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Making the Most of Good Times: Shareholder Rights and Performance Revisited

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Abstract

I provide a new explanation for the abnormal returns to governance and their disappearance after 2001 by demonstrating that firms with strong shareholder rights capture higher profits than their industry peers only when their industry is experiencing high profitability. Importantly, I also show that this pattern is anticipated by investors. Consistent with such expectations, and with an updating of valuations as anticipated industry conditions change, positive abnormal stock returns to good governance are concentrated in periods of high industry returns, and are at least partially reversed during industry downturns. Additional evidence supports a causal interpretation of the results.

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A large literature in corporate governance has documented a positive relation between governance and performance.[1] Most empirical studies have focused on whether there is a level effect of governance, while little attention has been paid to how governance interacts with the economic environment of the firm. Many agency theories, however, suggest that the impact of governance would vary with business conditions. Some models imply that manager and shareholder interests diverge the most in times of operational slack, when managers can engage in inefficient empire building, skimming extra pay or perks, or shirking from making the effort to cut costs and invest in new opportunities.[2] On the other hand, it may be that bad times drive more of a wedge between managers and shareholders. Managers may be slow to shut down inefficient operations, or, as termination becomes more likely, they may engage either in overly expensive measures to reduce risk or in excessive risk-taking to "gamble for resurrection."[3] Depending on which of these agency problems are the most prevalent, or which are the problems best addressed by the constraints and incentives imposed by corporate governance mechanisms, governance might primarily improve performance in either good times or bad times.

If these dynamics are not considered, we may incorrectly measure the effect of corporate governance, which in turn can lead to suboptimal governance choices and poor policy decisions. At the same time, examining these variations may provide further insight into the channels through which governance and performance are related. In this paper, I study one dimension of governance – the firm-level provisions and state statutes that weaken shareholder rights – and how it relates to performance in different environments.[4] Shareholder

[1] See Bebchuk and Weisbach (2010) for a review of much of this literature.
[2] See, e.g., Jensen (1986), Yermack (1997), and Bertrand and Mullainathan (2003).
[3] See, e.g., Bertrand and Mullainathan (2003), Gormley and Matsa (2012), and Jensen and Meckling (1976).
[4] Hereafter, I will use the more general term "governance" interchangeably with shareholder rights, but this is done for expositive simplicity, and not to diminish the importance of the many other facets of governance.

rights are of particular interest in that they are very widely used to measure corporate governance and yet the exact channel through which they impact performance remains unclear. It is also important that firms' shareholder rights provisions have been quite stable over the last two decades, which allows me to isolate the interaction of business conditions with this aspect of governance.

Focusing on the G Index, the measure developed by Gompers, Ishii and Metrick (2003) ("GIM"), and exploiting within-industry variation in this index, I find that the outperformance of well-governed firms is concentrated in good times. I first consider good and bad times in the context of equity returns from 1990 to 2008. Categorizing periods based on average industry stock returns, I find that the stocks of well-governed firms outperform shares of poorly governed firms in the same industry on a risk-adjusted basis when their industries are experiencing high returns. These positive returns are at least partially reversed during industry downturns, when well-governed firms earn negative risk-adjusted returns relative to poorly-governed firms. Next, considering operating performance over the same period, I find that well-governed firms outperform relative to poorly-governed firms in the same industry during highly profitable periods, while the firms have similar operating performance during weak industry conditions.

These results help to explain puzzling findings with regard to the relation between shareholder rights and stock returns. GIM find that well-governed firms have about 20% higher valuations in terms of Tobin's Q, and that a governance hedge portfolio would have generated average abnormal returns of an impressive 8.5% per annum in the 1990's. Others who have extended this analysis[5] find no abnormal returns to good governance in the 21st century, although the differential in valuation persists. As any expected differences in op-

[5]See, e.g., Core, Guay and Rusticus (2006) and Bebchuk, Cohen and Wang (2012).

erating performance should already be accounted for in the consistently higher valuations of well-governed firms, it is difficult to explain why large return differentials persisted for a decade, and then why they would disappear. One theory is that the G Index is measuring exposure to some form of systematic risk that investors demand compensation for bearing and which is not already captured by the model used by GIM to calculate abnormal returns.[6] Another leading theory is that the pattern in returns to governance reflects learning. That is, investors may have been consistently surprised by the outperformance of well-governed firms over the 1990's, but then adjusted their expectations going forward.[7]

My results provide an alternative explanation. If well-governed firms are more profitable than poorly-governed industry peers only when an industry is doing particularly well, and investors understand this, current valuations of well-governed firms should include a premium representing the net present value of this future outperformance, adjusted for the likelihood of such good times. Then, if new information indicates that an industry boom is more likely than was previously thought, the stock prices of all firms in the industry would adjust upwards in anticipation of higher profits. However, well-governed firms would experience higher returns than poorly-governed firms because of upward updating of the probability-adjusted premium for outperformance. This positive relative return would be observed even though investors fully understood the implications of good governance for performance. On the other hand, if an industry boom becomes less likely, well-governed firms would experience more negative returns than poorly-governed firms as the expected value of the premium that

[6] Among the additional risk factors that have been suggested, none have been able to fully explain the alpha earned by the governance hedge portfolio. See, e.g., Giroud and Mueller (2011) and Bebchuk, Cohen and Wang (2012) for tests using the takeover factor of Cremers, Nair and John (2009) as well as factors for liquidity, co-skewness, downside risk, and aggregate volatility.

[7] While attention to corporate governance does seem to have increased significantly by 2001, evidence is mixed regarding whether investors were surprised by the performance of well-governed firms until that time. See, e.g., Core, Guay and Rusticus (2006), Cremers and Ferrell (2012), and Bebchuk, Cohen and Wang (2012).

had already been impounded into their stock prices is adjusted downwards. These dynamics can explain the seemingly contradictory evidence in GIM and the subsequent literature in that the observed returns to governance are conditional on the type of period sampled.

I use analyst forecast data to confirm that investors understand the performance implications of governance throughout my sample. For quarters in which analysts forecast particularly high industry earnings, they also forecast well-governed firms to be more profitable than poorly-governed firms, by a margin similar to the actual observed operating outperformance in good times. This is true both from 1990 to 2001 as well as from 2002 to 2008. Thus, my results are consistent with investors expecting well-governed companies to earn extra profits in good times but being surprised by news about future good times and updating valuations accordingly. Whether or not we observe positive abnormal returns to governance then depends on the particular time sample selected and the outcomes or changes in outlook experienced during that time. Whether the positive abnormal returns should exceed the negative abnormal returns in expectation (or over long time horizons that produce a range of outcomes approaching the expected distribution) is less clear. The less idiosyncratic the industry booms are, the more likely investors are to demand such a risk premium.

I also make a preliminary investigation into how well-governed firms manage to outperform in good times. Others have linked weak shareholder rights to poor acquisition decisions, generally suboptimal use of cash holdings, and over-generous executive compensation.[8] I find that the higher operating income generated by well-governed firms relative to poorly governed industry peers is driven by stronger revenue growth, and possibly higher margins, in good times. Well-governed firms also invest more on average than poorly-governed firms, and

[8]See Masulis, Wang and Xie (2007), Harford, Mansi, and Waxwell (2008), Dittmar and Mahrt-Smith (2007), and Fahlenbrach (2009).

apparently even more so in advance of good times, though it is unclear whether these firms invest more in anticipation of their higher productivity or whether their higher productivity can be attributed to such investment.

Overall, these patterns do not provide evidence of empire building or earnings management, but are consistent with agency theories of shirking and possibly skimming. Such misbehavior might flourish at poorly governed firms either directly because of weak shareholder rights provisions or indirectly because of how these provisions are related to a lack of board discipline or other cultural factors.

The patterns are also consistent with non-agency explanations. For example, if firms with weak shareholder rights also are more likely to be subject to financial constraints, then they might not be able to invest in order to capitalize on good times. Empirically, though, it is the firms with strong shareholder rights that have more of the characteristics that commonly-used measures identify with financial constraints.[9] Another possibility is that growth firms are more likely to adopt stronger shareholder rights than value firms, but the governance patterns remain even after I control for growth firm characteristics.

A causal link between governance and outperformance in good times is further supported by an event study around the passage of state anti-takeover laws between 1985 and 1991, where this shock to governance is found to have a negative stock price impact only on those firms with a high value of future prospects, as measured by Tobin's Q. Thus, investors expected this negative shock to governance to have the greatest impact on value derived from future good times. This result provides strong support not only for the hypothesis that governance matters most in good times, but also that investors have understood the implications of governance and over time have been surprised by news of good outcomes

[9]These characteristics include being younger, smaller, and having higher cash holdings. See Farre-Mensa and Ljungqvist (2013).

rather than the observed outperformance conditional on such outcomes.

My results contrast with findings by other researchers regarding the key role of governance in periods of crisis. Gormley and Matsa (2011) study responses to workplace liability risk and conclude that governance is particularly important in such extreme adverse scenarios. In the international governance literature, Friedman et al (2000) and Mitton (2002) study the impact of the Asian financial crisis of 1997-1998 and find that affected countries and firms with better governance demonstrated stronger stock market performance through the crisis. My results do not contradict these earlier findings, but do suggest that relation of governance with performance in good times, rather than during these more rare crisis events, likely drives the value implications of governance.

This paper is organized as follows. The next section presents details on the data used and the sample analyzed. Then, Section 2 discusses the relation between returns and corporate governance in different business environments. Section 3 analyzes operating performance, analyst forecast, and investment patterns, as well as their implications for agency theories. Section 4 considers non-agency explanations for the performance patterns. Concluding remarks are offered in Section 5.

1 Data and Empirical Methodology

1.1 Data and Sample Characteristics

The sample analyzed is drawn from firms for which the G Index is available, described in Panel A of Table 1, and which in all sample years represent over 90% of the market value of companies traded on the major US exchanges. This index, originated by GIM, is constructed on the basis of a total of 24 provisions (or lack thereof) in company charters and state law

which weaken shareholder rights. The index value is equal to the sum of these that apply to a given firm. The G Index can thus range from 0 to 24, where higher levels of the index (which I will refer to as poor or low governance) relate to weaker shareholder rights. In robustness tests, I also use the E Index of Bebchuk, Cohen and Ferrell (2009), which ranges from 0 to 6 and is based on a subset of 6 out of the 24 provisions included in the G Index.

G Index data is obtained from Andrew Metrick's website and is based on publications of the Investor Responsibility Research Center ("IRRC") dated September 1990, July 1993, July 1995, February 1998, November 1999, January 2002, January 2004, and January 2006. Later IRRC publications are not consistent with these in terms of the definitions of variables as well as the variables provided, so G Index classifications are not available beyond 2006. Consistent with the previous literature, I assume G to remain constant in between these dates and from 2006 through the end of 2008. As discussed by GIM, Cremers and Ferrell (forthcoming), and others, classifications of firms as well- or poorly-governed according to the G Index are very stable over this sample period, making this quite a reasonable assumption. The stability of these categorizations is useful for my purposes in that there are fewer concerns about reverse causation when exploring the relation between governance and performance in good and bad times.

My analyses are primarily at the industry level, based on the historical 3-digit SIC code from CRSP. I also use the Standard & Poors 8-digit GICS industry classifications from Compustat in robustness tests, but for the majority of firms I only have access to history for this classification beginning in 1994 (through the Compustat variable SPGIM) and therefore back-fill the earliest available GICS code when necessary. I follow the literature in excluding firms with dual stocks from my sample. As shown in Panel A of Table 1, there are then an average of 241 3-digit SIC industries which have some G Index data in a given month in

my sample. IRRC coverage varies from publication date to publication date, resulting in an unbalanced panel (with the number of 3-digit SIC industries covered ranging from 222 to 268). To be included in the sample for a given analysis, I require that an industry include both high and low governance representation. High and low governance are either defined in the terminology of GIM as Democracies and Dictatorships (G less than 6 and G greater than 13 respectively, representing less than 10% of the sample at each extreme) or as the extreme quartiles of the G Index (approximated as G less than 7 and G greater than 11).

The resulting samples are described in Panels B and C of Table 1. While the number of industries that include both high and low governance representation drop sharply relative to the total that have G Index data, they represent some of the largest 3-digit SIC industries and therefore a significant fraction of the market value of the full sample. Thus, while the Democracies and Dictatorships sample includes about 21 industries in a sample month, these represent 40% of the market value of the firms in the 241 industries that, on average, have G Index data available. The Democracy and Dictatorship firms in my sample represent 47% of the market value of the Democracy and Dictatorship firms in the full sample in an average month. The governance quartiles sample includes an average of 59 industries representing 73% of the market value of the full sample, with the high and low governance groups representing 77% of the high and low governance firms in the full sample.

As in the case of the full sample, these panels are not balanced; as seen in the distributions provided in Panels B and C of Table 1, the number of industries with both high and low governance representation varies from month to month. This is due to the variation in IRRC coverage as well as firms dropping out of the CRSP file, changing industries, or moving out of the high and low governance groups. However, industries generally stay in the sample for one or at most two continuous periods (60% and 94% of the industries respectively), rather

than moving in and out of the sample multiple times. My results are robust to including only those industries that are in the sample for only one continuous period or to only considering observations that fall in a period of continuous industry coverage of at least 24 months. Industry good and bad times are defined by considering industry performance over the full time period, including periods when either of, or both, high and low governance are not represented, as described in Section 1.2 below.

The 3-digit SIC industry classifications are relatively narrow, such that an average industry includes 21 firms with G Index data in a given month for the Democracies and Dictatorships sample, with about 2 firms in each of the governance extremes (and an average of 12 firms per industry with 3 firms in the extremes for the governance quartiles sample). The average industry size is smaller in the case of governance quartiles because the more moderate definitions of high and low governance mean that many smaller industries fulfill the requirement of including representation of both extremes. Thus, while the larger number of firms found on average in the high and low categories might reduce the noise in the governance performance spread relative to the Democracies versus Dictatorships sample, the smaller number of firms that, on average, define the industry performance in the case of governance quartiles will add noise to the classification of good and bad periods. More detail on the firms included in industries for the purpose of calculating such industry performance is provided in the Section 1.2.

For analyses of returns, I require a match to CRSP data. For operating performance analyses, I require a match to Compustat data. I analyze performance data from September 1990, the first month for which G Index data is available, through the end of 2008. I end the period of analysis in 2008 to be consistent with the lags between updates of the G Index

(the last such update is in January 2006) and to avoid stale classifications.[10] All operating performance variables are winsorized at 1% in both tails. Characteristics of high compared to low governance firms by industry across the full time period and under each of the two definitions of the governance extremes are given in Panel D of Table 1. Consistent with GIM and the subsequent literature, I find that high governance firms have higher valuations in the form of Tobin's Q. In my industry-matched sample, I find that high governance firms are also slightly less levered and have many characteristics of growth firms; they are younger, spend more on capital expenditures, and have stronger revenue growth. High governance firms are associated with a higher return on assets, defined as operating income after depreciation to assets, though this relation is not statistically significant across the full sample period for the governance quartiles sample. The differences in operating performance and other characteristics will be analyzed in more detail in Sections 3 and 4.

1.2 Identifying Good and Bad Times

I use the performance of an industry in a given period, relative to its performance over the full sample, to characterize periods as good and bad times for firms in the industry. Using individual industry performance as the baseline rather than economy-wide performance provides a more refined measure of good and bad times. Also, this approach allows for a larger number of non-synchronous good and bad time observations, compared to, for example, only three economy-wide recessions over this time period. High and low levels of the G Index have been found to cluster in industries,[11] and so examining within-industry variation in performance by governance group over the industry highs and lows also helps to separate

[10] In unreported robustness tests, results are consistent when extended through 2011.

[11] Johnson, Moorman and Sorescu (2009) demonstrate this clustering and the impact on analyses that do not address it. Lewellen and Metrick (2010) provide a further discussion of how best to control for industry effects in analyses using the G Index.

governance from industry effects.

Thus, I measure industry performance in each month or quarter of the sample period, then rank these periods and classify periods in the top quartile of performance as good times and those in the bottom quartile of performance as bad times. In measuring industry performance for a given period, I only include firms that either (i) have a current G Index value; or (ii) do not have a current G Index value but do at some point in the sample period and are not ever classified as high or low governance. Further, in calculating the performance of an industry, I equally-weight firm performance with an adjustment to the weights of high and low governance firms. Specifically, I equally weight all explicitly mid-governance and unclassified but once mid-governance firms, and rescale the weights that would have applied to the high and low governance firms such that each of these governance groups receives the same weighting as a whole in that period. If either one of the extremes of governance is not available in that period, the other extreme of governance is not included in the industry metric either.

The reason for this somewhat restrictive definition of the industry and the adjusted weighting scheme is to avoid biasing the industry metrics towards one of the groups being analyzed, or else the results might not tell us anything about good and bad times. For example, if the performance of well-governed firms was correlated in some way unrelated to good and bad times for the industry, and such firms were overrepresented in the industry metric, well-governed firms experiencing a positive shock would make it likely for the industry to be classified as being in good times. It would look like these firms were outperforming in good times even if their outperformance was unrelated to industry good times. Thus, the weights given to the groups of well- and poorly-governed firms in an industry are equalized. Similarly, firms for which I do not have governance data are excluded, because I cannot tell

if high or low governance firms are overrepresented among such firms. While the 3-digit SIC codes that I primarily use to identify industries already provide a relatively fine classification, and excluding non-IRRC firms reduces the number of firms per industry further, any noise from using relatively small industries should work against my finding a result. As shown in Panels B and C of Table 1, there are some months for which the industry performance is defined by only one (mid-governance) firm, but these cases are limited to less than 1.5% of the sample months in the Democracies and Dictatorships sample (and around 6% in the governance quartiles sample, which includes much smaller industries on average).

Similarly, if an individual well- or poorly-governed firm is overrepresented in the industry metrics, its independent shocks would also be more likely to impact the classification of good and bad times and it thus would tend to make its own governance group look more pro-cyclical. Equal weights are applied for this reason. In robustness tests, I exclude high and low governance firms from the industry definitions altogether, make such exclusions and also apply value weights, and alternatively include all firms in the CRSP-Compustat matched database, whether or not they are assigned G Index data, in the industry definitions.

2 Governance and Equity Returns

2.1 Methodology

In order to study the relation of governance with equity returns in good and bad times, I first generate a time-series of the adjusted return differential between high and low governance firms in each industry. For this purpose, I calculate adjusted returns by firm, using the three-factor Fama-French model augmented with the momentum factor constructed by Kenneth French for performance attribution.

I obtain the size factor, the book-to-market factor, and the momentum factor ("SMB," "HML," and "UMD") from Kenneth French's website, and construct the market factor ("RMRF," the return on the market factor minus the risk-free rate) using the value-weighted market index and the 1-month risk-free rate from CRSP. For robustness tests, I also construct the Carhart (1997) "PR1YR" momentum factor from CRSP monthly data. To calculate a firm's adjusted return, I estimate its betas on the four factors using monthly returns and an outside period of up to five years before and up to five years after a given year, with a minimum of six months required to use either the pre- or post-period. Estimates from the pre- and post-period are given weights inversely proportional to the variance of these estimates to arrive at the final beta estimates.

GIM and much of the subsequent literature assume static betas. I update the beta estimates each year as described above because I am interested in dynamics over time and thus would like to give the factors an opportunity to explain as much of the variation as possible. For the same reason, I use a future as well as historical period in the estimation of betas. Even though this approach means that I do not generate a strictly tradable strategy, it better accounts for changes and secular trends in betas. Thus, these more up-to-date estimates of the betas give the factors a better chance of absorbing the dynamics of performance than betas calculated using only lagged data. (In non-reported robustness tests, the results are very similar using static betas or betas calculated only with lagged data.)

The adjusted return for a given firm (f) and a given month (t) is then calculated using the firm excess return (R_{ft}, the return minus the risk-free rate) and the estimated betas as:

$$\alpha_{ft} = R_{ft} - \hat{\beta}_{RMRF} RMRF_t - \hat{\beta}_{SML} SML_t - \hat{\beta}_{HML} HML_t - \hat{\beta}_{UMD} UMD_t$$

These firm-level adjusted returns are then combined into equally weighted portfolios

by industry-governance group (value weights are used in robustness checks). The monthly adjusted returns of these high and low governance groups by industry are plotted against the contemporaneous industry-level unadjusted return (calculated as per Section 1.2) in Figure 1. As high and low industry return periods likely reflect shocks that are at least somewhat idiosyncratic relative to the four-factor model above, we expect the factor-adjusted returns of firms in these industries to be increasing in the unadjusted industry return. However, the graph also demonstrates my main result, that well-governed firms earn positive abnormal returns relative to poorly-governed firms in high industry return periods, but that these returns are reversed in periods of negative industry returns.

In order to run more rigorous statistical tests, I will first normalize industry good and bad times. In this process, I will also apply a non-linear specification of good and bad times. About 50% of the observations in Figure 1 lie between -2.5% and 2.5% industry returns, where there is limited variation across governance groups, so a linear specification would have less power to identify the performance differential.

Thus, I generate indicators for good and bad times by industry, representing the top and bottom quartiles of unadjusted monthly industry returns, following the methodology described in Section 1.2. Finally, I regress the monthly time-series of the high-low governance differential adjusted return by industry (i) on these monthly good, bad, and mid-quartile dummies to estimate:

$$r_{diff,it} = \beta_1 D_{1it} + \beta_{2,3} D_{2,3it} + \beta_4 D_{4it} + \varepsilon_{it}$$

This regression forms the basis of my main results.

2.2 Results

The main results regarding the relation between stock returns and governance in good times and bad times are given in Table 2. Results are presented for three definitions of high and low governance – the Democracies and Dictatorships classification of GIM (G less than 6 or greater than 13), a broader definition using governance quartiles (G less than 7 or greater than 11), and an even broader classification of above median and below median governance (G less than 10 or greater than 9) – as well as for both adjusted (for the four factor model) and unadjusted returns. I also present results for the E index, though I do not use this measure of governance in further analyses as the results are less robust than those for the G Index. Reported T-statistics are based on heteroskedasticity robust standard errors that are clustered at the month level.[12]

Throughout Table 2, we see that high governance firms experience positive abnormal returns relative to low governance firms in good times, and that these are at least partially reversed by negative abnormal returns in bad times, similar to the pattern demonstrated in Figure 1. For example, for the Democracies versus Dictatorships classification, there is a significant 2.4% per month adjusted return to good governance in months in which industries are experiencing high returns, and a significant -1.0% monthly return to good governance in months of low industry returns. Across all periods, this translates into a net 0.33% monthly adjusted return, or approximately 4% per annum. This net positive alpha may indicate that investors require a risk premium for this variation, or it may simply reflect that the outcomes in this sample period are tilted more towards good times than the distribution of good and bad times expected by investors. Regardless of whether or not it is priced, this pattern of

[12] Cremers and Ferrell (2009) also find that the equity performance results for the E index are not as robust as those for the G Index, with results becoming insignificant once they control for industry or add firm fixed effects.

returns addresses the puzzle of disappearing returns to governance in that whether or not abnormal returns to governance are observed is clearly conditional on the type of period sampled.

On first glance, the returns of high governance firms may appear to be a levered version of the returns to low governance firms. However, as seen in Panel D of Table 1, high governance firms are actually less levered and hold more cash than low governance firms. Another possibility is that firms that experience particularly large positive or negative shocks tend to tighten their governance in advance of the price impact. If this were the case, we might expect to see a correlation between good governance and these large positive and negative returns. However, as mentioned in Section 1.1, categorizations according to shareholder rights provisions are quite static, so reverse causation is unlikely. To the extent that there are still some rare changes in classification within my sample, my results are robust to dropping firms if their governance categorization changes. Also, it is worth noting that Schoar and Washington (2011) find that periods of abnormally good firm performance tend to be related to a weakening of shareholder rights, and this primarily by already poorly-governed firms, a pattern that, if anything, works against the direction of my results. They find no changes in governance related to periods of abnormally bad performance.

Tables 3 and 4 present robustness tests. The first two columns of Table 3 demonstrate that the pattern of returns is similar from 1990 to 2001 and 2002 to 2008.[13] The third column of this table sorts periods by market returns rather than industry returns. The fact that the pattern remains may mean that at least a portion of the additional volatility in high governance stock prices is systematic in nature, and likely to be a priced risk. How-

[13]Bebchuk, Cohen and Wang (2012) demonstrate that attention to corporate governance in the media and academic literature had increased significantly by the end of 2001, and that the apparent disappearance of returns to governance coincided with this increased attention.

ever, because our abnormal returns already control for a linear market beta, this result is non-linear and would probably imply a dynamic market beta, as in a conditional CAPM model. By splitting the sample period between high and low market return periods, and returning to using industry good and bad time dummies, columns (4) and (5) demonstrate that there remains a strong industry effect incremental to the effect of the market. Column (6) demonstrates that the results are robust to using 8-digit GICS industries as the unit of analysis rather than defining industries on the basis of 3-digit SIC codes. In column (7), all firms in the CRSP database are included in their respective 3-digit SIC industries for the purpose of defining the performance quartiles, demonstrating that the exclusions (described in Section 1.2) that I make in order to be conservative are not driving my results.

Results are generally consistent for the robustness checks in Table 4 as well, which include using alternative weighting schemes, varying the factor model, and excluding particular industries. To address the theory that governance matters the most in the presence of high free cash flow (e.g., Chi and Lee (2010)), columns (5) and (6) of Table 4 separately consider industries with above and below median cash flows. The fact that results are similar in both cases suggests that the underperformance of poorly-governed firms in good times is not solely a function of inefficient uses of cash.

In general, though, the pattern of returns to governance, while it helps to address the puzzle of disappearing returns post 2001, only demonstrate a difference in volatility and do not provide a value judgment. To further understand the source of the variation in returns, I next consider operating performance patterns.

3 Governance and Operating Performance

3.1 Methodology

Given that returns are forward-looking with variable lags to the expected outcomes that they reflect, it is difficult to directly tie good times in the sense of returns to good times in the sense of profits. With the understanding that returns reflect expectations of profits at some point in the future, in this section I thus directly consider good times in the sense of profits. A preview of my results is provided in Figure 2, which demonstrates that well-governed firms earn extra profits only in highly profitable periods for the industry.

The approach to statistically analyzing operating performance is similar to that used for returns, in that I generate a time-series of high-low governance differential performance and regress it on dummies for the type of period the industry is experiencing, based on quartiles of industry performance. One key difference relative to stock returns is that operating performance is likely to be auto-correlated. For this reason, I use two different approaches to calculating my standard errors for these analyses. One approach is to apply a parametric AR(1)-process correction[14] to heteroskedasticity-robust standard errors, clustered at the quarter level. The second approach is to cluster my standard errors by industry as well as by quarter.

In this section, I consider raw performance measures, un-corrected for other firm characteristics which may impact performance, in order to get an overall sense of how the operating performance for high governance and low governance firms differs. I consider the possible impact of non-agency characteristics on the observed differences in performance between

[14] I adapt the standard AR(1) correction described in Bertrand, Duflo and Mullainathan (2004) to allow clustering by quarter and to account for non-consecutive observations that are associated with each industry-period-type.

firms with different levels of governance in Section 4.

3.2 Profitability Results

My main results for profitability measures are presented in Table 5. The measure of profitability that I focus on is the return on assets ("ROA"), measured as operating income after depreciation to total assets. I also consider net income to book equity, but these results are more noisy, consistent with the findings of other researchers, including GIM and Core, Guay and Rusticus (2006).

Similar to the pattern demonstrated in Figure 2, in Table 5 I find an asymmetric relation of governance with operating performance, whereby high governance firms outperform low governance firms in highly profitable times for an industry, but both types of firms perform similarly in weaker industry conditions. The magnitude of the outperformance is strongly significant statistically and economically. For example, the 1.08 percentage point higher quarterly operating income to assets in good times represents over 50% of the mean quarterly ROA of a poorly-governed firm. From an agency perspective, the differential profits in highly profitable times might be the result of managers having access to rents, which the poorly-governed managers capture or pass on to others, or might be driven by well-governed managers taking advantage of real options while poorly-governed managers shirk from such opportunities. The results for the separate components of return on assets, namely revenue to assets and operating income to revenue, are consistent with both possibilities as both are higher for well-governed firms in good times (though only the result for revenue is statistically significant, and this is the case only when using AR(1) corrected standard errors).

Table 6 presents various robustness checks, similar to those considered in the case of returns, for the ROA results. Results are generally consistent with the base case, including

for the two time period sub-samples. The pattern of relative performance is somewhat less consistent across specifications for the broader definition of high and low governance (i.e., governance quartiles), as shown in Panel B, than for the more commonly used categorization of Democracies and Dictatorships. Also, value-weighted results are somewhat less similar to the base case, but much of the difference is driven by not including high and low governance companies in the industry period classifications (as demonstrated in the fifth column), which can result in a more noisy measure of industry good and bad times.

The pattern of operating performance provides an explanation for the pattern in returns demonstrated in Section 2. Namely, if investors understand that well governed firms capture more profits in good times, the current valuations for such firms should incorporate the net present value of this future outperformance, adjusted for current expectations of the likelihood of such good times. As new information arrives regarding the likelihood of such good times, the expected value of this additional premium changes, resulting in positive or negative returns relative to other firms.

3.3 Analyst Forecasts

In order to examine what investors may have understood about the impact of governance, I consider analyst forecasts as a measure of investor expectations. To calculate the forecast income to book equity for a given quarter, I collect the monthly mean estimated earnings per share from IBES within 31 days before the beginning of the fiscal quarter. I then scale up the estimated earnings per share by applying the ratio of this estimate to the actual earnings per share reported by IBES, winsorized at 1% in both tails like my other operating performance variables, to the actual net income to book equity for the quarter based on Compustat data. Observations for which the sign of the actual earnings per share reported by IBES and the

sign of the actual net income reported by Compustat do not match are treated as missing.

Results of this analysis are presented in Table 7. In Panel A, I consider periods that are forecast to be good and bad times for each industry, based on the industry average (again calculated as per Section 1.2) forecast income to book equity. I find that analysts predict well-governed firms to generate higher incomes in times that they predict to be highly profitable for the whole industry. This pattern is consistent over the 1990-2001 and 2002-2008 subperiods. Under a learning story, we would have expected analysts to predict better performance for well-governed firms after 2001 than they did beforehand. Instead, we find that analyst predictions follow a similar pattern to the actual operating performance patterns considered in Section 3.2.

In Panel B, I consider analyst forecast errors, which follow a symmetric pattern similar to my return results, whereby analysts are more positively (negatively) surprised by well-governed firms relative to poorly-governed ones in times of large positive (negative) surprises. Again, the pattern is similar for both subperiods. Under a learning story, we would have expected to observe stronger positive surprises to good governance in the former period than in the latter.

This evidence is consistent with analysts understanding the asymmetric relation of corporate governance with operating performance, and being surprised by the type of period experienced rather than the differential performance of well- versus poorly-governed firms in a particular type of period.

3.4 Investment

In Table 8, I consider the relative levels of investment of high and low governance firms. In Table 8, we see that well-governed firms invest more than poorly-governed firms, both

in terms of capital expenditures as well as in terms of changes in net property, plants and equipment. The difference in investment is higher in periods of higher industry levels of Tobin's Q, which may measure industry investment opportunities, but it is unclear from Table 8 whether the incremental investment is efficient or not. As well-governed firms, while spending more on investment, also demonstrate better operating performance, it is likely that this is good rather than wasteful investment.

In an attempt to relate the difference in investment with the observed difference in ROA in good times, I consider lagged investment in advance of such high industry profit periods. Results are presented in Table 9. While not statistically significant, for the Democracies versus Dictatorships sample, the investment differential in the four quarters preceding a particularly profitable quarter is double the differential in a year preceding either low or mid levels of industry profitability. The same pattern is found for the eight quarters preceding these four quarters, which helps to address the concern that the former result may be driven by anticipation of forthcoming high cash flows that can be spent on investment. However, these patterns are not seen in the results for the governance quartiles sample. Thus, these results provide only suggestive evidence that the operating performance differential might be partially explained by well-governed firms taking advantage of more growth opportunities than poorly governed firms. It is also unclear whether these firms may invest more in anticipation of their higher productivity or whether their higher productivity can be attributed to such investment.

My results contrast with GIM, who find that poorly-governed firms spend more on capital expenditures, and Philippon (2006), who finds that the investment of poorly-governed firms is relatively more pro-cyclical. Given the clustering of governance types within industries, the reason that I reach opposite conclusions is likely driven by my ability to control for more

refined industry effects.

4 Governance versus Non-Agency Characteristics

A possible interpretation is that the equity and operating performance patterns identified in Sections 2 and 3 are driven by non-agency characteristics that are correlated with, but not caused by, our measure of corporate governance. For example, as discussed in Section 1.1 and as seen in Panel D of Table 1, high governance firms have many characteristics of growth firms. This may be an outcome of their strong governance, or it may be that growth firms are simply likely to adopt fewer anti-shareholder provisions. If the performance patterns discussed in this paper are a result of growth characteristics or other omitted variables, they would still resolve the puzzle of why high abnormal returns to governance in the 1990's seemed to disappear in the 21st century, but the interpretation of the differential performance would change.

I make two attempts to address the alternative interpretations. First, I correct firm performance for observable characteristics before running my performance regressions. Secondly, I use an event study to explore an exogenous shock to governance and thus separate the impact of governance from the potential impact of these other characteristics.

4.1 Characteristics-Corrected Performance

In this analysis, I construct a two-stage, bias-corrected matching estimator to control for differences in observable characteristics between well- and poorly-governed firms. It is important to point out that differences in governance may cause some of the variation in characteristics such as growth and investment. Thus, controlling for differences in such

characteristics could absorb some or all of the effect of governance. However, if there is a residual effect of governance even after controlling for such factors, we can be more confident that the full performance differential related to governance cannot be just as easily explained by a tendency of firms with particular characteristics to choose a certain set of governance provisions.

In the first stage, I regress firm performance on a number of non-agency characteristics. In the second stage, I use the residuals from these regressions for high and low governance firms to perform analyses of returns and operating performance similar to those presented in Table 2 and Table 5.

For the first stage of the analysis, I follow GIM and Core, Guay and Rusticus (2006) and include the book to market ratio and size, measured as the log of market capitalization, as explanatory characteristics. I also include 5-year revenue growth and 3-year capital expenditures to assets as additional non-agency characteristics that are likely to be related to performance and are also correlated with shareholder rights. I interact each characteristic with the dummies for high, low, and mid industry performance periods in order to allow a differential impact of these control variables across good and bad times. This gives the non-agency characteristics a more fair chance of explaining the differential performance results in such periods. In the first stage regression, I include all firms with G Index data, including mid-governance firms. To control for industry, I demean both the left-hand-side and right-hand-side variables – performance and the non-agency characteristics – for the firms' industry-period mean levels, so that I am explaining performance relative to the industry with characteristics relative to the industry.

In the second stage of the analysis, I use the residual performance from these regressions in my main stock returns and return on assets regressions. Table 10 presents the results of this

characteristics-corrected performance analysis, including my base-case results from Tables 2 and 5 for comparison. While correcting for non-agency characteristics slightly dampens the effects, and results in a somewhat less non-linear operating performance pattern, the overall patterns are consistent with my previous results. Thus, the relation between governance and outperformance in good times is not easily explained by differences in observable characteristics. The flattening of the pattern could mean that part of the performance differential related to governance is in fact a function of differences in the types of firms that choose particular governance levels, or it could mean that controlling for differences in characteristics such as growth and investment absorbs part of the impact of governance that operates through these channels.

Of course, it is still possible that I am omitting additional variables or that well-governed and poorly-governed firms differ across an unobservable dimension. In the next section, I try to address this concern by considering an exogenous shock to governance.

4.2 Business Combination Laws Event Study

State-level business combination laws ("BC laws"), which reduce the threat of hostile takeovers, were passed from 1985 to 1991 in 30 states.[15] Being subject to such laws is one of the provisions that is considered to be a weakening of shareholder rights in the calculation of the G Index. Many other researchers, including Garvey and Hanka (1999), Bertrand and Mullainathan (2003) and Giroud and Mueller (2010), have used the passage of these laws as an exogenous source of variation in governance. Like Giroud and Mueller (2010), I follow the event study methodology of Karpoff and Malatesta (1989) to identify the firms that were expected to be negatively impacted by the passage of such laws based on their stock price

[15]For a review of the details of these laws and the conditions surrounding their passage, see Bertrand and Mullainathan (2003).

reactions to news of the laws.

If, as considered in this paper, governance matters the most in good times, and if investors understand this, I would expect such laws to have the greatest immediate price impact on the firms that had the highest expected value from future good times at the time of the law's passage. That is, because returns are forward-looking, the event return should reflect investors' expectations of all future impacts of the event on the firm's profitability. For this reason, it is not sufficient to look only at whether firms are currently in good or bad times. In fact, short-term profitability might be less likely to be affected by the change in law in that many of the decisions driving current operations would have been made before the law was announced. For this reason, I focus on Tobin's Q as a proxy for the current expected value of future good prospects.

Specifically, I study 2-day event returns for the last trading day prior to and the first trading day on or after the first newspaper report of 19 of these state laws for firms with different levels of Tobin's Q.[16] Giroud and Mueller (2010) demonstrate that stock price reactions to the BC laws were concentrated in these 2-day periods. My sample includes all firms in the CRSP-Compustat matched database that were incorporated in these 19 states at the time of passage of the laws and which have the required data to calculate returns and Tobin's Q, for a total of 3,921 firms (or 3,787 firms excluding utilities). For each of the 19 states for which I have an event date, in addition to a single portfolio of all firms in the state, I also form 4 portfolios of firms incorporated in the state representing the four quartiles of the distribution of Tobin's Q in the state on the date 5 days prior to the event date. For each of the resulting 19 state portfolios and 76 Tobin's-Q-sorted state portfolios, I regress

[16]The 19 states studied are Arizona, Connecticut, Delaware, Georgia, Illinois, Kentucky, Maryland, Massachusetts, Minnesota, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, Tennessee, South Carolina, Virginia, Washington, and Wisconsin. I would like to thank Xavier Giroud for kindly sharing his data on the dates of first newspaper report of the BC laws in these states.

daily portfolio returns on the equally-weighted market index over the time period from 241 trading days to 41 trading days prior to the event date in order to calculate estimated market betas for each portfolio. These estimates are then used to calculate 2-day event cumulative abnormal returns (CARs). The standard errors of these CARs are calculated as forecast errors, using the variance of the residuals and the standard errors of the betas from the market model regressions.

My results are given in Table 11. I present results for the full sample as well as a sample that follows Giroud and Mueller (2010) in excluding utilities. As shown, across all firms, I find a -0.23% (-0.25% excluding utilities) negative event return upon passage of the BC laws, similar to the impact measured by Giroud and Mueller (2010). However, considering the portfolios that are sorted by Tobin's Q, I find that the negative event return is driven by a -0.61% (same excluding utilities) return experienced by firms in the top quartile of Tobin's Q, with insignificant results for any other quartile.

One possible concern with this interpretation is that sorting by Tobin's Q may in effect be sorting firms by their ex ante governance, given that good governance is associated with a higher Tobin's Q. It is logical that firms with very few anti-takeover provisions might be more affected by the passage of business combination laws than firms that already have many takeover protections in place. I do not have data on shareholder rights provisions during this time period in order to directly control for this possibility. However, the sort here is much wider than the value differentials attributed to governance. The mean Q in the fourth quartile is, on average, 4.83, or almost 200% higher than the mean Q of 1.64 in the third quartile, compared to a much smaller 20% improvement for Democracies relative to Dictatorships, from 1.46 up to 1.75. The much higher Q's of firms in the fourth quartile likely indicates that their categorization is driven much more by their future prospects than

by their governance type.

Another concern is that the BC laws could have impacted acquirer opportunities to generate value through hostile takeovers. Perhaps the acquirers that are most likely to be negatively impacted in this way are high Q firms because, as posited by Shliefer and Vishny (2003), such acquisitions allow them to "lock in" the overvaluation of their equity. If this is the case, then the pattern of event returns might be driven by high Q firms losing their takeover prey rather than the weakening of an external governance mechanism. In order to address this possibility, I add an additional sort on size, under the assumption that acquirers are likely to be relatively larger firms. Specifically, I split the firms in each state into large and small firms based on their market capitalization 5 trading days before the event relative to the median of such capitalization for the state.

As I am now splitting the firms incorporated in each state into a total of 8 portfolios, there is substantially more noise and statistical significance drops accordingly, but the patterns are still revealing. Among larger firms, the largest event returns are experienced by the next-to-highest Tobin's Q quartile, which experiences a mean event return of -0.89% (-0.77% excluding utilities). This impact may be consistent with an effect of governance in good times, though it is unclear why the top Q quartile is unaffected, or it may reflect the loss of takeover targets. However, among smaller firms, the original result of the event return being driven by firms in the top quartile of Tobin's Q still holds, with such firms experiencing an average event return of -0.99% (-1.34% excluding utilities). Because these firms are less likely to be acquirers, I can more confidently attribute this impact to the change in the governance environment.

Thus, consistent with other results in this paper, I find that investors expected governance to have the greatest effect on firms with the greatest prospects for future good times. Because

this analysis exploits exogenous variation in governance, unlike other analyses in this paper, it is not subject to the concern that the impact may be driven by non-agency characteristics of firms. Instead, the event study provides strong evidence that governance has the greatest impact on performance in good times and that investors understood this even in the late 1980's and early 1990's.

5 Concluding remarks

This paper documents that the outperformance of well-governed firms relative to poorly-governed firms in the same industry, where governance is measured by the G Index, is concentrated in periods when industries are experiencing particularly good times. Well-governed firms generate significantly higher operating incomes than poorly-governed firms in periods of very high industry profitability, but perform similarly to other firms under other business conditions. This asymmetric operating outperformance, which appears to be accounted for in the higher valuations of such firms, likely explains the more symmetric pattern of abnormal returns. Well-governed firms experience positive abnormal returns relative to poorly-governed firms in periods of high returns, but have negative relative abnormal returns in industry downturns. These returns likely reflect changing expectations of capturing the good times premium that should be accounted for in the prices of stocks of well-governed firms.

Because the observed abnormal returns to governance thus depend on the nature of the particular period being sampled, these patterns provide a reasonable explanation for the apparent disappearance of returns to governance after 2001. The results are robust to wide range of specifications and to controlling for non-agency characteristics. An event study

exploiting the exogenous passage of state-level anti-takeover laws provides evidence in favor of a causal channel for the pattern. Also, analyst forecast patterns and the event study provide strong support for the hypothesis that investors have understood the implications of governance and, over time, have been surprised by news of good outcomes rather than by observed outperformance conditional on such outcomes.

Understanding that corporate governance may matter only in good times has implications for measuring the impact of governance, for optimal governance choices, and for policy decisions. Additional details of the channel through which shareholder rights are related to performance, and the interaction of shareholder rights with other governance mechanisms, should be further explored.

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Figure 1: Adj. Return of High and Low Governance Firms versus Industry Return

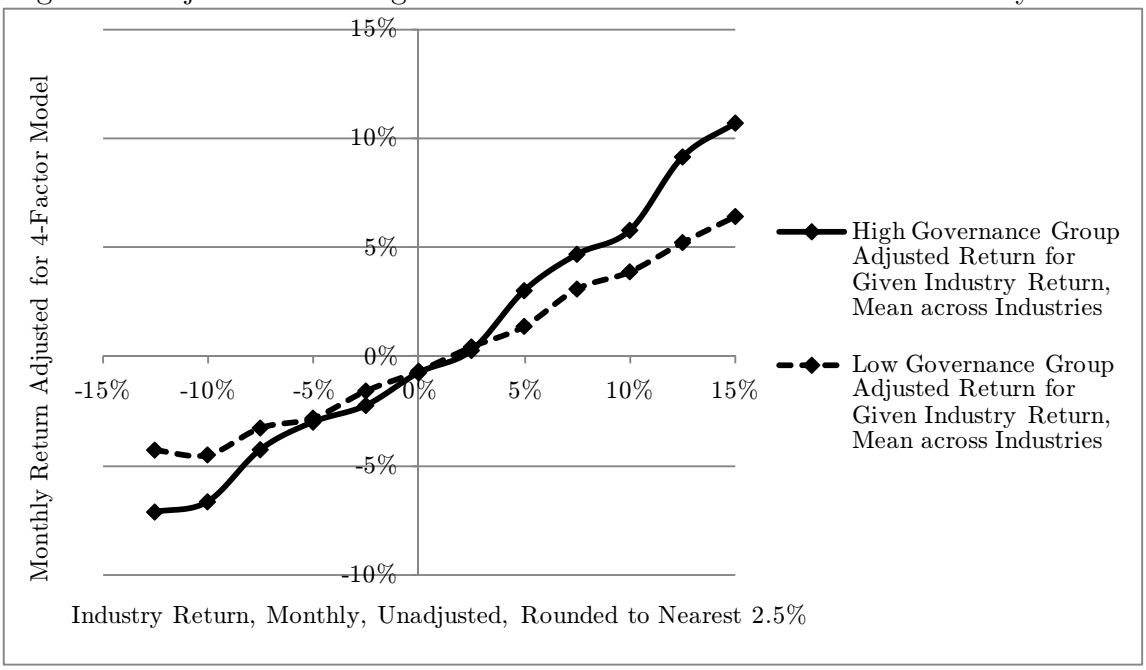

Figure 2: ROA of High and Low Governance Firms versus Industry ROA

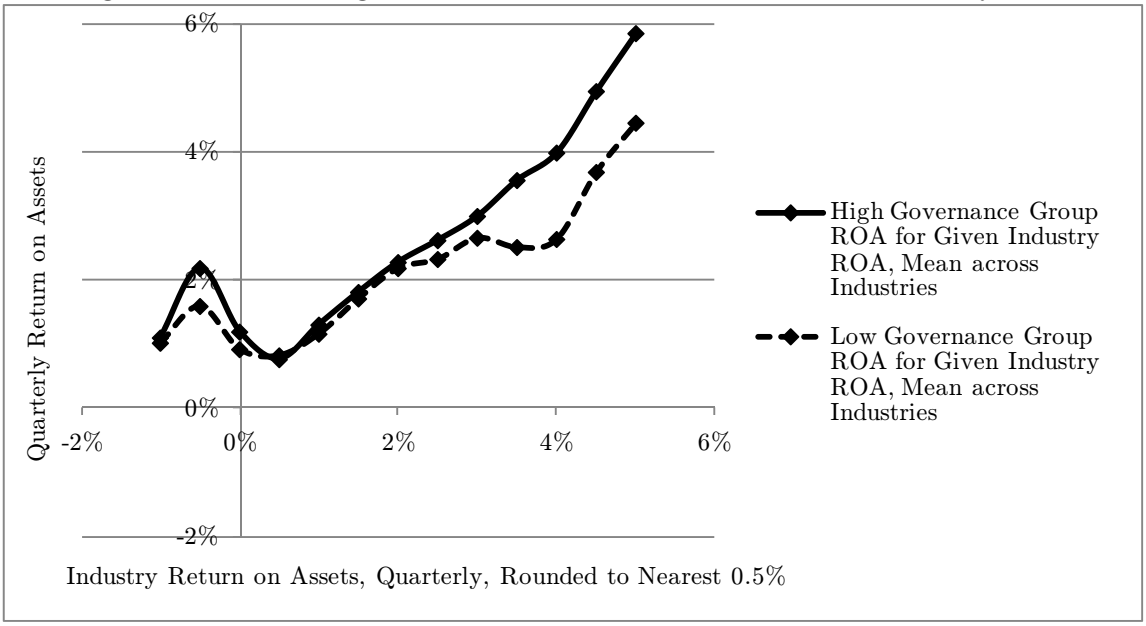

Table 1: Governance Sample Summary Statistics

Returns and operating performance data are analyzed from 1990 to 2008. The full sample of firms is limited to those included in IRRC publications from 1990 to 2006, as reported by Gompers, Ishii and Metrick in their Governance Index data, and which do not involve dual stocks. The samples used for most analyses are limited to industries in which both the high and low governance groups are represented (Panel B and C). The sample statistics in Panels A, B, and C have a distribution because the sample changes over time.

	Distribution over Months in Sample				
	Mean	Median	St. Dev.	Min	Max
Panel A. Full Sample					
Number of Industries (3-Digit SIC)	240.8	240	9.3	222	268
Number of Firms per Industry	6.0	3	11.3	1	148
GIM Governance Index ("G")	9.2	9	2.7	2	19
BC Entrenchment Index ("E")	2.4	2	1.3	0	6
Panel B. Democracy vs. Dictatorship Sample					
Number of Industries	21.4	21	4.2	12	30
Number of Firms per Industry[1]	20.8	11	26.6	1	191
Low Governance Firms (G>13) per Industry	1.7	1	1.3	1	10
High Governance Firms (G<6) per Industry	2.4	2	2.5	1	19
Panel C. High vs. Low Governance Quartiles Sample					
Number of Industries	59.4	60	6.2	46	75
Number of Firms per Industry[1]	11.7	6	18.4	1	182
Low Governance Firms (G>11) per Industry	3.1	2	3.7	1	39
High Governance Firms (G<7) per Industry	3.0	2	3.9	1	31

Panel D. High vs. Low Governance Characteristics

	Democracy/Dictatorship			Governance Quartiles		
Mean (at industry-gov. group level):	High Gov. (G<6)	Low Gov. (G>13)	T-Stat[2] for Difference	High Gov. (G<7)	Lov Gov. (G>11)	T-Stat[2] for Difference
Market Capitalization ($Mil)	5,433	4,320	0.76	7,738	5,195	1.29
Assets ($Mil)	8,274	10,158	-0.93	9,408	11,418	-0.58
Market Beta	0.978	0.977	0.03	1.029	1.054	-0.91
Tobin's Q	1.750	1.457	4.00***	1.830	1.601	3.17***
Long-Term Debt / Assets	0.181	0.204	-1.26	0.188	0.210	-2.37 **
1 - (Book Equity / Assets)	0.590	0.638	-2.15 **	0.563	0.621	-3.79***
Cash & ST Investments / Assets	0.119	0.078	4.03 **	0.109	0.070	5.91***
Age (Years in Compustat)	19	33	-7.88***	22	32	-8.86***
Quarterly:						
Cap. Ex. / Assets	0.017	0.014	2.72***	0.016	0.014	2.17 **
Revenue / Assets	0.242	0.228	0.89	0.293	0.299	-0.50
ROA (Oper. Income / Assets)	0.024	0.020	2.81***	0.025	0.024	1.05
ROE (Net Income / Book Equity)	0.026	0.027	-0.44	0.024	0.026	-0.46
5-Yr Revenue Growth	1.092	0.565	3.95***	1.129	0.558	6.33***

[1] Includes only those firm-months used to calculate industry returns and thus set industry high/low period dummies, which include mid-governance (or once mid-governance but never high/low governance) firms and, only when both high and low governance are represented in a given month, high and low governance firms. In some robustness tests, a narrower or broader group of firms is used to define the industry returns.

[2] Wald test based on full 1990-2008 sample, at industry level, with robust standard errors clustered by industry and by quarter. (*.10, **.05, ***.01)

Table 2: Stock Returns of High vs. Low Governance Firms, 1990-2008

This table reports the coefficients from a regression of the within-industry differential return between governance groups on dummies for the type of return experienced by the industry in the same month. The left-hand-side variable is the monthly return (adjusted in Panel A, unadjusted in Panel B) differential, by 3-digit SIC industry, of "high" versus "low" governance firms. Adjusted returns are excess returns adjusted for estimated betas on market, SMB, HML, and UMD factors as described in Section 1.2.1. Returns of firms in the same industry-governance group are equally-weighted. Low, mid, and high industry-return months are based on the quartiles of monthly returns specific to each industry from 1990 to 2008. See Section 1.1.2 for more detail on the construction of these industry return quartiles. Coefficients reported in percentage points (i.e., 0.01 is 1 basis point return).

Monthly Return Difference (high governance - low governance, by industry, in percent per month)

Governance Variable		N	Industry Return Dummies			Full Period
Low	High	(Industry-Month)	Low (1st quartile)	Mid (2nd and 3rd)	High (4th quartile)	(All Industry Return Types)
PANEL A: Adjusted return difference by industry (high governance - low governance)						
G > 13	G < 6	4,712	-1.01 ***	-0.02	2.38 ***	0.33 *
			(-3.11)	*(-0.08)*	*(5.98)*	*(1.88)*
G > 11	G < 7	13,076	-0.87 ***	-0.02	1.81 ***	0.22
			(-3.42)	*(-0.11)*	*(4.62)*	*(1.54)*
G > 9	G < 10	28,443	-0.60 ***	-0.03	1.12 ***	0.11
			(-3.83)	*(-0.43)*	*(5.96)*	*(1.44)*
E > 4	E < 1	4,170	-0.98 **	-0.15	0.91 *	-0.08
			(-2.25)	*(-0.60)*	*(1.96)*	*(-0.40)*
E > 3	E < 2	17,033	-0.08	0.08	0.75 ***	0.20 *
			(-0.39)	*(0.67)*	*(2.66)*	*(1.91)*
E > 2	E < 3	28,110	-0.61 ***	0.00	0.90 ***	0.07
			(-4.08)	*(-0.04)*	*(4.23)*	*(0.85)*
PANEL B: *Un-adjusted* return difference by industry (high governance - low governance)						
G > 13	G < 6	4,712	-1.27 ***	-0.13	2.64 ***	0.27
			(-3.57)	*(-0.60)*	*(6.44)*	*(1.46)*
G > 11	G < 7	13,076	-1.20 ***	-0.06	2.10 ***	0.19
			(-4.52)	*(-0.41)*	*(5.48)*	*(1.25)*
G > 9	G < 10	28,443	-0.93 ***	-0.01	1.28 ***	0.08
			(-6.19)	*(-0.14)*	*(6.42)*	*(0.94)*
E > 4	E < 1	4,170	-0.92 **	-0.24	1.09 **	-0.07
			(-2.10)	*(-0.98)*	*(2.22)*	*(-0.34)*
E > 3	E < 2	17,033	-0.28	0.02	0.84 ***	0.14
			(-1.30)	*(0.18)*	*(3.04)*	*(1.31)*
E > 2	E < 3	28,110	-0.83 ***	-0.03	0.91 ***	0.00
			(-6.03)	*(-0.44)*	*(4.38)*	*(-0.01)*

Standard errors are robust (clustered at month level).
T-statistics in parentheses. (*.10, **.05, ***.01)

Table 3: Stock Returns of High vs. Low Governance Firms - Robustness Tests I

This table presents robustness tests of the results in Table 1.2. The approach parallels that in Table 1.2, with the following differences. (1) includes observations only from 1990 to 2001; (2) includes observations only from 2002 to 2008. In both cases, industry quartiles are also set within these subperiods. (3) uses market return dummies as the right-hand side variables instead of industry returns. (4) is limited to periods of high (above median) equally-weighted market return; (5) is limited to periods of low (below median) equally-weighted market return. (6) uses 8-digit GICS industries instead of 3-digit SIC industries. (7) includes all firms available in CRSP for industry calculations rather than excluding those without G Index data. All specifications use adjusted returns (adjusted for estimated firm betas on market, SMB, HML, and UMD factors, estimated in a pre and post period) to calculate monthly high minus low governance returns. Coefficients reported in percentage points (i.e., 0.01 is 1 basis point return).

Monthly Adjusted Return Difference (high governance - low governance, by industry, in percent per month)

	(1) 1990-2001	(2) 2002-2008	(3) Market Return Dummies	(4) High Market Subsample	(5) Low Market Subsample	(6) GICS-8 Industries	(7) Industry Includes Non-IRRC Firms
PANEL A: Democracies vs. Dictatorships (G<6 and G>13)							
Low Ind/Mkt Return Dummy	-0.65 *	-1.93 ***	-0.57 *	-0.93	-1.03 ***	-0.67 *	-0.85 **
	(-1.66)	*(-3.39)*	*(-1.74)*	*(-0.95)*	*(-3.05)*	*(-1.94)*	*(-2.38)*
Mid Ind/Mkt Return Dummy	0.03	0.15	0.19	0.10	-0.15	-0.42 **	0.15
	(0.12)	*(0.37)*	*(0.86)*	*(0.36)*	*(-0.44)*	*(-2.02)*	*(0.66)*
High Ind/Mkt Return Dummy	1.79 ***	3.21 ***	1.48 ***	2.71 ***	0.99	1.48 ***	1.85 ***
	(3.58)	*(4.87)*	*(3.84)*	*(6.01)*	*(1.29)*	*(3.50)*	*(4.80)*
Full Period (any ind/mkt return)	0.28	0.44	0.33 *	1.02 ***	-0.39 *	-0.01	0.33 *
	(1.30)	*(1.45)*	*(1.88)*	*(4.14)*	*(-1.69)*	*(-0.07)*	*(1.88)*
N (Industry-Month)	3238	1474	4712	2412	2300	5753	4712
PANEL B: Governance Quartiles (G<7 and G>11)							
Low Ind/Mkt Return Dummy	-0.47	-1.46 ***	-0.02	-0.47	-0.95 ***	-1.08 ***	-0.49 **
	(-1.64)	*(-2.91)*	*(-0.07)*	*(-0.95)*	*(-3.28)*	*(-4.79)*	*(-2.08)*
Mid Ind/Mkt Return Dummy	0.00	-0.09	-0.07	-0.26	0.25	-0.01	0.04
	(-0.00)	*(-0.42)*	*(-0.44)*	*(-1.24)*	*(1.13)*	*(-0.04)*	*(0.26)*
High Ind/Mkt Return Dummy	1.40 **	2.46 ***	1.05 **	2.02 ***	0.99	1.48 ***	1.31 ***
	(2.54)	*(5.42)*	*(2.57)*	*(4.43)*	*(1.47)*	*(4.57)*	*(3.32)*
Full Period (any ind/mkt return)	0.23	0.22	0.22	0.60 ***	-0.16	0.10	0.22
	(1.15)	*(1.07)*	*(1.54)*	*(2.59)*	*(-0.96)*	*(0.79)*	*(1.54)*
N (Industry-Month)	8439	4637	13076	6616	6460	13713	13076

Standard errors are robust (clustered at month level).
T-statistics in parentheses. (*.10, **.05, ***.01)

Table 4: Stock Returns of High vs. Low Governance Firms - Robustness Tests II

This table presents further robustness tests of the results in Table 1.2. The approach parallels that in Table 1.2, with the following differences. (1) and (2) exclude "high" and "low" governance firms altogether from industry return calculations; (2) uses value weights for these industry return calculations and within the high and low governance portfolios. (3) uses Carhart's PR1YR factor in place of the Fama-French UMD factor; (4) excludes high tech, telecom, financial and related industries. (5)/(6) is a subsample of industries with above/below median cash flows relative to other industries. (7) requires a minimum of 10 firms per industry-month observation (for industry return dummy assignment as well as inclusion in regression). All specifications use adjusted returns (adjusted for estimated firm betas on market, SMB, HML, and momentum factors, estimated in a pre and post period) to calculate monthly high minus low governance returns. Coefficients reported in percentage points (i.e., 0.01 is 1 basis point return).

Monthly Adjusted Return Difference (high governance - low governance, by industry, in percent per month)

	(1) Industry Return Excl. H/L Gov	(2) (1) and Value Weights	(3) FF+ PR1YR	(4) Excl. Tech and Financial	(5) High CF Industries	(6) Low CF Industries	(7) At Least 10 Firms/Industry
PANEL A: Democracies vs. Dictatorships (G<6 and G>13)							
Low Industry Return Dummy	-0.52	-0.36	-0.81 **	-1.52 ***	-1.46 **	-0.59	-0.71 *
	(-1.48)	*(-0.99)*	*(-2.33)*	*(-3.80)*	*(-2.57)*	*(-1.23)*	*(-1.92)*
Mid Industry Return Dummy	0.16	0.49 **	0.04	-0.20	0.10	-0.15	0.19
	(0.73)	*(2.00)*	*(0.19)*	*(-0.69)*	*(0.29)*	*(-0.52)*	*(0.76)*
High Industry Return Dummy	1.50 ***	1.09 ***	2.29 ***	2.51 ***	2.26 ***	2.46 ***	2.28 ***
	(4.11)	*(3.54)*	*(6.05)*	*(4.70)*	*(3.31)*	*(4.69)*	*(4.72)*
Full Period (any industry return)	0.33 *	0.43 **	0.39 **	0.12	0.24	0.39 *	0.49 **
	(1.88)	*(2.56)*	*(2.18)*	*(0.52)*	*(0.84)*	*(1.70)*	*(2.38)*
N (Industry-Month)	4712	4712	4712	2924	2006	2706	3522
PANEL B: Governance Quartiles (G<7 and G>11)							
Low Industry Return Dummy	-0.50 **	0.07	-0.78 ***	-1.45 ***	-0.67 *	-0.97 ***	-0.33
	(-2.03)	*(0.29)*	*(-2.91)*	*(-4.97)*	*(-1.92)*	*(-2.84)*	*(-1.35)*
Mid Industry Return Dummy	0.28 *	0.21	0.06	-0.17	0.06	-0.09	-0.04
	(1.92)	*(1.15)*	*(0.40)*	*(-0.99)*	*(0.27)*	*(-0.48)*	*(-0.21)*
High Industry Return Dummy	0.91 **	0.38	1.99 ***	2.12 ***	1.73 ***	1.87 ***	1.46 ***
	(2.49)	*(1.52)*	*(5.12)*	*(4.45)*	*(4.34)*	*(3.05)*	*(4.31)*
Full Period (any industry return)	0.22	0.19	0.33 **	0.08	0.29 *	0.17	0.26 *
	(1.54)	*(1.42)*	*(2.16)*	*(0.46)*	*(1.76)*	*(0.80)*	*(1.82)*
N (Industry-Month)	12508	12508	13076	10034	5914	7162	6880

Standard errors are robust (clustered at month level).
T-statistics in parentheses. (*.10, **.05, ***.01)

Table 5: Operating Performance of High vs. Low Governance Firms, 1990-2008

This table reports the coefficients from a regression of the within-industry differential operating performance between governance groups on dummies for the type of operating performance experienced by the industry in the same quarter. The left-hand-side variable is the specified quarterly accounting measure differential, by 3-digit SIC industry, of "high" versus "low" governance firms. High and low governance throughout this table mean G Index levels of less than 6 or more than 13 respectively. Performance of firms in the same industry and governance group are equally-weighted. The right-hand-side variables are dummies corresponding to low, mid, and high levels of the specified (by panel) quarterly accounting measure in the industry, classified based on the quartiles of quarterly measures specific to each individual industry from 1990 to 2008. See Section 1.1.2 for more detail on the construction of these industry performance quartiles.

Quarterly Performance Difference (high governance - low governance, by industry)

Governance Variable (Democracies/Dictatorships)										
Low	High									
G > 13	G < 6									
			Type of Quarter for the Industry (based on panel accounting measure)					T-Statistics for Differences		
Operating Performance Variable		N (Industry-Qtr)	Low (1st quartile)		Mid (2nd and 3rd)		High (4th quartile)		Low - Mid Diff in Spreads		High - Mid Diff in Spreads	
PANEL A: Return on Assets Industry Dummies										
Return on Assets (operating income to assets)		1,525	-0.0004		0.0031		0.0108		-0.0035		0.0077	
			(-0.28)		(2.98)	***	(7.37)	***	(-1.99)	**	(4.06)	***
			(-0.21)		*(1.94)*	*	*(4.84)*	***	*(-1.76)*	*	*(3.52)*	***
Revenue (revenue to assets)		1,553	0.0001		0.0094		0.0384		-0.0093		0.0290	
			(0.01)		(1.37)		(3.06)	***	(-0.71)		(1.88)	*
			(0.01)		*(0.64)*		*(1.46)*		*(-0.67)*		*(1.52)*	
Operating Profit Margin (op. income to revenue)		1,535	-0.0043		-0.0010		0.0200		-0.0033		0.0211	
			(-0.25)		(-0.10)		(1.28)		(-0.17)		(1.13)	
			(-0.25)		*(-0.07)*		*(1.04)*		*(-0.23)*		*(0.84)*	
PANEL B: Return on Equity Industry Dummies										
Return on Equity (income to book equity)		1,506	-0.0054		-0.0045		0.0106		-0.0008		0.0151	
			(-1.09)		(-1.61)		(2.44)	**	(-0.15)		(2.89)	***
			(-0.78)		*(-1.18)*		*(1.96)*	**	*(-0.11)*		*(2.60)*	***
Revenue (revenue to assets)		1,553	0.0081		0.0034		0.0437		0.0047		0.0404	
			(0.86)		(0.47)		(3.80)	***	(0.38)		(2.82)	***
			(0.55)		*(0.23)*		*(1.77)*	*	*(0.46)*		*(2.15)*	**
Net Profit Margin (net income to revenue)		1,563	0.0039		-0.0124		0.0398		0.0163		0.0522	
			(0.24)		(-1.25)		(3.15)	***	(0.91)		(3.45)	***
			(0.27)		*(-0.81)*		*(1.22)*		*(1.12)*		*(1.27)*	

Standard errors are robust (clustered at quarter level) and either include an AR(1) correction for autocorrelation or are also clustered by industry.
AR(1)-corrected T-statistics in parentheses (above), two-way clustered T-statistics italicized in parentheses (below). (*.10, **.05, ***.01)

Table 6: Operating Performance of High vs. Low Governance Firms - Robustness Tests

This table presents robustness tests of the results in Table 1.5. The approach parallels that in Table 1.5, with the following differences. (1) includes observations only from 1990 to 2001; (2) includes observations only from 2002 to 2008. In both cases, industry quartiles are also set within these subperiods. (3) uses 8-digit GICS industries instead of 3-digit SIC industries. (4) includes all firms available in the CRSP-Compustat merged database for industry calculations rather than excluding those without G Index data. (5) and (6) exclude "high" and "low" governance firms altogether from industry ROA calculations; (6) uses value-weights for these industry ROA calculations and within the governance portfolios. (7) excludes high tech, telecom, financial and related industries. (8) requires a minimum of 10 firms per industry-quarter observation (for industry ROA dummy assignment as well as inclusion in regression).

Quarterly ROA Difference (high governance - low governance, by industry)

	(1) 1990-2001	(2) 2002-2008	(3) GICS Industries	(4) Industry Incl. Non-IRRC	(5) Industry ROA Excl. H/L Gov	(6) (5) + Value Weights	(7) Excl. Tech and Financial	(8) At Least 10 Firms/Industry
PANEL A: Democracies vs. Dictatorships (G<6 and G>13)								
Low Industry ROA Dummy	-0.0030	0.0003	-0.0011	0.0018	0.0022	0.0027	-0.0014	-0.0004
	(-1.54)	*(0.08)*	*(-0.37)*	*(0.78)*	*(1.15)*	*(1.11)*	*(-0.66)*	*(-0.15)*
Mid Industry ROA Dummy	0.0022	0.0084 ***	0.0000	0.0041 **	0.0038 **	0.0035 **	0.0025	0.0021
	(1.33)	*(2.70)*	*(-0.02)*	*(2.50)*	*(2.26)*	*(2.02)*	*(1.15)*	*(1.33)*
High Industry ROA Dummy	0.0098 ***	0.0118 ***	0.0062 *	0.0055 **	0.0060 ***	0.0046 **	0.0133 ***	0.0069 ***
	(3.41)	*(2.96)*	*(1.85)*	*(2.41)*	*(3.13)*	*(2.02)*	*(4.19)*	*(2.90)*
Full Period (any ind. ROA)	0.0025 *	0.0069 **	0.0012	0.0039 ***	0.0039 ***	0.0036 **	0.0037 **	0.0026 *
	(1.74)	*(2.39)*	*(0.59)*	*(2.81)*	*(2.81)*	*(2.42)*	*(2.05)*	*(1.75)*
N (Industry-Quarter)	1047	478	1956	1525	1525	1525	951	1130
PANEL B: Governance Quartiles (G<7 and G>11)								
Low Industry ROA Dummy	-0.0021	-0.0058 **	-0.0039 **	-0.0010	0.0008	0.0006	-0.0035	-0.0040 **
	(-0.98)	*(-2.25)*	*(-2.18)*	*(-0.53)*	*(0.49)*	*(0.42)*	*(-1.64)*	*(-2.13)*
Mid Industry ROA Dummy	0.0024	0.0022	-0.0003	0.0013	0.0007	0.0014	0.0015	-0.0012
	(0.96)	*(1.26)*	*(-0.19)*	*(0.81)*	*(0.41)*	*(0.96)*	*(0.67)*	*(-0.84)*
High Industry ROA Dummy	0.0055 *	0.0053 **	0.0073 ***	0.0051 **	0.0023	0.0007	0.0082 **	0.0046 **
	(1.78)	*(2.00)*	*(3.55)*	*(2.13)*	*(1.24)*	*(0.33)*	*(2.40)*	*(2.12)*
Full Period (any ind. ROA)	0.0020	0.0011	0.0006	0.0017	0.0011	0.0010	0.0019	-0.0005
	(0.94)	*(0.63)*	*(0.47)*	*(1.05)*	*(0.81)*	*(0.76)*	*(0.95)*	*(-0.43)*
N (Industry-Quarter)	2809	1524	4529	4333	4127	4126	3333	2235

Standard errors are robust (clustered at quarter and industry level).
T-statistics in parentheses. (*.10, **.05, ***.01)

Table 7: Analyst Forecast Patterns, 1990-2008

This table reports the coefficients from a regression of the within-industry differential analyst earnings forecasts or surprises relative to such forecasts between governance groups on dummies for the type of analyst forecasts or surprises corresponding to the industry in the same quarter. The left-hand-side variable is the specified quarterly measure differential, by 3-digit SIC industry, of "high" versus "low" governance firms. High and low governance throughout this table mean G Index levels of less than 6 or more than 13 respectively. Forecasts are all mean forecasts across analysts. Performance/forecasts of firms in the same industry and governance group are equally-weighted. The right-hand-side variables are dummies corresponding to low, mid, and high levels of the specified (by panel) quarterly measure in the industry, classified based on the quartiles of quarterly measures specific to each individual industry from 1990 to 2008 or subperiods as indicated. See Section 1.1.2 for more detail on the construction of these industry performance quartiles. Also reported are p-values for the Wald test that all coefficients of the pre-2002 regression are the same as those of the post-2001, based on the two-way clustered standard errors.

Quarterly Difference (high governance - low governance, by industry)

Governance Variable (Democracies/Dictatorships) Low: G > 13 / High: G < 6 — Operating Performance / Forecast Variable	N (Industry-Quarter)	Type of Quarter for the Industry (based on panel-specific measure) Low (1st quartile)	Mid (2nd and 3rd)	High (4th quartile)	P-value for Wald Test Pre vs. Post Sample
PANEL A: Forecast Income / Book Equity Industry Dummies					
Full Period: Forecast Income / Book Equity	1,099	-0.0057	0.0003	0.0165	
		(-1.71) *	(0.13)	(2.14) **	
		(-1.34)	*(0.09)*	*(1.54)*	
Pre-2002: Forecast Income / Book Equity	722	-0.0070	0.0027	0.0112	
		(-1.49)	(1.00)	(1.36)	
		(-1.59)	*(0.80)*	*(1.15)*	
Post-2001: Forecast Income / Book Equity	377	-0.0058	0.0019	0.0145	
		(-1.29)	(0.74)	(0.92)	
		(-0.81)	*(0.40)*	*(0.59)*	*0.98*
PANEL B: Analyst Surprise Industry Dummies					
Full Period: Actual - Forecast Income / Book Equity	1,099	-0.0247	0.0002	0.0054	
		(-3.02) ***	(0.17)	(2.65) ***	
		(-2.41) **	*(0.17)*	*(2.59)* ***	
Pre-2002: Actual - Forecast Income / Book Equity	722	-0.0329	-0.0007	0.0035	
		(-3.16) ***	(-0.38)	(1.57)	
		(-2.75) ***	*(-0.36)*	*(1.94)* *	
Post-2001: Actual - Forecast Income / Book Equity	377	-0.0047	0.0016	0.0082	
		(-0.39)	(0.77)	(2.33) **	
		(-0.27)	*(0.79)*	*(1.71)* *	*0.33*

Standard errors are robust (clustered at quarter level) and either include an AR(1) correction for autocorrelation or are also clustered by industry.
AR(1)-corrected T-statistics in parentheses (above), two-way clustered T-statistics italicized in parentheses (below). (*.10, **.05, ***.01)

Table 8: Valuation and Investment Patterns, 1990-2008

This table reports the coefficients from a regression of the within-industry differential Tobin's Q or investment between governance groups on dummies for the level of Tobin's Q corresponding to the industry in the same quarter. The left-hand-side variable is the specified quarterly accounting measure differential, by 3-digit SIC industry, of "high" versus "low" governance firms. Performance of firms in the same industry and governance group are equally-weighted. The right-hand-side variables are dummies corresponding to low, mid, and high levels of the Tobin's Q in the industry, classified based on the quartiles of quarterly Q specific to each individual industry from 1990 to 2008. See Section 1.1.2 for more detail on the construction of these industry quartiles. Q is calculated as the market value of assets – estimated as the total book value of assets plus the market value of equity minus book value of equity incl. deferred taxes – divided by the total book value of assets.

Quarterly Difference (high governance - low governance, by industry)

		Type of Quarter for the Industry (based on Q-Ratio)			T-Statistics for Differences	
Investment/Performance Variable	N (Industry-Quarter)	Low (1st quartile)	Mid (2nd and 3rd)	High (4th quartile)	Low - Mid Diff in Spreads	High - Mid Diff in Spreads
PANEL A: Democracies vs. Dictatorships (G<6 and G>13)						
Tobin's Q	1,556	0.1456	0.3108	0.4352	-0.1651	0.1244
		(3.71) ***	(6.66) ***	(5.22) ***	(-2.59) ***	(1.27)
		(2.27) **	*(3.63)* ***	*(3.31)* ***	*(-2.11)* **	*(1.16)*
CAPEX to Assets	1,273	0.0011	0.0038	0.0035	-0.0027	-0.0003
		(0.87)	(4.64) ***	(3.04) ***	(-1.85) *	(-0.21)
		(0.71)	*(2.88)* ***	*(2.33)* **	*(-1.72)* *	*(-0.19)*
Percent Change in Net PPE	1,518	0.6188	0.3878	2.0510	0.2310	1.6632
		(1.17)	(0.89)	(3.46) ***	(0.34)	(2.31) **
		(1.04)	*(0.86)*	*(3.16)* ***	*(0.33)*	*(2.21)* **
PANEL B: Governance Quartiles (G<7 and G>11)						
Tobin's Q	4,356	0.0807	0.1530	0.5584	-0.0723	0.4054
		(3.36) ***	(3.99) ***	(8.64) ***	(-1.63)	(5.14) ***
		(1.92) *	*(2.15)* **	*(3.52)* ***	*(-1.24)*	*(3.22)* ***
CAPEX to Assets	3,890	0.0022	0.0017	0.0026	0.0005	0.0009
		(3.92) ***	(4.70) ***	(4.79) ***	(0.77)	(1.25)
		(1.93) *	*(1.83)* *	*(2.33)* **	*(0.65)*	*(1.13)*
Percent Change in Net PPE	4,342	0.1325	0.7782	0.9978	-0.6457	0.2196
		(0.42)	(3.40) ***	(2.42) **	(-1.85) *	(0.46)
		(0.35)	*(3.21)* ***	*(2.32)* **	*(-1.59)*	*(0.48)*

Standard errors are robust (clustered at quarter level) and either include an AR(1) correction for autocorrelation or are also clustered by industry.
AR(1)-corrected T-statistics in parentheses (above), two-way clustered T-statistics italicized in parentheses (below) (*.10, **.05, ***.01)

Table 9: Lagged Investment vs. Profitable Periods, 1990-2008

This table reports the coefficients from a regression of the within-industry differential investment between governance groups on dummies for the type of operating performance experienced by the industry in a following quarter. The left-hand-side variable is the specified lagged differential in capital expenditures to assets, by 3-digit SIC industry, of "high" versus "low" governance firms. Investment of firms in the same industry and governance group are equally-weighted. The right-hand-side variables are dummies corresponding to low, mid, and high levels of ROA in the industry, classified based on the quartiles of quarterly ROA specific to each individual industry from 1990 to 2008. See Section 1.1.2 for more detail on the construction of these industry performance quartiles.

Difference in Investment (high governance - low governance, by industry)

		Type of Quarter for the Industry (based on ROA)			T-Statistics for Differences	
Lagged Investment Variable	N (Industry-Period)	Low (1st quartile)	Mid (2nd and 3rd)	High (4th quartile)	Low - Mid Diff in Spreads	High - Mid Diff in Spreads
PANEL A: Democracies vs. Dictatorships (G<6 and G>13)						
CAPEX to Assets : Quarters -1 to -4	807	0.0102	0.0117	0.0199	-0.0015	0.0082
		(1.22)	(2.40) **	(3.60) ***	(-0.16)	(1.16)
		(1.04)	*(2.17)* **	*(3.26)* ***	*(-0.19)*	*(1.21)*
CAPEX to Assets: Quarters -5 to -12	391	0.0182	0.0237	0.0400	-0.0056	0.0163
		(1.21)	(1.81) *	(2.95) ***	(-0.29)	(0.88)
		(0.80)	*(1.49)*	*(2.08)* **	*(-0.39)*	*(0.68)*
PANEL B: Governance Quartiles (G<7 and G>11)						
CAPEX to Assets: Quarters -1 to -4	2,864	0.0124	0.0103	0.0088	0.0020	-0.0016
		(3.84) ***	(5.61) ***	(3.60) ***	(0.53)	(-0.50)
		(2.33) **	*(2.41)* **	*(1.66)* *	*(0.63)*	*(-0.55)*
CAPEX to Assets: Quarters -5 to -12	1,816	0.0263	0.0320	0.0276	-0.0057	-0.0044
		(4.58) ***	(7.10) ***	(4.12) ***	(-0.79)	(-0.51)
		(2.08) **	*(2.96)* ***	*(1.88)* *	*(-1.11)*	*(-0.49)*

Standard errors are robust (clustered at quarter level) and either include an AR(1) correction for autocorrelation or are also clustered by industry.
AR(1)-corrected T-statistics in parentheses (above), two-way clustered T-statistics italicized in parentheses (below) (*.10, **.05, ***.01).

Table 10: Characteristic-Corrected Return and Operating Income Patterns, 1990-2008

This table reports the coefficients from a regression of the within-industry differential performance between governance groups on dummies for the type of performance experienced by the industry in the same period. The left-hand-side variable is the specified performance differential, by 3-digit SIC industry, of "high" versus "low" governance firms. High and low governance throughout this table mean G Index levels of less than 6 or more than 13 respectively. Characteristic-corrected performance is the residual from a regression of all firms' given performance statistic minus their industry-period mean on several industry-period-demeaned characteristics, each interacted with dummies corresponding to low, mid, and high levels of the industry performance statistic. The characteristics included in the first stage correction are log market capitalization, market to book ratio, 5-year revenue growth, and 3-year capital expenditures to assets. The right-hand-side variables in the specifications below are dummies corresponding to low, mid, and high levels of the specified (by panel) performance measure in the industry, classified based on the quartiles of periodic measures specific to each individual industry from 1990 to 2008. See Section 1.1.2 for more detail on the construction of these industry performance quartiles. Periods are months in Panel A and quarters in Panel B. Performance of firms in the same industry and governance group are equally-weighted. Returns are expressed in percentage points.

Performance Difference (high governance - low governance, by industry)

Governance Variable (Democracies/Dictatorships) Low G > 13 / High G < 6 — Performance Variable	N (Industry-Period)	Type of Period for the Industry (based on panel measure) Low (1st quartile)	Mid (2nd and 3rd)	High (4th quartile)	Full Period (Any Industry Performance)
PANEL A: Monthly Industry Return Dummies					
Monthly Adjusted Returns	4,712	-1.01 ***	-0.02	2.38 ***	0.33 *
		(-3.11)	*(-0.08)*	*(5.98)*	*(1.88)*
Characteristic-Corrected Monthly Adj. Returns	2,438	-0.91 *	-0.25	2.20 ***	0.17
		(-1.78)	*(-0.79)*	*(3.01)*	*(0.61)*
PANEL B: Quarterly Industry ROA Dummies					
Quarterly ROA	1,525	-0.0004	0.0031 *	0.0108 ***	0.0039 ***
		(-0.21)	*(1.94)*	*(4.84)*	*(2.81)*
Characteristic-Corrected Quarterly ROA	803	0.0037	0.0060 ***	0.0085 **	0.0059 ***
		(1.53)	*(2.78)*	*(2.48)*	*(2.91)*

Standard errors are robust (clustered at period level); for Panel B, they are also clustered at the industry level.
T-statistics in parentheses (*.10, **.05, ***.01).

Table 11: Event Study - Business Combination Laws

The numbers reported in the table are average portfolio cumulative abnormal returns (CARs), for 19 state-of-incorporation portfolios, upon first newspaper report of the business combination law in that state (ranging from 1985 to 1991). The event horizon is trading days -1 to 0 relative to such report. CARs and the accompanying standard errors are calculated using market betas and forecast errors determined for each state-quartile portfolio (or state-size-quartile portfolio) from trading days -241 to -41. The sample includes a total of 3,921 firms (3,787 firms when excluding utilities) across the 19 states, which are Arizona, Connecticut, Delaware, Georgia, Illinois, Kentucky, Maryland, Massachusetts, Minnesota, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, Tennessee, South Carolina, Virginia, Washington, and Wisconsin. Tobin's Q quartile and median size cutoffs are specific to each individual state. Tobin's Q is measured 5 days before the event, with the required accounting variables interpolated from the prior and next quarter end. Size is measured as market capitalization 5 days before the event. CARs are reported in percentage points (i.e., 0.01 is 1 basis point return).

2-Day CAR [-1, 0], reported in percentage points (0.01 = 1 basis point return)

		Tobin's Q Quartiles, As of Day -5			
	All Firms	Lowest Quartile	Second Quartile	Third Quartile	Highest Quartile
Full sample	-0.234 **	-0.084	-0.149	-0.088	-0.6067 **
	(-2.19)	*(-0.13)*	*(-0.65)*	*(-0.63)*	*(-2.34)*
Above median size	-0.286 *	-0.252	0.078	-0.888 *	-0.0757
	(-1.92)	*(-1.03)*	*(-0.14)*	*(-1.81)*	*(-1.22)*
Below median size	-0.188	-0.012	0.023	0.265	-0.9920 **
	(-1.17)	*(-0.09)*	*(-0.24)*	*(-0.31)*	*(-1.97)*
Excluding utilities	-0.251 **	-0.168	-0.107	-0.098	-0.6057 **
	(-2.27)	*(-0.32)*	*(-0.47)*	*(-0.75)*	*(-2.29)*
Above median size	-0.287 *	-0.177	-0.112	-0.772	-0.0866
	(-1.94)	*(-1.01)*	*(-0.67)*	*(-1.52)*	*(-1.29)*
Below median size	-0.227	-0.061	-0.033	0.447	-1.3387 *
	(-1.25)	*(-0.25)*	*(-0.31)*	*(0.01)*	*(-1.93)*

Z-statistics in parentheses (*.10, **.05, ***.01)