

Corporate Governance Ratings in Emerging Markets: Implications for Market Valuation, Internal Firm-Performance, Dividend Payouts and Policy

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Abstract

This paper utilizes a new data set from Alliance Bernstein that, unlike other corporate governance data, has monthly firm-level and country-level governance ratings for 22 emerging markets countries for almost a five year period. With these data we find several interesting results that have implications for corporations, investors and policymakers. First, using a fixed effects pooled cross-sectional time series analysis, we find a positive and significant relation between firm-level and country-level corporate governance ratings and market valuation. Second, we find that this relation between governance and market valuation is non-linear. Specifically, we find that top rated firms and firms in top-rated countries have significantly better market valuations than other firms, but there is little significant difference in the market valuation between intermediate rated and low rated firms. These results suggest that there is a premium paid for top level governance (both at the firm- and country-levels) but not for intermediate levels of governance. Third, since we have firm-level corporate governance ratings on a monthly basis, we examine the effects of changes in corporate governance at the firm level over the specific window of time when the corporate governance ratings have changed. This type of test allows us to overcome the issue of whether better governance causes better valuations, or whether firms with better valuations endogenously choose better governance. Using this test we find some evidence that corporate governance does cause better valuation as well as better internal firm performance. Fourth, we find that firm-level governance is positively and significantly related to return equity but country-level governance is negatively and significantly related to return on equity. Fifth, opposite of the return on equity results, we find that firm-level governance is negatively related to dividend payout but country-level governance is positively related to dividend payout. Sixth, in an examination of what country-level governance issues influence firm-level governance, we find that the governance stance on corporate governance and equity culture and the political, social, and environmental climate of the country are both positively and significantly related to firm-level governance. Although causation is difficult to determine, this result suggests that a county which is concerned with human rights and environmental issues creates a positive example that corporations seem follow in their firm-level governance. Seventh and finally, in an out-sample analysis of the predictive ability of the governance ratings, we find that firms located in countries with high country-level governance ratings did in fact predict significantly better future risk-adjusted stock return performance. On the other hand, we find that firm-level corporate governance ratings themselves are weaker predictors of future risk-adjusted stock return performance. Hence, our results suggest that for investors the first emphasis should be put on country governance and then firm-level governance in the search for better future risk-adjusted stock return performance.

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Abstract

This paper utilizes a new data set from Alliance Bernstein that, unlike other corporate governance data, has monthly firm-level and country-level governance ratings for 22 emerging markets countries for almost a five year period. With these data we find several interesting results that have implications for corporations, investors and policymakers. First, using a fixed effects pooled cross-sectional time series analysis, we find a positive and significant relation between firm-level and country-level corporate governance ratings and market valuation. Second, we find that this relation between governance and market valuation is non-linear. Specifically, we find that top rated firms and firms in top-rated countries have significantly better market valuations than other firms, but there is little significant difference in the market valuation between intermediate rated and low rated firms. These results suggest that there is a premium paid for top level governance (both at the firm- and country-levels) but not for intermediate levels of governance. Third, since we have firm-level corporate governance ratings on a monthly basis, we examine the effects of changes in corporate governance at the firm level over the specific window of time when the corporate governance ratings have changed. This type of test allows us to overcome the issue of whether better governance causes better valuations, or whether firms with better valuations endogenously choose better governance. Using this test we find some evidence that corporate governance does cause better valuation as well as better internal firm performance. Fourth, we find that firm-level governance is positively and significantly related to return equity but country-level governance is negatively and significantly related to return on equity. Fifth, opposite of the return on equity results, we find that firm-level governance is negatively related to dividend payout but country-level governance is positively related to dividend payout. Sixth, in an examination of what country-level governance issues influence firm-level governance, we find that the governance stance on corporate governance and equity culture and the political, social, and environmental climate of the country are both positively and significantly related to firm-level governance. Although causation is difficult to determine, this result suggests that a county which is concerned with human rights and environmental issues creates a positive example that corporations seem follow in their firm-level governance. Seventh and finally, in an out-sample analysis of the predictive ability of the governance ratings, we find that firms located in countries with high country-level governance ratings did in fact predict significantly better future risk-adjusted stock return performance. On the other hand, we find that firm-level corporate governance ratings themselves are weaker predictors of future risk-adjusted stock return performance. Hence, our results suggest that for investors the first emphasis should be put on country governance and then firm-level governance in the search for better future risk-adjusted stock return performance.

I. Introduction

Why is corporate governance important? According to Shleifer and Vishny (1997) the main reason is that corporate governance deals with the mechanisms that ensure that suppliers of capital to corporations receive returns on their investment. These returns to investment are crucial because without them capital will not flow to corporations, causing earnings to fall, employment to drop, and, if the problem is endemic throughout a country or region, economic growth to wane.

Given the importance of corporate governance, a small but rapidly growing literature has examined the impact of corporate governance in emerging market countries where many corporations rely on external capital to finance their growth. Most of this work has found that better governed firms have better internal performance and market valuations than firms with weaker governance structures.¹ However, this past literature suffers from significant data limitations. Most previous papers either examine only one country, have only a single cross-section of data, or have to use self-constructed corporate governance indexes that are subject to problems in terms of weighing which factors are the most important.

In this paper we utilize a new data set from Alliance Bernstein which allows us to overcome these limitations. Specifically, we have monthly firm-level and country-level corporate governance ratings from Alliance Bernstein for 22 emerging market countries for almost five years. In these data, each firm and country within the Alliance Bernstein emerging markets universe receives a corporate governance rating that ranges from A+ to D. These data permit us to re-examine the impact of firm-level and country-level governance on market valuation, internal firm-performance and dividend payouts, using a panel data approach that does not suffer from the data limitations faced by previous studies. Furthermore, since we have firm-level corporate governance ratings on a monthly basis, we can examine the effects of changes in corporate governance at the firm level. This type of test allows us to address the issue of whether better governance causes better valuations, or whether firms with better valuations endogenously choose better governance. To our knowledge, this type of test on the impact of corporate governance at the firm level has not been implemented before in the emerging markets literature.

In addition to the above, the Alliance Bernstein data also permits us to examine which aspects of country governance influence firm-level governance. The Alliance Bernstein country-level governance rating is based on five components: legal and regulatory infrastructure; government stance on corporate governance and equity culture; macroeconomic and political stability; accounting and auditing standards; and the political, social and environmental climate. Since we have the five component scores for each country, we examine the relation between firm-level corporate governance and these country rating components to identify which of the components are related to firm-level corporate governance. Although causation is difficult to conclusively determine, we identify some policy implications regarding the types of country-level governance policies that can produce better firm-level governance.

Finally, these data allow us to examine the out-of-sample risk-adjusted stock return performance of both firm-level and country-level governance ratings. As a result, we can investigate whether better governance predicts better stock return performance for investors. In these tests we use an approach from the mutual fund literature that is robust to survivorship bias.

¹ See, for example, Black (2001), Durnev and Kim (2005), Black, Kim, Jang and Park (2005), Black, Jang and Kim (2006), Black, Love and Rachinsky (2006), and Klapper and Love (2006), among others.

The rest of the paper is organized as follows. Section II provides a literature review. Section III presents the data and the summary the Alliance Bernstein rating system; Section IV presents the methodology and results. In Section V we provide a summary of our main results and conclude the paper.

II. Literature Review

In this paper we examine the effect of corporate governance in emerging markets on market valuation, internal firm performance via return on equity, dividend payout, and the interactions of firm-level and country-level governance. All of these topics have received some treatment in the previous literature on corporate governance in emerging markets. In this section we detail the existing literature and relate how our paper contributes to this literature.

A number of papers have examined the effect of corporate governance on firm valuation in emerging markets. The vast majority of these papers find that better corporate governance is, to some extent, related to higher market valuation. However, the data used in these studies are limited. For example, Black (2001) and Black, Jang and Kim (2006b) examine the effects of firm-level corporate governance in only one emerging market country with one cross-section of data.² Durnev and Kim (2005) and Klapper and Love (2004) examine firms in many emerging market countries but again with only one cross-section of data. Finally, Black, Kim, Jang and Park (2006) (for Korea) and Black, Love and Rachinsky (2007) (for Russia) examine time series data but only for one country.

All of the above papers suffer from a possible endogeneity problem as it is difficult to determine if better corporate governance is causing higher market valuations or if higher valued firms endogenously choose better corporate governance. The endogeneity problem exists in these papers because they lack a suitable instrument through which to implement generalized least square approaches that could correct for possible endogeneity. Two papers that do attempt to deal with endogeneity using an instrumental variables approach are Durnev and Kim (2005) and Black, Jang and Kim (2006a). They both find that after controlling for endogeneity, corporate governance likely explains market valuations.³

This paper extends the literature in two ways. First, we offer the first paper to use panel data on multiple firms based in multiple countries. These data allow us examine the effects of corporate governance in a much more thorough fashion than the previous literature. Second, since we have firm-level corporate governance ratings on a monthly basis, we can examine the effects of changes in corporate governance at the firm level over the specific window of time during which the corporate governance ratings have changed. This type of test allows us investigate whether better governance causes better valuations, while avoiding the endogeneity issue.

The related literature uses various forms of corporate governance data in its analyses. For firm-level corporate governance, Black, Jang and Kim (2006a), Black, Jang and Kim (2006b), Black, Kim, Jang and Kim (2006) use self-constructed indices of corporate governance that are based on data from surveys that were conducted by the underlying stock exchange or other government institutions. Others, like ourselves, use firm-level corporate governance rating from

² Black (2001) examines Russia and Black, Jang and Kim (2006) examine Korea.

³ Black, Jang and Kim (2006a) uses unique features of Korean legal rules to construct an instrument for Korean listed firms. Durnev and Kim (2005) use industry instruments.

investment banks (Black (2001), Klapper and Love (2004) and Durnev and Kim (2005)).⁴ Finally, Black, Love and Rachinsky (2007) use a number of different firm-level corporate ratings in their analysis.⁵ Indeed, one measure of corporate governance that they use is a combined index of these various ratings.

Since Klapper and Love (2004) and Durnev and Kim (2005) conduct a multi-country analysis, they also use country investor protection data to measure the governance level of the countries themselves. However, since the investment bank from which they acquired the firm-level data did not produce or release country-level ratings they instead use other measures of country governance than ratings. For example, Klapper and Love (2004) use measures of legal efficacy from the International Country Risk Guide. Similarly, Durnev and Kim (2005) use a host of sources to obtain legal efficacy and investor protection information about the country.⁶

Our paper, on the other hand, uses firm-level and country-level governance ratings from a single source, Alliance Bernstein. Hence, biases that result from obtaining the firm-level and country-level data from different sources are not present in our paper. Moreover, another advantage of the Alliance Bernstein data is that while the Alliance Bernstein's country-level governance rating takes into account many of the same legal and investor protection issues used by other papers, it also contains many other aspects such as macroeconomic stability and the country's stand on environmental, human rights and other important issues which may affect investors and firm-level governance.

Besides market valuation, our paper also examines if firm-level and country-level corporate governance influences internal firm performance, as measured by return on equity. Similarly, Klapper and Love (2004) also investigate this issue on a multi-country approach, with one-cross section of data, using return on assets.⁷ They find that firm-level corporate governance is positively and significantly related to return on assets. However, they find mixed results when they examine the relation between country-level governance and return on assets. Specifically, they find that after controlling for firm-level corporate governance, the level of shareholder rights in the country is positively and significantly related to return on assets while the level of judicial efficiency and legality are not significantly related to return on assets.

In our paper, we find similar results to Klapper and Love (2004) for firm-level governance. That is, better firm-level governance does indeed seem to be positively related to return on equity. However, somewhat unlike Klapper and Love, we find that country-level governance is generally negatively related to return on equity. Hence, firms in countries with lower-levels of country-level governance have higher return on equity after controlling for firm-level governance. The difference in the results may be due to the fact that we use a more comprehensive measure of country-level governance than Klapper and Love.

Our paper also examines the relation between corporate governance and dividend payout. The most similar papers to ours in this regard are La Porta, Lopez-de-Silanes, Shleifer and Vishny (LLSV) (2000) and Mitton (2004). LLSV (2000) examine the link between country-level

⁴ Black (2001) uses firm-level corporate governance ratings from Brunswick Warburg investment bank, while Klapper and Love (2004) and Durnev and Kim (2005) use ratings from Credit Lyonnais Securities Asia (CLSA).

⁵ Specifically, Black, Love and Rachinsky (2007) use firm-level corporate governance ratings from Brunswick UBS Warburg, Troika Dialog (Russia's oldest investment bank), The Institute of Corporate Law and Governance, The Russian Institute of Directors, and Standard and Poor's.

⁶ They use information from La Porta et. al (1998a), La Porta (1998b), Claessens, Djankov and Nenova (1999), the World Fact Book, Pistor, Raiser and Gelfer (2000) and Dyck and Zingales (2002).

⁷ Core, Guay, and Rusticus (2005) examine this issue in the U.S. and find that better governance leads to better internal firm performance.

governance and dividend payout. They find that dividend payouts are significantly higher in countries with better country-level governance; in particular, countries that have stronger legal protection of minority shareholders. This result is consistent with an agency theory model in which shareholders perceive a greater risk of expropriation by insiders. Specifically, outside shareholders with better rights will demand higher dividend payouts as they fear expropriation by insiders. Conversely, outside shareholders without strong rights will not be able to demand higher levels of dividend payouts.

Unlike LLSV (2000), Mitton (2004) examines if firm-level governance is related to dividend payouts. Using the same firm-level corporate governance ratings as Klapper and Love (2004), Mitton finds a positive and significant relation between firm-level corporate governance and dividend payouts. However, the effect is limited to countries that have strong investor protection. In countries with weaker legal standards, Mitton finds that there is no significant relation between firm-level corporate governance and dividend payouts.

In our analysis, very similar to LLSV (2000), we find that country-level governance is significantly and positively related to dividend payouts. However, unlike Mitton, we find that after controlling for country-level governance there is a somewhat negative relation between firm-level governance and dividend payout.

Finally, our paper examines the link between country-level governance and firm-level governance. That is, we ask if any particular type of country-level governance policies are related to better firm-level governance. In the literature, Doidge, Karolyi and Stulz (2007) have also examined this question in great detail. They find that country characteristics are crucial to firm-level governance. Specifically, they find almost all the variation in firm-level corporate governance in developing countries is due to country characteristics rather than firm characteristics.

In our analysis we find somewhat similar results. Although causality is difficult to determine, we find that two specific country factors, the government's stand on corporate governance and equity culture, and the political, social and environmental climate, have an impact on firm-level governance.

III. Data

In this section we detail the data used in the study. Since this is the initial study using this data set, we describe the data in detail. To make this section more readable, we have divided it into five sections that detail the sample period, the Alliance Bernstein firm-level corporate governance ratings, the Alliance Bernstein country-level governance ratings, other data, and descriptive statistics.

III.a. Sample Period

The sample period for our study is November 2001 to September 2006. All of data is monthly unless otherwise indicated. We begin the sample in November 2001 as this is the first time period for which the Alliance Bernstein governance ratings are available.

III.b. Alliance Bernstein Firm-Level Corporate Governance Ratings

We use the firm-level corporate governance ratings compiled by Alliance Bernstein. The ratings are calculated for all firms and countries within the Alliance Bernstein Capital Emerging Market Universe. This consists of several hundred firms from many emerging market countries. The inclusion of firms in the Alliance Bernstein universe is determined by their inclusion in indexes

generated by index providers, particularly the Morgan Stanley Capital International Emerging Markets Index (MSCI EM). While the Alliance Bernstein universe does not include a number of non-growth oriented firms in the MSCI EM, it does include about 70 to 85 percent of the total market capitalization of MSCI EM.⁸

A firm-level corporate governance rating is calculated on a monthly basis for each firm that Alliance Bernstein includes in its universe. The ratings are based on an Alliance Bernstein analyst's answers to a set questionnaire that consists of 58 questions. The questions primarily require answers of yes or no, with scores provided for each yes or no answer. For example, one question asks "Is senior management accessible to investors?" If the analyst answers yes then the firm receives five points; if the analyst answers no then the firm receives zero points. The highest possible score, representing the highest firm-level corporate governance rating that a firm can receive, is 111 while the lowest is a zero.

The analysts that answer the questionnaire all live in the same region as the firms that they survey. Most are locals that grew up in the culture and speak the local language. Also, most of the analysts have advanced graduate degrees from top U.S. and foreign business and economics programs and have extensive experience as analysts.

The questionnaire that these analysts answer is sub-divided into seven sections. Below we briefly describe each one of these sections.

1. Information Disclosure

This section determines whether the company produces financial reports in a timely fashion, maintains an English language webpage, has an American Depositary Receipt (ADR), and other disclosure issues. There are eight questions with the highest possible score being an eight. Hence only eight out of 111 points, or about seven percent of the final firm-level corporate governance score, come from this section.

2. Management Access and Fair Disclosure

This section deals with the accessibility of management, the usefulness of investor relations, the dissemination of information and issues surrounding possible insider trading. There are five questions with the highest possible score being a 12. Hence, about 11 percent of the score is formed from this section.

3. Representation of Data (Accounting)

The questions in this section examine the rigor and consistency of accounting methods, treatments of items such as goodwill, deferred taxation, research and development, and auditor independence. The questionnaire also evaluates transactions such as related-party loans and takes into account the company's accounting track record, deducting points for a change in auditors or qualification to the financial statements in the past five years. There are ten questions in this section worth a total of 13 points (about 12 percent of the overall score).

⁸ Alliance Bernstein does not run a quantitative screen to determine what firms to include or not include in their universe, instead this is arrived at on a case-by-case basis. Indeed, one of the requirements to be included in the Alliance emerging markets universe is that firms provide enough information so that corporate governance rating can be assessed.

4. Value Creation

This section examines whether management understands the concept of value creation and has a track history of creating value. Issues include stability of management and compensation packages that are linked to suitably challenging performance criteria. The analyst has to determine whether the company is clearly articulating a business direction. There are nine questions in this section worth a total of 24 points (about 22 percent of the overall score).

5. Board and Shareholder Structure

The questionnaire also examines board and ownership structure. The questionnaire contains questions on whether the board of directors is suitably qualified, including whether they have been convicted of bribery or fraud in the last three years. The questionnaire also examines the degree of board independence and uses the best practices of the Institute of International Finance's Code of Corporate Governance as the role model for board independence. There are 12 questions in this section worth a total of 24 points (about 22 percent of the overall score).

6. Capital Management

This section examines the degree of the firm's capital efficiency, and whether the capital is used for the benefit of minority shareholders. For example, the questionnaire asks whether the company is making satisfactory use of its cash flow in the form of dividends or share buybacks, hedging its risks adequately and using appropriate sources of financing for projects and acquisitions. There are seven questions in this section worth 14 points (about 13 percent of the overall score).

7. Ethics, Social Responsibility and Other

In this section the questionnaire asks if the company has a code of ethics, whether it has an equal opportunity policy and whether it explicitly avoids employing under-age labor. It also asks whether the company does business in countries that support terrorism or deals with parties suspected of terrorist activity. In addition, analysts are required to answer the most subjective question of the questionnaire, "Do you trust management?" This question is asked because experience has shown that management's statements may be accurate, but they may still behave in a way that hurts minority shareholders. There are nine questions in this section worth 16 points (about 14 percent of the overall score), with the "Do you trust management" question receiving five points (about 4.5 percent of the total score) for a yes answer.

As seen above, value creation and board and shareholder structure receive the most weight of any of the sections. Indeed, 44 percent of the final score is from these sections.

To calculate the firm-level corporate governance ratings, Alliance Bernstein gives firms an A rating if their total score is above 84 out of a total of 111 points; a B rating if their score is between 56 and 83; a C rating if their score is between 28 and 55; and a D if their rating is 27 or below.

Finally at the end of the questionnaire the analyst is asked to provide a directional indicator as to whether he or she thinks the firm's corporate governance is improving or deteriorating. If improving, the analyst gives a plus sign, if deteriorating the analyst gives a minus sign, and if no change is perceived then the analysts provides no sign. This plus or minus sign is then added to the rating grade to arrive at the final grade. Hence, a firm that scored a 77 on the questionnaire and was seen by the analysts as having improving corporate governance would receive a final grade of B+.

III.c. Alliance Bernstein Country-Level Corporate Governance Ratings

For country-level corporate governance, Alliance Bernstein uses a rating system that is also based on a questionnaire that is answered by analysts in the region. As with the firm-level ratings, the analysts are asked primarily require yes or no responses with scores provided for each yes or no answer. A total of 50 questions are asked worth a total of 100 points. The questions are sub-divided into the following five sections:

A. Legal and Regulatory Infrastructure

This section includes whether the legal system of the country operates efficiently; whether laws related to minority shareholder rights are satisfactory; the quality of the police and courts; whether there is an independent securities regulator; and a host of other legal issues concerning investors. There are 20 questions worth 30 of the 100 total points (30 percent of the final country score).

B. Government Stance on Corporate Governance and Equity Culture

A total of 11 questions are asked in this section on how supportive is the government towards creating good corporate governance and the equity culture of the country. Examples of questions include: Is the legal and regulatory environment and government approach truly supportive of the corporate governance? Does the country have a significant domestic institutional investor base and or a significant retail investor base? Is the country organized, and supportive of good corporate governance? Does the stock market have a significant role within the economy? Do large companies dominate the stock market? The 11 questions are worth a total of 30 points (30 percent of the final country score).

C. Macroeconomic and Political Stability

This section examines a host of macroeconomic and political stability issues of the country. There are nine questions asked which include questions regarding the quality of financial transparency and financial data of the country; the degree of macroeconomic and political stability; the independence of the central bank; and the degree of corruption in the government. There are nine questions in this section worth a total of 20 points (20 percent of the final country score).

D. Accounting and Auditing Standards

Two specific questions are asked here: Are accounting standards formulated in accordance with International Financial Reporting Standards and/or US Generally Accepted Accounting Principles? Are national standards based on International Standards on Auditing? These two questions are worth a total of five points (five percent of the final country score).

E. Political, Social and Environmental Climate

In this section eight questions are asked of the analyst. Examples of questions include: Is the country in external or internal conflict/war? Does the country support terrorism? Does the country have respect for human, political and civil rights? Is there discrimination based on race, sex, disability, language or social status? Does the country support environmental issues and adheres to signed protocols? The eight questions are worth a total of 15 points (15 percent of the final country score).

As seen above, the most important areas for the country-level corporate governance score are the legal and regulatory infrastructure and the government stance on corporate governance and equity culture. Sixty percent of the final country score is based on these two factors.

To arrive at a country-level corporate governance rating, Alliance Bernstein gives countries an A rating if their scores is above 76; a B rating if the score is between 51 and 75; a C rating if the score is between 26 and 50; and a D rating if the score is below 26. In addition, similar to the firm-level ratings, the analysts are requested to provide a directional indicator as to whether the country is changing its policies on corporate governance, through a plus for improvement, a minus for deteriorating conditions, or neither for no perceived change. For example, Brazil received a C+ rating, indicating that it scored a low overall score but is making policy changes that are expected to improve country-level governance.

One important difference between the firm-level and country-level corporate governance ratings is that the firm-level ratings change during our sample period of November 2001-September 2006, while the country ratings remain the same throughout the entire sample period. For example, Brazil has a C+ rating throughout each month of our sample period. According to Alliance Bernstein, this is because none of the changes in policies since November 2001 have been sufficient to move the overall country score enough to change the overall country rating.⁹

III.d. Other Data

Other data used in this study are from Worldscope and Institutional Brokers Estimates System (IBES). For market valuation purposes we use monthly price to book (PB) and price to earnings (PE) ratios. The price is a month-end price in the local currency. The book value and earnings per share are determined on an annual basis. Specifically, the book value is extracted at the end of the last fiscal year end and earnings are extracted for the 12 months ending in the last fiscal year.

For internal performance, we use return on equity (ROE). This is calculated on an annual basis as $\text{Net Income before Preferred Dividends} - \text{Preferred Dividend Requirement} / \text{Last Year's Common Equity} \times 100$.

We also use dividend payout as a dependent variable in many of the results presented. The payout measure is calculated as dividends per share/earnings per share. Worldscope calculates this measure by looking through a series of four Worldscope dividend per share definitions and four earning per share definitions and prioritizing the most recent 12 month period available. As a result of this the data changes on a quarterly basis.

As control variables we use net assets of the firm, the capital to sales ratio (Capex/Sales), and the debt to equity ratio (Debt/Equity).¹⁰ We also use as a control the growth in earnings per share (EPS Growth). This represents a forecasted expected annual increase in operating earnings over the company's next full business cycle. The forecasts are received directly from contributing IBES analysts.¹¹ In general, these forecasts refer to a period of between three to five years. As recommended by the data provider, we use the median value of the forecast as opposed the mean value. The median value is less affected by outliers. Because a significant proportion of

⁹ It should be noted that in late 2006, after our sample ended, Alliance downgraded the country rating of Venezuela from C- to D.

¹⁰ Capex/Sales is defined as the $(\text{capital expenditures}/\text{net sales}) \times 100$. Debt to equity is defined as $((\text{long term debt} + \text{short term debt} + \text{current portion of long-term debt})/\text{common equity}) \times 100$.

¹¹ IBES is a company owned by Thomson Financial. They survey sell side analysts forecasts for firm future earnings, growth, valuation, etc. and then sell the forecasts to the public.

EPS Growth observations are missing, we set missing values of EPS Growth equal to zero and include a corresponding dummy variable that is equal to 1 if the EPS Growth data is missing and 0 otherwise (No EPS Growth Dummy).

III.e. Descriptive Statistics of the Data

In Table 1 (Panels A-E) we present the descriptive statistics of our data. Panel A presents the countries used in our sample, the number and proportion of observations associated with each country, and the Alliance Bernstein country-level corporate governance rating for each country in our sample. The country-level corporate governance ratings remain the same throughout our sample period. Panel B provides the industries in our sample and the number and proportion of observations associated with each industry. Panel C provides the number of firms included in our sample each month. Panel D presents the correlations between all the variables; and Panel E provides some summary statistics.

Several points are noteworthy. First, we create several variables from the firm-level and country ratings that we later use in our analysis. Firm Rating 1-3 is a variable in which the firm receives a value of three if it has any A rating, i.e. (A+, A, A-), a two if it has any B rating (B+, B or B-), and a value of one if it has any C rating (C+, C or C-). Country rating 1-3 is similarly defined for country ratings. Firm rating 1-9 is a variable in which a firm that has an A+ rating receives a value of nine, a firm that has an A rating receives a value of eight, decreasing incrementally until our lowest firm rating of C-, which receives a value of one. Country rating 1-9 is similarly defined for country ratings. No firms or countries in our sample had a rating below a C-.

Second, our data, like most emerging market data, is subject to significant outliers which, if included, heavily influence the results. As a result we exclude these outliers. We applied a number of different rules to exclude these outliers with relatively similar results for the tests performed throughout the paper.¹² The estimation results reported here use the rule of eliminating any firm observation in the top and bottom two percent of the distribution of the dependent variable. Hence, when the dependent is PB, observations associated with the top and bottom two percent of the distribution of PB are eliminated. We proceed similarly when PE or ROE ratios are the dependent variables. When Dividend Payout is the dependent variable we only exclude those firm observations that are in the top two percent of the distribution of Dividend Payout since many firms do not pay any dividends at all. The sample used to generate descriptive statistics (Table 1, Panels A-E) excludes all observations with outlier values of PB, PE, ROE, or Dividend Payout.

The descriptive statistics show some interesting results. As can be seen in Panel A, six countries (Taiwan, South Africa, India, Korea, Brazil and China) compose approximately 69 percent of the sample. Similarly, Panel B illustrates that over 50 percent of the sample is composed of just four industry sectors: financials, information technology, materials, and telecommunications services. Panel C indicates that the number of observations varies somewhat each month. This is because Alliance Bernstein is continually adding and dropping firms from its

¹² For example, we tried excluding the top and bottom one percent of the distribution. While we had relatively similar results to that of excluding the top and bottom two percent of the distribution, we still were including some very large outliers for the PE ratio that skewed the results of these regressions. We also tried using subjective outlier rules of excluding any PB ratio above 10 and below -10 and any PE ratio or return on equity ratio above 200 and below -200. While these subjective rules all produced relatively similar results to those reported we had to exclude between 5 and 7 percent of the total observations to use these rule, which we felt excluded too many observations.

universe and the fact that firms with financial ratio data in the top and bottom two percent of the distribution are excluded from the sample. In Panel D the correlations between the variables show that most of the variables are not significantly correlated to each other. The firm rating 1-3 and firm rating 1-9 variables are, unsurprisingly, very highly correlated. Similarly, the country rating 1-3 and country rating 1-9 variables are also very highly correlated.

In Panel E of Table 1 we see that there are a total of 12,155 monthly firm level observations after excluding the outliers. The vast majority of the observations are of firms that receive A or B firm-level corporate governance ratings. Indeed, only 766 of the monthly firm-level observations (6.3 percent of the sample) contain a C-level firm rating. Among firms located in A-rated countries, the number of C-rated firms is very low, with only 35 observations (1.3 percent of the total A-country observations).

Panel E also shows that firm-level governance follows country-level governance to some extent. In A-rated countries, approximately 50 percent of the firms receive an A- rating for firm-level corporate governance. In B- and C-rated countries, the percentages fall off to 29 percent and 18 percent respectively. Hence, better country governance seems to foster better firm level governance. These results are consistent with Doidge, Karolyi and Stulz (2007) who find that country-wide governance policies influence firm-level corporate governance.

The summary statistics in Panel E also illustrate that A-rated firms have higher PB, ROE and Debt/Equity ratios than other firms. Furthermore, the results indicate that C-rated firms have higher Capex/Sales ratios, indicating that these firms are either disproportionately from industries which use more capital, or that they do not use capital as efficiently as higher rated firms.

Our finding that lower rated firms will have higher capital to sales ratios is consistent with predictions of Klapper and Love (2004). Specifically, individuals who invest firms with high capital intensities will not require high firm-level corporate governance standards as there is little free capital left to abscond with. Conversely, a firm with a low degree of capital intensity will be forced by outside investors to have better firm-level corporate governance as it has many intangible assets that can be stolen by insiders.

One surprising result is that A-rated firms actually have lower EPS Growth averages than C-rated firms. However, upon closer inspection this result is mainly due to C-rated firms in B-rated countries having higher rates of growth. In both A-rated and C-rated countries, earnings growth is positively related to firm-level corporate governance. This is to be expected to some extent, as high growth firms require outside financing and hence may need to have better corporate governance standards to attract outside capital.

Finally, the No EPS growth dummy indicates about 19 percent of the sample as a whole did not have growth data. The growth data was more extensively available for A-rated firms than those of B- and C-rated firms.

IV. Methodology and Results

IV.A. PB, PE, ROE and Dividend Payout results

In Tables 2 and 3 we use a fixed effects pooled cross-sectional time series estimation approach to examine the effect of firm-level (Table 2) and country-level (Table 3) governance ratings on PB, PE, ROE and dividend payout. The fixed effects model allows us to pool the monthly cross-sections together as it controls for omitted variables not in the actual regression. Our fixed effects model controls for firm-specific and date-specific characteristics through the inclusion of firm-

specific dummy variables and dummy variables for each of the 59 months in our sample, excluding references.

As controls variables we use firm-level log(assets), Debt/Equity, Capex/Sales, EPS Growth, and the No EPS Growth dummy. In Table 2 we use as an additional control variable, country rating 1-9, which proxies the level of country governance that the firm is located, whereas in Table 3 we use firm rating 1-9 which proxies the level of company governance.¹³

The values of PB and PE reported in our sample could change each month. Hence, in the cases where the dependent variable is PB or PE, we pooled all of the 59 monthly cross-sections in our regression estimations. When we use ROE as the dependent variable we only pool annual observations from each December of our sample, as the data is only updated by Worldscope on an annual basis. For dividend payout the data is updated each quarter, hence we pool the quarterly observation from every March, June, September and December.

The results presented in Tables 2 and 3 indicate that better firm-level and country-level governance generally produces higher PB and PE ratios. Table 2 shows that firms with firm ratings of B and C have significantly lower PB ratios than A-rated firms, and that B-rated firms have significantly lower PE ratios than A-rated firms. The table also shows that the relation between valuation and firm-level governance is non-linear. A-rated firms outperform B and C firms, but B-firms do not outperform C firms in terms of valuation (we independently test for the difference between B-rated and C-rated firms). Indeed, the C-rated firms actually had a significantly higher PE ratio than the B-firms.

Table 3 shows much the same relation using country-level governance ratings. That is, firms located in countries with better country governance have significantly higher market valuations, yet there is little difference in market valuation between firms located in B- and C-rated countries. Hence, the results in Table 2 and 3 suggest that while better firm-level and country-level governance leads to better market valuations, only A-rated firm-level and country-level governance is valued by the markets.

Before discussing the rest of the results from Tables 2 and 3, we should note that we cannot determine econometrically if the higher valuations are actually caused by better governance. That is, there is a potential that the relation between governance and valuation reflects an endogeneity, in which higher value firms choose better governance. Our analysis lacks, as with most of the other papers on this issue (the exceptions are Durnev and Kim (2005) and Black, Kim, Jang and Park (2006)), an effective instrument to deal with this endogeneity issue.

The results of Tables 2 and 3 also show some interesting results about ROE and dividend payout. Table 2 indicates that A-rated firms have significantly higher ROE than B-rated firms. Similarly, A-rated firms have higher ROE than C-rated firms but the difference is not significant. These results are similar to Klapper and Love (2004) who find the same results with return on assets. Table 3, on the other hand, shows that firms in B- and C-rated countries have significantly higher ROE than firms in A-rated countries. Hence, firms in countries with weaker country corporate governance and strong firm-level governance will have a high ROE while firms in countries with strong country corporate governance and weak firm-level governance will have lower ROE. These results make some intuitive sense. One would surmise that better run firms,

¹³ Note that robustness tests using the variables firm rating 1-3 in Table 2 and country rating 1-3 in Table 3 were very similar to those reported in the paper. Note also that we do not use dummies for industry in the regressions reported in Tables 2-3. This is because industry dummies are not compatible with the fixed effects model because they are perfectly collinear with the firm-specific dummy variables.

regardless of their country-level of governance, will have better ROE. Furthermore, firms located in lower rated countries (controlling for firm-level governance) will probably have higher ROE as these countries are not as developed as the A-rated countries and hence have higher rates of economic growth as they attempt to converge with other countries. Indeed, the average annualized real rate of GDP growth over the period 1999-2006 in A-rated countries 4.06, while it was 4.56 percent in B-rated countries and 5.05 percent in C-rated countries.¹⁴ These higher rates of economic growth would serve to create higher ROE.

For dividend payout, the results of Tables 2 and 3 are quite the opposite of the ROE results. Whereas we found that firm-level governance was positively related to ROE, we find better firm-level corporate governance is, to some extent, negatively related to dividend payout as C-rated firms have significantly higher dividend payout ratios than either A- or B-rated firms. Further, while we found evidence that country-level governance was negatively related to ROE, we find a positive and significant relation between country governance and dividend payout that is consistent with LLSV (2000) and Mitton (2006). Hence, on average, a firm with poorer firm-level governance that is located in a country with strong country-level governance will have significantly higher dividends payouts than a firm with strong-firm level governance that is located in a country with weaker country-level governance.

In terms of explaining the above dividend payout results, first consider the positive relation between country-level ratings and dividend payout. Since the minority shareholder rights are generally stronger in countries with higher country-level governance ratings, firms located in these countries will tend to pay higher dividends as the minority shareholders fear expropriation by insiders. Conversely, since minority shareholder rights are weaker in lower rated countries, firms in these countries will tend to pay lower dividends. However, after controlling for these country effects, it is reasonable to assume that firm-level corporate governance would be negatively related to dividend payout. This is because better firm-level governance would imply that investors could better trust the company to efficiently reinvest earnings in the interest of minority shareholders. In other words, firms with better governance would not be forced to payout higher dividends since investors trust management with their earnings, whereas firms with weak firm-level governance would have to pay higher dividends as the investors do not trust the company with their earnings.

Also consistent with LLSV (2000) and Mitton (2005) we find a negative and significant relation between dividend payout and growth opportunities. This suggests that investors will allow firms with strong growth opportunities to reinvest rather than payout dividends.

IV.B. The effect of changes in firm-level corporate governance ratings

In our sample, there are several hundred cases where the firm-level governance rating changes from the previous period. This is unlike the country-level corporate governance ratings which remain static throughout our sample. These changes in firm-level corporate governance allow us to examine the effects of corporate governance change on a micro level, something that has not, to our knowledge, been examined in the previous emerging markets literature due to a lack of panel data. Since we can examine what actually happens to market valuation, internal performance and dividend payout before and after the change in governance, we can overcome, to some extent, the issue of whether better governance causes better valuations, or whether firms with better valuations endogenously choose better governance.

¹⁴ The annualized real GDP growth rates were calculated from data provided by the IMF and Deutsche Bank. The averages were calculated by taking an equally weighted average of all of the countries in the rating group.

In Table 4 we use an OLS regression to examine periods immediately before and after the change in firm-level governance ratings to see if PB, PE, ROE and dividend payout significantly change before and after these changes in the firm-level ratings. Specifically, we examine four windows of time surrounding the time of the ratings change: one month before and after the change, three months, six months and 12 months.¹⁵

To examine the effect of the change in ratings we create a variable titled “firm rating change increments” which proxies the degree of the firm rating change. This variable is defined as follows: For each rating grade increase (decrease), the firm rating change increment variable increases (decreases) by one. For example, a firm that sees its corporate governance rating increase from a B to B+ receives a value of one. A firm that sees its corporate governance rating decrease from B to C receives a value of negative three. The largest increase (decrease) in the firm rating grade change increment variable experienced by any one firm at one time was six (negative six).

We use several control variables in the regression. First, to control for the fact that the country stock market may have changed dramatically over the window of time before and after the change in the firm-level rating, we use the mean monthly returns of the country stock market index over the window of time as a control variable.¹⁶ Second, we use the change in Debt/Equity, Capex/Sales, log(Assets), and EPS Growth over the window of time to control for any major changes that took place in the companies underlying structure during the period surrounding the firm-level ratings change. Some of these variables cannot change over the 1-month and 3-month windows as their frequency is quarterly or annual. Third, we use the No EPS Growth dummy to designate if the observation did not have EPS Growth data. Fourth, to control for the other country effects we use the country rating 1-9 variable. Fifth, and finally, we include dummies for industry, using the same industries listed in Table 1.B, excluding a reference. The coefficients associated with industry dummies are not presented in Table 4.¹⁷

The results of this analysis show several interesting findings. First, changes in corporate governance are somewhat related to market valuation and internal performance. Specifically, we find a significant (at the ten percent level) and positive relation between the PB ratio and the magnitude of the change in the firm level corporate governance rating using both the one-month and three-month pre/post windows. Hence, improvements (declines) in firm-level corporate governance are positively related to higher (lower) PB ratios. These results provide some evidence that the market does value improvements in corporate governance; however they should be viewed with caution as we do not find similar results for the PE ratios. Indeed, we find that PE ratios are not significantly related to changes in the firm-level governance ratings whatsoever.

Second, we find a significant (at the five percent level) relation between ROE and the magnitude of the change in the firm level corporate governance rating using a 12 month pre/post window. This finding indicates that firms do perform better internally, as measured by ROE, after improvements in corporate governance. We do not find a significant relation for the shorter window period, attributable to the fact that ROE is only updated once a year in the data.

¹⁵ The windows always include the month of the ratings change. For example, the one month pre-post window is a total of three months: one month before the change, the month of the change, and one month after the change.

¹⁶ We use the local Morgan Stanley Capital International country indexes in local currency to calculate this variable.

¹⁷ Robustness tests that exclude the industry dummies generally find the same results. The only major difference is that the one year ROE result is significant at the ten percent rather than five percent when we exclude the industry dummies.

Third, and finally, we find no significant relation between dividend payout and changes in the firm-level corporate governance rating. In three of the four windows (all but the six month window) the coefficient on firm rating change increment is negative which is, to some extent, consistent with our results in Table 2 indicating that dividend payout is negatively related to improvements in firm-level corporate governance after controlling for the country effect.

IV.C. Tests of the relation between country characteristics and firm rating

The Alliance Bernstein data also permit us to examine which aspects of country-level governance influence firm-level governance. As stated in Section III, the country governance rating is based on five components: legal and regulatory infrastructure, government stance on corporate governance and equity culture, macroeconomic and political stability, accounting and auditing standards, and the political, social, and environmental climate. Since we have the five component scores for each country, we examine the relation between firm-level corporate governance and these country rating components to identify which of the components is related to firm-level corporate governance. In this way, we can identify some policy implications about the type of country governance changes that may indeed produce better firm-level governance.

To test for the above we use a fixed effects pooled cross-section time series estimation approach in which we regress the component scores of the country-level ratings on firm-level ratings. Specifically we use the variables firm rating 1-9 and firm rating 1-3 as the two dependent variables. Again, firm rating 1-9 assigns a value of nine to a firm that has an A+ rating and a value of one to a firm that has a C-rating. Firm rating 1-3 assigns a value of three to a firm that has any A rating (A+, A, or A-) and a value of one to a firm that has any C rating (C+, C, C-).

For this test, we use all of the available observations in the sample period. This includes observations that were excluded because the financial ratio data was in the top or bottom two percent of the distribution, and observations that were excluded because of lack of financial ratio data. Hence, we use a total of 14,961 observations as compared to 11,813 observations in the PB regression on Table 2.

The results are presented in Table 5. We find that the governance stance on corporate governance and equity culture and the political, social, and environmental climate of the country are both positively and significantly related to firm-level governance. That is, in countries that have high scores on these two measures, we see significantly higher ratings for firm-level corporate governance. As described in Section III, the government stance on corporate governance and equity culture contains issues such as whether the legal and regulatory environment of the country's government are truly supportive of the corporate governance, and how much influence the stock market has on the overall economy. To a large extent, these results are not surprising as many papers have found the legal and regulatory environment to be important for better corporate governance (for example, see LLSV (2000)). What is more surprising is that the political, social, and environmental climate of the country is positively related to better firm-level governance. Again, this component encompasses such issues as whether the country is conflict and whether the country supports human rights and environmental issues. This result suggests that a county which is concerned with human rights and environmental issues creates an example that corporations follow. That is, a government that cares about these basic issues fosters corporations that care how they operate.

Of course, the above findings may be unrelated to better firm governance as we cannot determine the direction of causality. Indeed, it may be that having firms with better governance fosters better country governance. However, according to large of number of papers e.g., LLSV

(1999-2002) and Doidge, Karolyi and Stulz (2007), country-level governance impacts firm-level governance far more than the other way around. According to Doidge, Karolyi and Stulz (2007), country-level policies heavily impact firm-level governance because they influence the costs that firms incur to bond themselves to good governance and the benefits the firm's receive from doing so.¹⁸ For example, a credible method of verifying a firm's income statements may not be available due to insufficient infrastructure in the country.

Hence, our results indicating that the governance stance on corporate governance and equity culture, and the political, social, and environmental climate of the country are both positively and significantly related to firm-level governance may provide some insights into the types of policies that countries want to follow in order to produce better firm-level governance.

IV.C. The out-of-sample stock return performance of corporate governance ratings

The final issue that we investigate is whether the firm-level and country-level corporate governance ratings can help predict risk-adjusted stock return performance. To answer this question we examine the out-of-sample stock performance of both the firm-level and country-level ratings. Specifically, we create two separate three-year out-of-sample periods: 2002-2004 and 2003-2005. To generate these two samples we take all the firms that received firm-level corporate governance ratings at the beginning of the sample (December 31, 2001 for the 2002-2004 sample and December 31, 2002 for the 2003-2005 sample). These firms were then followed for the next three years, and the monthly returns for each firm were collected during the out-of-sample period. To prevent survivorship bias, firms that dropped out before the end of the sample period were not excluded. Instead, the returns of the firms that dropped out of the sample were treated as follows. First, we use the actual monthly returns of the firm until it drops out of the sample. Once it drops out, the monthly returns then become the returns of the closest matching firm that survived the entire out-of-sample period. To find the closest matching firm we used an algorithm that is described in Appendix I. The algorithm matches firms on firm-level and country-level governance ratings, Capex/Sales, dividend payout, and log(assets).

To examine the stock return performance of the firms we use the Sharpe ratio, defined as the mean monthly return divided by the monthly standard deviation of the firm's stock. All returns are in US dollars to permit comparison across countries.

The results are organized in four panels of Table 6. Panel A uses a regression analysis in which firms with firm ratings of A (any firm rating of A+, A, or A-) are the reference group and dummy variables are used for B-rated and C-rated firms. In this regression, the constant term provides the mean Sharpe ratio of A-rated firms during the out-of-sample period. The coefficient on the B- rating dummy provides the mean difference in Sharpe ratio between B-rated firms and the A-rated firms. The coefficient on the C dummy provides the mean difference between C-rated firms and A-rated firms. Negative and significant coefficients on the B and C dummies indicate that the Sharpe ratio performance of B and C firms is significantly less than that of A-rated firms.

Panel B uses the same approach as Panel A but uses country ratings instead of firm-level ratings. Panel C replicates Panel A but also uses country rating 1-9 to control for country-level rating effects. Finally, Panel D replicates Panel B. but also uses firm rating 1-9 to control for firm-rating effects.

In the analysis of firm-level ratings, we find some evidence that firm-level ratings can predict future stock risk-adjusted return performance, although the results are weaker than for

¹⁸ Doidge, Karolyi and Stulz (2007), p. 3.

country-level ratings. Before controlling for the country-level governance (Panel A), we find that B-rated firms in the 2002-2004 sample and C-firms in the 2003-2005 sample have significantly weaker performance than A-firms. The other coefficients, although not significant, have negative coefficients, indicating that these lower rated firms generally perform worse than A-rated firms. However, when we control for the country-level effect (Panel C) we find that the significance levels on the coefficients generally fall. Indeed, only the C-firms in the 2003-2005 samples remain negative and significant. Thus, after we control for country-level effects, the ability of firm-level governance ratings alone to predict future stock performance is limited at best.

Panels B and D indicate that firms located in countries with high country-level governance ratings generally perform significantly better than firms located in countries with low country-level governance ratings. The only case where we do not report a negative and significant coefficient is for C-firms in the 2003-2005 sample. These results were identified both before and after controlling for firm-level governance (Panels B and D).

In sum, while an investor would obviously be advised to consider many other aspects before deciding upon investing in a firm in an emerging market, our results in this section suggest that investors should consider country governance and then firm-level governance in the search for better future stock risk-adjusted return performance. These results are broadly consistent with Doidge, Karolyi, and Stulz (2007) who find the country-level characteristics matter a great deal in terms of firm-level corporate governance.

V. Conclusions and Caveats

In this paper we utilize a new data set from Alliance Bernstein that has firm-level and country-level corporate governance ratings on a panel basis. Specifically, we have monthly firm-level and country-level corporate governance ratings from Alliance Bernstein for 22 emerging market countries for almost five years. In these data, each firm and country within the Alliance Bernstein emerging markets universe receives a corporate governance rating that ranges from A+ to D, although the lowest actual rating is C-.

Part of our study, namely the results reported in Tables 2 and 3, is subject to endogeneity as we cannot determine if corporate governance causes these effects or if the effects endogenously cause their to be different levels of corporate governance. Also, our investigation as to what aspects of country-level governance relate to better firm-level governance is subject to endogeneity as we cannot determine whether better country governance necessarily influences better firm-level governance or vice versa. However, these caveats notwithstanding, we find many interesting results regarding firm-level and country-level corporate governance that have implications for corporations, investors and policymakers.

First, using a fixed-effects pooled cross-sectional time series analysis that uses many controls, we find that better firm-level and country-level governance are positively and significantly related to better market valuations, i.e., PB and PE ratios. These results are generally similar to what has been found in the previous literature.

Second, while we find better governance is related to better market valuations, we find that the relation is non-linear. Specifically we find that the firms with the best firm-level corporate governance ratings (A-rated) have significantly higher PB and PE ratios than firms with intermediate ratings (B-rated) and firms with low ratings (C-rated). However, we generally find that there is no significant difference between B-rated and C-rated firms in terms of market valuation. We also find this same non-linear relation when examining country-level governance. Firms in highly rated countries (A-rated) have higher market valuations than firms in

intermediate (B-rated) and low-rated (C-rated) countries. Yet, there is no significant difference between the market valuations of firms in B-rated countries and those in C-rated countries. These results suggest that there is a significant premium is paid for top firm-level and country-level governance but not for intermediate levels of governance.

Third, using the same fixed-effects approach, we find that ROE is also positively and significantly related to better firm-level corporate governance. These results are similar to Klapper and Love (2004) who find the same result with return on assets. However, interestingly, we find that ROE is negatively and significantly related with country-level governance. We argue that the reason for the higher return to equity in firms from lower rated countries is that these countries have recently had higher rates of real economic growth than the A- and B-rated countries, and hence will have higher ROE after firm-level governance and other factors are controlled.

Fourth, consistent with LLSV (2000), we find that firms located in countries with high governance standards pay out significantly higher dividends. This result is consistent with an agency theory model in which shareholders perceive a great risk of expropriation by insiders. However, if the country-level governance effect is controlled, firm-level corporate governance is actually somewhat negatively related to dividend payout. Specifically, we find that firms with C (the lowest) firm-level corporate governance ratings have significantly higher dividend payouts than the firms with A-or B- ratings. These results suggest that after controlling for the level of country governance, investors demand higher dividend payouts from firms that have weak firm-level governance as they are unsure of the firm's ability to efficiently reinvest earnings.

Fifth, we find that if a firm's corporate governance rating improves (worsens) there is some evidence that the firm's PB and return to equity improve (decline) over period immediately before and after the change in governance. More specifically, we find a significant (at the ten percent level) and positive relation between the PB and the change in the firm-level corporate governance rating using 1-month and 3-month windows before and after the month when the firm-level governance rating changed. We find that there is a positive and significant (at the five percent level) relation between ROE and the change in the firm level corporate governance rating using a one-year window surrounding the month when the firm-level governance rating changed. These tests using the change in the firm-level corporate governance ratings have allowed us to overcome, to some extent, the issue of whether better governance causes better valuations, or whether firms with better valuations endogenously choose better governance, a problem from which our results in Tables 2-3 also suffer. To our knowledge, this type of test on the impact of corporate governance at the firm level has not been examined before in the emerging markets literature.

Sixth, in our examination of what aspects of country governance influence firm level governance, we find that the governance stance on corporate governance and equity culture and the political, social, and environmental climate of the country are both positively and significantly related to firm-level governance. That is, in countries that have high scores on these two measures, we see significantly higher ratings for firm-level corporate governance. The two components encompass such issues as the government's stance on privatization, how transparent the government's privatization efforts have been, whether the government discriminates foreign investors from domestic investors, how much of a domestic retail base exists for the stock exchange, how important the stock exchange is to the overall economy, and the country's stand on human rights and environmental policy. Although causation is difficult to determine, these

results suggest that if governments improve their stance in these issues, firm-level corporate governance will improve.

Seventh, our out-of-sample analysis finds that firms in countries with high country-level governance ratings predict significantly better future risk-adjusted performance. This was the case before and after controlling for firm-level governance. On the other hand, we find that firm-level corporate governance ratings themselves are somewhat weak predictors of future firm performance. Hence, our results suggest that for investors the first emphasis should be put on country governance and then firm-level governance in the search for better future performance.

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Appendix I: Algorithm used to identify matching firms for out-of-sample tests.

Matches are identified as follows:

1. Eliminate all firms that do not survive entire subsample period.
2. Identify all firms that share the same firm rating (any rating within the same letter is acceptable) on the last month for which data is available.
 - a. If only one firm is identified that satisfies this filter, eliminate all other firms and go to the final step.
 - b. If zero firms are identified, don't eliminate any additional firms, and go to the next step.
 - c. If more than one firm survives this filter, eliminate all other firms and go to the next step.
3. Identify all firms that share the same country rating (any rating within the same letter is acceptable) on the last month for which data is available.
 - a. If only one firm is identified that satisfies this filter, eliminate all other firms and go to the final step.
 - b. If zero firms are identified, don't eliminate any additional firms, and go to the next step.
 - c. If more than one firm survives this filter, eliminate all other firms and go to the next step.
4. Identify all firms that survive the previous step for which Capex/Sales is within 25 and 200 percent of the non-surviving firm on the last month for which data is available. Then,
 - a. If only one firm is identified that satisfies this filter, eliminate all other firms and go to the final step.
 - b. If zero firms are identified, don't eliminate any additional firms, and go to the next step.
 - c. If more than one firm survives this filter, eliminate all other firms and go to the next step.
5. Identify all firms that survive the previous step for which dividend payout is within 25 and 200 percent of the non-surviving firm on the last month for which data is available. Then,
 - a. If only one firm is identified that satisfies this filter, eliminate all other firms and go to the final step.
 - b. If zero firms are identified, don't eliminate any additional firms, and go to the next step.
 - c. If more than one firm survives this filter, eliminate all other firms and go to the next step.
6. Identify all firms that survive the previous step for which log(assets) is within 25 and 200 percent of the non-surviving firm on the last month for which data is available. Then,
 - a. If only one firm is identified that satisfies this filter, eliminate all other firms and go to the final step.
 - b. If zero firms are identified, don't eliminate any additional firms, and go to the next step.
 - c. If more than one firm survives this filter, eliminate all other firms and go to the next step.

7. Identify all firms that survive the previous step for which Capex/Sales is within 75 and 125 percent of the non-surviving firm on the last month for which data is available. Then,
 - a. If only one firm is identified that satisfies this filter, eliminate all other firms and go to the final step.
 - b. If zero firms are identified, don't eliminate any additional firms, and go to the next step.
 - c. If more than one firm survives this filter, eliminate all other firms and go to the next step.
8. Identify all firms that survive the previous step for which dividend payout is within 75 and 125 percent of the non-surviving firm on the last month for which data is available. Then,
 - a. If only one firm is identified that satisfies this filter, eliminate all other firms and go to the final step.
 - b. If zero firms are identified, don't eliminate any additional firms, and go to the next step.
 - c. If more than one firm survives this filter, eliminate all other firms and go to the next step.
9. Identify all firms that survive the previous step for which $\log(\text{assets})$ is within 75 and 125 percent of the non-surviving firm on the last month for which data is available. Then,
 - a. If only one firm is identified that satisfies this filter, eliminate all other firms and go to the final step.
 - b. If zero firms are identified, don't eliminate any additional firms, and go to the next step.
 - c. If more than one firm survives this filter, eliminate all other firms and go to the next step.
10. Of the firms that survive until this point, randomly choose 1 of the remaining firms and go to the final step.
11. Final Step: Extract the return of the identified surviving firm.

Table 1: Descriptive Statistics.

Panel 1.A: Number of observations, proportion of total observations, and country corporate governance ratings, by country.

| <i>Country</i> | <i>N</i> | <i>Proportion</i> | <i>Country Rating</i> |
|----------------|----------|-------------------|-----------------------|
| Taiwan | 1,961 | 16.13% | B |
| South Africa | 1,754 | 14.43% | A |
| India | 1,242 | 10.22% | B+ |
| Korea | 1,161 | 9.55% | B |
| Brazil | 1,158 | 9.53% | C+ |
| China | 1,088 | 8.95% | C+ |
| Mexico | 743 | 6.11% | B |
| Russia | 424 | 3.49% | C |
| Malaysia | 405 | 3.33% | B |
| Turkey | 397 | 3.27% | B |
| Chile | 368 | 3.03% | A |
| Thailand | 293 | 2.41% | C- |
| Israel | 237 | 1.95% | A |
| Hungary | 226 | 1.86% | A |
| Poland | 204 | 1.68% | B |
| Indonesia | 154 | 1.27% | C+ |
| Egypt | 118 | 0.97% | C |
| Argentina | 77 | 0.63% | C |
| Czech Republic | 65 | 0.53% | A |
| Philippines | 65 | 0.53% | C |
| Venezuela | 9 | 0.07% | C- |
| Peru | 6 | 0.05% | C |

Panel 1.B: Number of observations and proportion of total observations, by industry.

| <i>Industry</i> | <i>N</i> | <i>Proportion</i> |
|-----------------------------|----------|-------------------|
| Financials | 1,945 | 16.00% |
| Information Technology | 1,822 | 14.99% |
| Materials | 1,636 | 13.46% |
| Telecommunications Services | 1,634 | 13.44% |
| Consumer Discretionary | 1,397 | 11.49% |
| Industrials | 1,118 | 9.20% |
| Consumer Staples | 910 | 7.49% |
| Energy | 881 | 7.25% |
| Utilities | 508 | 4.18% |
| Health Care | 304 | 2.50% |

Panel 1.C: Number of observations per month.

| Month | Number | Month | Number | Month | Number | Month | Number |
|----------|--------|----------|--------|----------|--------|----------|--------|
| Nov 2001 | 121 | Feb 2003 | 214 | May 2004 | 219 | Aug 2005 | 256 |
| Dec 2001 | 130 | Mar 2003 | 215 | Jun 2004 | 203 | Sep 2005 | 244 |
| Jan 2002 | 129 | Apr 2003 | 224 | Jul 2004 | 211 | Oct 2005 | 256 |
| Feb 2002 | 137 | May 2003 | 214 | Aug 2004 | 215 | Nov 2005 | 257 |
| Mar 2002 | 153 | Jun 2003 | 212 | Sep 2004 | 220 | Dec 2005 | 244 |
| Apr 2002 | 162 | Jul 2003 | 213 | Oct 2004 | 223 | Jan 2006 | 241 |
| May 2002 | 175 | Aug 2003 | 214 | Nov 2004 | 226 | Feb 2006 | 217 |
| Jun 2002 | 186 | Sep 2003 | 186 | Dec 2004 | 205 | Mar 2006 | 219 |
| Jul 2002 | 194 | Oct 2003 | 185 | Jan 2005 | 214 | Apr 2006 | 217 |
| Aug 2002 | 198 | Nov 2003 | 191 | Feb 2005 | 214 | May 2006 | 179 |
| Sep 2002 | 199 | Dec 2003 | 195 | Mar 2005 | 225 | Jun 2006 | 183 |
| Oct 2002 | 193 | Jan 2004 | 199 | Apr 2005 | 248 | Jul 2006 | 182 |
| Nov 2002 | 204 | Feb 2004 | 200 | May 2005 | 258 | Aug 2006 | 197 |
| Dec 2002 | 205 | Mar 2004 | 204 | Jun 2005 | 258 | Sep 2006 | 187 |
| Jan 2003 | 214 | Apr 2004 | 216 | Jul 2005 | 255 | | |

Panel 1.D: Correlations between variables.

PB is the Price to Book ratio; PE is the Price to Earnings ratio; ROE is Return on Equity; EPS Growth is Growth in Earnings Per Share; No EPS Growth Dummy is a dummy that is equal to 1 if the EPS Growth data is missing and 0 otherwise; Firm Rating 1-9 is a variable that quantifies the firm corporate governance rating, where a firm with an A+ rating receives a 9, a firm with an A rating receives an 8, etc. Firm Rating 1-3 is a variable that quantifies the firm corporate governance rating, where a firm with an A+, A or A- rating receives a 3, a firm with a B+, B or B- rating receives a 2, and a firm with a C+, C or C- rating receives a 1. Country rating 1-9 is a variable that quantifies the country governance rating, where a firm in a country with an A+ rating receives a 9, a firm in a country with an A rating receives an 8, etc. Country rating 1-3 is a variable that quantifies the country governance rating, where a firm in a country with an A+, A or A- rating receives a 3, a firm in a country with a B+, B or B- rating receives a 2, and a firm in a country with a C+, C or C- rating receives a 1.

| | | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] | [11] | [12] |
|---------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|
| PB | [1] | | | | | | | | | | | | |
| PE | [2] | 0.33 | | | | | | | | | | | |
| ROE | [3] | 0.55 | -0.26 | | | | | | | | | | |
| Dividend Payout | [4] | 0.06 | 0.10 | -0.02 | | | | | | | | | |
| log(Assets) | [5] | -0.31 | -0.15 | -0.14 | -0.07 | | | | | | | | |
| (Capex/Sales)/10 | [6] | -0.05 | 0.06 | -0.10 | -0.09 | 0.10 | | | | | | | |
| EPS Growth | [7] | 0.17 | 0.21 | 0.00 | -0.04 | -0.06 | 0.03 | | | | | | |
| No EPS Growth Dummy | [8] | -0.07 | -0.04 | -0.01 | -0.03 | -0.07 | -0.04 | -0.33 | | | | | |
| (Debt/Equity)/100 | [9] | -0.06 | -0.02 | -0.04 | -0.06 | 0.41 | 0.05 | -0.01 | 0.09 | | | | |
| Firm Rating 1-9 | [10] | 0.21 | 0.05 | 0.12 | 0.05 | -0.06 | -0.06 | 0.04 | -0.06 | 0.05 | | | |
| Firm Rating 1-3 | [11] | 0.22 | 0.08 | 0.12 | 0.07 | -0.06 | -0.03 | 0.03 | -0.08 | 0.05 | 0.95 | | |
| Country Rating 1-9 | [12] | 0.05 | 0.06 | 0.02 | 0.05 | -0.15 | -0.15 | 0.02 | 0.00 | -0.04 | 0.22 | 0.22 | |
| Country Rating 1-3 | [13] | 0.03 | 0.06 | 0.01 | 0.06 | -0.14 | -0.16 | 0.01 | 0.03 | -0.03 | 0.24 | 0.25 | 0.97 |

Panel 1.E: Summary statistics by country and firm corporate governance ratings.

| <i>Country Rating</i> | <i>Firm Rating</i> | <i>Number</i> | <i>Avg. PB</i> | <i>Avg. PE</i> | <i>Avg. ROE</i> | <i>Avg. Dividend Payout</i> | <i>Avg. log(Assets)</i> | <i>Avg. (Capex/Sales)/10</i> | <i>Avg. EPS Growth</i> | <i>Avg. No EPS Growth Dummy</i> | <i>Avg. (Debt/Equity)/100</i> |
|-----------------------|--------------------|---------------|----------------|----------------|-----------------|-----------------------------|-------------------------|------------------------------|------------------------|---------------------------------|-------------------------------|
| All | All Firm Ratings | 12,155 | 2.80 | 15.70 | 20.16 | 36.17 | 3.56 | 1.36 | 1.30 | 0.19 | 0.86 |
| | A+, A, or A- | 3,700 | 3.41 | 17.32 | 21.69 | 38.17 | 3.54 | 1.29 | 1.48 | 0.14 | 0.94 |
| | B+, B, or B- | 7,689 | 2.59 | 14.84 | 19.97 | 35.99 | 3.54 | 1.37 | 1.18 | 0.21 | 0.83 |
| | C+, C, or C- | 766 | 1.87 | 16.48 | 14.71 | 28.36 | 3.82 | 1.62 | 1.64 | 0.22 | 0.73 |
| A+, A, or A- | All Firm Ratings | 2,650 | 2.87 | 16.19 | 20.84 | 41.27 | 3.42 | 0.96 | 1.17 | 0.24 | 0.68 |
| | A+, A, or A- | 1,322 | 3.11 | 16.01 | 22.41 | 43.11 | 3.52 | 0.98 | 1.39 | 0.18 | 0.79 |
| | B+, B, or B- | 1,293 | 2.65 | 16.48 | 19.32 | 39.77 | 3.31 | 0.95 | 0.97 | 0.30 | 0.58 |
| | C+, C, or C- | 35 | 1.52 | 12.45 | 17.72 | 27.50 | 3.67 | 0.90 | 0.53 | 0.40 | 0.50 |
| B+, B, or B- | All Firm Ratings | 6,113 | 2.83 | 16.10 | 19.69 | 34.18 | 3.55 | 1.13 | 1.45 | 0.16 | 0.95 |
| | A+, A, or A- | 1,773 | 3.48 | 17.98 | 20.56 | 35.92 | 3.58 | 1.35 | 1.61 | 0.08 | 1.05 |
| | B+, B, or B- | 3,928 | 2.61 | 14.97 | 19.92 | 33.68 | 3.53 | 1.01 | 1.30 | 0.19 | 0.91 |
| | C+, C, or C- | 412 | 2.13 | 18.85 | 13.76 | 31.38 | 3.70 | 1.42 | 2.15 | 0.19 | 0.92 |
| C+, C, or C- | All Firm Ratings | 3,392 | 2.69 | 14.57 | 20.48 | 35.79 | 3.68 | 2.03 | 1.14 | 0.20 | 0.83 |
| | A+, A, or A- | 605 | 3.85 | 18.26 | 23.41 | 33.97 | 3.46 | 1.67 | 1.30 | 0.23 | 0.93 |
| | B+, B, or B- | 2,468 | 2.54 | 13.76 | 20.39 | 37.69 | 3.70 | 2.13 | 1.11 | 0.19 | 0.84 |
| | C+, C, or C- | 319 | 1.57 | 13.86 | 15.60 | 24.54 | 3.99 | 1.96 | 1.09 | 0.23 | 0.52 |

Table 2: The relation between firm corporate governance ratings and valuation, ROE, and dividend payout. Regression estimation is performed using a fixed effects pooled cross-section time series approach. When Price to Book (PB) and Price to Earnings (PE) are the dependent variables, all observations from each of the 59 months in the November 2001 – September 2006 sample period are pooled. Since the Return on Equity (ROE) data is annual, when ROE is the dependent variable we only pool each December observation. Since dividend payout data is quarterly, when dividend payout is the dependent variable we only pool each March, June, September and December observation. In all the regressions, we use firms with A+, A, or A- ratings as the reference group. Hence, the regressions test for the difference between A-rated firms (A+, A or A-) and B-rated firms (B+, B, or B-), and A-rated firms (A+, A, or A-) and C-rated firms (C+, C or C-). The ***, **, * indicate that this difference is significant at the one, five and ten percent levels, respectively. The t-statistics are reported below each coefficient. We also independently test whether there is a significant difference between the B-rated firms (B+, B or B-) and C-rated firms (C+, C and C-). The ###, ##, # indicate that the difference between B-rated firms and C-rated firms is significant at the one, five and ten percent levels respectively. In each regression we use size of the firm (log (assets)), debt level of the firm (Debt to equity/100), capital intensity of the firm ((Capex/Sales)/10), Long-term growth in earnings per share (EPS Growth), a dummy if the EPS growth data is missing (No EPS Growth Dummy), and a variable that proxies the country corporate governance rating (Country rating 1-9) (see table 1.D for an explanation) as control variables. Each of the estimations includes, but we do not present, a fixed effects model for the date of the observation using date-specific dummies, excluding one reference. Each of the estimations further includes, but we do not present, a fixed effects model for firm identification using firm-specific dummies. Because country ratings are invariant over the sample period, the country rating 1-9 variable is a linear combination of the firm-specific dummies. We therefore exclude as references one firm dummy from an A-rated country, one firm dummy from a B-rated country, and one firm dummy from a C-rated country.

| <i>Dependent Variable</i> | Independent Variables | | | | | | | | | <i>N</i> | <i>Adj-R2</i> |
|---------------------------|-----------------------|---------------------------------|---------------------------------|----------------------|--------------------------|-------------------------|---------------------|----------------------------|---------------------------|----------|---------------|
| | <i>Constant</i> | <i>Firm rating B+, B, or B-</i> | <i>Firm rating C+, C, or C-</i> | <i>log(Assets)</i> | <i>(Debt/Equity)/100</i> | <i>(Capex/Sales)/10</i> | <i>EPS Growth</i> | <i>No EPS Growth Dummy</i> | <i>Country Rating 1-9</i> | | |
| PB | 12.26*** (25.21) | -0.10** (-2.56) | -0.15** (-2.08) | -3.27*** (-26.52) | 0.30*** (24.12) | -0.02*** (-3.69) | 0.04*** (6.61) | 0.06* (1.90) | 0.30*** (7.33) | 11813 | 0.81 |
| PE | -14.63*** (-3.53) | -0.99***### (-2.88) | 0.16 (0.24) | 3.11*** (3.16) | -0.16*** (-3.63) | -0.01 (-0.22) | 0.60*** (11.38) | 0.62** (2.02) | 4.94*** (11.48) | 11764 | 0.48 |
| ROE | 63.89*** (4.06) | -3.02** (-2.36) | -2.06 (-0.86) | -9.44** (-2.35) | -0.99 (-1.23) | -0.24 (-1.00) | 0.57 (1.39) | -2.47* (-1.83) | -2.47* (-1.76) | 952 | 0.58 |
| Dividend Payout | 32.15** (2.09) | 0.23### (0.21) | 6.20*** (2.93) | 4.73 (1.30) | -0.04 (-0.18) | -0.08 (-0.68) | -0.46*** (-2.74) | -3.06*** (-2.98) | 2.17 (1.64) | 3745 | 0.66 |

Table 3: The relation between country corporate governance ratings and valuation, ROE, and dividend payout. Regression estimation is performed using a fixed effects pooled cross-section time series approach. When Price to Book (PB) and Price to Earnings (PE) are the dependent variables, all observations from each of the 59 months in the November 2001 – September 2006 sample period are pooled. Since the Return on Equity (ROE) data is annual, when ROE is the dependent variable we only pool each December observation. Since dividend payout data is quarterly, when dividend payout is the dependent variable we only pool each March, June, September and December observation. In all the regressions, we use countries with A+, A, or A- ratings as the reference group. Hence, the regressions test for the difference between A-rated countries (A+, A or A-) and B-rated countries (B+, B, or B-), and A-rated countries (A+, A, or A-) and C-rated countries (C+, C or C-). The ***, **, * indicate that this difference is significant at the one, five and ten percent levels, respectively. The t-statistics are reported below each coefficient. We also independently test whether there is a significant difference between the B-rated countries (B+, B or B-) and C-rated countries (C+, C and C-). The ###, ##, # indicate that the difference between B-rated countries and C-rated countries is significant at the one, five and ten percent levels respectively. In each regression we use size of the firm (log (assets)), debt level of the firm (Debt to equity/100), capital intensity of the firm ((Capex/Sales)/10), Long-term growth in earnings per share (EPS Growth), a dummy if the EPS growth data is missing (No EPS Growth Dummy), and a variable that proxies the country corporate governance rating (Country rating 1-9) (see table 1.D for definition) as control variables. Each of the estimations includes, but we do not present, a fixed effects model for the date of the observation using date-specific dummies, excluding one reference. Each of the estimations further includes, but we do not present, a fixed effects model for firm identification using firm-specific dummies.

| Dependent Variable | Independent Variables | | | | | | | | | N | Adj-R2 |
|--------------------|-----------------------|-----------------------------|-----------------------------|----------------------|---------------------|---------------------|---------------------|---------------------|-------------------|-------|--------|
| | Constant | Country rating B+, B, or B- | Country rating C+, C, or C- | log(Assets) | (Debt/Equity)/100 | (Capex/Sales)/10 | EPS Growth | No EPS Growth Dummy | Firm Rating 1-9 | | |
| PB | 14.50*** (34.97) | -1.31*** (-5.99) | -1.56*** (-7.52) | -3.25*** (-26.35) | 0.30*** (24.26) | -0.02*** (-3.81) | 0.04*** (6.68) | 0.06* (1.87) | 0.04*** (3.72) | 11813 | 0.81 |
| PE | 28.62*** (8.10) | -27.46*** (-12.62) | -24.44*** (-11.39) | 3.35*** (3.40) | -0.15*** (-3.51) | -0.02 (-0.61) | 0.61*** (11.56) | 0.57* (1.85) | -0.09 (-0.98) | 11764 | 0.48 |
| ROE | 33.01** (2.46) | 19.13*** (2.79) | 12.22* (1.75) | -9.39** (-2.35) | -1.06 (-1.32) | -0.21 (-0.85) | 0.60 (1.47) | -2.37* (-1.76) | 0.88*** (2.58) | 952 | 0.58 |
| Dividend Payout | 56.12*** (4.21) | -15.52** (-2.37) | -10.20 (-1.54) | 4.71 (1.30) | -0.03 (-0.13) | -0.10 (-0.84) | -0.44*** (-2.63) | -3.02*** (-2.95) | -0.43 (-1.44) | 3745 | 0.66 |

Table 4: Tests of the impact of a firm corporate governance rating change on PE, PB, ROE, and Dividend Payout. Regression estimation is performed that uses as the dependent variable the change in PB, PE, ROE, and Dividend Payout over a period before and after a firm's rating changed. Before/after windows range from 12 months, 6 months, 3 months, and 1 month pre and post the ratings change. For example, the 12 month Δ PB is the firm's price to book 12 months *after* the month in which the change in the firm's rating took place minus the firm's price to book 12 months *before* the month in which the change in the firm's rating took place. The independent variables include a firm rating change increment variable which proxies the degree of the firm rating change. For each grade increase (decrease) the firm rating change increment variable increases (decreases) by 1. For example, a firm that sees its corporate governance rating increase from a B to B+ receives a value of 1. A firm that sees its corporate governance rating decrease from B to C receives a value of -3. The largest increase (decrease) in the rating grade experienced by any one firm was 6 (-6). Other independent variables include the country rating 1-9 variable, the average monthly country index return over the entire pre/post window, the post minus the pre change in Debt to Equity/100, (Capex/Sales)/10, log (assets), EPS Growth, and a dummy if the observation did not have EPS Growth data. We also include dummies for industry (using the same industries listed in table 1.B) which are not reported. The t-statistics are reported below each coefficient. ***, **, * indicate one, five and ten percent levels of significance, respectively.

| Before/ After window | Dependent Variable | Independent Variables | | | | | | | | | N | Adj-R2 |
|----------------------------|-----------------------------|-----------------------|-------------------------------------|-----------------------|------------------------|----------------------------------|----------------------------------|-------------------------|------------------------|---------------------------|-----|--------|
| | | Constant | Firm rating change increments | Country Rating 1-9 | Avg. Country Return | Δ Debt/Equity)/ 100 | Δ (Capex/Sales) /10 | Δ log(Assets) | Δ EPS Growth | No EPS Growth Dummy | | |
| 12 months pre/post | Δ PB | 0.50 (0.56) | 0.03 (0.44) | 0.07 (0.80) | 0.77*** (4.94) | 0.22*** (2.86) | -0.02 (-0.19) | -2.83** (-2.51) | 0.02 (1.17) | 0.63 (1.64) | 148 | 0.25 |
| | Δ PE | -13.33** (-2.24) | 0.11 (0.22) | 1.42** (2.34) | 2.44** (2.40) | -0.64 (-1.28) | 0.16 (0.20) | -6.67 (-0.97) | 0.23** (2.24) | 2.65 (1.05) | 142 | 0.07 |
| | Δ ROE | 6.77 (0.96) | 1.22** (2.06) | -0.40 (-0.55) | 1.67 (1.35) | -7.89*** (-2.79) | -1.00 (-0.99) | 0.98 (0.10) | 0.21* (1.67) | 9.03*** (2.89) | 145 | 0.14 |
| | Δ Dividend Payout | -1.02 (-0.08) | -0.06 (-0.05) | 0.70 (0.51) | 6.04*** (2.68) | -2.76 (-0.91) | -2.44 (-1.17) | 2.86 (0.18) | -0.25 (-0.98) | -4.64 (-0.80) | 132 | 0.03 |
| 6 months pre/post | Δ PB | 0.93* (1.79) | 0.02 (0.51) | -0.00 (-0.04) | 0.27*** (4.32) | 0.20*** (4.11) | -0.08 (-0.79) | -1.85* (-1.82) | 0.02** (2.32) | -0.18 (-0.69) | 259 | 0.17 |
| | Δ PE | -0.29 (-0.07) | -0.35 (-0.94) | -0.09 (-0.20) | 0.64 (1.37) | -0.25 (-0.70) | 0.05 (0.05) | 2.16 (0.42) | -0.01 (-0.21) | -2.05 (-1.05) | 253 | -0.00 |
| | Δ ROE | 5.39 (1.49) | 0.16 (0.45) | -0.19 (-0.46) | 0.63 (1.46) | 4.78*** (2.95) | -0.14 (-0.20) | -5.76 (-0.78) | 0.06 (1.13) | 0.28 (0.15) | 254 | 0.04 |
| | Δ Dividend Payout | 3.18 (0.50) | 0.79 (1.37) | -0.19 (-0.26) | -0.03 (-0.04) | -0.59 (-0.27) | -2.32 (-1.42) | 22.74* (1.72) | -0.20** (-2.24) | -0.25 (-0.08) | 232 | 0.02 |
| 3 months pre/post | Δ PB | 0.45 (1.62) | 0.05* (1.74) | -0.01 (-0.18) | 0.15*** (6.14) | 0.15*** (3.35) | -0.14* (-1.84) | -3.78*** (-5.71) | 0.01** (2.52) | -0.01 (-0.06) | 287 | 0.25 |
| | Δ PE | -2.58 (-0.95) | 0.17 (0.59) | 0.48 (1.40) | 0.40* (1.72) | -0.88** (-2.00) | -2.61** (-2.55) | 5.91 (0.91) | 0.13*** (2.62) | -0.62 (-0.43) | 285 | 0.04 |
| | Δ ROE | 1.83 (0.83) | 0.32 (1.38) | -0.15 (-0.56) | 0.26 (1.37) | 4.69*** (3.23) | 1.55** (2.48) | -1.25 (-0.22) | -0.02 (-0.43) | -1.60 (-1.27) | 286 | 0.07 |
| | Δ Dividend Payout | 4.73 (1.07) | -0.11 (-0.25) | -0.24 (-0.41) | -0.14 (-0.37) | 1.47 (0.68) | -2.48 (-1.41) | 7.58 (0.67) | -0.05 (-0.62) | 1.53 (0.60) | 259 | -0.02 |
| 1 month pre/post | Δ PB | 0.31 (1.59) | 0.04* (1.75) | -0.01 (-0.35) | 0.06*** (4.89) | 0.20*** (5.55) | -0.14** (-1.97) | -1.90*** (-2.91) | 0.01* (1.96) | -0.00 (-0.02) | 324 | 0.18 |
| | Δ PE | 0.67 (0.29) | -0.16 (-0.62) | -0.00 (-0.01) | 0.17 (1.26) | -1.28*** (-2.85) | 1.45 (1.07) | 7.57 (0.96) | 0.09 (1.20) | 1.02 (0.76) | 324 | -0.00 |
| | Δ ROE | 1.71 (1.22) | -0.08 (-0.56) | -0.26 (-1.46) | 0.03 (0.43) | 4.52*** (4.05) | 2.31*** (4.24) | 10.59* (1.95) | 0.00 (0.01) | -1.52* (-1.83) | 322 | 0.12 |
| | Δ Dividend Payout | 3.54 (1.06) | -0.43 (-1.18) | -0.59 (-1.35) | -0.21 (-1.08) | 0.69 (0.30) | 0.74 (0.31) | -2.91 (-0.24) | -0.04 (-0.32) | -1.18 (-0.58) | 300 | -0.01 |

Table 5: Tests of the relation between country characteristics and firm rating. A fixed effects pooled cross-sectional time series regression is performed with dependent variables that quantify the firm corporate governance rating. Specifically, Firm Rating 1-9 is a variable where a firm with an A+ rating receives a 9, a firm with an A rating receives an 8, etc. Firm Rating 1-3 is a variable where a firm with an A+, A or A- rating receives a 3, a firm with a B+, B or B- rating receives a 2, and a firm with a C+, C or C-rating receives a 1. The independent variables are the monthly scores for the five components that compose the country rating. Each of the estimation includes, but we do not present, a fixed effects model for firm identification using firm-specific dummies, excluding one reference. The t-statistics are reported below each coefficient. ***, **, * indicate one, five and ten percent levels of significance, respectively.

| <i>Dependent Variable</i> | <i>Independent Variables</i> | | | | | | <i>N</i> | <i>Adj-R2</i> |
|---------------------------|------------------------------|--|---|---|--|---|----------|---------------|
| | <i>Constant</i> | <i>Legal and Regulatory Infrastructure</i> | <i>Government Stance on Corporate Governance and Equity Culture</i> | <i>Macro-economic and Political Stability</i> | <i>Accounting and Auditing Standards</i> | <i>Political, Social, and Environmental Climate</i> | | |
| Firm Rating 1-9 | -9.05 (-1.36) | 0.14 (0.98) | 0.25*** (6.07) | -0.38* (-1.88) | 1.92 (1.58) | 0.60*** (2.98) | 14961 | 0.75 |
| Firm Rating 1-3 | 0.39 (0.18) | -0.04 (-0.86) | 0.07*** (5.62) | -0.09 (-1.41) | 0.15 (0.38) | 0.19*** (2.91) | 14961 | 0.75 |

Table 6: The out-of-sample performance of corporate governance ratings, adjusted for survivorship bias. Regression estimation is performed to estimate the out-of-sample performance of the firm-level and country-level corporate governance ratings. Two three-year out-of-sample periods were examined: 2002-2004 and 2003-2005. For each of these two samples all the firms that received a corporate governance rating were surveyed at the beginning of the sample (December 31, 2001 for the 2002-2004 sample and December 31, 2002 for the 2003-2005 sample). These firms were followed for the next three years, and the monthly returns for each firm were collected during the out-of-sample periods. To prevent survivorship bias, firms that dropped out before the end of the sample period were not excluded. Instead, the returns of the firms that dropped out of the sample were treated as follows. First, we use the actual monthly returns of the firm until it drops out of the sample. Once it drops out, the monthly returns then become the returns of the closest matching firm that survived the entire out-of-sample period. To find the closest matching firm we used an algorithm that is described in Appendix I. Panel 6.A. uses firm-level rating dummies as the only independent variables. Panel 6.B. uses country-level rating dummies as the only independent variables. Panel 6.C. replicates panel 6.A. but also uses country rating 1-9 as an additional control variable. Panel 6.D. replicates panel 6.B. but also uses firm rating 1-9 as an additional control variable. In Panels 6.A. and 6.C. we use A-rated firms (A+, A, or A-) as the reference group. Hence, the regressions test for the difference between A-rated firms (A+, A or A-) and B-rated firms (B+, B, or B-), and the difference between A-rated firms (A+, A, or A-) and C-rated firms (C+, C or C-). In Panels 6.B. and 6.D. we use firms from A-rated countries (A+, A or A-) as the reference group. Hence, the regressions test for the difference between firms in A-rated countries (A+, A or A-) and firms in B-rated countries (B+, B, or B-), and the difference between firms in A-rated countries (A+, A, or A-) and firms in C-rated countries (C+, C or C-). The ***, **, * indicate that the difference is significant at the one, five and ten percent levels respectively. The t-statistics are reported below each coefficient. Note also that in panels 6.A. and 6.C. we also examine if there is a significant difference between the B-rated firms (B+, B or B-) and C-rated firms (C+, C and C-). In panels 6.B. and 6.D. we also examine if there is a significant difference between firms in B-rated countries (B+, B or B-) and firms in C-rated countries (C+, C or C-). The ###, ##, #, indicate that the difference between B firms and C firms is significant at the one, five and ten percent levels, respectively.

Panel 6.A

| <i>Out-of-sample period</i> | <i>Dependent Variable</i> | <i>Independent Variables</i> | | | <i>N</i> | <i>Adj-R2</i> |
|-----------------------------|---------------------------|------------------------------|---------------------------------|---------------------------------|----------|---------------|
| | | <i>Constant</i> | <i>Firm rating B+, B, or B-</i> | <i>Firm rating C+, C, or C-</i> | | |
| 2002-2004 | Sharpe ratio | 0.30*** (9.58) | -0.06* (-1.76) | -0.09 (-1.52) | 178 | 0.01 |
| 2003-2005 | Sharpe ratio | 0.35*** (18.09) | -0.02# (-1.07) | -0.08** (-2.45) | 281 | 0.01 |

Panel 6.B

| <i>Out-of-sample period</i> | <i>Dependent Variable</i> | <i>Independent Variables</i> | | | <i>N</i> | <i>Adj-R2</i> |
|-----------------------------|---------------------------|------------------------------|------------------------------------|------------------------------------|----------|---------------|
| | | <i>Constant</i> | <i>Country rating B+, B, or B-</i> | <i>Country rating C+, C, or C-</i> | | |
| 2002-2004 | Sharpe ratio | 0.37*** (15.90) | -0.20*** (-6.16) | -0.17*** (-4.87) | 178 | 0.19 |
| 2003-2005 | Sharpe ratio | 0.36*** (18.99) | -0.06***### (-2.56) | -0.01 (-0.51) | 281 | 0.02 |

Panel 6.C

| <i>Out-of-sample period</i> | <i>Dependent Variable</i> | <i>Independent Variables</i> | | | | <i>N</i> | <i>Adj-R2</i> |
|-----------------------------|---------------------------|------------------------------|---------------------------------|---------------------------------|---------------------------|----------|---------------|
| | | <i>Constant</i> | <i>Firm rating B+, B, or B-</i> | <i>Firm rating C+, C, or C-</i> | <i>Country Rating 1-9</i> | | |
| 2002-2004 | Sharpe ratio | 0.12** (2.39) | -0.04 (-1.06) | -0.04 (-0.77) | 0.03*** (4.58) | 178 | 0.11 |
| 2003-2005 | Sharpe ratio | 0.34*** (9.99) | -0.02# (-1.02) | -0.08** (-2.30) | 0.01 (0.40) | 281 | 0.01 |

Panel 6.D

| <i>Out-of-sample period</i> | <i>Dependent Variable</i> | <i>Independent Variables</i> | | | | <i>N</i> | <i>Adj-R2</i> |
|-----------------------------|---------------------------|------------------------------|------------------------------------|------------------------------------|------------------------|----------|---------------|
| | | <i>Constant</i> | <i>Country rating B+, B, or B-</i> | <i>Country rating C+, C, or C-</i> | <i>Firm Rating 1-9</i> | | |
| 2002-2004 | Sharpe ratio | 0.31*** (5.27) | -0.19*** (-5.65) | -0.16*** (-4.49) | 0.01 (1.31) | 178 | 0.19 |
| 2003-2005 | Sharpe ratio | 0.27*** (7.26) | -0.05***## (-2.29) | -0.01 (-0.00) | 0.01*** (2.62) | 281 | 0.04 |