17***	0.02	-0.01	-0.02	0.04**	0.04*	-0.05***	-0.04**	0.03	0.12***	1						
24 3yr Dividend Growth	0.14***	0.17***	-0.03	-0.02	-0.01	0.12***	0.02	0.02	-0.01	-0.05***	0.01	0.07***	-0.09***	0.20***	0.03*	-0.01	-0.01	0.19***	0.07***	0.39***	0.03	0.08***	0.00	1					
25 5yr Income Growth	-0.07***	0.32***	0.01	0.04*	-0.03	0.12***	-0.08***	-0.06***	-0.02	-0.08***	0.07***	-0.01	0.05**	0.16***	0.04**	0.02	-0.05**	0.21***	-0.01	0.28***	-0.02	0.21***	0.15***	0.30***	1				
26 5yr Sales Growth	-0.09***	0.39***	0.04*	0.08***	-0.07***	0.10***	-0.02	-0.01	0.05***	-0.05**	0.10***	0.01	0.02	0.13***	0.07***	0.06***	0.05***	0.15***	0.01	0.16***	-0.01	0.28***	0.09***	0.07***	0.64***	1			
27 Short-Term Debt	0.05***	-0.03*	0.06***	-0.09***	0.58***	-0.15***	0.04**	0.07***	-0.06***	-0.16***	0.11***	-0.18***	0.30***	-0.13***	0.00	0.00	0.01	-0.09***	-0.17***	-0.19***	-0.01	-0.10***	0.14***	0.00	-0.04*	-0.06***	1		
28 5yr Assets Growth	-0.08***	0.33***	0.02	0.04*	-0.06***	0.12***	0.01	0.00	0.08***	-0.12***	0.07***	0.07***	0.07***	0.10***	0.08***	0.06***	0.05***	0.13***	0.09***	0.10***	0.04	0.31***	0.11***	0.04**	0.56***	0.82***	-0.06***	1	
29 Total Debt (%)	-0.03*	-0.01	0.07***	-0.07***	0.35***	-0.25***	-0.08***	-0.11***	-0.15***	-0.05***	0.05***	-0.29***	0.58***	-0.20***	-0.07***	-0.01	-0.03*	-0.04**	-0.28***	-0.31***	-0.04***	-0.04**	0.19***	-0.14***	-0.02	0.02	0.38***	0.07***	1

**Panel C: CGQ Variable Descriptions**

This table displays the summary statistics for the variables in the Corporate Governance Quotient (CGQ) data. RiskMetrics Group tracked corporate governance behavior of firms around the world from 2003-2009, but mostly in developed economies. They published their firm ratings, the CGQ, under the Governance Risk Indicators (GRId). It is for this reason that the mean GDP per capita differs so dramatically from the mean GDP per capita in Table 1 where emerging economies create a lower overall average statistic. Only data used in our models is included in the summary statistics below. The first two variables reported below are the two corporate governance scores awarded to firms. The next three variables are the three observable country characteristics used in our analysis. *Antidirector x Legal* captures the interactions of the Revised Antidirector Rights Index and the Rule of Law in that country. The following firm variables include the observable firm characteristics included in previous studies (sales growth, financial dependence (EBITDA based), closely held shares (as a percent of total shares), log(assets), and cash-to-assets ratio). The remaining variables described below are additional observable firm characteristics used to capture the complex interaction between firms and corporate governance in emerging economies. The following variables below have been winsorized at the 1st/99th percentiles to remove outliers: Index and Industry Corporate Governance Quotients, 2yr Sales Growth, Financial Dependence, Closely Held Shares, Cash/Total Assets, Antidirector x Legal, GDP per capita, Fixed Assets/Total Assets, Current Ratio, Leverage, Tobin's Q, Foreign Sales, 1yr Foreign Sales Growth, PE Ratio, Price to Book Ratio, Quick Ratio, Return on Assets, Capital Expenditure, Cash/Dividends, 3yr Dividends Growth, 5yr Income Growth, 5yr Sales Growth, Short-Term Debt, 5yr Assets Growth, and Total Debt (%). The extreme values of R&D Intensity (measured as R&D expenditure as a % of sales) come from 10 or so start-up companies in the pharmaceutical industry, with only one firm going to 1000%, listed here as the max.

<b>Variable</b>	<b>Median</b>	<b>Mean</b>	<b>St. Dev.</b>	<b>Min</b>	<b>Max</b>	<b>Observations</b>
Index Corporate Governance Quotient	50.20	50.21	28.77	1.00	99.10	15,390
Industry Corporate Governance Quotient	50.70	50.73	28.76	1.50	100.00	15,390
2yr Sales Growth	9.83	11.36	26.03	-53.67	129.48	14,261
Financial Dependence	-1.87	-3.59	5.49	-36.12	3.65	10,013
Closely Held Shares	29.00	32.70	23.37	0.03	89.90	13,602
Log (Assets)	8.07	8.23	1.86	1.28	15.14	14,399
Cash/Total Assets	0.09	0.13	0.13	0.00	0.66	12,992
Antidirector x Legal	6.09	6.22	1.76	0.63	8.53	15,262
GDP per Capita	28,367.84	29,788.35	7,491.74	11,546.99	40,707.00	15,134
Stock Market Cap/GDP	103.24	114.75	87.12	13.15	617.05	15,093
Fixed Assets/Total Assets	0.25	0.30	0.24	0.00	0.99	14,280
SEC Compliance	0.00	0.12	0.33	0.00	1.00	15,267
Current Ratio	1.37	1.72	1.24	0.32	7.82	12,088
Leverage	0.57	0.57	0.24	0.01	1.19	13,695
Tobin's Q	0.84	1.12	1.05	0.06	6.84	13,336
Foreign Sales	38.86	41.86	31.98	0.00	100.00	11,451
1yr Foreign Sales Growth	5.42	13.98	45.73	-72.10	306.84	11,004
PE Ratio	15.32	17.57	32.06	-88.11	207.86	14,037
Price-to-Book Ratio	1.68	2.34	2.42	-2.10	15.87	14,079
Quick Ratio	0.94	1.24	1.10	0.15	7.12	12,095
Return on Assets	4.43	4.82	8.10	-30.11	31.49	14,296
R&D Intensity (expenditure as a % of sales)	0.00	0.93	13.21	0.00	1,061.42	11,699
Capital Expenditure	3.80	5.20	5.42	0.02	31.18	13,718
Cash Dividend Coverage Ratio	4.88	7.97	11.20	-5.60	82.43	10,954
3yr Dividend Growth	5.76	4.47	31.32	-100.00	88.21	13,204
5yr Income Growth	8.71	11.53	21.98	-36.90	102.04	11,499
5yr Sales Growth	6.17	8.54	14.28	-25.33	72.52	13,804
Short-Term Debt	126.21	3,160.16	15,232.77	0.00	129,655.70	14,261
5yr Assets Growth	6.05	8.91	14.78	-21.74	75.19	13,772
Total Debt (%)	52.98	124.93	252.37	-234.30	1,684.67	14,362

**Panel D: CGQ Variable Correlations**

The following table displays the correlations among the variables in the CGQ data set from Risk Metrics. This data set encompasses 7 years of corporate governance scores for firms. Correlation are marked with an \* for 5%, \*\* for 1%, and \*\*\* for 0.1% significance.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30								
1 Index CGQ	1																																					
2 Industry CGQ	0.93***	1																																				
3 2yr Sales Growth	0.00	0.02**	1																																			
4 Financial Dependence	-0.03***	-0.02**	-0.06***	1																																		
5 Closely Held Shares	-0.28***	-0.31***	0.01	0.03***	1																																	
6 Log (Assets)	-0.05***	-0.03***	0.01	-0.06***	-0.12***	1																																
7 Cash/Total Assets	-0.01	-0.02**	0.02***	-0.12***	0.06***	-0.27***	1																															
8 Antidirector x Legal	0.39***	0.40***	0.02**	-0.03***	-0.18***	-0.21***	0.03***	1																														
9 GDP per capita	-0.24***	-0.26***	-0.05***	-0.01	-0.07***	0.02**	0.11***	0.24***	1																													
10 Stock Market Cap/GDP	0.10***	0.10***	0.09***	-0.04***	0.12***	-0.06***	0.07***	0.36***	0.11***	1																												
11 Fixed Assets/Total Assets	-0.01	-0.01	0.01	0.35***	0.03***	-0.07***	-0.37***	0.04***	-0.03***	0.01*	1																											
12 SEC Compliance	0.12***	0.18***	0.04***	0.04***	-0.18***	0.21***	0.02*	0.04***	-0.12***	0.02**	0.07***	1																										
13 Current Ratio	-0.06***	-0.03***	0.02*	-0.05***	0.04***	-0.28***	0.56***	0.05***	0.09***	0.09***	-0.23***	0.03***	1																									
14 Leverage	0.06***	0.06***	-0.05***	-0.14***	-0.13***	0.42***	-0.28***	-0.10***	-0.09***	-0.15***	-0.15***	0.00	-0.56***	1																								
15 Tobin's Q	0.10***	0.09***	0.13***	0.06***	0.02*	-0.31***	0.28***	0.11***	-0.05***	0.09***	0.01	0.06***	0.18***	-0.17***	1																							
16 Foreign Sales	0.15***	0.17***	0.01	0.03**	-0.06***	-0.01	0.07***	0.07***	-0.13***	0.09***	-0.09***	0.20***	0.09***	-0.08***	0.10***	1																						
17 1yr Foreign Sales Growth	0.03***	0.04***	0.41***	-0.03***	0.03***	0.01	-0.02**	0.05***	-0.03***	0.08***	-0.02**	0.00	-0.01	-0.01	0.06***	0.10***	1																					
18 PE Ratio	-0.05***	-0.06***	0.04***	0.00	0.03***	0.01	0.00	-0.03***	0.07***	-0.01	-0.01	0.00	0.00	-0.03***	0.06***	-0.03***	0.01	1																				
19 Price-to-Book Ratio	0.12***	0.10***	0.13***	-0.04***	-0.01	-0.13***	0.17***	0.06***	-0.12***	0.06***	-0.08***	0.07***	-0.04***	0.07***	0.58***	0.04***	0.05***	0.06***	1																			
20 Quick Ratio	-0.06***	-0.04***	0.04***	-0.03***	0.06***	-0.28***	0.65***	0.03***	0.08***	0.09***	-0.20***	0.04***	0.94***	-0.53***	0.21***	0.08***	0.00	0.00	0.00	1																		
21 Return on Assets	0.07***	0.05***	0.18***	0.01	0.06***	-0.03***	0.02**	0.05***	-0.08***	0.13***	0.05***	0.01	0.02**	-0.19***	0.38***	0.06***	0.10***	0.09***	0.30***	0.02*	1																	
22 R&D Intensity (as a % of sales)	0.02**	0.03***	0.00	0.04***	-0.07***	-0.18***	0.35***	0.02**	0.09***	-0.06***	-0.15***	0.12***	0.31***	-0.20***	0.22***	0.16***	-0.02*	0.00	0.08***	0.32***	-0.13***	1																
23 Capital Expenditure	0.03***	0.04***	0.14***	0.26***	0.01	-0.07***	-0.15***	0.03***	-0.08***	0.00	0.53***	0.10***	-0.10***	-0.10***	0.15***	0.05***	0.09***	-0.01	0.09***	-0.07***	0.19***	-0.08***	1															
24 Cash Dividend Coverage Ratio	-0.14***	-0.12***	0.08***	0.08***	0.01	0.16***	-0.04***	-0.13***	0.13***	-0.08***	0.08***	0.06***	-0.06***	0.12***	-0.08***	-0.01	0.02	0.04***	-0.05***	-0.04***	-0.06***	0.01	0.14***	1														
25 3yr Dividend Growth	-0.06***	-0.06***	0.19***	-0.06***	-0.02**	0.07***	0.06***	0.05***	0.12***	0.09***	-0.03***	0.02**	0.06***	-0.13***	0.14***	-0.03***	0.11***	0.05***	0.14***	0.07***	0.31***	0.01	0.08***	-0.05***	1													
26 5yr Income Growth	0.03***	0.03***	0.31***	-0.08***	-0.01	0.06***	0.03***	0.01	-0.05***	0.03***	-0.05***	0.02**	-0.02**	0.01	0.13***	0.06***	0.16***	-0.06***	0.15***	0.00	0.28***	-0.04***	0.14***	0.08***	0.32***	1												
27 5yr Sales Growth	0.06***	0.07***	0.39***	-0.04***	0.02***	-0.01	0.05***	0.07***	-0.13***	0.11***	0.04***	0.05***	0.02**	-0.08***	0.13***	0.04***	0.20***	-0.01*	0.11***	0.04***	0.13***	0.01	0.22***	0.04***	0.16***	0.54***	1											
28 Short-Term Debt	0.04***	0.06***	0.01	-0.13***	-0.09***	0.48***	-0.06***	-0.07***	-0.06***	-0.05***	-0.18***	0.14***	-0.14***	0.25***	-0.13***	-0.08***	0.00	-0.03***	-0.05***	-0.12***	-0.08***	-0.06***	-0.13***	0.08***	-0.02***	0.00	0.01	1										
29 5yr Assets Growth	0.10***	0.12***	0.30***	-0.06***	-0.01	0.04***	0.02*	0.08***	-0.18***	0.07***	0.01	0.04***	0.07***	-0.07***	0.08***	0.05***	0.18***	-0.02**	0.07***	0.09***	0.12***	-0.04***	0.24***	0.00	0.13***	0.45***	0.76***	0.04***	1									
30 Total Debt (%)	0.00	0.02**	0.00	-0.07***	-0.04***	0.39***	-0.15***	-0.10***	-0.09***	-0.08***	-0.08***	0.04***	-0.23***	0.42***	-0.15***	-0.13***	-0.01	-0.03***	0.23***	-0.21***	-0.12***	-0.12***	-0.10***	0.18***	-0.10***	-0.01	0.00	0.56***	0.02*	1								



**Table II**

The tables below show the coefficient estimates from the CLSA corporate governance ratings for emerging economies only. In Panel A there are the OLS and xtmixed models; in Panel B there are the nested ANOVA results. The regressions below explore the relative importance of countries and firms in explaining corporate governance ratings of firms in emerging economies. The OLS models include different combinations of observable firm and country characteristics as well as observable firm and country characteristics, captured in fixed effects. These models are run sequentially, with the previous Adjusted-R<sup>2</sup> being subtracted to give us the pure contribution of the additional variables added in each model. Thus in Models 1-9, we add, respectively: year effects, observable country characteristics, observable limited set of firm characteristics, observable full set of firm characteristics, country fixed effects, country fixed effects and observable characteristics, firm and country fixed effects, firm and country fixed effects plus observable country characteristics and limited observable firm characteristics, and finally, firm and country fixed effects plus observable country characteristics and all observable firm characteristics. The random effects model, Model 10, is provided as a one step way to analyze the contributions of firms and countries. The ANOVA models in Panel B similarly capture unobservable firm characteristics and are analyzed sequentially. The results in both Panels A and B below show that firm characteristics, and especially firm fixed effects, explain more corporate governance ratings variation than country characteristics. For observed characteristics, an inclusive set of firm characteristics in Model 4 explains 8% of the variance while countries explain 5%. For unobserved characteristics, firm fixed effects plus observable variables explain 42% while country fixed effects plus observable variables explain only 15%. In the random effects model, Model 10, the amount of variance explained is calculated from the random effects listed below, showing that firms explain 37.33% of variance and countries explain 26.80%. Correlations are marked with an \* for 5% significance, \*\* for 1% significance, and \*\*\* for 0.1% significance.

**Panel A: OLS and Random Effects Results in CLSA Emerging Economies Only**

Independent Variables	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*
	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	RE
Antidirector x Legal		2.07*** (0.38)	1.77*** (0.47)	1.32** (0.61)		-0.31 (0.70)		0.54 (1.65)	4.91** (2.23)	
GDP per capita		-0.00*** (0.00)	-0.00* (0.00)	0.00 (0.00)		0.00 (0.00)		0.00 (0.00)	0.00 (0.00)	
Stock Market Cap/GDP		0.00 (0.00)	-0.01* (0.00)	0.00 (0.01)		0.01** (0.00)		0.00 (0.01)	-0.01 (0.01)	
Sales Growth			-0.03** (0.01)	-0.02 (0.02)				-0.01 (0.01)	0.00 (0.02)	
Financial Dependence			-0.03 (0.19)	0.32 (0.24)				-0.15 (0.23)	-0.04 (0.28)	
Closely Held Shares			-0.05** (0.03)	-0.05 (0.03)				-0.02 (0.03)	0.00 (0.05)	
log(Assets)			-0.48 (0.37)	-0.72 (0.57)				0.72 (1.48)	-0.24 (3.06)	
Cash/Total Assets			2.15 (3.97)	-11.13* (6.39)				1.76 (7.61)	1.37 (10.16)	
Expanded Firm Variables				yes					yes	
Year FE	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country FE					yes	yes				
Firm FE							yes	yes	yes	
Observations	3,636	2,744	1,445	779	3,636	2,744	3,636	1,445	779	3,636
R <sup>2</sup>	0.08	0.13	0.13	0.24	0.21	0.23	0.73	0.75	0.80	
Adjusted-R <sup>2</sup>	0.08	0.13	0.12	0.20	0.21	0.22	0.61	0.61	0.64	
Additional Adjusted-R <sup>2</sup>		0.05	-0.01	0.08	0.13	0.15	0.40	0.39	0.42	
Country Random Effect										7.87 (1.54)
Firm Random Effect										9.28 (0.27)
Residual										9.1 (0.13)

**Panel B: Nested ANOVA Results for CLSA Emerging Economies Only**

Source of Variation	Additional R <sup>2</sup>	Additional Adjusted-R <sup>2</sup>
Year	7.70%	7.48%
Country	12.16	11.65
Firm	53.33	41.44

**Table III**

These tables show the regression results on the corporate governance quotients from emerging economies data only. Panels A and B use both OLS and random effects regression to look at the index-weighted corporate governance quotient and the industry-weighted CGQ, respectively. Panels C and D use Nested ANOVA to look at both outcome variables. The regressions below explore the relative importance of countries and firms in explaining corporate governance ratings of firms in emerging economies. The OLS models include different combinations of observable firm and country characteristics as well as observable firm and country characteristics, captured in fixed effects. These models are run sequentially, with the previous Adjusted-R<sup>2</sup> being subtracted to give us the pure contribution of the additional variables added in each model. Thus in Models 1-9, we add, respectively: year effects, observable country characteristics, observable limited set of firm characteristics, observable full set of firm characteristics, country fixed effects, country fixed effects and observable characteristics, firm and country fixed effects, firm and country fixed effects plus observable country characteristics and limited observable firm characteristics, and finally, firm and country fixed effects plus observable country characteristics and all observable firm characteristics. The random effects model, Model 10, is provided as a one step way to analyze the contributions of firms and countries. The Nested ANOVA models in Panels C and D similarly capture unobservable firm characteristics and are analyzed sequentially. The results in all panels below show that firm characteristics, and especially firm fixed effects, explain more corporate governance ratings variation than country characteristics. For observed characteristics, an inclusive set of firm characteristics in Model 4 explains 10-13% of the variance while countries explain 8-10%. For unobserved characteristics, firm fixed effects plus observable variables explain 34-38% while country fixed effects plus observable variables explain only 15-19%. In the random effects model, Model 10, the amount of variance explained is calculated from the random effects listed below, showing that firms explain 37.84-50.40% of variance and countries explain 10.98-28.33%. Correlations are marked with an \* for 5% significance, \*\* for 1% significance, and \*\*\* for 0.1% significance.

**Panel A: OLS and Random Effects Results for Emerging Economies Only - Index CGQ**

Independent variables	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*
	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	RE
Antidirector x Legal		-0.14 (0.65)	0.03 (1.10)	9.6*** (3.22)		-3.57*** (1.05)		5.37 (3.97)	10.28 (8.04)	
GDP per capita		0.00*** (0.00)	0.00* (0.00)	-0.00** (0.00)		0.00** (0.00)		0.00 (0.00)	0.00 (0.00)	
Stock Market Cap/GDP		-0.04*** (0.01)	-0.04*** (0.01)	-0.02 (0.02)		0.03** (0.01)		0.03** (0.01)	0.03 (0.02)	
Sales Growth			0.02 (0.02)	0.05 (0.05)				0.01 (0.02)	0.01 (0.08)	
Financial Dependence			0.10 (0.20)	0.61 (0.80)				-0.15 (0.25)	3.06 (2.49)	
Closely Held Shares			-0.03 (0.07)	0.07 (0.07)				0.05 (0.06)	0.25 (0.16)	
Log (Assets)			0.19 (0.99)	0.74 (1.45)				-4.22* (2.42)	2.91 (10.39)	
Cash/Assets			3.13 (9.67)	25.37 (16.30)				-18.81** (9.38)	-30.92 (31.39)	
<b>Expanded Firm Variables</b>				yes					yes	
Year FE	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country FE					yes	yes				
Firm FE							yes	yes	yes	
Observations	1,413	1,292	748	222	1,413	1,292	1,413	748	222	1,413
R <sup>2</sup>	0.17	0.27	0.25	0.47	0.34	0.37	0.75	0.80	0.84	
Adjusted-R <sup>2</sup>	0.17	0.27	0.23	0.37	0.33	0.36	0.68	0.73	0.70	
Additional Adjusted-R <sup>2</sup>		0.10	-0.04	0.10	0.16	0.19	0.35	0.37	0.34	
Country Random Effect										11.56 (4.08)
Firm Random Effect										13.36 (0.68)
Residual										12.63 (0.27)

Panel B: OLS and Random Effects Results for Emerging Economies Only - Industry CGQ										
	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*
	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	RE
Antidirector x Legal		0.24 (0.72)	0.38 (1.17)	1.35 (1.76)		-3.70*** (1.22)		5.69 (3.80)	11.28 (8.52)	
GDP per capita		0.00*** (0.00)	0.00 (0.00)	0.00* (0.00)		0.00*** (0.00)		0.00 (0.00)	0.00 (0.00)	
Stock Market Cap/GDP		-0.04*** (0.01)	-0.03*** (0.01)	-0.07** (0.01)		0.02 (0.01)		0.02 (0.01)	0.03 (0.02)	
Sales Growth			0.03 (0.02)	-0.01 (0.06)				0.01 (0.02)	0.02 (0.08)	
Financial Dependence			0.12 (0.18)	0.20 (1.01)				-0.18 (0.29)	2.84 (3.05)	
Closely Held Shares			-0.07 (0.07)	-0.05 (0.08)				0.01 (0.06)	0.20 (0.19)	
Log (Assets)			0.53 (1.05)	1.16 (1.54)				-4.18* (2.50)	4.31 (10.96)	
Cash/Assets			10.13 (10.09)	26.48 (19.03)				-17.49* (10.37)	-34.77 (33.75)	
Expanded Firm Variables									yes	
Year FE	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country FE					yes	yes				
Firm FE							yes	yes	yes	
Observations	1,413	1,292	748	222	1,413	1,292	1,413	748	222	1,413
R <sup>2</sup>	0.14	0.22	0.21	0.44	0.27	0.31	0.74	0.79	0.83	
Adjusted-R <sup>2</sup>	0.14	0.22	0.20	0.34	0.26	0.29	0.66	0.72	0.68	
Additional Adjusted-R <sup>2</sup>		0.08	-0.02	0.13	0.12	0.15	0.41	0.42	0.38	
Country Random Effect										6.98 (2.73)
Firm Random Effect										14.94 (0.74)
Residual										13.10 (0.28)
Panel C: Nested ANOVA Results for Emerging Economies Only - Index CGQ										
Source of Variation	Additional R <sup>2</sup>						Additional Adjusted-R <sup>2</sup>			
Year	17.06%						16.71%			
Country	16.71						16.15			
Firm	40.99						34.62			
Panel D: Nested ANOVA Results for Emerging Economies Only - Industry CGQ										
Source of Variation	Additional Ordinary R <sup>2</sup>						Additional adjusted R <sup>2</sup>			
Year	14.50%						14.13%			
Country	12.17						11.54			
Firm	47.09						40.52			

**Table IV**

These tables show the regression results on the corporate governance quotients (CGQ) from developed economies data only. Developed economies are defined as those with OECD membership by 1990. Panels A and B use both OLS and random effects regression to look at the index-weighted CGQ and the industry-weighted CGQ, respectively. Panels C and D use Nested ANOVA to look at both outcome variables. The regressions below explore the relative importance of countries and firms in explaining corporate governance ratings. The OLS models include different combinations of observable firm and country characteristics as well as observable firm and country characteristics, captured in fixed effects. These models are run sequentially, with the previous Adjusted-R<sup>2</sup> being subtracted to give us the pure contribution of the additional variables added in each model. Thus in Models 1-9, we add, respectively: year effects, observable country characteristics, observable limited set of firm characteristics, observable full set of firm characteristics, country fixed effects, country fixed effects and observable characteristics, firm and country fixed effects, firm and country fixed effects plus observable country characteristics and limited observable firm characteristics, and finally, firm and country fixed effects plus observable country characteristics and all observable firm characteristics. The random effects model, Model 10, is provided as a one step way to analyze the contributions of firms and countries. The Nested ANOVA models in Panels C and D similarly capture unobservable firm characteristics and are analyzed sequentially. The results in all panels below show that country characteristics explain more corporate governance ratings variation than firm characteristics. For observed characteristics, countries explain 38-42% of the variance while an inclusive set of firm characteristics in Model 4 explains only 1-5%. For unobserved characteristics, country fixed effects plus observable variables explain 56-57% while firm fixed effects plus observable variables explain 11-13%. In the random effects model, Model 10, the amount of variance explained is calculated from the random effects listed below, showing that firms explain 18.66-19.07% of variance and countries explain 45.96-48.12%. Correlations are marked with an \* for 5% significance, \*\* for 1% significance, and \*\*\* for 0.1% significance.

**Panel A: OLS and Random Effects Results for GRI Developed Economies Only - Index CGQ**

Independent variables	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*
	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	RE
Antidirector x Legal		7.20*** (0.29)	6.36*** (0.43)	4.81*** (0.63)		-1.58* (0.84)		-10.98** (1.50)	-9.53*** (3.10)	
GDP per capita		-0.00*** (0.00)	-0.00*** (0.00)	-0.00*** (0.00)		0.00 (0.00)		-0.00*** (0.00)	-0.01** (0.00)	
Stock Market Cap/GDP		0.17*** (0.01)	0.16*** (0.01)	0.18*** (0.02)		-0.01 (0.02)		0.02 (0.02)	-0.04 (0.04)	
Sales Growth			-0.02* (0.01)	(0.01) (0.03)				0.00 (0.01)	-0.01 (0.03)	
Financial Dependence			-0.03 (0.09)	0.06 (0.14)				-0.01 (0.11)	0.08 (0.23)	
Closely Held Shares			-0.21*** (0.02)	-0.20*** (0.03)				-0.03 (0.03)	-0.06 (0.08)	
log(Assets)			0.62** (0.30)	(0.70) (0.56)				2.37** (1.05)	5.52* (3.22)	
Cash/Total Assets			12.80*** (3.00)	12.70* (7.25)				-5.24 (4.41)	-11.94 (13.97)	
<b>Expanded Firm Variables</b>				yes					yes	
Year FE	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country FE					yes	yes				
Firm FE							yes	yes	yes	
Observations	13,977	13,779	7,473	2,762	13,977	13,779	13,977	7,473	2,762	13,977
R <sup>2</sup>	0.00	0.38	0.42	0.44	0.56	0.56	0.77	0.78	0.79	
Adjusted-R <sup>2</sup>	0.00	0.38	0.42	0.43	0.56	0.56	0.71	0.72	0.69	
Additional Adjusted-R <sup>2</sup>		0.38	0.04	0.05	0.56	0.56	0.15	0.16	0.13	
Country Random Effect										18.10 (2.77)
Firm Random Effect										11.66 (0.23)
Residual										15.79 (0.11)

Panel B: OLS and Random Effects Results for GRI Developed Economies Only - Industry CGQ										
	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*
	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	RE
Antidirector x Legal		7.34*** (0.28)	6.56*** (0.43)	6.02*** (0.56)		-1.41* (0.81)		-10.02*** (1.48)	-9.90*** (2.51)	
GDP per capita		-0.00*** (0.00)	-0.00*** (0.00)	-0.00*** (0.00)		0.00 (0.00)		-0.00*** (0.00)	-0.00** (0.00)	
Stock Market Cap/GDP		0.19*** (0.01)	0.17*** (0.01)	0.17*** (0.02)		-0.02 (0.02)		0.00 (0.02)	0.01 (0.03)	
Sales Growth			-0.01 (0.01)	-0.04* (0.02)				0.00 (0.01)	-0.04 (0.02)	
Financial Dependence			0.00 (0.08)	0.16 (0.13)				-0.04 (0.11)	0.08 (0.16)	
Closely Held Shares			-0.24*** (0.02)	-0.20*** (0.03)				-0.02 (0.03)	0.00 (0.05)	
log(Assets)			0.95*** (0.29)	-0.43 (0.49)				2.47** (1.06)	6.05*** (2.17)	
Cash/Total Assets			13.43** (2.93)	8.71 (6.02)				-7.71* (4.29)	-7.87 (9.47)	
Expanded Firm Variables				yes					yes	
Year FE	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country FE					yes	yes				
Firm FE							yes	yes	yes	
Observations	13,977	13,779	7,473	2,762	13,977	13,779	13,977	7,473	2,762	13,977
R <sup>2</sup>	0.00	0.42	0.46	0.437	0.57	0.57	0.78	0.79	0.783	
Adjusted-R <sup>2</sup>	0.00	0.42	0.46	0.43	0.57	0.57	0.72	0.73	0.683	
Additional Adjusted-R <sup>2</sup>		0.42	0.04	0.01	0.57	0.57	0.15	0.16	0.11	
Country Random Effect										18.58 (2.84)
Firm Random Effect										11.57 (0.23)
Residual										15.44 (0.10)
Panel C: Nested ANOVA Results for GRI Developed Economies Only - Index CGQ										
Source of Variation	Additional R <sup>2</sup>				Additional Adjusted-R <sup>2</sup>					
Year	0.11%				0.07%					
Country	55.9				55.85					
Firm	20.92				15.46					
Panel D: Nested ANOVA Results for GRI Developed Economies Only - Industry CGQ										
Source of Variation	Additional R <sup>2</sup>				Additional Adjusted-R <sup>2</sup>					
Year	0.10%				0.06%					
Country	57.13				57.08					
Firm	20.52				15.25					

Appendix 1: Country Statistics								
This table presents the summary statistics for all countries represented in our dataset, broken down by market type and by data. The first set of country statistics come from the CLSA data, specifically, their Corporate Governance Score, which we winsorized at the 1% level to remove outliers. As can be seen below, emerging and developed economies contain firms with maximum scores close to each other. Also visible below is how dominated the CLSA dataset is by emerging economies. Developed economies are much less represented in this data. The corporate governance quotient (CGQ) summary statistics by country are located in Panels C and D of this table. We chose to only look at the index-based score, as any trends in the country statistics should be visible in either score. This outcome variable has also been winsorized at the 1% level. As can be seen in this set of statistics, the developed economies observations for the CGQ span a number of countries and are dominated by developed economies.								
Panel A: CLSA Emerging Economies								
Country	Observations	Mean	St. Dev.	Median	Min	Max	25th Per	75th Per
Argentina	2	59.7	10.0	59.6	52.6	66.7	52.6	66.7
Brazil	58	59.9	11.6	61.2	34.6	83.9	53.5	67.8
Chile	14	62.0	5.4	60.4	52.7	72.2	59.4	66.4
China	400	45.1	15.8	46.7	5.4	74.6	36.2	56.7
Colombia	1	51.4	.	51.4	51.4	51.4	51.4	51.4
Czech Republic	2	47.8	5.2	47.8	44.1	51.4	44.1	51.4
Hong Kong	719	55.0	13.6	56.1	5.4	83.9	46.8	64.8
Hungary	4	51.9	6.9	51.0	45.3	60.4	46.4	57.5
India	571	52.3	12.4	51.4	5.4	83.9	43.4	61.0
Indonesia	166	42.0	16.8	40.0	5.4	79.3	32.4	52.0
Malaysia	302	57.8	13.1	58.5	12.0	83.9	50.6	65.9
Mexico	15	63.9	9.3	66.7	39.0	74.2	62.1	69.9
Pakistan	11	34.0	13.5	30.7	18.9	65.6	25.3	43.0
Peru	3	73.1	3.0	71.5	71.2	76.5	71.2	76.5
Philippines	107	50.2	17.4	53.7	7.7	83.0	36.6	63.5
Poland	4	40.5	6.9	38.9	34.0	50.3	36.2	44.9
Russia	2	22.1	9.4	22.1	15.4	28.7	15.4	28.7
Singapore	304	59.4	10.5	59.6	34.1	83.9	51.1	66.7
South Africa	53	69.8	8.9	69.7	45.0	81.8	64.9	78.4
South Korea	344	53.8	15.0	54.7	5.4	81.0	45.3	64.7
Taiwan	455	53.6	12.7	54.6	5.4	83.9	47.4	61.6
Thailand	224	61.7	12.6	63.6	21.7	83.9	54.8	69.8
Panel B: CLSA Developed Economies								
Country	Observations	Mean	St. Dev.	Median	Min	Max	25th Per	75th Per
Australia	38	62.8	20.2	70.5	5.4	83.9	53.1	78.0
Canada	6	56.6	15.7	61.7	30.9	71.0	45.5	68.9
Greece	2	57.2	5.2	57.2	53.5	60.8	53.5	60.8
Japan	72	57.9	16.2	55.8	5.4	83.9	50.5	69.9
New Zealand	2	83.9	0.0	83.9	83.9	83.9	83.9	83.9
Norway	1	80.2	.	80.2	80.2	80.2	80.2	80.2
Spain	2	45.6	1.6	45.6	44.4	46.7	44.4	46.7
Switzerland	2	82.6	0.0	82.6	82.6	82.6	82.6	82.6
Turkey	30	41.9	14.0	39.8	10.5	63.1	34.7	53.9
United Kingdom	28	72.6	10.9	77.0	46.9	83.9	66.2	81.7
United States	27	55.2	12.3	54.1	22.8	83.9	48.1	62.6
Panel C: Emerging Economies - Index CGQ								
Country	Observations	Mean	St. Dev.	Median	Min	Max	25th Per	75th Per
Bermuda	113	63.6	25.1	65.5	2.7	99.7	49.3	81.9
Cayman Islands	47	59.5	18.2	59.2	14.6	99.1	47.3	74.7
Gibraltar	4	69.6	4.7	65.5	73.8	69.6	65.6	73.7
Guernsey	5	76.7	4.8	77.4	72.3	84.1	72.4	77.5
Hong Kong	660	39.6	19.2	43.2	1.7	95.0	24.6	53.2
Israel	10	39.2	16.5	43.5	11.6	59.7	30.9	51.5
Jersey	7	69.8	2.4	70.9	67.0	72.4	67.3	72.4
Liberia	5	77.7	20.9	73.5	53.1	99.2	63.5	99.0
Marshall Islands	5	63.1	6.8	60.7	56.7	70.4	57.4	70.3
Netherlands Antilles	9	50.7	47.1	74.6	0.9	99.8	2.4	4.3
Panama	2	42.4	0.5	42.4	42.0	42.7	42.0	42.7
Singapore	474	54.2	21.0	54.7	0.5	99.6	42.9	68.8
South Korea	67	46.3	15.1	47.6	4.0	76.1	38.6	57.1
Panel D: Developed Economies - Industry CGQ								
Country	Observations	Mean	St. Dev.	Median	Min	Max	25th Per	75th Per
Australia	696	66.4	18.9	66.2	1.4	100.0	54.1	79.6
Austria	156	41.8	25.1	43.7	0.1	97.7	23.0	58.1
Belgium	176	29.1	22.1	27.6	0.0	82.4	8.1	46.6
Canada	1320	52.7	28.6	54.6	0.5	100.0	28.5	76.7
Denmark	173	28.1	22.5	23.0	0.4	85.7	7.7	46.1
Finland	229	54.3	26.3	59.7	2.4	99.8	35.2	75.7
France	587	58.9	23.4	63.3	0.1	99.3	48.0	75.0
Germany	631	51.4	19.1	52.6	2.1	99.4	41.0	64.6
Greece	286	17.0	19.9	7.3	0.0	78.3	2.1	25.5
Ireland	118	76.9	15.2	78.7	6.0	99.7	69.8	86.4
Italy	500	43.1	22.8	50.0	0.2	92.7	22.2	59.2
Japan	4145	28.3	16.3	26.7	0.1	90.2	15.9	37.0
Luxembourg	29	28.0	17.4	27.7	2.6	60.1	14.6	42.3
Netherlands	319	50.1	27.0	56.8	0.5	100.0	26.3	69.3
New Zealand	124	58.7	17.0	59.3	10.1	96.8	45.6	70.2
Norway	173	30.9	21.9	27.3	0.3	89.3	11.5	47.9
Portugal	96	14.0	16.1	7.0	0.1	63.9	2.0	21.2
Spain	375	36.4	25.2	40.5	0.1	95.5	10.7	55.6
Sweden	350	40.2	26.2	43.4	0.3	98.8	13.0	60.2
Switzerland	411	66.9	22.2	71.1	1.1	100.0	49.2	83.3
Turkey	61	27.7	13.8	25.3	0.1	57.6	18.7	40.2
United Kingdom	3022	83.7	12.6	86.2	0.0	100.0	77.2	93.1

### Appendix 2 - CLSA Multinationals Robustness Tests

The models below explore the relative importance of firms and countries in explaining corporate governance variance and what impact multinationals firms have on this importance. The table shows that, regardless of whether we look at multinationals or single market firms in emerging economies, the importance of firm characteristics is greater than that of country characteristics. We determined multinationals by matching the firms in the CLSA data to firms listed in the Directory of Corporate Affiliations (DCA). Multinationals were determined by whether or not they had subsidiaries in foreign countries. Panel A explores the OLS results while Panel B and C looks at the Nested ANOVA models. In the top highlighted row of Panel A, we see the entire sample of firms in emerging economies. The middle highlighted row shows multinationals in emerging economies and the bottom highlighted row show single market firms in emerging economies. Comparing all three samples on top of each other, we see that the results are roughly the same across the board. Firms take on a greater importance in emerging markets regardless of whether they are multinationals or single market firms. The random effects models suggest that firms are even more important in multinationals and that in single market firms countries are statistically equal to firms in importance.

#### Panel A: OLS Results

Independent Variables	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*
	<i>OLS</i>	<i>OLS</i>	<i>OLS</i>	<i>OLS</i>	<i>OLS</i>	<i>OLS</i>	<i>OLS</i>	<i>OLS</i>	<i>OLS</i>
<b>Expanded Firm Variables</b>				yes					yes
<b>Year FE</b>	yes	yes	yes	yes	yes	yes	yes	yes	yes
<b>Country FE</b>					yes	yes			
<b>Firm FE</b>							yes	yes	yes
<b>R<sup>2</sup></b>	0.08	0.13	0.13	0.24	0.21	0.23	0.73	0.75	0.80
<b>Adjusted-R<sup>2</sup></b>	0.08	0.13	0.12	0.20	0.21	0.22	0.61	0.61	0.64
<b>Additional Adjusted-R<sup>2</sup> for All Firms</b>		0.05	-0.01	0.08	0.13	0.15	0.40	0.39	0.42
<b>Adjusted-R<sup>2</sup> for Multinationals</b>	0.112	0.124	0.106	0.207	0.170	0.158	0.623	0.561	0.649
<b>Additional Adjusted-R<sup>2</sup> for Multinationals</b>		0.01	-0.02	0.08	0.06	0.05	0.45	0.40	0.49
<b>Adjusted-R<sup>2</sup> for Single Market Firms</b>	0.0711	0.153	0.157	0.306	0.248	0.268	0.634	0.608	0.658
<b>Additional Adjusted-R<sup>2</sup> for Single Market Firms</b>		0.08	0.00	0.15	0.18	0.20	0.39	0.34	0.39

#### Panel B: Nested ANOVA Results for Multinationals

Source of Variation	Additional R <sup>2</sup>	Additional Adjusted-R <sup>2</sup>
Year	12.00%	11.25%
Country	5.31	3.48
Firm	62.57	47.55

#### Panel C: Nested ANOVA Results for Single Market Firms

Source of Variation	Additional R <sup>2</sup>	Additional Adjusted-R <sup>2</sup>
Year	7.20%	6.81%
Country	18.18	17.46
Firm	51.79	39.28

**Appendix 3 - GRI Developed Economies Except the United Kingdom and Japan**

The table below examines the relative importance of firms and countries in explaining variance in the corporate governance quotient (CGQ). Specifically, these tables are intended to explore the importance of the United Kingdom and Japan in our developed economy results. We test this by excluding these two markets together and compare our results to those for the full set of developed economies. Panel A gives the results for models using the index-based CGQ while Panel B gives the results for the industry-based CGQ. We see below that removing the UK and Japan weakens the importance of countries relative to firms, and that this is especially true for the index-based CGQ. Models 5-9 in Panel A show that, by removing the UK and Japan, firms and countries are roughly at parity in importance. However, also in Panel A, we see that country characteristics are more important than firm characteristics in Models 2 and 4 and that countries are more important than firms for the random effects model. In Panel B, the importance of countries in explaining variance remains strong through all models. Thus, we can also see that removing these two countries does not change our finding about the importance of country characteristics in developed economies. We can be confident that our trend is not driven by specific countries. Correlations are marked with an \* for 5% significance, \*\* for 1% significance, and \*\*\* for 0.1% significance.

**Panel A: OLS and Random Effects Results for Index CGQ**

Independent variables	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*
	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	RE
Antidirector x Legal		2.72*** (0.35)	1.69*** (0.47)	1.97*** (0.62)		0.79 (0.87)		0.18 (2.83)		3.703 (4.44)
GDP per capita		0.00 (0.00)	-0.00*** (0.00)	-0.00*** (0.00)		0.00* (0.00)		0.00 (0.00)		0.00 (0.00)
Stock Market Cap/GDP		0.09*** (0.01)	0.08*** (0.02)	0.10*** (0.02)		0.01 (0.01)		0.05* (0.03)		0.07* (0.04)
Sales Growth			-0.02 (0.02)	-0.03 (0.03)				-0.01 (0.02)		-0.03 (0.04)
Financial Dependence			-0.09 (0.16)	-0.22 (0.32)				-0.26 (0.28)		-0.20 (0.37)
Closely Held Shares			-0.20*** (0.03)	-0.19*** (0.04)				-0.02 (0.04)		0.03 (0.07)
log(Assets)			3.04*** (0.45)	2.86*** (0.76)				3.12* (1.64)		2.83 (3.68)
Cash/Total Assets			22.20*** (5.65)	13.56 (13.55)				-11.58 (7.53)		-18.82 (18.23)
Expanded Firm Variables				yes						yes
Year FE	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country FE					yes	yes				
Firm FE							yes	yes	yes	
Observations	6,810	6,659	3,382	1,832	6,810	6,659	6,810	3,382	1,832	6,810
R <sup>2</sup>	0.01	0.10	0.13	0.16	0.27	0.26	0.66	0.63	0.65	
Adjusted-R <sup>2</sup>	0.01	0.09	0.13	0.15	0.26	0.26	0.57	0.53	0.52	
Additional Adjusted-R <sup>2</sup>		0.09	0.03	0.05	0.25	0.25	0.31	0.27	0.26	
Country Random Effect										16.23 (2.67)
Firm Random Effect										15.36 (0.40)
Residual										17.93 (0.17)

**Panel B: OLS and Random Effects Results for Industry CGQ**

Independent variables	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*
	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	RE
Antidirector x Legal		4.11*** (0.35)	2.95*** (0.48)	3.08*** (0.61)		0.39 (0.75)		0.18 (2.71)		2.16 (4.13)
GDP per capita		-0.00** (0.00)	-0.00*** (0.00)	-0.00*** (0.00)		0.00 (0.00)		0.00* (0.00)		0.00 (0.00)
Stock Market Cap/GDP		0.12*** (0.01)	0.11*** (0.02)	0.12** (0.02)		0.00 (0.01)		0.01 (0.03)		0.02 (0.04)
Sales Growth			-0.01 (0.02)	-0.02 (0.03)				-0.01 (0.02)		-0.04 (0.03)
Financial Dependence			-0.05 (0.12)	-0.23 (0.24)				-0.22 (0.24)		-0.29 (0.39)
Closely Held Shares			-0.26*** (0.03)	-0.21*** (0.04)				-0.02 (0.04)		0.02 (0.07)
log(Assets)			3.35*** (0.43)	2.45*** (0.76)				2.63 (1.63)		3.24 (3.63)
Cash/Total Assets			24.07** (5.37)	20.55 (12.49)				-13.26* (7.37)		-23.24 (17.77)
Expanded Firm Variables				yes						yes
Year FE	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country FE					yes	yes				
Firm FE							yes	yes	yes	
Observations	6,810	6,659	3,382	1,832	6,810	6,659	6,810	3,382	1,832	6,810
R <sup>2</sup>	0.01	0.15	0.20	0.21	0.36	0.36	0.69	0.67	0.67	
Adjusted-R <sup>2</sup>	0.00	0.15	0.19	0.20	0.35	0.35	0.61	0.57	0.55	
Additional Adjusted-R <sup>2</sup>		0.15	0.04	0.05	0.35	0.35	0.25	0.21	0.20	
Country Random Effect										17.17 (2.79)
Firm Random Effect										14.02 (0.38)
Residual										17.34 (0.17)



#### Appendix 4: CGQ Emerging Economies Nested ANOVA Results with Industry Included

The tables below show the coefficient estimates from the Nested ANOVA models of emerging economies corporate governance quotient variance. In contrast to previous emerging economies CGQ results using ANOVA specifications, the models below include industry as an intermediate level of analysis. We understand industry to be embedded within years, but crossing countries, so we proceed with the following hierarchy in our analysis: year, industry, country, and firm. These tables are intended to explore whether our previous results for firms (that firms explain greater variance than countries in emerging economies) are actually capturing industry effects. Panels A and B focus on the 2-digit SIC codes for the Index and Industry CGQ's, respectively. Panels C and D focus on the 3-digit SIC codes for the Index and Industry CGQ's, again respectively. What we see in the results below is that industry does capture some of the variation in corporate governance ratings. The more specific 3-digit SIC code is consistently more important than countries and for the index CGQ even rivals firms. However, the main result holds even to the inclusion of industry effects: the importance of firm effects in explaining ratings variation is still larger than country effects.

##### Panel A: Index CGQ, 2-digit SIC Codes

Source of Variation	Additional $R^2$	Additional Adjusted- $R^2$
Year	17.06%	16.71%
Industry	14.46%	12.06%
Country	12.95	12.91
Firm	30.28	25.76

##### Panel B: Industry CGQ, 2-digit SIC Codes

Source of Variation	Additional $R^2$	Additional Adjusted- $R^2$
Year	14.50%	14.13%
Industry	14.62%	12.14%
Country	11.04	10.88
Firm	33.53	28.93

##### Panel C: Index CGQ, 3-digit SIC Codes

Source of Variation	Additional $R^2$	Additional Adjusted- $R^2$
Year	17.06%	16.71%
Industry	24.41%	19.57%
Country	10.88	11.35
Firm	22.4	19.81

##### Panel D: Industry CGQ, 3-digit SIC Codes

Source of Variation	Additional $R^2$	Additional Adjusted- $R^2$
Year	14.50%	14.13%
Industry	24.72%	19.71%
Country	9.02	9.28
Firm	25.45	22.96

**Appendix 5: CGQ Developed Economies Nested ANOVA Results with Industry Included**

The tables below shows the coefficient estimates from the Nested ANOVA models of variance in developed economies' corporate governance quotient (CGQ). In contrast to previous developed economy CGQ results using ANOVA specifications, the models below include industry as an intermediate level of analysis. We understand industry to be embedded within years, but crossing countries, so we proceed with the following hierarchy in our analysis: year, industry, country, and firm. These tables are intended to explore whether our previous results that countries explain greater variance than firms in developed economies is actually capturing industry effects. Panels A and B focuses on the 2-digit SIC codes for the Index and Industry CGQ's, respectively. Panels C and D focus on the 3-digit SIC codes for the Index and Industry CGQ's, again respectively. What we see in the results below is that industry does capture some of the variation in corporate governance ratings, however it is very small. It is even smaller than that captured in the emerging economies. Therefore, industry plays an insignificant role in explaining the results we find in developed economies.

**Panel A: Index CGQ, 2-digit SIC Codes**

<b>Source of Variation</b>	<b>Additional <math>R^2</math></b>	<b>Additional Adjusted-<math>R^2</math></b>
Year	0.11%	0.07%
Industry	5.29%	4.81%
Country	51.77	51.99
Firm	20.08	14.82

**Panel B: Industry CGQ, 2-digit SIC Codes**

<b>Source of Variation</b>	<b>Additional <math>R^2</math></b>	<b>Additional Adjusted-<math>R^2</math></b>
Year	0.10%	0.06%
Industry	4.42%	3.84%
Country	55.05	55.3
Firm	18.74	13.66

**Panel C: Index CGQ, 3-digit SIC Codes**

<b>Source of Variation</b>	<b>Additional <math>R^2</math></b>	<b>Additional Adjusted-<math>R^2</math></b>
Year	0.11%	0.07%
Industry	12.77%	11.03%
Country	46.06	46.94
Firm	18.23	13.57

**Panel D: Industry CGQ, 3-digit SIC Codes**

<b>Source of Variation</b>	<b>Additional <math>R^2</math></b>	<b>Additional Adjusted-<math>R^2</math></b>
Year	0.10%	0.06%
Industry	11.53%	9.77%
Country	49.92	50.87
Firm	16.58	12.06

**Appendix 6 - CGQ Emerging Economies, Excluding Tax Havens**

The tables below show the coefficient estimates of models using the Corporate Governance Quotient (CGQ) with emerging economies, but excluding tax havens. These small, island countries are present throughout the CGQ data. We wanted to ensure that these unique countries are not biasing our results in any direction. Thus, we have rerun all of our initial models for emerging economies, but on a restricted sample that excludes the tax havens. More generally, the regressions below explore the relative importance of countries and firm in explaining corporate governance ratings of firms in emerging economies. For the OLS models, Model 1-9, we analyze additional Adjusted- $R^2$  to determine additional variance explained by each set of variables, as we've done in previous tables. In Model 10, we use random effects, which accounts for the hierarchical nature of the data with a single regression. Panels A and B present OLS and random effects results for the Index-based CGQ, and the Industry-based CGQ, respectively. Panels C and D present Nested ANOVA results, again for the Index- and Industry-based CGQ's, respectively. The results below show that the importance of firms effects in emerging economies does not depend on the inclusion of tax havens. Firm variables continue to explain greater governance variance than country variables do, even on this restricted sample of emerging economies without tax havens. The one exception to this is the random effects model in Panel A, which looks at the Index CGQ. Here, the country random effect is larger than the firm random effects. However, the difference between these two numbers is not statistically significant. Thus, we take these results together to confirm our overall finding that, in emerging economies, firm characteristics range from anywhere to roughly equal to significantly more important than country characteristics in explain corporate governance variance. Correlations are marked with an \* for 5% significance, \*\* for 1% significance, and \*\*\* for 0.1% significance.

**Panel A: OLS and Random Effects Results for Index CGQ**

Independent variables	<b>*(1)*</b>	<b>*(2)*</b>	<b>*(3)*</b>	<b>*(4)*</b>	<b>*(5)*</b>	<b>*(6)*</b>	<b>*(7)*</b>	<b>*(8)*</b>	<b>*(9)*</b>	<b>*(10)*</b>
	<i>OLS</i>	<i>OLS</i>	<i>OLS</i>	<i>OLS</i>	<i>OLS</i>	<i>OLS</i>	<i>OLS</i>	<i>OLS</i>	<i>OLS</i>	<i>RE</i>
Antidirector x Legal		2.68 (1.90)	2.65 (2.44)	6.97** (3.01)		-0.84 (2.23)		8.38* (4.44)	12.55 (8.28)	
GDP per capita		0.00 (0.00)	0.00 (0.00)	0.00 (0.00)		0.00 (0.00)		0.00 (0.00)	-0.0** (0.00)	
Stock Market Cap/GDP		-0.03** (0.01)	-0.03 (0.02)	-0.04** (0.02)		0.03** (0.01)		0.03*** (0.01)	0.03 (0.02)	
Sales Growth			0.03 (0.02)	0.07 (0.06)				0.02 (0.02)	0.04 (0.06)	
Financial Dependence			0.17 (0.19)	-1.03 (0.67)				-0.18 (0.25)	2.01 (1.54)	
Closely Held Shares			0.04 (0.08)	0.04 (0.08)				0.05 (0.07)	0.12 (0.13)	
log(Assets)			-0.38 (1.02)	-0.41 (1.40)				-4.48** (2.24)	8.66 (6.05)	
Cash/Total Assets			-1.60 (10.14)	-0.93 (14.31)				-24.02** (10.19)	-33.11 (27.33)	
<b>Expanded Firm Variables</b>									yes	
Year FE	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country FE					yes	yes				
Firm FE							yes	yes	yes	
Observations	1,223	1,110	666	293	1,223	1,110	1,223	666	293	1,223
$R^2$	0.20	0.26	0.25	0.421	0.33	0.35	0.73	0.79	0.847	
Adjusted- $R^2$	0.20	0.25	0.24	0.354	0.33	0.34	0.66	0.71	0.736	
Additional Adjusted- $R^2$		0.05	-0.02	0.10	0.13	0.14	0.33	0.37	0.39	
Country Random Effect										13.57 (7.03)
Firm Random Effect										11.94 (0.67)
Residual										12.32 (0.28)

Panel B: OLS and Random Effects Results for Industry CGQ										
Independent variables	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*
	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	RE
Antidirector x Legal		2.78 (1.96)	2.76 (2.28)	0.06 (0.05)		-1.12 (2.52)		7.39 (4.70)	0.04 (0.06)	
GDP per capita		0.00 (0.00)	0.00 (0.00)	-1.00 (0.70)		0.00 (0.00)		0.00 (0.00)	1.82 (1.97)	
Stock Market Cap/GDP		-0.03** (0.01)	-0.03* (0.01)	-0.01 (0.09)		0.02 (0.01)		0.02 (0.01)	0.04 (0.14)	
Sales Growth			0.03 (0.02)	0.00 (1.43)				0.01 (0.02)	8.36 (6.83)	
Financial Dependence			0.18 (0.17)	12.02 (16.23)				-0.22 (0.28)	-33.73 (29.36)	
Closely Held Shares			-0.03 (0.08)	7.17** (2.97)				0.00 (0.07)	13.46 (8.17)	
log(Assets)			0.02 (1.10)	0.00 (0.00)				-4.78** (2.30)	-0.00* (0.00)	
Cash/Total Assets			5.20 (10.70)	-0.04** (0.02)				-22.53* (11.50)	0.02 (0.02)	
Expanded Firm Variables									yes	
Year FE	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country FE					yes	yes				
Firm FE							yes	yes	yes	
Observations	1,223	1,110	666	293	1,223	1,110	1,223	666	293	1,223
R <sup>2</sup>	0.17	0.22	0.21	0.41	0.28	0.30	0.73	0.78	0.85	
Adjusted-R <sup>2</sup>	0.16	0.22	0.20	0.34	0.27	0.29	0.66	0.70	0.73	
Additional Adjusted-R <sup>2</sup>		0.05	-0.02	0.12	0.11	0.12	0.39	0.41	0.44	
Country Random Effect										8.67 (6.94)
Firm Random Effect										13.38 (0.75)
Residual										12.59 (0.29)
Panel C: Nested ANOVA Results for Index CGQ										
Source of Variation	Additional R <sup>2</sup>						Additional Adjusted-R <sup>2</sup>			
Year	20.23%						19.84%			
Country	12.95						12.68			
Firm	39.8						32.04			
Panel D: Nested ANOVA Results for Industry CGQ										
Source of Variation	Additional R <sup>2</sup>						Additional Adjusted-R <sup>2</sup>			
Year	16.77%						16.36%			
Country	11.16						10.85			
Firm	45.08						38.29			

**Appendix 7 - FTSE Variables**

The following table gives the summary statistics for the FTSE ISS Corporate Governance Index scores. This dataset encompasses data from 2005-2008. The first variable is the CLSA given corporate governance score. The next three variables are the three observable country characteristics used in our analysis. Antidirector x Legal captures the interaction of the Revised Antidirector Rights Index and the Rule of Law in that country. The following firm variables include the observable firm characteristics included in previous studies (sales growth, financial dependence (EBITDA based), closely held shares (as a percent of total shares), log(assets), and cash to assets ratio). The remaining variables described below are additional observable firm characteristics used to capture the complex interaction between firms and corporate governance in emerging economies. The following variables below have been winsorized at the 1st/99th percentiles to remove outliers: 2yr Sales Growth, Financial Dependence, Antidirector x Legal, GDP per capita, Current Ratio, Leverage, Tobin's Q, PE Ratio, Price to Book Ratio, Quick Ratio, Return on Assets, Capital Expenditure, Cash Dividend Coverage Ratio, 3yr Dividend Growth, 5yr Income Growth, 5yr Sales Growth, Short-Term Debt, 5yr Assets Growth, and Total Debt (%). Correlations are marked with an \* for 5% significance, \*\* for 1% significance, and \*\*\* for 0.1% significance.

**Panel A: Summary Statistics**

<b>Variable</b>	<b>Observations</b>	<b>Median</b>	<b>Mean</b>	<b>St Dev.</b>	<b>Min</b>	<b>Max</b>
Corporate Governance Score	9,736	3.19	3.48	1.21	1.00	5.99
Antidirector x Legal	9,719	6.01	6.11	1.63	0.81	8.52
GDP per capita	9,726	34,587	32,871.37	6,675.82	15,013.30	40,707.00
Stock Market Cap / GDP	9,719	134.12	131.81	89.89	17.51	617.05
2yr Sales Growth	9,177	9.00	12.09	24.51	-51.04	124.23
Financial Dependence	6,910	-2.02	-4.24	6.94	-39.92	6.86
Closely Held Shares	8,282	22.08	27.22	23.14	0.00	100.00
Log (Assets)	9,228	15.64	15.70	1.85	8.94	22.05
Cash/Total Assets	7,662	0.08	0.16	1.42	0.00	101.96
Fixed Assets/Total Assets	9,126	0.21	0.28	0.25	0.00	0.99
SEC Compliance	9,728	0.00	0.10	0.30	0.00	1.00
CurrentRatio	7,303	1.34	1.69	1.19	0.32	7.57
Leverage	8,718	0.59	0.58	0.27	0.00	1.57
PE Ratio	7,556	15.95	17.39	24.47	-82.85	145.00
Price-to-book Ratio	7,333	1.98	2.68	2.67	-3.15	16.88
Quick Ratio	7,282	0.91	1.19	1.06	0.12	6.97
Return on Assets	9,169	5.72	6.43	7.85	-26.09	33.80
R&D Intensity (expenditure as a % of sales)	9,732	0.00	0.36	2.27	0.00	76.23
CapitalExpenditure	8,679	4.05	5.35	5.31	0.00	28.95
Cash Dividend Coverage Ratio	6,938	4.84	7.57	8.67	-2.05	54.99
3yr Dividend Growth	8,531	9.56	10.87	26.28	-100.00	94.28
5yr Income Growth	7,849	10.49	13.48	20.57	-29.92	101.17
5yr Sales Growth	8,918	7.57	9.62	12.97	-20.00	63.29
Short-Term Debt	9,151	183,524	5,144,406.00	25,200,000.00	0.00	207,000,000.00
5yr Assets Growth	8,878	7.10	9.47	13.25	-21.12	60.35
Total Debt (%)	9,224	53.89	131.99	268.63	-271.39	1,728.55

Panel B: Correlations

	Corporate Governance Score	Antidirector x Legal	GDP per capita	Stock Market Cap / GDP	2yr Sales Growth	Financial Dependence	Closely Held Shares	Log (Assets)	Cash/Total Assets	Fixed Assets/ Total Assets	SEC Compliance	Current Ratio	Leverage	PE Ratio	Price-to-book Ratio	Quick Ratio	Return on Assets	Intensity (expenditure as a % of Capital Expenditure	Dividend Coverage Ratio	3yr Dividend Growth	5yr Income Growth	5yr Sales Growth	Short-Term Debt	5yr Assets Growth	Total Debt (%)	
Corporate Governance Score	1																									
Antidirector x Legal	0.57***	1																								
GDP per capita	-0.54***	-0.23***	1																							
Stock Market Cap / GDP	-0.04***	0.278***	0.08***	1																						
2yr Sales Growth	0.01	0.03***	-0.07***	0.09***	1																					
Financial Dependence	0.00	0.02	-0.03***	-0.01	-0.08***	1																				
Closely Held Shares	-0.10***	0.10***	-0.13***	0.22***	0.04***	0.03***	1																			
Log (Assets)	-0.20***	-0.42***	0.09***	-0.10***	0.03***	-0.09***	-0.18***	1																		
Cash/Total Assets	0.01	0.03***	-0.01	0.00	-0.03**	-0.01	0.00	-0.08***	1																	
Fixed Assets/Total Assets	0.01	0.05***	-0.01	0.03**	0.00	0.36***	0.02*	-0.08***	-0.05***	1																
SEC Compliance	0.21***	0.03***	-0.15***	0.00	0.00	0.05***	-0.08***	0.21***	-0.01	0.05***	1															
Current Ratio	-0.12***	0.00	0.14***	0.12***	0.02	-0.11***	0.07***	-0.24***	0.05***	-0.28***	-0.04***	1														
Leverage	0.09***	-0.04***	-0.12***	-0.15***	-0.05***	-0.09***	-0.14***	0.29***	0.09***	-0.10***	0.03***	-0.48***	1													
PE Ratio	-0.07***	-0.05***	0.07***	0.01	0.02	-0.03*	0.01	-0.06***	0.00	0.03**	-0.04***	0.03**	-0.06***	1												
Price-to-book Ratio	0.06***	-0.04***	-0.06***	0.06***	0.08***	-0.03**	-0.05***	-0.17***	0.04***	-0.03***	0.01	0.00	0.01	0.12***	1											
Quick Ratio	-0.10***	0.01	0.11***	0.14***	0.05***	-0.10***	0.10***	-0.23***	0.05***	-0.25***	-0.02	0.92***	-0.45***	0.04***	0.03**	1										
Return on Assets	0.04***	0.03**	-0.07***	0.12***	0.12***	0.01	0.01	-0.15***	-0.03***	0.08***	0.03***	0.11***	-0.26***	0.08***	0.39***	0.11***	1									
R&D Intensity (expenditure as a % of sales)	-0.08***	-0.09***	0.06***	-0.03***	-0.03***	0.02	-0.04*	-0.05***	0.01	-0.05***	0.02	0.16***	-0.09***	0.05***	0.08***	0.17***	0.01	1								
CapitalExpenditure	0.0241**	0.03**	-0.03***	0.00	0.12***	0.28***	0.00	-0.10***	-0.03***	0.59***	0.07***	-0.14***	-0.08***	0.01	0.08***	-0.11***	0.20***	-0.05***	1							
Cash Dividend Coverage Ratio	-0.23***	-0.18***	0.27***	-0.08***	0.09***	0.07***	-0.04***	0.18***	-0.04***	0.09***	0.04***	-0.05***	0.05***	0.01	-0.07***	-0.04***	-0.07***	0.00	0.23***	1						
3yr Dividend Growth	-0.07***	-0.03**	0.07***	0.03***	0.17***	-0.06***	0.01	0.08***	-0.05***	0.02	0.03***	0.06***	-0.12***	0.03**	0.10***	0.06***	0.26***	-0.07***	0.09***	0.05***	1					
5yr Income Growth	-0.02*	-0.01	-0.02*	0.02**	0.33***	-0.08***	-0.01	0.05***	-0.02	-0.07***	0.02	0.02	-0.03**	-0.03***	0.11***	0.04***	0.22***	-0.03*	0.11***	0.15***	0.27***	1				
5yr Sales Growth	-0.02*	0.02*	-0.04***	0.11***	0.45***	-0.07***	0.01	-0.01	-0.03***	0.01	-0.01	0.06***	-0.08***	0.01	0.09***	0.07***	0.11***	0.00	0.18***	0.10***	0.14***	0.56***	1			
Short-Term Debt	0.03***	-0.09***	-0.07***	-0.06***	0.04***	-0.21***	-0.05***	0.46***	-0.01	-0.18***	0.13***	-0.11***	0.18***	-0.05***	-0.07***	-0.09***	-0.11***	-0.01	-0.15***	0.04***	-0.02**	-0.02	0.01	1		
5yr Assets Growth	0.02	0.02**	-0.08***	0.09***	0.36***	-0.12***	0.00	0.06***	-0.03**	-0.06***	-0.05***	0.06***	-0.08***	0.02	0.06***	0.06***	0.11***	-0.03**	0.16***	0.05***	0.13***	0.45***	0.74***	0.05***	1	
Total Debt (%)	0.03***	-0.09***	-0.11***	-0.08***	0.04***	-0.12***	-0.02**	0.38***	-0.02	-0.07***	0.05***	-0.19***	0.34***	-0.05***	0.15***	-0.17***	-0.15***	-0.02	-0.11***	0.08***	-0.08***	-0.04***	0.02*	0.54***	0.05***	1