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**Rating the Ratings:
How Good are Commercial Governance Ratings?**

Robert Daines, Stanford Law School and
The Rock Center for Corporate Governance at Stanford University
Ian Gow, Kellogg School of Management, Northwestern University

David Larcker, Stanford University and
The Rock Center for Corporate Governance at Stanford University

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Robert M. Daines
Law School and Graduate School of Business
Rock Center for Corporate Governance
Stanford University

Ian D. Gow
Kellogg School of Management
Northwestern University

David F. Larcker
Graduate School of Business
Rock Center for Corporate Governance
Stanford University

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Abstract

Proxy advisory and corporate governance rating firms (such as RiskMetrics/ISS, GovernanceMetrics International, and The Corporate Library) play an increasingly important role in U.S. public markets. They rank the quality of firm corporate governance, advise shareholders how to vote and sometimes press for governance changes. We examine whether commercially available corporate governance rankings provide useful information for shareholders. Our results suggest that they do not. Commercial ratings do not predict governance-related outcomes with the precision or strength necessary to support the bold claims made by most of these firms. Moreover, we find little or no relation between the governance ratings provided by RiskMetrics with either their voting recommendations or the actual votes by shareholders on proxy proposals.

Corresponding author: Robert Daines, Stanford Law School, 558 Nathan Abbot Way, Stanford, CA 94305; (o) (650) 736-2684, (f) (650) 725-0253; daines@stanford.edu.

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1. Introduction.

Corporate governance advice is big business. RiskMetrics/ISS, the largest advisor, claims over 1,700 institutional clients managing \$26 trillion in assets, including 24 of the top 25 mutual funds, 25 of the top 25 asset managers and 17 of the top 25 public pension funds. ISS was sold in 2007 to RiskMetrics, a firm that has since gone public, for an estimated \$550 million. Governance Metrics International (GMI) advises clients managing \$15 trillion. These governance ratings also serve as inputs into tradable indices created by ISS/FTSE and S&P/Glass Lewis.

If these ratings identify corporate governance characteristics that lead to desirable or undesirable outcomes, users of these ratings may be able to earn superior risk-adjusted returns by either investing in firms with good governance or avoiding firms with poor governance. Governance advisory firms commonly make this claim explicit. ISS claims that its ratings “identify the worst corporate offenders”¹ and that “there is no doubt that [its] ratings could have helped some investment managers avoid the gigantic losses experienced during the corporate scandal era defined by meltdowns at Enron, Global Crossing and WorldCom.”² Similarly, TCL says its approach “led to our successfully identifying the Enron, WorldCom, Global Crossing, HealthSouth, Kmart, Warnaco and DPL boards as likely to encounter problems well *before* those firms

¹ Institutional Shareholder Services, Solutions Overview: <http://www.issproxy.com/pdf/cgq.pdf>.

² ISS website: <http://www.riskmetrics.com/issgovernance/esg/cgq.html>.

imploded, even while most other ratings systems awarded those boards generally high marks.”³ GMI’s “premise is simple: companies that focus on corporate governance and transparency will, over time, generate superior returns and economic performance and lower their cost of capital. The opposite is also true: companies weak in corporate governance and transparency represent increased investment risks and result in a higher cost of capital.”⁴

These ratings also change firm practices when boards seek to increase their ratings. Aetna and GE reportedly hired ISS to recommend governance changes that would boost their ratings; the implemented changes lifted their ratings from 10% to more than 90%.⁵ Do such ratings-driven changes lead to better outcomes? The question is broader than the hundreds of similar firms that pay for advice on what they should change. In a recent survey, public firm directors listed corporate governance advisors as the third most influential institution on board, behind only institutional investors and analysts, and ahead of activist hedge funds or shareholder plaintiffs.⁶ Directors also said that a low governance rating is an important red flag that prompts them to increase their monitoring -- falling just behind the firm’s missing analysts’ earnings estimates in importance.

³ TCL website: <http://www.thecorporatelibrary.com/Products-and-Services/board-effectiveness-ratings.html>.

⁴ GMI website: <http://www.gmiratings.com>.

⁵ Wall Street Journal, *Making the Grade: Want to lift your firm’s rating on governance? Buy the test*, June 6, 2003. Reportedly hundreds of others other firms pay for similar advice on what they can change. This potential conflict of interest (charging firms for advice on how to increase the grades ISS assigns) was the subject of a recent SEC investigation. These ratings are also included on the front page of Riskmetric/ISS’s influential voting recommendations to institutional shareholders, suggesting the ratings may play a role in shareholder voting.

⁶ PricewaterhouseCoopers. 2008. What Directors Think, The Corporate Board Member / PricewaterhouseCoopers Survey.

Do these ratings identify important governance effects? Evidence about the value of these ratings and their ability to predict future events or performance is scarce and, when available, sponsored by the commercial companies themselves. If the (somewhat bold) claims of the rating firms are supported by rigorous empirical analysis, these commercial firms are providing valuable information to boards of directors and market participants. However, if ratings have little predictive ability, it is not clear that boards of directors and shareholders should be concerned about their governance ratings or change their firms' governance practices when pressed to do so by these governance monitors.

The purpose of this paper is to examine the association between the ratings produced by leading commercial corporate governance rating firms and subsequent undesirable outcomes such as accounting restatements and shareholder litigation, as well as future operating performance, stock returns, and the cost of debt. In particular, we consider *CGQ* (the "Corporate Governance Quotient" calculated by RiskMetrics/ISS), *GMI* (a measure of governance quality produced by Governance Metrics International), and *TCL* (a rating produced by The Corporate Library). We also examine the performance of *AGR*, a somewhat different measure of firm accounting practices and governance produced by Audit Integrity.

We find little evidence that the rankings are useful in predicting subsequent accounting restatements or shareholder litigation. While *AGR* and *GMI* have statistically significant relations with future restatements and *AGR* has with future

class-action lawsuits, the improvement in prediction of such events from the use of these ratings is very modest. In terms of future performance, *AGR* predicts future improvements in operating performance, *TCL* has a positive relation with future Tobin's *Q*, and *AGR* (and to a much lesser extent *TCL* and *CGQ*) has a positive relation with future alpha (excess stock price return). None of the ratings are able to predict the subsequent changes in a firm's cost of debt, as measured by its credit rating. Thus, there seems to be something to *AGR*'s rating of accounting practices (which are probably best viewed as governance outputs rather than as measures of governance inputs, as explained in Section 3.4 below). However, the predictive ability of the leading commercial governance ratings (*CGQ*, *TCL* and *GMI*) is well below the threshold necessary to support the bold claims made for them.

One especially interesting result is that *CGQ* (perhaps the most visible governance rating) exhibits virtually no predictive ability, and when *CGQ* is significant more often than not it has an unexpected sign (e.g., higher *CGQ* seems to be associated with lower Tobin's *Q*, and in some models *more* class-action lawsuits). In unreported regressions, we examine ISS's "sub-scores" that rate the quality of firm's audit review and board of directors and find these are typically statistically significant, but again have an unexpected sign (better governance ratings yields worse results).

The weak (and mixed) predictive results for *CGQ*, *GMI*, and *TCL* have several interpretations. It is possible that corporate governance is an endogenous choice by firms that optimally adjust the costs and benefits of these governance choices. If so, we

should not observe an empirical association between firm performance and the governance ratings (assuming we have the correct functional form and the necessary control variables are measured without error). However, we should still observe a relation between governance ratings and outcomes such as restatements and shareholder litigation, as these variables are not *net* economic outcome variables such as profits or stock price. Moreover, since we find some relation between future operating performance and excess returns and the rating that focuses on accounting practices (AGR), it does not appear that the results for CGQ, GMI, and TCL are completely explained by concerns regarding the optimal endogenous selection of corporate governance.

Another interpretation of our weak and mixed results is that the commercial ratings contain a large amount of measurement error. It is well known that measurement error attenuates the estimated coefficients in simple regressions and produces mixed estimation results depending on the covariance structure of the variables included in multivariate regressions. It is instructive to note that there is very little correlation among the ratings. This suggests that either the ratings are measuring very different corporate governance constructs or that there is substantial measurement error in at least some of the ratings. Since the firms use the same basic governance data, examine similar governance dimensions (e.g., anti-takeover provisions, board structure, and executive compensation), and claim to measure overall “corporate governance,” we believe that each firm is attempting to measure a similar corporate governance

construct. Thus, we believe our results are produced by substantial measurement error in the commercial corporate governance ratings.

The implications of this interpretation extend beyond the merits of these particular ratings. First, our results provide additional, if indirect, evidence regarding the merits of academic indices of corporate governance. If large commercial organizations with substantial expertise and extensive databases cannot devise reliable measures of corporate governance, it seems unlikely that the check-and-sum measures used by academic researchers have significantly better validity. Second, our results suggest a more fundamental issue with regard to the notion of “corporate governance” in general. The fact that experts cannot agree on the measurement of the quality of corporate governance structures highlights the need for future research on developing reliable and valid measures of the construct “corporate governance.” Finally, these results suggest that boards of directors should not implement governance changes solely for the purpose of increasing their ranking.

The remainder of the paper is as follows. Section 2 reviews prior research on corporate governance ratings and commercial corporate governance advisory firms. Section 3 reviews the commercial governance ratings examined in this paper. Section 4 provides descriptive statistics for our ratings data. Section 5 examines whether the ratings are useful in predicting future firm performance or outcomes of interest to shareholders. Section 6 examines the relation between the CGQ index and proxy

recommendations by ISS and actual shareholder voting on proxy proposals. Section 7 concludes.

2. Prior research

There is a vast empirical literature examining the relations between selected corporate governance mechanisms and firm performance. For example, Morck, Schleifer, and Vishny (1988) consider managerial ownership, Daines and Klausner (2001) examine takeover defenses, Fich and Shivdasani (2006) analyze the consequences of busy boards, Coles, Naveen, and Naveen (2008) consider board size, and Larcker, Richardson, and Tuna (2007) examine a variety of board and ownership variables and various firm outcomes. This literature yields mixed findings in terms of the relations, between such corporate governance measures and firm performance.

Other academic researchers have attempted to combine these individual governance elements into a single metric or rating of the overall quality of a firm's governance. La Porta et al. (1998) create an index of shareholder protections around the world and find that it correlates with economic growth and market capitalization. Gompers, Ishii, and Metrick (2003) create a governance score, the G-score, composed of mostly anti-takeover items and find that better governed firms exhibit superior future shareholder returns. Although these academic indices have generated considerable research on the relationship between overall governance and firm performance, their validity is still an open question. For example, Core, Guay and Rusticus (2006) report evidence that suggests that G-score is not related to superior firm performance. Finally,

Bebchuk, Cohen, and Ferrell (2009) find six components of the G-Score (which they call the E-index) produces large abnormal returns. However, recent research by Johnson, Moorman, and Sorescu (forthcoming) demonstrates that no abnormal returns are generated using the G-Score or E-Index when the benchmark asset pricing model is adjusted for industry clustering. Thus, the research results linking individual governance indicators or indices to firm performance are quite mixed. Bhagat, Bolton and Romano (2007) provide an excellent review of the theoretical and empirical issues associated with governance indices created by academic researchers.

Despite the extensive research on academic corporate governance indices, little scrutiny has been given to the governance ratings generated by commercial firms. There are several reasons to suspect that these commercial ratings might provide reliable and valid measures for the construct of corporate governance. First, firms selling ratings appear to be a commercial success, which suggests the possibility that the ratings are useful to their customers. Second, commercial ratings use proprietary, quantitative algorithms that presumably capture their extensive expertise regarding the relationship between governance choices and firm performance. In contrast, academic governance indices are generally calculated by simply counting the number of “good” or “bad” governance mechanisms for each firm. This purposefully naive approach equally weights governance indicators that likely differ in importance and ignores the possibility that some provisions may be substitutes or complements (e.g., Larcker, Richardson, and Tuna, 2007). Third, commercial indices typically rate each firm relative

to industry or size peers, whereas academic indices are usually absolute measures constructed without regard to variation in governance practices across industries. Fourth, commercial rating algorithms explicitly change each year to “take into account market trends,” whereas most academic ratings are calculated in the same way over time. Finally, commercial firms employ large, rich databases from multiple data sources, whereas typical academic governance indices rely on relatively limited data sources such as the IRRC data, which are heavily focused on takeover defenses.

A small number of prior studies have examined ISS ratings or their inputs. Brown and Caylor (2004) report univariate results for one year suggesting that high CGQ scores are associated with higher current stock returns, higher accounting returns, lower volatility, and higher dividends. However, this analysis is backward-looking and provides no evidence on the ability of CGQ to predict *future* firm outcomes. Brown and Caylor (2005) examine the relationship between Tobin’s Q and an index created from 51 governance variables collected by ISS (and identified as important elements of ISS’s rating). Their index is simply the sum of a variety of indicator variables that ISS considers consistent with good governance. They find that their own index is significantly related to contemporaneous Tobin’s Q for 2002, but do not report findings for the CGQ rating. Aggarwal and Williamson (2006) use ISS data to examine the relationship between firm value and 64 governance-related inputs to the ratings, but again do not examine the primary CGQ rating. Finally, Koehn and Ueng (2005) examine

a sample of 106 large U.S. firms and find no statistically significant relationship between the CGQ scores and Audit Integrity's measure of earnings quality.

Ashbaugh-Skaife and LaFond (2006) examine whether GMI's governance ratings are related to cost of equity capital in research sponsored by GMI. In an executive summary of their findings, the authors report that higher GMI governance ratings were associated with lower cost of equity capital in 2004 and conclude that "GMI ratings are valid assessments of the strength (or weakness) of U.S and non-U.S. firms' governance." However, they do not report whether current ratings predict future cost of capital. Similarly, Derwall and Verwijmeren (2007) find that GMI governance ratings for 2005 have a contemporaneous negative association with cost of equity capital and firm-specific and systematic risk.

Finally, Bhagat, Bolton and Romano (2007) examine several ratings from TCL. Using multivariate analysis and simultaneous equations, they report mixed evidence about its ability to predict future operating performance and share price appreciation. To our knowledge there is no third-party research examining the ability of Audit Integrity's AGR to predict future performance outcomes.

In summary, there have been very few studies about whether commercial corporate governance ratings predict firm outcomes. Extant studies are generally backward-looking and thus provide no evidence that the ratings predict future outcomes as they are frequently claimed to do. Moreover, a common comparative

analysis for the three major commercial governance ratings has not been conducted. Given their practical importance, we conduct such an analysis in this paper.

3. Commercial corporate governance ratings

In this study, we evaluate governance ratings from three primary corporate governance rating firms: ISS Corporate Governance Quotient (CGQ), GovernanceMetrics International (GMI), and The Corporate Library's TCL Rating. As we describe below, these ratings differ in terms of focus, approach, and sample coverage, but each attempts to evaluate the corporate governance of a wide cross-section of public firms. We also examine the rankings produced by Audit Integrity (AGR), which differ in that they focus primarily on the risk of certain accounting and financial statement practices (governance outputs).

3.1 Institutional Shareholder Services' CGQ ratings

The CGQ rating is produced by Institutional Shareholder Services (ISS), a division of RiskMetrics. The rating "evaluates the strengths, deficiencies and overall quality of a company's corporate governance practices and board of directors" and "is designed on the premise that good corporate governance ultimately results in increased shareholder value."⁷ ISS reports two main ratings for each firm: *CGQ_INDUSTRY*, which gives a firm's percentile standing within its GICS industry group, and *CGQ_INDEX*, which gives a firm's percentile within its index (e.g., S&P 500 for

⁷ Institutional Shareholder Services. 2003. ISS Corporate Governance: Best Practices User Guide & Glossary, Revision 2.4, Wednesday, October 8, 2003.

Microsoft). We focus on *CGQ_INDUSTRY* (hereafter simply *CGQ*), but get virtually identical results are obtained when our analyses are conducted using *CGQ_INDEX*.

ISS ratings are based on data taken from public filings and company surveys in eight categories: board of directors (composition, independence), audit, charter and bylaw provisions, anti-takeover provisions, executive and director compensation, progressive practices (such as performance reviews and succession plans), ownership, and director education. ISS conducts “more than 4,000” statistical tests using 16 measures of risk and performance to develop the optimal weighting of 64 governance variables in *CGQ* according to their correlation with firm risk and prior performance.⁸ The ratings were then back-tested and calculated for more than 9,000 companies. In addition, ISS states that it changes the ratings model and weights over time to “better reflect current market trends in corporate governance” and to align the rankings with ISS policies.⁹

ISS claims *CGQ* is a “reliable tool for identifying portfolio risk related to governance and leveraging governance to drive increased shareholder value” and emphasizes claims of a “very strong relationship between governance and firm value, using *CGQ* data.”

⁸ ISS website: <http://www.iscggq.com/cgqratings.htm>.

⁹ *CGQ Corporate Governance Fact Sheet* – November 3, 2006.

3.2 *GovernanceMetrics International's GMI ratings*¹⁰

GMI was “founded on the premise that the quality of corporate governance can add significantly to the risk-reward profile of credit and investment portfolios.”¹¹ GMI collects data on several hundred governance mechanisms (ranging from compensation to takeover defenses and board membership), as well as on firms’ compliance with securities regulations, stock exchange listing requirements and various corporate governance codes and principles. In all, it collects “hundreds of metrics structured in a manner that can only produce yes, no or not disclosed answers.” GMI develops a scoring model that examines each metric, weights it “according to investor interest” and then calculates a rating on a scale of 1.0 (lowest) to 10.0 (highest). The GMI scoring algorithm rewards (or penalizes) “outliers” and ranks each firm relative to the other companies in the GMI sample. The *GMI* ratings are calculated for over 4,100 companies.

GMI says its “scoring algorithm has also been tested and validated by outside statistical experts and is patent pending.” Its materials tout the fact that “companies that emphasize corporate governance and transparency will, over time, generate superior returns and economic performance and lower their cost of capital” suggesting that firms with high *GMI* scores will “generate superior returns.”

3.3 *The Corporate Library's TCL ratings*

Where the other ratings are the product of proprietary quantitative analysis, TCL’s ratings reflect subjective judgment and expertise. TCL analysts avoid data

¹⁰ This sub-section was adapted from material found at <http://www.gmiratings.com>.

¹¹ GovernanceMetrics International, Sept. 2006, *Governance and Performance: Recent Evidence*

checklists and rely instead on their experience and private assessment of a firm's governance quality. TCL analysts review four specific areas (the company's board and succession planning, CEO compensation practices, takeover defenses, and board-level accounting concerns) and assign each firm a "grade" from A to F. Companies rated A or B do not exhibit significant risk in any of the four basic categories; C-rated companies exhibit risk in no more than one category; D-rated companies in two or more categories; and F-rated companies were either bankrupt, delisted from an exchange, or described as companies "where management has achieved effective control over the company ... and conducts its business with flagrant disregard for the interest of any minority public shareholders." The analysts focus on "'red flag' indicators of board ineffectiveness and corporate mismanagement, supported by in-depth analysis and commentary by our senior research associates and analysts."

According to TCL, its ratings "have been proven to predict losses in shareholder value and the occurrence of securities class action lawsuits"¹² and "have been tested against actual investment returns."¹³

¹² http://www.thecorporatelibrary.com/UserFiles/Board_Analyst0907.pdf.

¹³ <http://www.thecorporatelibrary.com/info.php?id=53>.

3.4 Audit Integrity's AGR ratings¹⁴

In contrast to the three governance rankings described above, the Audit Integrity's *Accounting and Governance Risk* (AGR) ranking is primarily focused on accounting practices. Audit Integrity examines 200 accounting and governance metrics and 3,500 variables designed to produce "an assessment of financial statement risk – the risk that financial statements do not accurately reflect a company's true financial condition due to fraud or misrepresentation" AGR seeks to identify "fraudulent patterns of behavior." Although it is thus focused less on governance as an input, and more on trying to assess the quality of the firm's financials as an "output" of governance, we nevertheless examine AGR in part because it too includes some governance measures and also because, as will be seen, it provides a useful benchmark for the other three governance rankings.

AGR scores range from 0 to 100, corresponding to "Very Aggressive" (approximately 10% of all firms) to "Conservative" (approximately 15% of all firms). The ratings are objective and mechanical in that they are produced by statistical examination of financial data (such as changes and trends in revenue recognition variables) "without preconceived bias as to what defines fraud." AGR scores are calculated for over 9,000 publicly traded companies.

¹⁴ This section is a summary of the information provided by Audit Integrity consisting of: (http://www.auditintegrity.com/documents/Audit_Integrity_Summary_Corp.pdf); Audit Integrity white paper, *The Audit Integrity AGR Model: Measuring Accounting and Governance Risks in Public Companies* (June 27, 2005), available at http://www.auditintegrity.com/documents/Audit_Integrity_AGR_White_Paper.pdf; The Audit Integrity Multi-Factor Restatement Model: A Leading Indicator of Financial Restatement (April 11, 2006), available at http://www.auditintegrity.com/documents/Audit_Integrity_Restatement_White_Paper.pdf.

Audit Integrity claims that its measure has been verified in “study after study” and that high-risk firms are more likely to be sued, to restate financials, to suffer large drops in share value, and earn lower returns.¹⁵ Its web site claims that its ratings offer users the ability to “achieve excess returns,” “avoid companies at a high risk of litigation,” and “a great deal of predictive power concerning future corporate problems.”

4. Governance ratings: Data and descriptive statistics

Corporate governance ratings were compiled for U.S. firms from each of the four commercial rating services from a variety of public sources, research services or from the advisory firms themselves. While we have data for each of the four ratings from late 2005 through to early 2007, most of our analysis focuses on the ratings available on December 31, 2005.¹⁶ Our primary sample consists of 2005 *CGQ* rankings for 5,059 firms, *GMI* rankings for 1,565 firms, *TCL* for 1,906 firms and *AGR* rankings for 6,714 firms. There are 6,827 unique firms across the four commercial ratings. These sample sizes are consistent with the reported coverage universe for U.S. firms for these rating firms. Our sample also spans many economic sectors and closely mimics the industry distribution in Compustat (Table 1, Panel C).

¹⁵ Audit Integrity is careful to note that “behavior that matches past patterns of fraud is not a guarantee of current fraudulent or misleading behavior.”

¹⁶ We also have data for *CGQ* and *GMI* for earlier periods. The results produced from this longer time series are discussed in later sections. Analyses using 2006 ratings (and thus shorter periods for the outcome variables) yield very similar results to those we provide here.

As discussed in Section 3 above, the distribution of scores differs substantially for each governance ratings (see Figure 1). Since *CGQ* is expressed as a percentile, it is not surprising that it is approximately uniform between 0 and 100. However, *AGR* and *TCL* have noticeable negative skewness, with many firms clustering at relatively high scores and a smaller number of firms forming a long tail to the left. The *GMI* scores are relatively symmetric. Clearly, *AGR*, *CGQ* and *TCL* are not directly comparable even though each takes values between 0 and 100.

Since the commercial firms use the same basic governance data, examine similar governance dimensions (e.g., anti-takeover provisions, board structure, and executive compensation), and all claim to measure overall “corporate governance,” we would expect their ratings to be highly correlated.

However, one key finding is that, as illustrated in Panel B of Table1, these four ratings are close to being uncorrelated, with the exception of *GMI* and *CGQ*, which have a Pearson (Spearman) correlation of .484 (.480). The Pearson (Spearman) correlations among the remaining five pairs range from $-.009$ to $.076$ ($-.020$ to $.063$). *AGR* in particular seems uncorrelated with most of the other ratings in our dataset.

Consistent with this lack of correlation, many large firms with substantial investor followings and long track records receive wildly disparate grades from the various services: AT&T, General Electric, General Motors and Safeway received nearly perfect scores from one rating firm (a 99 or 100 from ISS) and near-failing grades from another (a D from TCL). Notably, these firms are not obscure start-ups where appropriate

governance arrangements and practices are less standard. The fact that the governance ratings are so uncorrelated suggests substantial measurement error in one or more of the commercial ratings.

Finally, as might be expected, the ratings are positively correlated over time. Prior studies (e.g., Gompers, Ishii, and Metrick, 2003) have found that firm governance variables are quite stable over time. The correlations between 2005 and 2006 ratings range from 0.558 for *AGR* to 0.847 for *CGQ*.

5. Predictive ability of governance ratings

We evaluate the ratings by examining their ability to predict five important outcomes. These outcome variables are selected because either one or more of the rating firms claims that the ratings will predict the outcome or because prior literature has suggested a relationship between the outcome and quality of corporate governance. The first two outcomes, accounting restatements and class action lawsuits, are relatively rare “bad” outcomes that one or more of the ratings should be expected to predict. We examine three outcomes that are traditional measures of corporate performance, namely accounting operating performance, Tobin's *Q*, excess stock returns (or alpha). Finally, we examine the relationship between the governance ratings and cost of debt, which is affected by the quality of firm governance (Cremers, Nair and Wei, 2007).

Our basic approach is to estimate a regression for each outcome variable on the ratings and perhaps a set of controls. Our analysis is conducted both with and without additional control variables (e.g., Larcker, Richardson, and Tuna, 2007). In assessing the

impact of governance quality on economic outcomes it may make sense to exclude the control variables to the extent that governance quality affects the outcomes through its effect on the controls. For example, governance quality may affect the likelihood of restatements both directly and indirectly through its effect on a firm's book-to-market ratio. Under this scenario, including the book-to-market ratio as a control will cause us to underestimate the total effect (direct and indirect) of governance quality on the likelihood of accounting restatements. Similarly, to the extent that governance quality is persistent over time, it may affect operating performance in any given period both directly and indirectly through impact on prior period's operating performance that persists over time. Thus, it is unclear whether the analysis should incorporate these control variables (a "conditional" analysis) or exclude them (an "unconditional" analysis). We therefore include both analyses.

In addition, we aim not only to understand the relationships between governance quality (as measured by the ratings) and various economic outcomes, but also to assess the value of the ratings as predictive tools in their own right. In doing this, it is unclear whether the governance ratings are constructed to already capture the effect of the control variables (in which case, "unconditional" analysis excluding these controls is appropriate) or the ratings are constructed from inputs distinct from the control variables (in which case, "conditional" analysis with the effects of the control variables included is appropriate). Thus, we perform each of our analyses of the outcome variable both with and without control variables to provide a more

comprehensive analysis of the relationship between governance quality and economic outcomes.

In examining the predictive ability of the governance ratings, we focus on ratings available as of December 31, 2005, as this is the earliest point at which we have a sizable cross-section of ratings across the four rating firms. To facilitate the interpretation of the regression coefficients across ratings, we standardize each of the ratings to have zero mean and unit variance.

5.1 Accounting restatements

It is often claimed that accounting restatements are either evidence of, or caused by, weak governance. A number of papers predict that accounting restatements will be positively associated with poor governance and find support for this prediction (Farber, 2005; Beasley, 1996; Peng and Röell, 2006; Erickson, Hanlon, and Maydew, 2006). However, other papers find little evidence of a relationship between accounting restatements and governance (Larcker, Richardson, and Tuna, 2007). We expect that if the ratings predict restatements, higher ratings will be associated with fewer restatements.¹⁷

We obtain data on accounting restatements from Glass-Lewis & Co., which maintains a comprehensive database on restatement information obtained from SEC filings, press releases, and other public data. We focus on the indicator variable *Earnings*

¹⁷ While the common assumption of a negative relationship between governance quality and accounting restatements seems intuitively plausible, it is important to note that accounting restatements imply a minimal level of governance in that the mechanisms to detect misstated financial statements must be in place for the restatements to be observed by the researcher.

Restatement, which takes the value of one for a firm Glass-Lewis & Co. identifies as making one or more accounting restatements in the period January 2006 to December 2008 that relate to either revenue or expense recognition and affect fiscal years 2004–2008.¹⁸ Glass-Lewis identifies 595 such restatements, representing about 8.72% of our sample of 6,827 firms across the four ratings.

For each governance rating, we estimate logistic regressions with *Earnings Restatement* as the dependent variable and either just the governance rating in question (unconditional analysis) or the rating and controls (conditional analysis) as independent variables. Based on the extensive research on restatements, we include the following controls: *Leverage* is calculated as the ratio of book value of debt (Compustat *DLTT+DLC*) to market value of common equity ($PRCC_F \times CSHO$), *BM*, the book value of common equity (*CEQ*) divided by the market value of common equity. *Free Cash Flow* is measured as the difference between operating cash flows (*OANCF*) and average capital expenditures over the prior three years (*CAPX*). *External Financing* is total net external financing from debtholders and shareholders during the fiscal period. *Acquisitions* is cash spent on acquisitions (*AQC*) divided by market value of common equity. *Log(Market Value)* is the log of market value of common equity. All control variables are measured in the latest fiscal year ending on or prior to September 30, 2005, allowing at least a three month lag prior to the period over which we capture

¹⁸ We exclude restatements affecting fiscal years 2003 and earlier on the premise that these restatements are less likely to be of relevance to current shareholders.

restatements so as to be confident that the controls are observable prior to this period. All controls are winsorized at the 2nd and 98th percentiles by fiscal year.¹⁹

Table 2 presents the results of this analysis. Two of the four primary ratings (*CGQ* and *TCL*) are not associated with restatements either conditionally or unconditionally. However, *AGR* and *GMI* exhibit a statistically significantly negative association with restatements, implying that higher ratings are associated with fewer future restatements.²⁰ These results are robust to inclusion of controls (conditional analysis).

Assessing the economic (or substantive), rather than statistical, significance of these results in Table 2 is problematic in the absence of information about the loss function associated with Type I and Type II errors in predicting restatements. In order to provide some insight, we examine the ability of the ratings to improve the actual classification of outcomes. We focus on *GMI*, as this rating appears to have the greatest predictive (explanatory) power for restatements in our sample.

¹⁹ Consistent with most prior research, we winsorize our data to eliminate unusual observations. Our results are substantially the same without winsorization, but with somewhat less statistical significance.

²⁰ ISS also provides *CGQ* sub-scores covering particular areas of focus, for instance: “audit review” (*CGQ_AUDIT*), “board of directors” (*CGQ_BOARD*), “executive and director compensation and ownership” (*CGQ_COMP*), and “takeover defenses” (*CGQ_TKOVER*). Similarly, *TCL* provides sub-scores, such as *TCL_BP* (percentage of certain “best practices” adopted by a company), *TCL* (“financial compliance”), *TCL_ACCTG* (“accounting and auditing”), *TCL_BOARD* (“board composition”), *TCL_COMP* (“CEO compensation”), *TCL_TKOVER* (“board effectiveness and shareholder friendliness in the area of takeover defenses”). *TCL* sub-scores take values of “very high concern,” “high concern,” and “low concern,” which are re-coded as 1, 2, and 3 respectively. In untabulated analysis, we examined the sub-scores from ISS and *TCL* and find that most are not associated with restatements. *TCL_ACCTG* is statistically associated with restatements, consistent with notion that this accounting-focused sub-score is somewhat useful in predicting accounting problems. However, there are no statistically significant results for the accounting-focused sub-score *CGQ_AUDIT*.

For the 1,562 firms with GMI ratings and data to calculate our controls, 147 experienced a restatement in our test period. We estimate the predicted probability of restatement using the controls alone and setting a probability cutoff for predicting a lawsuit at 0.1, the estimated model classifies 574 firms into the “restate” category (but only 73 of these actually exhibit a restatement). Moreover, 74 firms that did restate are incorrectly classified as “not restate”. When we include *GMI* as an additional explanatory variable, 91 firms are correctly classified as restating firms, an improvement over the model with controls alone and fewer firms that do not restate are misclassified – 487 versus 501. Consistent with this, the percent correctly classified increases from 63.19% to 65.24% with the inclusion of *GMI*.²¹ Thus, there is a modest within-sample improvement when *GMI* is included in the logistic regression. There is no evidence that other ratings could predict restatements in a meaningful way.

We examine the sensitivity of these results to a number of variations. To allow for the possibility that governance only affects outcomes at the extremes (where firms have either very poor or very good governance), we run our analysis with the standardized governance ratings replaced by two indicator variables representing membership of the top or bottom deciles for each rating (if the rating does not allow for partitioning into deciles, we use the top and bottom category instead). We then examine the difference between the coefficients on these indicators. Statistically significant

²¹ It is important to note that this statistic implies that investors are equally concerned about both kinds of classification errors, whereas they may care more about reducing false negatives (i.e., owning stock in a firm that later experienced a restatement) than the false positives (missing out on firms predicted to restate that did not). Note that simply classifying all firms as “not restate” would be correct for 90.59% (= 1415 ÷ 1562) of firms.

differences appear for precisely the same ratings, with the same signs, as in our primary analysis. Given the differences in the sample size and composition across the ratings, we also perform analysis using a common sample across the ratings (there are 1,505 firms with ratings from each of the four rating firms and 1,504 meet the data requirements for our conditional analysis). Our inferences are identical in this case with one exception: *CGQ* becomes statistically significant at the 5% level in the predicted direction in both the unconditional and conditional analyses. We also allow for the possibility that many of the restatements in our sample are “innocuous” by including only those restatements associated with a negative return of 3% or more over either a 3- or 5-day window around the announcement of the restatement. Our results for this subset of observations are very similar in to those reported in Table 2.

We also examine the relationship between changes in governance ratings and restatements. In this analysis, we find some evidence that improvements in *CGQ* and *TCL* (but not *AGR* and *GMI*) over the period from December 31, 2005 to June 30, 2006 are associated with lower probability of restatements occurring between July 2006 and December 2008. But neither relationship is robust to the inclusion of controls. Finally, the inclusion of industry fixed effects has virtually no impact on our inferences.

5.2 Class-action lawsuits

The second outcome we consider is whether the firm was the subject of a class action lawsuit. Woodruff-Sawyer identifies 338 firms within our sample that are the subject of a class action lawsuit from December 31, 2005 to June 30, 2009, representing

4.95% of our sample.²² We set the variable *Lawsuit* equal to one for these firms, and zero for the remaining firms. We again perform logistic regressions with *Lawsuit* as the dependent variable and either the governance rating in question (unconditional analysis) or the rating and controls (conditional analysis) as independent variables. We follow Rogers and Stocken (2005) in our list of controls: *Size* (log of market value of equity), *Turnover* (average daily turnover divided by average shares outstanding), *Beta* (the slope coefficient from a regression of daily returns on the CRSP value-weighted index), *Returns* (buy-and-hold returns), *Std Dev(Returns)* (standard deviation of daily returns), *Skewness(Returns)* (skewness of daily returns), and *Min(Returns)* (minimum value of daily returns). All controls are obtained from CRSP and measured over the year ending December 31, 2005.

Table 3 presents the results of our analysis. Higher *AGR* scores are statistically significantly associated with fewer future class-action lawsuits, both unconditionally and conditionally. Higher *CGQ (TCL)* scores are associated with *more* (fewer) lawsuits unconditionally, but this association disappears when the controls are included. *GMI* is not statistically associated with lawsuits unless the controls are included. Thus, other than *AGR*, there is no robust association between governance ratings and future shareholder suits.

²² We do not find any statistical difference in the overall frequency of lawsuits between the overall sample and the *AGR* and *CGQ* samples, but we do find a higher rate of lawsuits in the *GMI* (9.90%) and *TCL* (9.22%) samples.

To assess the economic significance of our findings, we use a similar approach to that used for restatements. In this case, we focus on *AGR*, as this seems to have the greatest power to predict lawsuits in our sample. Of the 5,304 firms with available data, 326 experience class-action lawsuits over the period we study. With a probability cutoff of 0.1, including *AGR* in the logistic model raises the number of firms with lawsuits that are correctly classified from 130 to 140, but at the expense of misclassifying 758 (an increase from 712) firms that do not have lawsuits. The reduction in “percent correctly classified” is from 82.88% to 82.20%. However, if the cost of misclassifying firms experiencing lawsuits is at least five times as great as that of misclassifying firms with no lawsuits, there is possibly an economic benefit from including *AGR*, as $(140 - 130) \times 5 - (758 - 712) > 0$. But it should be recognized that this classification analysis is within the sample used for estimation, and thus likely represents an upper bound on the ability of *AGR* to predict “out-of-sample” observations.

As with the restatement analysis, we examine the effect of using indicator variables for the top and bottom category. In this analysis, only *AGR* has statistical significant differences between the coefficients on the two indicator variables in both the unconditional and conditional analyses. Looking at a common sample yields identical inferences (with lower significance levels in some cases). Focusing on changes in ratings from December 2005 to June 2006 yields consistently weaker results, with only *TCL* having a relationship and then only in the unconditional analysis.

5.3 Future operating performance

Following prior research (e.g., Gompers, Ishii, and Metrick, 2003) we assess whether governance ratings predict future operating performance by examining return on assets (ROA), measured as operating income (Compustat item *OIADP*) divided by average total assets (*AT*). Larcker, Richardson, and Tuna (2007) use only *Log (Market Value)* and median industry ROA as controls reflecting a focus on measurement of corporate governance quality. While current ROA seems to be a natural control, Larcker, Richardson, and Tuna (2007) argue that “to the extent that governance structures are stable over time ... the inclusion of current operating performance is likely to remove the impact of governance that we are trying to estimate.” Given our interest in the governance ratings as both measures of governance quality and as informative signals of future firm performance, we estimate regressions both with and without the prior period’s industry-adjusted ROA as an additional control.

Our outcome variable is industry-adjusted ROA, or the difference between ROA for a firm and the median ROA for its industry in that fiscal year (using two-digit SIC codes for industry classification). We measure industry adjusted ROA at the end of the fiscal year ending between June 2008 and March 2009, the latest data available on Compustat at the time of this study.

Table 4 presents the results from our analysis. We find that *AGR* is associated with future operating performance. This statistical result is robust to the inclusion of lagged ROA as a regressor. However, the strength of the relation is greater when lagged

ROA is omitted, consistent with governance quality being relatively persistent and affecting ROA over multiple periods. For the remaining ratings, *CGQ* and *TCL* have significant coefficients with the predicted sign in both the contemporaneous and unconditional future ROA analysis, but once lagged ROA is included (Panel D), the coefficients are insignificant. In other words, neither *CGQ*, *TCL* nor *GMI* predict future performance given current levels of performance.

Thus, only *AGR* appears to be robustly associated with future operating performance. To assess the economic significance of the coefficient on the *AGR* rating, we consider the shift in predicted lagged ROA associated with a one standard deviation shift in the *AGR* rating. Obviously, these sensitivity analyses should be interpreted with caution because it is quite plausible that governance quality and operating performance are jointly determined in a manner that confounds any causal interpretation of our regression coefficients. We first note that the 25th, 50th and 75th percentiles for industry-adjusted ROA for the sample of firms with at least one rating are -6.3%, 0.2% and 5.8% respectively. Shifting up one standard deviation in terms of *AGR* is associated with a 3.7 percentage point increase in ROA (using the coefficients on *AGR* in the unconditional regression). This shift seems economically significant, but is insufficient to move a firm across a full quartile. The coefficient on *AGR* when ROA is included in the regression is much smaller, but note that the inclusion of lagged ROA suggests that the appropriate benchmark is more appropriately measured by the one-year change in ROA. The 25th, 50th and 75th percentiles for changes in ROA for the sample of firms with at least one

rating are -5.9% , -0.9% and 2.6% respectively. This suggests that the shift of 1.33 percentage points associated with a one-standard-deviation shift in *AGR* is insufficient to move a firm across a full quartile in terms of change in ROA.

We also conduct the robustness checks described above. Focusing on a common sample of 1,348 firms with controls data and ratings from each of the four firms, there are few changes. Focusing on the top and bottom deciles, we find that *AGR* has a significant difference between the operating performance of firms in the top decile relative to those in the bottom decile in all three analyses. Looking at changes in ratings from December 2005 to June 2006, we find that improved governance ratings are not associated with higher levels of operating performance in fiscal 2008.

One possible explanation for the absence of robust relations between the three primary governance ratings and operating performance is that it may take more than three years for the effects of good or bad governance (i.e., 2005 ratings) to be observed in firm profits (i.e., 2008 ROA). In addition to the data in our primary sample, we have data on *CGQ* for 2004 and on *GMI* from 2003. We conducted additional tests to evaluate the relationship between fiscal 2008 industry-adjusted ROA and the earliest rating available (2004 for *CGQ* and as early as 2003 for *GMI*). We find no statistically significant relation between either *CGQ* or *GMI* and operating performance in these tests. Given that 2005 *CGQ* predicts fiscal 2008 operating performance, but 2004 *CGQ* does not, we examine the relationship between 2006 ratings and fiscal 2008 performance and find that only the relationship between *AGR* and operating performance is robust.

Thus, while 2005 CGQ predicts 2008 operating performance, neither 2004 nor 2006 CGQ does so.

5.4 Firm value

Tobin's Q, typically measured using some variant of the market-to-book ratio, is commonly used as an indicator of firm value in accounting and finance research.

However, since market-to-book ratios (or their inverse) are used as proxies for risk factors (Fama and French, 1993), accounting conservatism (Roychowdhury and Watts, 2007), and investment opportunity set or future growth opportunities (Adam and Goyal, 2006), it is unclear whether the market-to-book ratio captures the underlying theoretical construct of "firm value."²³ However, in light of its continued popularity in academic corporate finance research, we also examine Tobin's Q.

We measure *Tobin's Q* as $(TA+MVE-BVE)/TA$, where *TA* is total assets (Compustat item *AT*), *MVE* is market value of equity ($PRCC_F \times CSHO$) and *BVE* is the book value of equity (*CEQ*). To control for differences associated with industry rather than governance attributes of each firm, we include industry fixed effects in our regressions. Because *Tobin's Q*, like measures of operating performance, is highly persistent, we follow the approach used with operating performance and estimate both regressions with industry fixed effects and the governance variables alone and regressions with these variables and lagged *Tobin's Q* as an additional control. We

²³ At best, the market-to-book ratio captures average Tobin's Q, whereas the variable of interest is generally the marginal Tobin's Q. The Q results are reported in order to be consistent with prior literature, but we believe that the more interpretable results are future operating performance and excess stock price returns.

measure *Tobin's Q* at the end of the latest fiscal year ending on or before December 31, 2005 (contemporaneous *Tobin's Q*) and at the end of the fiscal year ending between June 2008 and May 2009 (future *Tobin's Q*), the latest data available on Compustat at the time of this study. We winsorize contemporaneous and future *Tobin's Q* at the 2nd and 98th percentiles.

As shown in Table 5, when examining contemporaneous *Tobin's Q* (*Tobin's Q*₂₀₀₅), we find that three of the four primary ratings have statistically significant coefficients, including two that are unexpectedly negative (*AGR*, *CGQ*) and one that is positive (*TCL*). Looking at future *Tobin's Q* without *Tobin's Q* in fiscal year 2005 (*Tobin's Q*₂₀₀₅) as a control gives very similar results. But, when lagged *Tobin's Q* is included, none of the ratings attain statistical significance.²⁴

To assess the economic significance of the estimated coefficients, note that for the 5,053 firms with ratings from each of the four firms and data on *Tobin's Q*, the mean value of *Tobin's Q* is 1.82 and the 25th, 50th and 75th percentiles are 0.95, 1.10, and 1.61 respectively. Thus, while the coefficient on *TCL* without lagged *Tobin's Q* (0.119) is statistically significant, the effect is not sufficient for a one standard deviation shift in the ratings to be associated with a shift in *Tobin's Q* across a full quartile.

Our somewhat inconclusive results with *Tobin's Q* are quite sensitive to model specification. Placing firms in top and bottom deciles by rating, we find that *TCL* and

²⁴ We examine the impact of winsorization of *Tobin's Q* on our results with the primary ratings by performing analyses without winsorization. In the contemporaneous and unconditional analyses, *CGQ* and *TCL* remain the only significant variables, and *CGQ* again has an unexpected sign. None of the ratings has a statistically significant coefficient in the conditional analysis.

CGQ are associated with *Tobin's Q* at the 1% level in the contemporaneous and unconditional analyses, but only the coefficients on *TCL* have the expected sign. Using a common sample of 1,349 firms with contemporaneous *Tobin's Q*, none of the ratings is significant. For future *Tobin's Q* using the 1,346 firms with necessary data for all ratings, only CGQ is significant with the predicted sign in the analysis and only with contemporaneous *Tobin's Q*.

Overall, we interpret our results as consistent with there being little systematic relationship between *Tobin's Q* and the governance ratings. As before, we also examine the relationship between 2008 *Tobin's Q* and the earliest available ratings for CGQ and *GMI*. In general, we find no statistically significant relations with the expected sign.

5.5 Stock returns

We conduct two different tests related to stock prices and governance ratings reflecting differing assumptions about how ratings might affect future firm performance and how stock markets form expectations about such effects. The first set of tests examines stock returns around rating changes. To the extent that favorable changes in governance ratings convey unexpected positive information to stock markets, we expect positive abnormal returns to firms that see their governance ratings improve around the time that these improvements occur. Additionally, even if the ratings per se do not convey information to markets, to the extent that improvements in ratings reflect unexpected changes in underlying governance characteristics that are expected to result in increased firm value, we would expect changes in governance

ratings to be associated with future abnormal returns to the extent that the governance ratings capture the improvements in governance on a timely basis.

The second set of tests examines the relation between corporate governance ratings and subsequent stock returns. Specifically, commercial governance rating firms frequently claim that their ratings are associated with subsequent stock performance. As discussed in Gompers, Ishii, and Metrick (2003), if markets correctly anticipate the effect of governance on firm performance, it is not clear that we should expect an association between stock returns and corporate governance.²⁵ Furthermore, if better corporate governance implies a lower cost of capital, as argued by some corporate governance rating firms, we would expect subsequent stock returns to be *lower* for firms with better governance.

5.5.1 Stock returns around rating changes

In examining stock returns around rating changes, we examine two kinds of return windows, each consistent with one of the two reasons to expect an association between rating changes and stock returns. First, consistent with the idea that rating changes convey information to the market about changes in governance, we examine short-window (i.e., 3- or 5-day) returns around announcements of rating changes. Second, consistent with the possibility that rating changes do not convey information to markets but are driven by changes in governance also observed by the market, we also examine returns over the period from the prior rating to the issuance of a new, different

²⁵ While Gompers, Ishii, and Metrick (2003) do find evidence consistent with the market being surprised by the superior performance, Core, Guay, and Rusticus (2006) demonstrate that this finding does not extend beyond the sample period examined in Gompers, Ishii, and Metrick (2003).

rating. Note that the ratings differ markedly in terms of the frequency and clustering of updates. GMI updates its ratings quarterly and ISS updates CGQ monthly. In contrast, AGR and TCL update the ratings of individual companies on a less specific schedule. For these reasons, the rating changes for GMI (CGQ) are clustered into 8 (18) dates, while we have 668 (206) dates with rating updates for AGR (TCL) spread over 56 (32) distinct months.

In conducting this test, we regress the market-adjusted or size-adjusted returns over a 3-day or 5-day window around the dated of a rating change (day 0) on the change in the unstandardized ratings. In an attempt to capture returns over a longer time period, we also regress the adjusted returns over the time period from the prior rating to day +1 on the change in rating. The results from these regressions are presented in Table 6. Overall, there is limited evidence of changes in corporate governance ratings being associated with contemporaneous stock returns. *CGQ* exhibits a very small positive coefficient using 3-day size-adjusted returns. The primary exception is *TCL*, where changes appear to be associated with stock returns over a five-day window around the change with both market-adjusted and size-adjusted returns. The changes are arguably economically significant. For example, a change from in rating from 'C' to 'A' would be associated with a market-adjusted return of 0.67% ($0.33\% \times 2$) over a five-day period. However, only 12.9% of changes in *TCL* are of this magnitude, and 86.5% of changes in *TCL* are a change up or down one level.

5.5.2 Future stock returns

We also examine excess stock returns, *Alpha*, as an outcome variable. Specifically, for each firm in our sample, we obtain monthly stock returns (*RET*) from CRSP for the months January 2006 to December 2008. For each firm, we then estimate regressions of these returns on the standard Fama-French monthly factor returns (*Mkt-RF*, *SMB*, *HML*, and *Mom*) obtained from Ken French's website for three overlapping periods: 12 months, 24 months, and 36 months (i.e., the full period). The estimated intercepts from these regressions form our estimates of *Alpha*. Since *Alpha* represents returns in excess of hypothesized risk factors, we do not include additional controls in our subsequent regressions. As pointed out in prior literature (Gompers, Ishii, and Metrick, 2003; Larcker, Richardson, and Tuna, 2007), if stock prices incorporate rational beliefs about the costs and benefits of alternative governance structures, we should expect no association between excess returns and the governance ratings. Any association is the result of either (i) inefficiency in the pricing of corporate governance, (ii) unexpected, systematic shocks in firm value either caused by or correlated with these measures of corporate governance or (iii) an omitted risk factor that is correlated with the measures of corporate governance. Notwithstanding these arguments, it is frequently argued by the rating firms that the governance ratings will be positively associated with future returns. An alternative argument, though not one made by the rating firms, is that governance quality is associated with lower expected returns (i.e., lower cost of capital),

in which case we might expect a negative relationship between governance quality and realized returns.

Table 7 presents the results of our excess returns analysis over, 12-, 24- and 36-month periods. Over a 12-month period, only *AGR* has a statistically significant association with *Alpha*, with the additional excess return associated with a one-standard-deviation shift in *AGR* is 0.45% per month. Over a 24-month period, two of the four primary ratings, *AGR* and *TCL*, have a statistically significant positive association with *Alpha*. The additional excess return associated with a one-standard-deviation shift in *AGR* (*TCL*) is 0.32% (0.11%) per month. Over a 36-month period, the statistical significance of *TCL* increases and a statistically significant relation between *CGQ* and *Alpha* appears. These relations are arguably economically significant. For example, a shift in *AGR* of one standard deviation equates to *Alpha* over three years of 11.34% ($36 \times 0.315\%$). However, as these hypothetical excess returns do not account for transaction costs, it is not clear whether they could form the basis of a profitable trading strategy.

It is unclear why the statistical significance of the relationship increases over a longer period. One possibility is that the market fails to appreciate the implications of good corporate governance, as measured by *AGR*, *CGQ*, and *TCL*, for future corporate performance and only corrects this failure over a period extending over three years. A second possibility is that the corporate governance ratings are correlated with an omitted risk factor and increasing the sample period increases our ability to detect a relation. An implication of this alternative explanation is that governance ratings are

negatively associated with the portion of expected returns attributable to this hypothetical omitted factor. That is, better governance leads to a higher cost of capital, which contrasts with frequent claims that better governance lowers a firm's cost of equity capital.

Another possibility is that there is something specific to the third year that affects the relations between the ratings and alphas. Given that the third year (January-December 2008) coincides with the recent financial crisis, we investigate this further. Examining governance ratings as of December 31, 2006 and *Alpha* over 24 months, we find statistically significant coefficients of similar magnitudes on the same three variables (*AGR*, *CGQ*, and *TCL*). This is consistent with the ratings – and perhaps corporate governance – being more valuable in the recent crisis. However, given that the S&P 500 lost more than 38% of its value over this period, the 7.3% (untabulated coefficient on *AGR* of $0.306\% \times 24$) alpha from moving up a full standard deviation of *AGR* provides only very limited insurance even if these results are taken at face value.

We again examine the sensitivity of our results to the use of indicators for the top and bottom deciles in place of standardized ratings and the use of a common sample across the ratings. We focus on the full 36-month return period in these analyses. In the decile analysis, the difference between the coefficients on the indicators for *AGR*, *CGQ*, and *TCL* (i.e., the ratings with significant relations in Table 7) are both economically and statistically significant. The mean monthly alpha for the top (bottom) decile based on *AGR* is 0.212% (–0.968%), with the latter (and the difference) being statistically

significant at the 1% level. The mean monthly alpha for the remaining 80% of observations is -0.156% , suggesting that the coefficient shown in Table 7 is primarily attributable to negative alpha in the lowest decile. The coefficients on the CGQ decile portfolios yield a statistically significant difference (p -value of 0.02), but one that is less than half the size of the difference for the AGR portfolios. With a common sample of 1,500 firms across all ratings, only AGR remains statistically significant with a coefficient of 0.22% , slightly below that estimated above and consistent with the results above not being driven by differences in samples across the ratings

We also examine (in untabulated analysis) the relationship between changes in governance ratings and future outcomes. We measure the change in ratings over the period from December 31, 2005 to June 30, 2006 and examine each outcome (restatements, lawsuits, operating performance, Tobin's Q, and credit ratings) over the next two or three years (depending on data availability). These results suggest even weaker ability for the ratings to predict future outcomes than that suggested by our primary analysis.

5.6 Credit ratings

Our final outcome measure is credit rating, a measure of a firm's cost of debt capital, which prior studies find is affected by the quality of firm governance (Cremers, Nair and Wei, 2007). Table 8 presents results from three sets of analyses using ordered logistic regressions. Panel B of Table 8 reports the results from estimating the relationship between corporate governance ratings and contemporaneous credit ratings

issued by Standard and Poor's, after controlling for a number of variables shown to be related to credit ratings in prior research (e.g., Ashbaugh-Skaife, Collins, and LaFond, 2006). Only *GMI* exhibits a statistical association with contemporaneous credit ratings. Panel C of Table 8 provides results from regressions in which governance ratings are used as unconditional predictors of future credit ratings. Two ratings are associated with future credit ratings and with the expected sign. However, this unconditional analysis is presented mostly for completeness and comparability with our earlier analyses. Governance ratings are presumably only useful in predicting future credit ratings if they provide information of incremental usefulness given *current* credit ratings. Panel D of Table 8 presents the regression when the credit ratings at the end of 2005 are also included in the regression. In this analysis, none of the governance rating has a statistically significant coefficient.

Using the top and bottom deciles of the ratings, we get similar results. In the unconditional analysis, *CGQ* and *GMI* are significantly (at the 1% level) negatively related, consistent with the idea that stronger governance may lead to weaker creditor protection, but *TCL* does not have a significant relation with future credit ratings. Using a common sample, inferences are almost identical to those from Table 8.

6. CGQ, ISS recommendations and shareholder voting

ISS is unique among the firms we examine in that it also provides influential advice on shareholder voting. As the dominant player in this market, ISS provides clients with “comprehensive analyses of proxy issues and complete vote

recommendations” on all shareholder votes.²⁶ According to some reports, these recommendations are followed by roughly 20% of its clients and are therefore influential in voting outcomes.²⁷

In this section, we examine two questions. First, does ISS consider a firm’s CGQ when it evaluates whether to recommend shareholders vote for or against a particular proposal? Second, does CGQ appear to affect the shareholder support for a proposal? There are at least two reasons to expect a relationship between CGQ and ISS recommendations. First, and somewhat simplistically, ISS places CGQ scores on the cover of its voting recommendations and reportedly reminds prospective clients of this when selling its services advising firms on how to increase CGQ scores. This suggests that ISS considers CGQ relevant to the voting decision. Second, there is substantial overlap between the inputs to CGQ and the inputs to voting recommendations. Indeed, ISS has “undertaken several steps to ensure that its voting policy and ratings criteria in CGQ are aligned.”²⁸ ISS also claims that its voting recommendations are “based on our benchmark policies, which leverage empirical research on the impact of proxy issues on shareholder value.”²⁹ With regard to voting outcomes, if CGQ provides useful information to shareholders, it seems plausible that CGQ would be associated with

²⁶ ISS website: <http://www.issproxy.com/issgovernance/research/recommendation.html>.

²⁷ A Proxy Adviser's Two Sides; Some Question Work of ISS for Companies It Scrutinizes The Washington Post January 23, 2006 Monday. Also see Alexander, et al. (2009).

²⁸ See “ISS US Corporate Governance Policy, 2007 Updates,” available at www.issproxy.com/pdf/2007%20US%20Policy%20Update.pdf.

²⁹ ISS website: <http://www.issproxy.com/issgovernance/research/recommendation.html>.

voting outcomes either directly, or indirectly through its effect on the voting recommendations of ISS.

We focus on management proposals voted on at meetings in the years 2005 to 2007 for which we have prior CGQ ratings and use the most recently issued CGQ rating on the date of the meeting.³⁰ We examine both a broad class of proposals (mostly director elections and auditor ratifications) and proposals related to employee compensation plans, as the latter are frequently closer votes. Using voting data provided by ISS, our sample includes 34,761 management-supported proposals between 2005 and 2007 for which we have data on ISS recommendations. This sample includes 2,309 proposals on compensation plans, 27,243 director elections, 3,821 auditor ratifications and 1,388 proposals on other matters, such as proposals to adopt majority voting or declassify the board.

As with the evaluation of the link between outcomes and ratings above, we consider both “conditional” and “unconditional” analyses. In so doing, we allow for the possibility that corporate governance factors captured by CGQ may have a direct impact on voting outcomes (independent of their impact on ISS recommendations) as well as an indirect impact through the ISS recommendation. Recognizing that shareholders may consider many factors other than CGQ or the ISS recommendation in their assessment of how to vote on a proposal, we include a number of controls. For our analysis of all proposals taken together, we include excess returns over a twelve-month

³⁰ We exclude proposals by shareholders that do not receive management support, as it is unclear how support for such proposals will relate to the quality of a firm’s corporate governance.

period prior to the meeting date as a control to allow for the possibility that poor stock performance affects voting outcomes and is correlated with CGQ. For compensation proposals, we also include proposal dilution, burn rate and overhang, as these variables are approximations of the factors that ISS explicitly considers in developing its recommendations (Morgan, Poulsen, and Wolf, 2006).³¹ These data were obtained from Equilar Inc.

Panel A of Table 9 shows an association between CGQ and ISS recommendations, but one that is surprisingly weak. For example, for an increase of one point in a firm's CGQ rating, the change in probability that ISS recommends a vote in favor of a proposal is approximately 0.0022, which suggests that a one standard deviation increase in CGQ (28.50 points) is associated with a 6.3 percentage point increase in the probability of ISS favoring a proposal. This is rather odd, as it suggests that ISS does not place much weight on its own measure when developing voting recommendations. Panel B of Table 9 provides results from similar analysis of director elections. Again the relation between CGQ and ISS recommendations is statistically significant, but substantively small, with a one-point (one-standard deviation) increase in CGQ translating into 0.17 (4.70) percentage-point increase in the probability that ISS recommends a vote for a director. Given that, in our sample, ISS recommends a vote in

³¹ We do not include governance variables considered in prior research (e.g., staggered board or majority voting in Cai, Garner, and Walkling, 2008 or Choi, Fisch, and Kahan, 2008), as these variables are identified as inputs to the CGQ score. Including such variables would understate the impact of CGQ if shareholders do not consider these variables directly, but do rely on CGQ. However, the impact of CGQ may be overstated in our analyses if shareholders rely on these variables, either alone or in conjunction with CGQ, as by excluding them we will attribute the explanatory power of all governance variables to CGQ.

favor of more than 90% of management-supported director candidates, the effect of CGQ on ISS recommendations seems small in that the predicted probability of ISS support is high even if CGQ is very low.

Panel C of Table 9 documents the relationship between CGQ and shareholder voting outcomes, where the outcome is defined as the percentage of votes cast for a proposal or candidate director. We first examine voting outcomes on all proposals, including director elections and proposed compensation plans, taken together. Excluding the ISS recommendation from the analysis, the estimated coefficient on CGQ is very small (0.0001). When ISS recommendations are included in the analysis, the coefficient is actually negative, suggesting that the higher the CGQ rating, the lower the percentage of votes cast in favor of a proposal. Note that the coefficients on the ISS recommendation indicator variable are consistent with prior work, such as Bethel and Gillan (2002). Taken literally, these suggest that an ISS recommendation in favor of a proposal can sway more than 16% of the vote.

Focusing just on votes concerning compensation plans, including stock and option plans, CGQ again has an economically insignificant relation with voting outcomes when ISS recommendations and controls are excluded from the regression, but conditional on ISS recommendations and proposal-specific factors likely to affect voting outcomes (namely, excess return, proposal dilution, burn rate and overhang), our results suggest a negative (but substantively weak) relationship between CGQ ratings and shareholder voting outcomes.

Finally, Panel D of Table 9 examines the relationship between CGQ and shareholder voting outcomes for director elections. We conduct analysis both with and without additional controls and for various subsets of director elections, namely elections of members of the three major committees: audit, compensation, and nominating and governance committees. Data on director characteristics come from the Equilar director file. In all cases, we find that either CGQ has no statistically significant relationship with voting outcomes or the relationship is of the “incorrect” sign, namely that higher CGQ is associated with lower shareholder support for the directors proposed by management.³²

To evaluate the robustness of our findings, we examine the role of institutional shareholders, as these firms are the major clients of ISS and CGQ rankings may matter when more shares are held by institutional investors. We estimate the regressions in Panel C of Table 9 with the inclusion of the variable *Percent institutional holding*, which represents the percentage of shares outstanding held by institutions making 13-F filings, interacting this variable with both the CGQ rating and the ISS recommendation. We did not find this variable or either of the interactions to be statistically significant or the inclusion of these variables to alter the basic finding that CGQ has a very small impact on voting outcomes.

We also examined the role of “extreme” ratings on both ISS recommendations and voting outcomes. In particular, we create indicator variables for a firm’s rating

³² Few director elections in our sample are contested elections and our results are unaffected when we exclude elections that appear to be contested.

being in the top or bottom decile of CGQ ratings and used these two indicator variables in place of CGQ in the regressions tabulated in Table 9. The results from these regressions are consistent with tabulated results, except that there appears to be a more significant relationship between CGQ and ISS recommendations for “extreme” ratings. For example, including controls, a firm with a CGQ in the top (bottom) decile has a 4 (12) percentage-point increase in the probability that ISS recommends for (against) a director. However, the impact of “extreme” CGQ scores on voting outcomes remains economically small, as the predicted probability of ISS supporting a management-supported director is still high, even when CGQ is very low.

7. Summary and concluding remarks

Shareholders, regulators, hedge fund managers, press commentators, board members and policy makers increasingly stress the importance of good governance, arguing that it improves firm performance, shareholder welfare and the health of the public markets. However, distinguishing good governance from bad has proved more difficult, especially given the great variety of corporate governance mechanisms (and combinations thereof) employed by firms. Several commercial firms now offer ratings of the quality of a company’s governance. The providers of these ratings make strong claims regarding the ratings’ value in predicting future outcomes, such as accounting restatements, shareholder suits, operating performance and stock returns. Directors also use these ratings as guides in organizing their firm’s governance arrangements and as a “red flag” that indicates about how much they need to monitor.

We provide an independent assessment of prominent commercial corporate governance ratings. Prior evidence on individual ratings has generally been backward-looking, raising the distinct possibility that the ratings reflect past firm performance but are unable to predict future outcomes. We examine the ability of ratings produced by RiskMetrics/ISS, GovernanceMetrics International, and The Corporate Library to predict future restatements, security litigation, and firm performance. We find that these governance ratings have either limited or no success in predicting firm performance or other outcomes of interest to shareholders. Moreover, even when there is a statistical association with future outcomes, the substantive economic effect is small. In contrast, we find somewhat stronger predictive evidence for the governance rating produced by Audit Integrity, AGR, which uses information in financial statements, rather than focusing on observable corporate governance mechanisms, such as board structure.

The fact that we find some relation between AGR and both future operating performance and excess returns, suggests that the results for CGQ, GMI, and TCL are not simply attributable to the confounding effects of the optimal selection of governance structures. Our view is that a more plausible interpretation of the weak and mixed results we find is that the commercial ratings contain a large amount of measurement error. Some support for this interpretation is found in the surprisingly small correlations among the ratings. This suggests that either the ratings are measuring very different corporate governance constructs or there is substantial measurement error in

at least some of the ratings. Since the firms use the same basic governance data, examine similar governance dimensions (e.g., anti-takeover provisions, board structure, and executive compensation), and claim to measure overall “corporate governance,” we believe that each firm is attempting to measure a similar corporate governance construct. The absence of cross-sectional correlation is consistent with a high degree of measurement error in the rating processes across firms.³³ These results suggest that boards of directors should not implement governance changes solely for the purpose of increasing their ranking.

An alternative explanation is that we do not have the right model for estimating the impact of firm governance or the right measures of firm performance. Ratings firms may object that, given the right model specification, their ratings are significant and informative. Again the fact that we find support for AGR suggests that our analyses are not completely confounded by such concerns. But, to the degree that this objection is valid, it is incumbent on the ratings firms to explain how their ratings map into future performance, given the apparent difficulty of independently substantiating the claimed relations across a battery of standard tests using several important outcome variables. Such explanations would be consistent with the rating companies’ urging of transparency on the firms they rate. As stated on the RiskMetrics/ISS website,

³³ Given our results, an interesting question is why institutional investors, shareholders, and other parties buy the ratings. It is difficult for us to precisely answer this question. We interviewed executives at several money management firms that purchase the commercial ratings. One consistent explanation was that, while the ratings do not have predictive value, purchasing the ratings is a cost-effective way to obtain the underlying data. It is also not clear whether the market for commercial ratings is highly profitable. For example, the majority of profit earned by ISS/RiskMetrics is produced from their voting recommendation and processing work.

'As more and more investors, insurers and credit rating agencies recognize the link between corporate governance performance and risk, the more important it is for companies to understand how their corporate governance practices are measured. ... We believe profoundly that transparency instills trust and, with trust comes confidence and more intelligent decisions.'

Table 1: Summary of governance ratings

Panel A provides summary statistics for primary governance ratings of Audit Integrity (*AGR*), RiskMetrics/ISS (*CGQ*), GovernanceMetrics International (*GMI*), and The Corporate Library (*TCL*). Panel B provides correlation statistics for the primary governance ratings. Pearson (Spearman) correlations between governance ratings are presented above (below) the diagonal. Numbers on the diagonal represent correlation between 2005 and 2006 ratings for firms in our sample. Panel C provides the percentage of each rating sample in each of 24 Global Industrial Classification System groups. *AGR*, *CGQ* and *GMI* are on a 0–100 scale. *TCL* is converted from an “A” to “F” grade to numerical values 1–5, where “A” equals 5 and “F” equals 1 (no “E”). The governance ratings are measured as of December 31, 2005.

Panel A: Descriptive statistics

Variable	N	Mean	SD	Min	P25	Median	P75	Max
Primary Ratings								
<i>AGR</i>	6714	63.67	15.18	4.0	54.0	67.0	75.0	88.0
<i>CGQ</i>	5059	51.61	28.50	0.4	27.1	52.0	76.2	100.0
<i>GMI</i>	1565	7.08	1.22	2.5	6.5	7.0	8.0	10.0
<i>TCL</i>	1906	3.22	0.90	1.0	3.0	3.0	4.0	5.0

Panel B: Correlation coefficients

	<i>AGR</i>	<i>CGQ</i>	<i>GMI</i>	<i>TCL</i>
<i>AGR</i>	(0.558*)	0.005	0.031	0.063*
<i>CGQ</i>	0.029*	(0.847*)	0.480*	0.005
<i>GMI</i>	0.048	0.484*	(0.817*)	-0.020
<i>TCL</i>	0.076*	0.016	-0.009	(0.613*)

* Indicates statistically significant correlation at the 5% level (two-tail).

Table 1 cont'd: Summary of governance ratings

Panel C: Industry composition (% of sample)

	AGR	CGQ	GMI	TCL	Compustat
Energy	4.42	4.40	4.81	4.52	6.06
Materials	4.72	4.71	6.36	6.34	6.31
Capital Goods	7.65	7.65	8.18	7.99	6.87
Commercial & Professional Services	3.33	3.25	3.25	3.25	3.37
Transportation	1.95	1.94	2.14	2.48	1.99
Automobiles & Components	1.48	1.52	1.62	1.87	1.43
Consumer Durables & Apparel	4.29	4.40	4.61	4.80	3.78
Consumer Services	3.56	3.63	4.03	4.08	3.40
Media	3.07	3.05	3.18	3.36	3.13
Retailing	5.21	4.98	6.04	6.39	3.77
Food & Staples Retailing	0.92	0.93	1.17	1.27	0.79
Food, Beverage & Tobacco	2.34	2.42	2.99	3.03	2.27
Household & Personal Products	0.76	0.80	0.84	0.99	0.91
Health Care Equipment & Services	7.62	7.62	7.40	6.84	6.82
Pharma, Biotech & Life Sciences	7.42	7.20	3.44	3.09	6.17
Banks	7.52	7.75	5.52	5.62	9.28
Diversified Financials	2.57	2.53	3.18	3.03	2.84
Insurance	2.87	2.80	3.64	3.36	2.59
Real Estate	4.16	4.29	3.64	3.53	3.21
Software & Services	8.31	8.34	6.30	7.06	9.19
Technology Hardware & Equipment	6.99	6.99	7.34	7.00	7.24
Semiconductors (inc. Equipment)	3.99	3.95	4.16	4.08	2.67
Telecommunication Services	1.72	1.63	1.17	1.32	2.66
Utilities	3.13	3.22	5.00	4.69	3.26

Table 2: Governance ratings and future restatements

This table reports the results of logit regressions where the dependent variable equals 1 if, in the three years after December 31, 2005, the firm restates revenues or expenses for fiscal years 2004 or later, 0 otherwise (data on restatements are obtained from Glass Lewis & Co.). Numbers in parentheses are standard errors clustered by two-digit SIC code.

The independent variables included are a constant (unconditional analysis) or a constant plus controls (conditional analysis). Following Larcker, Richardson and Tuna (2007), the controls used are debt-to-market (*Leverage*), book-to-market (*BM*), *External Financing*, log of market capitalization (*Log Market Value*), cash spent on acquisitions (*Acquisitions*) and *Free Cash Flow*. All controls are measured for the latest fiscal year ending on or before September 30, 2005.

The governance rating variables are the *AGR* from Audit Integrity, *CGQ* from RiskMetrics/ISS, *GMI* from a GovernanceMetrics International, and *TCL* from a The Corporate Library. The governance ratings are measured as of as of December 31, 2005. Each governance rating is standardized to have a mean of zero and standard deviation of one.

Panel A: Primary governance ratings, unconditional analysis

	AGR	CGQ	GMI	TCL
Governance Rating	-0.264** (0.0469)	-0.0421 (0.0777)	-0.383** (0.0994)	-0.0164 (0.0828)
Constant	-2.350** (0.130)	-2.319** (0.143)	-2.325** (0.202)	-2.205** (0.188)
Observations	6554	5003	1565	1903
Pseudo R ²	0.0103	0.000238	0.0195	<0.0001

Panel B: Descriptive statistics, controls for conditional analysis

Variable	N	Mean	Std. dev.	P25	Median	P75
<i>Leverage</i>	6,645	0.27	0.38	0.02	0.16	0.35
<i>BM</i>	6,551	0.47	0.36	0.21	0.41	0.65
<i>External Financing</i>	6,551	0.02	0.25	-0.07	-0.01	0.07
<i>Log Market Value</i>	6,551	5.48	2.43	3.8	5.49	7.17
<i>Acquisition</i>	6,551	0.02	0.06	0	0	0
<i>Free Cash Flow</i>	6,518	-0.13	1.94	-0.06	0.03	0.07

Panel C: Primary governance ratings, conditional analysis

	AGR	CGQ	GMI	TCL
Governance Rating	-0.249** (0.0451)	-0.0430 (0.0829)	-0.352** (0.111)	-0.0709 (0.0817)
<i>Leverage</i>	-0.00821 (0.162)	-0.00900 (0.271)	-1.218 (0.640)	-0.402 (0.471)
<i>BM</i>	-0.420* (0.198)	-0.530** (0.168)	-0.304 (0.338)	-0.699* (0.334)
<i>External Financing</i>	-0.352 (0.180)	-0.348 (0.207)	-1.050 (0.568)	-0.298 (0.455)
<i>Log Market Value</i>	-0.0313 (0.0274)	-0.0230 (0.0354)	-0.0490 (0.0756)	-0.190** (0.0553)
<i>Acquisition</i>	1.557 (0.924)	2.416* (0.991)	2.320 (2.048)	0.745 (1.983)
<i>Free Cash Flow</i>	0.148 (0.104)	0.0906 (0.0527)	-1.510* (0.703)	0.551 (0.467)
Constant	-2.005** (0.152)	-1.986** (0.183)	-1.605** (0.596)	-0.436 (0.418)
Observations	6,416	4,979	1,562	1,897
Pseudo R ²	0.0149	0.0071	0.0325	0.0128

*, ** Indicates significance at the 5 percent and 1 percent levels (two-tail), respectively.

Table 3: Governance ratings and future class-action lawsuits

Results are for logit regressions where the dependent variable (*Lawsuit*) equals 1 if a class-action lawsuit is filed against the firm after December 31, 2005 and before June 30, 2009 (the latest date on the Woodruff-Sawyer database of corporate litigation), 0 otherwise. The independent variables are the indicated governance rating as of December 31, 2005 and either a constant (unconditional analysis) or controls (conditional analysis). Numbers in parentheses are standard errors. .

Following Rogers and Stocken (2005), we use the following controls in Panel B: the natural log of the average market value of equity (*Size*), average daily turnover divided by average shares outstanding (*Turnover*), the slope coefficient from a regression of daily returns on the CRSP value-weighted index (*Beta*), buy-and-hold returns (*Returns*), the standard deviation, skewness and minimum value of daily returns *Std Dev(Returns)*, *Skewness(Returns)*, *Min(Returns)* respectively) and indicators for membership of the following industry groups: Biotechnology, Computer Hardware, Electronic, Retailing, and Computer Software. All controls are measured over the year ending December 31, 2005.

The governance rating variables are the *AGR* from Audit Integrity, *CGQ* from RiskMetrics/ISS, *GMI* from a GovernanceMetrics International, and *TCL* from a The Corporate Library. The governance ratings are measured as of as of December 31, 2005. Each governance rating is standardized to have a mean of zero and standard deviation of one.

Panel A: Unconditional analysis

	AGR	CGQ	GMI	TCL
Governance Rating	-0.319** (0.0508)	0.551** (0.0678)	0.00689 (0.0846)	-0.206** (0.0769)
Constant	-2.989** (0.0583)	-2.987** (0.0699)	-2.208** (0.0846)	-2.303** (0.0804)
Observations	6,714	5,059	1,565	1,906
Pseudo R ²	0.0140	0.0337	<0.0001	0.0061

Table 3: Governance ratings and future class-action lawsuits

Panel B: Descriptive statistics, controls for conditional analysis

Variable	N	Mean	Std. dev.	P25	Median	P75
<i>Turnover</i>	5,329	0.0076	0.0156	0.0023	0.0048	0.0089
<i>Size</i>	5,329	19.77	1.91	18.43	19.66	20.99
<i>Returns</i>	5,329	0.11	0.54	-0.15	0.05	0.27
<i>Std Dev(Returns)</i>	5,329	0.03	0.02	0.02	0.02	0.03
<i>Min(Returns)</i>	5,329	-0.10	0.08	-0.13	-0.08	-0.05
<i>Beta</i>	5,329	0.92	0.69	0.46	0.94	1.36
<i>Skewness(Returns)</i>	5,329	0.40	1.53	-0.13	0.30	0.84

Panel C: Conditional analysis

	AGR	CGQ	GMI	TCL
Governance Rating	-0.367** (0.0587)	0.0155 (0.0825)	-0.211* (0.0935)	-0.104 (0.0838)
<i>Turnover</i>	5.125 (2.920)	15.04** (4.496)	37.71* (15.21)	37.61** (11.80)
<i>Size</i>	0.435** (0.0381)	0.445** (0.0456)	0.625** (0.0758)	0.450** (0.0658)
<i>Returns</i>	0.252** (0.0871)	0.244* (0.0969)	-0.300 (0.280)	0.121 (0.224)
<i>Std Dev(Returns)</i>	6.987 (8.730)	-1.532 (11.10)	89.92** (32.33)	41.24* (19.15)
<i>Min(Returns)</i>	-1.635 (1.435)	-2.540 (1.660)	9.269* (3.846)	4.861 (3.004)
<i>Beta</i>	0.132 (0.107)	0.210* (0.125)	-0.112 (0.284)	-0.0280 (0.218)
<i>Skewness(Returns)</i>	-0.0439 (0.0612)	-0.00765 (0.0682)	-0.112 (0.110)	-0.109 (0.100)
Constant	-12.30** (0.860)	-12.60** (1.025)	-17.06** (1.865)	-12.86** (1.598)
Observations	5,304	4,326	1,563	1,871
Pseudo R²	0.110	0.108	0.100	0.0806

*, ** Indicates significance at the 5 percent and 1 percent levels (two-tail), respectively.

Table 4: Governance ratings and future operating performance

Results are for OLS regressions where the dependent variable is industry-median adjusted ROA (*Ind Adj. ROA₂₀₀₈*) for the fiscal year ending between June 2008 and May 2009 and the independent variables are the indicated governance rating as of December 31, 2005, industry-median adjusted ROA for the latest fiscal year ending on or before December 31, 2005 (*Ind. Adj. ROA₂₀₀₅*), and, following Larcker, Richardson and Tuna (2007), the natural logarithm of market value in millions of dollars as of December 31, 2005, *ln(MV)*. Industries are defined using two-digit SIC codes. ROA is defined as using income from operations (Compustat *OIADP*) divided by average total assets (average of Compustat *AT* for current and prior fiscal year) for the fiscal year ending between June 2008 and May 2009. ROA is winsorized to have an absolute value not greater than one. To be included in the sample, firm must have data for ROA on Compustat and be in an industry with at least 5 observations on ROA. Numbers in parentheses are standard errors.

The governance rating variables are the *AGR* from Audit Integrity, *CGQ* from RiskMetrics/ISS, *GMI* from a GovernanceMetrics International, and *TCL* from a The Corporate Library. The governance ratings are measured as of as of December 31, 2005. Each governance rating is standardized to have a mean of zero and standard deviation of one.

Panel A: Descriptive statistics

Variable	N	Mean	Std. dev.	P25	Median	P75
<i>Ind. Adj. ROA₂₀₀₈</i>	5,074	-0.0246	0.2709	-0.0321	0.0354	0.0986
<i>Ind. Adj. ROA₂₀₀₅</i>	5,067	-0.0037	0.2712	-0.0004	0.0488	0.1137
<i>ln(MV)</i>	5,056	5.25	2.52	3.45	5.31	7.11

Panel B: Contemporaneous ROA

	AGR	CGQ	GMI	TCL
Governance Rating	0.0372** (0.00329)	0.00807** (0.00375)	-0.00340 (0.00345)	0.00884** (0.00321)
<i>ln(MV)</i>	0.0465** (0.00144)	0.0347** (0.00170)	0.0192** (0.00263)	0.0230** (0.00220)
Constant	-0.297** (0.00908)	-0.216** (0.0108)	-0.0876** (0.0211)	-0.118** (0.0172)
Observations	4,941	3,917	1,400	1,651
Adjusted R ²	0.189	0.141	0.0378	0.0613

Table 4: Governance ratings and future operating performance

Panel C: Future ROA, without contemporaneous ROA

	AGR	CGQ	GMI	TCL
Governance Rating	0.0371** (0.00335)	0.00816* (0.00389)	-0.00287 (0.00358)	0.00584 (0.00336)
<i>ln(MV)</i>	0.0454** (0.00147)	0.0348** (0.00176)	0.0220** (0.00273)	0.0259** (0.00230)
Constant	-0.308** (0.00924)	-0.234** (0.0112)	-0.125** (0.0219)	-0.156** (0.0179)
Observations	4,941	3,917	1,400	1,651
Adjusted R ²	0.178	0.134	0.0467	0.0703

Panel D: Future ROA, with contemporaneous ROA

	AGR	CGQ	GMI	TCL
Governance Rating	0.0133** (0.00263)	0.00288 (0.00302)	-0.000300 (0.00245)	-0.000694 (0.00238)
<i>Ind. Adj. ROA₂₀₀₅</i>	0.641** (0.0112)	0.654** (0.0129)	0.757** (0.0190)	0.739** (0.0182)
<i>ln(MV)</i>	0.0156** (0.00125)	0.0122** (0.00144)	0.00746** (0.00191)	0.00893** (0.00168)
Constant	-0.117** (0.00792)	-0.0933** (0.00917)	-0.0587** (0.0151)	-0.0691** (0.0129)
Observations	4,941	3,917	1,400	1,651
Adjusted R ²	0.504	0.478	0.553	0.534

*, ** Indicates significance at the 5 percent and 1 percent levels, respectively.

Table 5: Governance ratings and Tobin's Q

Results are for OLS regressions where the dependent variable is *Tobin's Q*, defined as the ratio $(TA+MVE-BVE)/TA$, where *TA* is total assets (Compustat *AT*), *MVE* is market capitalization ($PRCC_F \times CSHO$) and *BVE* is the book value of equity (*CEQ*), each for the fiscal year ending between June 2008 and May 2009. *Tobin's Q*₂₀₀₅ is measured as of the end of the latest fiscal year ending on or before December 31, 2005. To be included in the sample, firm must have data for *Tobin's Q* on Compustat and be in an industry with at least 5 observations. Industry fixed effects are not reported for reasons of space. Numbers in parentheses are standard errors.

The governance rating variables are the *AGR* from Audit Integrity, *CGQ* from RiskMetrics/ISS, *GMI* from GovernanceMetrics International, and *TCL* from The Corporate Library. The governance ratings are measured as of as of December 31, 2005. Each governance rating is standardized to have a mean of zero and standard deviation of one.

Panel A: Descriptive statistics

Variable	N	Mean	Std. dev.	P25	Median	P75
<i>Tobin's Q</i>	5,048	1.82	2.49	0.95	1.10	1.61
<i>Tobin's Q</i> ₂₀₀₅	5,053	2.33	2.74	1.07	1.47	2.34

Panel B: Contemporaneous Tobin's Q

	AGR	CGQ	GMI	TCL
Governance Rating	-0.136** (0.0380)	-0.236** (0.0309)	0.0133 (0.0291)	0.119** (0.0318)
Ind. fixed effects	Yes	Yes	Yes	Yes
Observations	5,000	3,922	1,402	1,653
Adjusted R ²	0.0852	0.106	0.139	0.117

Panel C: Future Tobin's Q, without contemporaneous Tobin's Q

	AGR	CGQ	GMI	TCL
Governance Rating	-0.153** (0.0349)	-0.228** (0.0294)	0.00943 (0.0198)	0.0800** (0.0242)
Ind. fixed effects	Yes	Yes	Yes	Yes
Observations	4,995	3,920	1,399	1,649
Adjusted R ²	0.0693	0.0776	0.162	0.162

Table 5: Governance ratings and Tobin's Q

Panel D: Future Tobin's Q, with contemporaneous Tobin's Q

	AGR	CGQ	GMI	TCL
Governance Rating	-0.0532* (0.0211)	-0.0604** (0.0201)	0.00255 (0.0125)	0.00951 (0.0154)
<i>Tobin's Q</i> ₂₀₀₅	0.731** (0.00795)	0.694** (0.0104)	0.529** (0.0118)	0.589** (0.0121)
Ind. fixed effects	Yes	Yes	Yes	Yes
Observations	4988	3917	1399	1649
Adjusted R ²	0.657	0.574	0.666	0.664

*, ** Indicates significance at the 5 percent and 1 percent levels, respectively.

Table 6: Stock returns around changes in governance ratings

Results are the coefficients on the change in (unstandardized) governance rating from OLS regressions of market- or size-adjusted returns, expressed as percentages, over the indicated windows around the date of the rating change (date 0). Sample includes rating changes from public sources over the period from 2002 through September 2007. Unchanged governance ratings are not included. Numbers in parentheses are standard errors. These standard errors are clustered on event dates for 3- and 5-day windows and on months for windows from prior rating to the day after the rating change

The governance rating variables are the *AGR* from Audit Integrity, *CGQ* from RiskMetrics/ISS, *GMI* from a GovernanceMetrics International, and *TCL* from a The Corporate Library. The governance ratings are measured as of as of December 31, 2005.

Panel A: Market-adjusted returns

Event window	AGR	CGQ	GMI	TCL
(-1, +1)	0.0036 (0.0029)	0.0076 (0.0044)	-0.0350* (0.0145)	0.1506 (0.1319)
(-2, +2)	0.0048 (0.0032)	0.0050 (0.0038)	-0.0150 (0.0114)	0.3328** (0.1190)
(prior rating, +1)	0.0287 (0.0154)	-0.0182 (0.0108)	-0.0910 (0.1118)	-0.3846 (0.7423)
Num. of event dates	668	18	8	206
Number of months	56	18	8	32

Panel B: Size-adjusted returns

Event window	AGR	CGQ	GMI	TCL
(-1, +1)	0.0028 (0.0027)	0.0069* (0.0029)	-0.0270 (0.0202)	0.1535 (0.1146)
(-2, +2)	0.0044 (0.0032)	0.0051 (0.0042)	0.0003 (0.0126)	0.3173** (0.1096)
(prior rating, +1)	0.0307* (0.0144)	-0.0013 (0.0110)	-0.0644 (0.0983)	0.1303 (0.5173)
Num. of event dates	668	18	8	206
Number of months	56	18	8	32

Panel C: Descriptive statistics of governance rating changes

	AGR	CGQ	GMI	TCL
Mean	-0.13	0.15	0.04	-0.19
Standard deviation	11.02	7.70	2.43	1.19
10 th percentile	-13.00	-4.29	-0.50	-1.00
25 th percentile	-6.00	-1.30	-0.50	-1.00
50 th percentile	1.00	-0.40	0.50	-1.00
75 th percentile	6.00	0.42	0.50	1.00
90 th percentile	13.00	4.57	1.00	1.00

*, ** Indicates significance at the 5 percent and 1 percent levels, respectively.

Table 7: Governance ratings and future stock performance

Results are for OLS regressions where the dependent variable is *Alpha*, estimated as the residual from a four-factor Fama-French model with a momentum factor estimated using returns over the 12, 24 or 36 months after December 31, 2005 (a minimum of 12 months of return data are required for inclusion). Factor data obtained from Ken French's website.

The governance rating variables are the *AGR* from Audit Integrity, *CGQ* from RiskMetrics/ISS, *GMI* from a GovernanceMetrics International, and *TCL* from a The Corporate Library. *AGR*, *CGQ* and *GMI* ratings are on a 0-100 scale. *TCL* is converted from an "A" to "F" grade to numerical values 1-5, where "A" equals 5 and "F" equals 1 (no "E"). The governance ratings are measured as of as of December 31, 2005. Each governance rating is standardized to have a mean of zero and standard deviation of one.

Panel A: Alphas, 12 months after December 31, 2005

	AGR	CGQ	GMI	TCL
Rating	0.00449** (0.00101)	-0.000795 (0.00107)	-0.000563 (0.00118)	-0.000162 (0.00124)
Constant	-0.000135 (0.000951)	0.00196 (0.00103)	0.00260* (0.00118)	0.00256* (0.00124)
Observations	4,970	4,063	1,525	1,808
Adjusted R ²	0.00375	0.00011	0.00051	0.00054

Panel B: Alphas, 24 months after December 31, 2005

	AGR	CGQ	GMI	TCL
Rating	0.00318** (0.000458)	0.000369 (0.000496)	0.000768 (0.000527)	0.00108 (0.000559)
Constant	-0.000669 (0.000430)	-0.00118* (0.000475)	-0.000211 (0.000527)	0.000119 (0.000559)
Observations	4,975	4,066	1,526	1,809
Adjusted R ²	0.00942	-0.00011	0.00074	0.00152

Panel C: Alphas, 36 months after December 31, 2005

	AGR	CGQ	GMI	TCL
Rating	0.00315** (0.000446)	0.00179** (0.000486)	0.000769 (0.000527)	0.00150** (0.000562)
Constant	-0.00244** (0.000420)	-0.00280** (0.000465)	0.000964 (0.000528)	0.000505 (0.000561)
Observations	4,977	4,068	1,527	1,810
Adjusted R ²	0.00971	0.00307	0.000738	0.00336

*, ** Indicates significance at the 5 percent and 1 percent levels, respectively. Numbers in parentheses are standard errors.

Table 8: Governance ratings and credit ratings

Results are for ordered logit regressions where the dependent variable is the Standard and Poor's credit rating at either the end of the latest fiscal year ending on or before December 31, 2005 (Panel B) or the end of fiscal 2008 (Panels C and D). In Panel B, the independent variables are the indicated governance rating as of December 31, 2005, $\ln(MV)$, BM , ROA , and $Leverage$ for the latest fiscal year ending on or before December 31, 2005, and $Beta$ and $Volatility$ estimated using data for the 60 months prior to December 31, 2005. $\ln(MV)$ is the natural logarithm of market value expressed in millions of dollars. BM is the book value of common equity (CEQ) divided by the market value of common equity. ROA is defined as using income from operations (Compustat $OIADP$) divided by average total assets (average of Compustat AT for current and prior fiscal year). ROA is winsorized to have an absolute value not greater than one. $Beta$ is computed using firm-specific CAPM regressions and $Volatility$ is the annualized standard deviation of monthly returns in excess of the risk free rate. In Panel D, we add the Standard and Poor's credit rating at the end of the latest fiscal year ending on or before December 31, 2005. Numbers in parentheses are standard errors.

The governance rating variables are the AGR from Audit Integrity, CGQ from RiskMetrics/ISS, GMI from a GovernanceMetrics International, and TCL from a The Corporate Library. The governance ratings are measured as of as of December 31, 2005. Each governance rating is standardized to have a mean of zero and standard deviation of one.

Panel A: Descriptive statistics, independent variables

Variable	N	Mean	Std. dev.	P25	Median	P75
$\ln(MV)$	1,310	8.19	1.49	7.18	8.16	9.39
BM	1,310	0.47	0.29	0.28	0.43	0.62
ROA	1,319	0.09	0.08	0.04	0.08	0.13
$Leverage$	1,319	0.30	0.21	0.16	0.27	0.41
$Beta$	1,201	0.99	0.80	0.43	0.83	1.29
$Volatility$	1,200	0.36	0.18	0.23	0.31	0.43

Panel B: Contemporaneous credit ratings

	AGR	CGQ	GMI	TCL
Governance Rating	0.0599 (0.0601)	-0.0578 (0.0676)	0.159** (0.0668)	0.0953 (0.0631)
$\ln(MV)$	1.213** (0.0555)	1.214** (0.0585)	1.089** (0.0740)	1.121** (0.0699)
BM	0.149 (0.219)	0.0270 (0.249)	0.304 (0.324)	-0.0759 (0.293)
ROA	1.028 (0.773)	1.910* (0.839)	4.052** (1.027)	3.587** (0.974)
$Leverage$	-2.473** (0.303)	-2.507** (0.320)	-2.539** (0.406)	-2.699** (0.370)
$Beta$	-0.0418 (0.0983)	-0.0378 (0.112)	0.440** (0.161)	0.297** (0.133)
$Volatility$	-7.866** (0.544)	-8.333** (0.602)	-12.48** (0.899)	-11.00** (0.759)
Observations	1,195	1,076	781	857
Pseudo R ²	0.233	0.241	0.220	0.233

Table 8: Governance ratings and credit ratings

Panel C: Future credit ratings, unconditional prediction

	AGR	CGQ	GMI	TCL
Governance Rating	-0.0744 (0.0534)	0.432** (0.0609)	0.521** (0.0612)	-0.106 (0.0556)
Observations	1342	1185	832	918
Pseudo R ²	<0.001	0.008	0.018	<0.001

Panel D: Future credit ratings, conditional prediction

	AGR	CGQ	GMI	TCL
Governance Rating	-0.0438 (0.0555)	-0.0585 (0.0625)	0.0256 (0.0657)	-0.0381 (0.0581)
<i>Credit Rating</i> ₂₀₀₅	1.245** (0.0366)	1.270** (0.0390)	1.245** (0.0465)	1.202** (0.0426)
Observations	1217	1098	785	863
Pseudo R ²	0.331	0.335	0.306	0.307

*, ** Indicates significance at the 5 percent and 1 percent levels, respectively

Table 9: CGQ, ISS recommendations, and shareholder voting

Results in Panels A and B are for logit regressions where the dependent variable equals 1 if the ISS recommends a vote “for” a proposal. Results in Panels C and D are for Tobit regressions (with bounds at 0 and 1) where the dependent variable *percent_for* is calculated as the numbers of votes for a proposal divided by the sum of votes for, votes against plus abstentions. Shareholder voting data are for proposals receiving management support and voted on at meetings in 2005, 2006, and 2007 for which we have prior CGQ ratings. Votes on compensation plans include votes on bonus, compensation, stock and option plans, excluding non-employee plans. Recommendation and voting data were obtained from ISS. Director elections in Panels C and D are restricted to those on the Equilar director file. Numbers in parentheses are standard errors clustered by firm.

Excess returns are the returns over the twelve-month period ending two months prior to the meeting date, less the value-weighted CRSP returns over the same period. Dilution measures are based on data supplied by Equilar. Proposal dilution equals shares requested under the proposal divided by shares outstanding. Burn rate equals options granted in the prior fiscal year divided by shares outstanding. Overhang equals options outstanding divided by shares outstanding. Recent restatement indicates that the firm had a restatement listed on the Glass-Lewis file over the 24-month period prior to the meeting. Excess compensation is the residual, as a proportion of the fitted value, from a regression by two-digit SIC code of 2005 total direct compensation, as defined by Equilar, on market value, sales, return on assets, and one-year total shareholder return. Panels B (and D) reports regressions estimating ISS recommendation on (and results of) shareholder votes for particular directors. *Chair, Vice chairman, Lead director, Outsider, Insider, and Female* are indicator variables for individual directors nominated for the board and are taken from the Equilar director file. *Age (Tenure)* is the director’s age (tenure on the board) taken from the Equilar director file.

Panel A: CGQ and ISS recommendations

	All proposals	Compensation plans	Compensation plans
CGQ	0.0282** (0.0729)	0.0241** (0.0022)	0.0243** (0.0027)
<i>Proposal dilution</i>			-9.5612** (1.6661)
<i>Burn rate</i>			-5.7680 (5.8100)
<i>Overhang</i>			-2.8278 (1.7920)
Constant	0.4872** (0.0013)	0.1232 (0.1397)	0.8802 (0.2218)
Marginal effect of change in CGQ on probability that ISS recommends a vote “for” the proposal (evaluated at the mean value for CGQ)	0.0022	0.0031	0.0031
Observations	34,761	2,309	1,527

Table 9: CGQ, ISS recommendations, and shareholder voting

Panel B: CGQ and ISS recommendations in director elections

	Without controls	With controls
<i>CGQ</i>	0.0278** (0.00211)	0.0248** (0.00210)
<i>Chair</i>		0.233** (0.0885)
<i>Vice chairman</i>		-0.356 (0.227)
<i>Lead director</i>		-0.210 (0.151)
<i>Outsider</i>		1.288** (0.110)
<i>Insider</i>		0.0403 (0.110)
<i>Female</i>		-0.0580 (0.112)
<i>Age</i>		-0.00760 (0.00459)
<i>Tenure</i>		-0.00248 (0.00433)
Constant	0.528** (0.117)	0.413 (0.307)
Marginal effect of change in <i>CGQ</i> on probability that ISS recommends a vote "for" the proposal (evaluated at the mean value for <i>CGQ</i>)	.00204	.00165
Observations	13,011	12,698
Pseudo R ²	0.0732	0.1180

Table 9: CGQ, ISS recommendations, and shareholder voting

Panel C: CGQ and shareholder voting outcomes

	All votes		Compensation plans	
<i>CGQ</i>	0.0001** (<0.0001)	-0.0003** (<0.0001)	0.00007** (0.0001)	-0.0006** (0.0001)
<i>ISS recommendation</i>		0.1644** (0.0054)		0.1717** (0.0107)
<i>Excess return</i>		-0.0010 (0.0017)		-0.0020 (0.0050)
<i>Proposal dilution</i>				-0.4253** (0.1066)
<i>Burn rate</i>				-0.5960** (0.2649)
<i>Overhang</i>				-0.3919** (0.0715)
Constant	0.9381** (0.0026)	0.8198** (0.0062)	0.8442** (0.0087)	0.7926** (0.0151)
Observations	33,772	33,594	2,278	1,503

Table 9: CGQ, ISS recommendations, and shareholder voting

Panel D: CGQ and shareholder voting outcomes for director elections

	All director elections		Audit committee members	
CGQ	0.0001 (0.0001)	-0.000381** (0.0001)	-0.000107 (0.0001)	-0.000213** (0.0000)
ISS recommendation		0.175** (0.00831)		0.227** (0.0134)
Excess return		0.00515 (0.00371)		0.00314 (0.00377)
Chair		-0.00824** (0.00217)		-0.0257** (0.00649)
Vice chairman		-0.00946 (0.00709)		-0.00539 (0.00990)
Lead director		0.00175 (0.00198)		0.00394 (0.00266)
Outsider		0.00206 (0.00253)		0.00199 (0.00579)
Insider		0.0232** (0.00326)		0.0535** (0.0166)
Female		0.00795** (0.00155)		0.00284 (0.00207)
Age		0.00004 (0.0001)		-0.000106 (0.000109)
Tenure		-0.000471** (0.000108)		-0.000571** (0.000154)
Committee chair				-0.00262* (0.00137)
Recent restate.				-0.0127** (0.00313)
Constant	0.943** (0.00385)	0.812** (0.00978)	0.959** (0.00437)	0.765** (0.0145)
Observations	12,510	12,206	5,137	5,109

Table 9: CGQ, ISS recommendations, and shareholder voting

Panel D: CGQ and shareholder voting outcomes for director elections (cont.)

	Governance and nominating committee members		Compensation committee members	
CGQ	0.000133 (0.0001)	-0.000217** (0.0001)	0.0000 (0.0001)	-0.000228** (0.0001)
ISS recommendation		0.210** (0.0103)		0.231** (0.0113)
Excess return		0.00216 (0.00392)		0.00273 (0.00417)
Chair		-0.0112* (0.00495)		-0.00610 (0.00636)
Vice chairman		-0.0237 (0.0211)		-0.0315* (0.0181)
Lead director		0.00386 (0.00247)		0.00730* (0.00287)
Outsider		0.00009 (0.00430)		-0.00261 (0.00469)
Insider		0.0947** (0.0162)		0.139** (0.0188)
Female		0.00824** (0.00233)		0.00537* (0.00242)
Age		0.000143 (0.000117)		0.00004 (0.000122)
Tenure		-0.000787** (0.000163)		-0.000624** (0.000146)
Committee chair		-0.00509** (0.00172)		-0.000167 (0.00146)
Excess comp.				0.000006** (0.0000)
Constant	0.935** (0.00517)	0.765** (0.0121)	0.944** (0.00529)	0.753** (0.0131)
Observations	4,759	4,746	5,030	4,111

*, ** Indicates significance at the 5 percent and 1 percent levels, respectively.

Table 10: Summary of results

This table summarizes the results reported in Tables 2-8, focusing only the estimated coefficient for the governance ratings. An asterix (*) signifies a significant relationship with the expected sign (i.e., a high governance rating is related to fewer bad outcomes or superior performance). An "x" signifies a statistically significant relationship with an unexpected sign. The governance rating variables are *AGR* from Audit Integrity, *CGQ* from RiskMetrics/ISS, *GMI* from GovernanceMetrics International, and *TCL* from The Corporate Library.

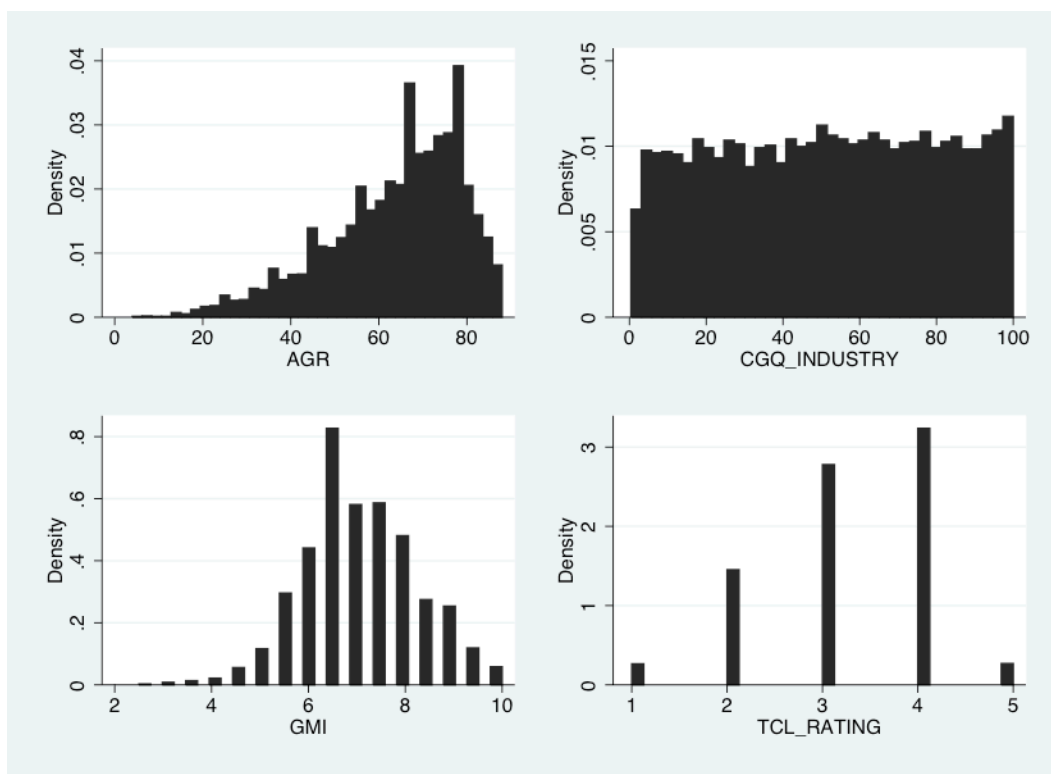
Dependent Variable		AGR	CGQ	GMI	TCL
Restatements	No controls	**		**	
	Controls	**		**	
Class-action lawsuits	No controls	**	xx		**
	Controls	**		*	
Operating performance	Contemporaneous ROA	**	**		**
	Future ROA, without contemporaneous ROA	**	*		
	Future ROA, with contemporaneous ROA	**			
Tobin's Q	Contemporaneous Q	xx	xx		**
	Future Q, without contemporaneous Q	xx	xx		**
	Future Q, with contemporaneous Q	x	xx		
Stock returns around ratings changes	Market-adjusted returns (-1, +1)			x	
	(-2, +2)				**
	(prior rating, +1)				
Future stock performance	Size-adjusted returns (-1, +1)		*		
	(-2, +2)				**
	(prior rating, +1)	*			
Future stock performance	Alphas - 12 months	**			
	Alphas - 24 months	**			
	Alphas - 36 months	**	**		**
Credit ratings	Contemporaneous S&P rating			**	
	Future S&P rating, controls				

* (**) indicates significance with the expected sign at the 5 (1) percent level.

x (xx) indicates significance with the unexpected sign at the 5 (1) percent level.

Figure 1: Distribution of ratings

Figure depicts histograms for primary governance ratings of Audit Integrity (*AGR*), RiskMetrics/ISS (*CGQ*), GovernanceMetrics International (*GMI*), and The Corporate Library (*TCL*). *AGR*, *CGQ* and *GMI* are on a 0–100 scale. *TCL* is converted from an “A” to “F” grade to numerical values 1–5, where “A” equals 5 and “F” equals 1 (no “E”). The governance ratings are measured as of December 31, 2005.



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