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Outsourcing Corporate Governance: Conflicts of Interest and Competition in the Proxy Advisory Industry

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Abstract

Proxy advisory firms are third-party advisors that help institutional investors decide which way to vote on corporate issues. Advising equity assets in trillions of dollars, these advisors play a powerful role in shaping corporate governance. The industry has historically been dominated by a single firm, operates under little regulatory oversight, and suffers from potential conflicts of interest. In this paper, I model how conflicts of interest arise when a proxy advisor provides services to both investors and corporate issuers on the same governance issues. I then study how increased competition can alleviate these conflicts. Using a unique dataset on voting recommendations, I show that the entry of a new advisory firm reduces favorable recommendations for management proposals by the incumbent advisor. This is consistent with our theory as the incumbent is subject to conflicts of interest by serving both investors and corporations. These results inform the policy debate on whether and how to regulate the proxy advisory industry.

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1 Introduction

A proxy advisor is a third-party advisory firm that helps institutional shareholders decide which way to vote on corporate issues. For a fee,[1] this advisor provides independent proxy research[2] and voting recommendations. Some advisors also provide voting platforms for their institutional clients. The proxy advisory industry has grown exponentially over the past 25 years due to a convergence of market and regulatory developments, and a steady growth in institutional equity ownership[3] has substantially increased these investors' voting power as well as their obligations. However, they often lack proper incentives[4] or necessary expertise to do research in order to make informed votes. Many institutional investors rely on the advice of proxy advisory firms. Increased shareholder activism after the dot-com bust further increased demand for governance advice and proxy voting.

In 2003, the SEC adopted rules that require mutual funds to publicly disclose their voting records, as well as adopt policies to ensure that they vote proxies in the best interests of clients, which triggered a sharp increase in demand for proxy advisory services. Recent changes in financial regulation have further accentuated impacts of proxy votes and influences of the proxy advisory industry. These changes include (1) a shift towards majority voting for directors, (2) the Dodd-Frank Act's requirements on advisory vote on executive compensation ("say-on-pay" vote), (3) the elimination of broker discretionary voting[5] in uncontested director elections, and on executive compensation matters.

While the importance of a viable proxy advisory industry is clear, the provision of accurate proxy research and recommendations is complicated by peculiar industry features. First, this industry is dominated by only two firms – Institutional Shareholder Services, Inc. (ISS) and Glass, Lewis & Co. (Glass Lewis) – with Glass Lewis gaining prominence only in the past several years. Second, and perhaps most importantly, proxy advisors' business models suffer from conflicts of interest. For example, ISS provides services to both institutional investors and corporate issuers on the same governance issues, potentially creating ample opportunities for making biased voting

[1] Most institutional investors subscribe to proxy advisory services on an annual basis.

[2] Sometimes referred to as proxy analysis, proxy research involves analyzing proxy statements and financial statements of public companies, as well as multiple external original research sources to evaluate board effectiveness and corporate governance risk profiles. It allows institutional investors to understand governance risk within portfolio companies and take appropriate voting action.

[3] In the U.S., institutional investors have become the dominant players in the stock market, owning 50.6% of total equity outstanding, and 73% of the largest 1,000 US companies at the end of 2009 (Tonello and Rabimov, 2010). These investors include mutual funds, public and private pension funds, hedge funds and other fiduciaries. Retail investors usually do not bother to vote for company policies.

[4] An institutional investor usually holds a diversified portfolio. Its stake in a particular company is typically small, and how it votes is unlikely to affect vote outcomes. As one investor put it, "[researching proxy voting issues] does not add a lot of value in terms of making [clients] money..." (see Bew and Fields, 2012).

[5] For most routine proposals, brokers once were allowed to vote on behalf of their retail investors in "street name" (broker discretionary votes or broker non-votes). Research finds that brokers historically voted uninstructed shares in accordance with management's recommendation (see Brickley, Lease and Smith, 1994; Bethel and Gillan, 2002). The SEC has recently prohibited broker discretionary voting as required by the Dodd-Frank Act.

recommendations. Third, the extent of inaccuracies and lack of transparency in proxy analyses coupled with limited engagement with issuers, have raised concerns among industry experts and securities regulators.

These features of the industry have raised questions about the quality of proxy research and recommendations provided by these prominent players. In particular, a consensus has developed among policymakers and academics as to potential benefits of increasing competition among proxy advisors as a tool for improving quality. For example, SEC's July 2010 concept release on the U.S. proxy system explicitly asked "whether these issues are affected – and if so, how – by the fact that there is one dominant proxy advisory firm in the marketplace, Institutional Shareholder Services ('ISS'), whose long-standing position, according to the Government Accountability Office, 'has been cited by industry analysts as a barrier to competition."'

Although the argument for increased competition has gained traction, its theoretical and empirical merits are not at all well established. Recent research on the credit ratings industry,[6] a similar information intermediary market,[7] sheds light on why the role of competition needs to be better understood. A growing body of literature (see Bolton, Freixas and Shapiro, 2012; Becker and Milbourn, 2011) has shown that competition among credit ratings agencies actually contributes to ratings inflation and lower consumer surplus, contrary to the popular perception that competition improves ratings quality. In the issuer-pay business model adopted by ratings agencies, corporate issuers can shop for better credit ratings. In equilibrium, credit ratings agencies may loosen their standards for fear of revenue loss. A careful study of the role of competition among proxy advisors thus is warranted.

This is the first paper that examines effects of increased competition in the proxy advisory industry. Heightened competition is found to have reduced favorable recommendations for management proposals by ISS, the incumbent advisor widely believed to suffer from conflicts of interest arising from serving both shareholders and corporate issuers. This stands in sharp contrast to the role competition plays among credit ratings agencies. In the buyer-pay model adopted by proxy advisory firms, institutional investors now have an outside option (a competitor's reports) generated by competition (see Hörner, 2002). The existence of a competitor, especially when it is perceived as less conflicted, can discipline the incumbent advisor. Given this competitor's reports, investors may make a more informed guess about incumbent's truthfulness.

I begin this study by developing a model to analyze strategic behavior of a proxy advisor that

[6]There are a number of parallels between the credit ratings industry and the proxy advisory industry. These common features include (1) various conflicts of interest (see footnote 9 for details), (2) a lack of competition due to barrier of entry, (3) a lack of transparency in decision making, and potential inaccuracies. However, their fundamental business models are different. Credit ratings agencies use an issuer-pay model – the bulk of their ratings-related income comes from issuers whose products they rate (see White, 2002). Proxy advisory firms, on the other hand, adopt a buyer-pay model that their principal revenue stream comes from investors who purchase their services.

[7]According to Rose (1999), an information intermediary is "an independent, profit maximizing economic information processing system performing its activities (information acquisition, processing, and dissemination) on behalf of other agents' information needs."

sells investors a report on a management proposal, as well as consulting services to the management. I look at different market structures (monopoly and competition from a new entrant that sells only proxy reports) where proxy advisors obtain noisy information about the proposal's quality and issue reports to communicate the information. A central innovation of this model is how it captures demand for proxy advisory services. Investors may be either litigation-averse, in which case they follow the incumbent proxy advisor to avoid lawsuits from their clients in the case of a wrong vote, or rational, in which case they understand the structure of the game and can find out the advisors' incentives. The information reported is non-verifiable, but proxy advisors may suffer reputation costs (e.g., loss of future business) for misleading investors. This model shows that under monopoly, the incumbent advisor tends to inflate quality of the proposal when its expected reputation cost is low, compared to the consulting fee. Because of the disciplinary effect under competition (a higher probability of getting caught for issuing biased recommendations), the incumbent advisor is likely to be more truthful than under monopoly.

Before empirically analyzing potential conflicts of interest and the role of competition in reducing these conflicts, I provide evidence concerning proxy advisors' influence on vote outcomes. A major concern regarding conflicts of interest is that if biased recommendations translate into actual votes, shareholder value may be adversely affected. I show that endorsement by either of the dominant advisors, ISS or Glass Lewis, substantially increased the percent of "For" votes for management proposals, independent of ballot types and firm characteristics. This finding is consistent with prior research (see Choi, Fisch and Kahan, 2010; Ertimur, Ferri and Oesch, 2012). On the other hand, when these two advisors give conflicting recommendations, a proposal receives fewer favorable votes. Interestingly, as competition began to heat up, the ability of ISS's recommendations to predict vote outcomes diminished, while Glass Lewis became more influential. One plausible explanation is that investors were increasingly following Glass Lewis's recommendations, as it established itself as an alternative to ISS. The purpose of this exercise is to show that advisory firms can play an important role in shareholder voting, rather than claiming any causal relationship between voting recommendations and vote outcomes. In practice, investors may select a proxy advisor due to prior agreement with the advisor's governance philosophy.

A key contribution of this paper is to show empirically that increased competition brought by Glass Lewis's entry into the proxy market has reduced ISS's favoritism to corporate managers. Since entering the market in early 2003, Glass Lewis has grown into a credible competitor of ISS, capturing a market share of over 40% in 2011, measured by client assets (see Figure 1). Empirically, I use two methods to measure potential effects of competition. First, I examine whether or not there was a convergence of recommendations at the firm level when Glass Lewis was achieving a higher market share. Glass Lewis does not provide consulting services to corporate issuers, and is thus widely considered to be less conflicted. With more institutional shareholders subscribing to both companies, ISS's recommendations would be under intense scrutiny. It would potentially react to market pressure and engage in more truthtelling. This would increase the correlation between

ISS's recommendations and Glass Lewis's. I find that the firm-level spread between ISS's and Glass Lewis's "For" recommendations shrank as Glass Lewis's market share increased, indicating that with Glass Lewis's entry, ISS was more likely to switch from making "For" recommendations to "Against/Withhold" than from making "Against/Withhold" recommendations to "For". To identify the direction of changes, I show that with a 10 percentage points increase in Glass Lewis's market share, the fraction of differing recommendations (ISS recommended "For," Glass Lewis recommended "Against/Withhold") indeed went down by 6 percentage points for the period 2004-2011. However, the fraction of differing recommendations (ISS recommended "Against/Withhold," Glass Lewis recommended "For") dropped by only 1 percentage point. These results suggest that competition had a disciplinary effect of making ISS less friendly to corporations.

Second, I look at how ISS's recommendations for a company changed when Glass Lewis began to cover it for the first time. When Glass Lewis (or any other proxy advisor) obtains a new institutional client, it has to cover all portfolio firms of the client. Prior to establishing the relationship, however, Glass Lewis does not know which companies are in the client's portfolio. Thus the event that Glass Lewis began to cover a new company served as an *exogenous* shock to ISS's recommendations for that company. I find that when Glass Lewis began to cover a company for the first time, ISS's average "For" recommendations for its management proposals dropped by 1.9-2.3%.

This order of magnitude seems small because it is the effect of competition on ISS's recommendations for an average firm, which might not be ISS's corporate client. The effect of competition is expected to be larger for ISS's corporate clients. Absent competition, ISS might be more likely to issue f134Againstion,c.435-459(ewis's. 435-45assains)1(28(h)-287(cs)1(do)-324(i.435 Td 2(is)-)1(28nThe5i)1(366

While this paper supports the view that greater competition is needed among proxy advisors the readiness of investors to support multiple advisory firms remains doubtful. A 2007 Government Accountability Office (GAO) study recognizes this dilemma, noting that some investors "questioned whether the existing number of firms is sufficient, while others questioned whether the market could sustain the current number of firms." Alternatively, some industry experts have argued that not-for-profit proxy advisors are conflict-free and can better serve the public interest. The entry of organizations like the Sustainable Investments Institute (Si2) which assists retail investors in voting seems to support such a "public utility" model. But eventual effects remain to be seen.

Related Literature

This paper is related to a large literature on information intermediaries in both microeconomics and finance (see e.g., Biglaiser 1993; Lizzeri, 1999). A parallel topic within this literature is credit ratings agencies. Bolton, Freixas and Shapiro (2012) analyze credit ratings agencies' conflicts of interest, and find that increased competition leads to more ratings inflation, as issuers are able to more easily shop for ratings. Similar papers that study ratings inflation and shopping include Mathis, McAndrews and Rochet (2009), Skreta and Veldkamp (2008), Sangiorgi, Sokobin and Spatt (2009) and Camanho, Deb, and Liu (2012). Becker and Milbourn (2011) provide empirical support, finding that competition in corporate bond markets led to higher and less informative ratings. Griffin and Tang (2011) and Strobl and Xia (2012) provide further evidence of ratings inflation.

This work also relates to the literature on conflicts of interest in financial markets. Davis and Kim (2007) study mutual funds' business ties with their portfolio firms, and find a positive relation between business ties and the propensity to vote with management. Hong and Kacperczyk (2010) find that competition among stock analysts reduces their optimism bias in their research. Similarly, a number of papers find that analysts from brokerage houses with underwriting relationship to a company tends to provide more positive forecasts than those from unaffiliated houses (e.g., Dugar and Nathan, 1995; Lin and McNichols, 1998; Dechow, Hutton and Sloan, 1999; Michaely and Womack, 1999).

Regarding the proxy advisory industry itself, a handful of papers have documented a strong association between proxy advisors' recommendations and shareholder votes. The effect of ISS's recommendations has been estimated at 14-21% for management proposals (Bethel and Gillan 2002), between 13% and 30% for director elections, depending on the context and time period (Cai, Garner and Walkling, 2009; Choi, Fisch and Kahan, 2010; Ertimur, Ferri and Maber, 2012), and 25% for compensation-related shareholder proposals (Ertimur, Ferri and Muslu, 2011). Also, Alexander, Chen, Seppi, and Spatt (2010) find that an ISS recommendation in favor of a dissident in proxy contests increases the likelihood of the dissident's victory by 14%.

arise when issuers shop for ratings (see Bolton, Freixas and Shapiro, 2012).

To my knowledge, only a few papers have studied impacts of Glass Lewis's recommendations, in addition to ISS's. Choi, Fisch and Kahan (2010) find that for director elections in 2005 and 2006, a Glass Lewis "Withhold" recommendation has a greater impact on a vote if ISS has issued a "For" recommendation than if ISS has issued a "Withhold" recommendation. This suggests the possibility that some institutional investors automatically will vote in favor of the board's nominees if both ISS and Glass Lewis issue "For" recommendations, but not if one of them issues a "Withhold" recommendation. Ertimur, Ferri and Oesch (2012) focus on say-on-pay votes in 2011, and find a negative recommendation from ISS (Glass Lewis) is associated with 24.7% (12.9%) more votes against the say-on-pay proposal. These papers, however, explore only a small portion of the data. My paper is the first to use Glass Lewis's comprehensive voting recommendations for the period 2004-2011. Together with ISS's voting recommendations, this panel dataset enables me to study effects of competition on incumbent advisor ISS's recommendations during that period.

Another strand of literature questions the value of proxy advisors' recommendations. Daines, Gow and Larcker (2010) find governance ratings do not predict governance-related outcomes, and there is little relation between ISS's governance ratings and its voting recommendations. Larker, McCall, and Ormazabal (2012) find that companies following proxy advisors' guidelines on stock option repricing had worse subsequent performance.

This work also relates to the broad shareholder voting literature that identifies various economic determinants of proxy voting outcomes (see e.g., Brickley, Lease and Smith, 1988; Pound, 1988; Gordon and Pound, 1993; Morgan and Poulsen, 2001; Bethel and Gillan, 2002; Cremers and Romano, 2007; Cai, Garner and Walkling, 2009; Gillan and Starks, 2000; Maug and Rydqvist, 2009; and Matvos and Ostrovsky, 2010).

The paper is organized as follows. In Section 2, I develop a model and derive testable implications. Section 3 provides more background information on the proxy advisory industry. Section 4 describes various data sources and presents summary statistics. In Section 5, I discuss the influence of voting recommendations, and Section 6 evaluates effects of increased competition on the incumbent advisor's voting recommendations. Sections 7 and 8 offer further discussions and conclusion.

2 The Model

Consider a company owned by $N > 1$ institutional investors and run by management. Each investor holds one share, and casts exactly one vote during shareholder meetings (a "one-share-one-vote" rule). The management comes up with an exogenous proposal for a project that requires shareholder approval. The game lasts for one period.

Value of the proposal to investors is uncertain. Let $\omega \in \{a, o\}$ denote state of the world, in which a stands for "approve", and o stands for "oppose". If an "a" proposal is approved, nothing goes wrong. However, if an "o" proposal is approved, with probability p it leads to a loss and that

is discovered by investors.

Investors share the same ex ante belief that the proposal is of type "a" with probability $\frac{1}{2}$. This is without loss of generality since an ex ante belief different from $\frac{1}{2}$ will not change our results. This creates a business opportunity for a proxy advisory firm (hereafter "PA"), which can use its technology to discover the state. The PA costlessly extracts a private signal $s \in \{a, o\}$, whose precision is $e \in (\frac{1}{2}, 1)$ and e is common knowledge:

$$\Pr(s = a|\omega = a) = \Pr(s = o|\omega = o) = e$$

Given the level of precision e, the PA proposes to sell its voting report to investors[10] for a fee f. This report will contain a recommendation of $m = A$ ("approve") or $m = O$ ("oppose"). If at least one investor subscribes to its service, the PA will retrieve a signal and make a report. Only investors who buy the report observe PA's recommendation.[11] At the same time, the PA provides consulting services to the company that investors own. The company will buy PA's services for ϕ if it makes a favorable recommendation $m = A$, otherwise the company refuses to purchase the product.[12] This creates potential conflicts of interest for the PA. We say the PA is conflicted when it receives a signal $s = o$ and reports $m = A$.

Institutional investors will be held liable if their clients find out that they made a wrong vote – that is, they voted for an "o" proposal. These investors are required by law (rules the SEC adopted in 2003) to vote proxies in the best interests of clients. The clients may sue[13] these institutional investors for breach of fiduciary duty[14] when they discover that their shares were voted for an "o" proposal. Investors will incur a litigation cost (both monetary and reputation costs) in case of such a lawsuit. On the other hand, voting against an "a" proposal does not involve any litigation cost because the proposal never leads to a loss, and the state therefore is not revealed.

There are two types of investors – litigation-averse and rational. A fraction α of investors are litigation-averse who wish to reduce litigation costs by relying on PA's advice. Since the PA is regarded as an expert in the corporate governance market, following its recommendation may convince clients that they acted in good faith. These investors often lack appropriate incentives

[10]This buyer-pay business model is in stark contrast to the issuer-pay model adopted by credit ratings agencies. Competition among credit ratings agencies can lead to ratings inflation due to issuer shopping. Competition in the proxy advisory industry, however, may play a disciplinary role in the absence of shopping.

[11]For contested meetings in which a group of dissident shareholders seek shareholder support for their own slate of director nominees, investors may observe voting recommendations given by advisory firms even without purchasing their reports. The media tend to report high-profile proxy contests. On average there were only 52 contested meetings annually for the period 1994-2008, as documented by Fos (2011). This paper studies uncontested management proposals. For these proposals, the associated voting recommendations are usually not widely reported by the media.

[12]In practice, a company may buy the PA's consulting services in anticipation of its favorable recommendation. Modeling this will yield similar results. ϕ is normalized by investor size N as per capita profit.

[13]Alternatively, clients may withdraw funds from these institutions. Since management fees are based on assets under management, client withdrawal of funds is costly for such institutional investors.

[14]Institutional investors owe clients fiduciary duties under Section 36(b) of the Investment Company Act of 1940. Recent high-profile shareholder lawsuits for breach of fiduciary duty involve Janus Capital Group Inc. and the AXA Group Mutual Funds.

or necessary expertise to do research in order to make informed votes. Without hiring the PA, expected litigation cost is C when a litigation-averse investor is held liable for voting for an "o" proposal. However, if the investor obtains the PA and follows its voting recommendation, then litigation cost is a smaller c (c is normalized to 0) when the PA is found out to be conflicted. In reality, many institutional investors with limited resources, such as small mutual funds, tend to be litigation-averse. The rest of investors are rational in that they understand PA's incentives and potential conflicts, and form their belief of PA's truthfulness.[15] However, they do not observe the state or signal of the PA. Rational investors will incur a cost $\tilde{C}$ if their clients discover that they voted for an "o" proposal. Rational investors can be thought of as well-incentivized asset management firms. Both types of investors will vote according to their ex ante belief – that is, each votes for the proposal with probability $\frac{1}{2}$, if they choose not to buy PA's report.[16]

If investors find out that the PA is conflicted, they will refuse to buy its reports in future periods. Investors, however, are able only to discover ex post whether the PA is conflicted in the event of a loss. For example, after several months, investors involving in an M&A deal that the PA supported may see it fall apart. As a result, they investigate whether the PA received an "o" signal. If this is indeed the case, investors conclude that the PA did not relay its signal truthfully, and will not purchase any further reports. In practice it is difficult to determine if the PA is conflicted even ex post, but it is in general easier than ex ante. Formally, the PA will incur a reputation cost ρ in terms of the present value of future profits when it receives a signal $s = o$ and reports $m = A$, and a loss occurs. Reputation cost ρ is exogenous, as in Bolton, Freixas and Shapiro (2012) and Morgan and Stocken (2003).

As in Bolton, Freixas and Shapiro (2012), I assume that there is a small amount of uncertainty on the reputation ρ:

Assumption 1 *The PA is uncertain about the value of* ρ*:* $\rho \in [\tilde{\rho} - \epsilon, \tilde{\rho} + \epsilon]$ *such that* $\epsilon \to 0$*. After the PA receives its signal, the uncertainty is resolved.*

This tiny uncertainty prevents the PA from using mixed strategies for its report. Since most institutional investors have to diversify in their investments, the company is likely to be owned by many investors. N thus is assumed to be a large number. And without loss of generality, I assume that N is an even number throughout the analysis. The analysis in which N is odd is similar and is briefly described in the Internet Appendix. Voting rule is simple majority.

2.1 The Monopoly PA

I first analyze the monopoly game. The timing of the moves is as follows:

[15] Allowing the PA to disclose potential conflicts of interest will not qualitatively change the equilibria as the results are mainly driven by ligitation-averse investors, who will not use the disclosed information.

[16] We can allow rational investors to retrieve their own signal of the state, but this will not qualitatively change any result.

1. The PA posts fee f for its proxy report of a company.

2. Institutional investors of the company decide whether to buy the report.

3. The company issues a management proposal for shareholder vote.

4. The PA retrieves a private signal $s \in \{a, o\}$ and makes a report of $m \in \{A, O\}$.

5. The company uses PA's consulting services for fee ϕ if recommendation is "A"; otherwise the company does not use PA's services.

6. Outcome of the proposal realizes if approved. With probability p a loss occurs and that is found out by investors only if the state is "o". The PA incurs a reputation cost from investors who buy its report.

Litigation-averse investors would like to buy the report if the value of information exceeds price f. The profit-maximizing PA will set fee f low enough to woo litigation-averse investors. Thus there are two reporting regimes for the PA – it always reports $m = A$ when consulting fee ϕ is greater than its expected reputation cost, and it truthfully relays the signal when consulting fee is less than its reputation cost. An equilibrium also depends on whether the fraction of litigation-averse investors α is greater than $\frac{1}{2}$ and rational investors' prior belief of the PA's truthfulness.

To simplify notations for the equilibria, I introduce these following definitions:[17] β is the probability that the proposal is approved when all litigation-averse investors vote for it and each rational investor votes for it with probability $\frac{1}{2}$. γ is the probability that the proposal is approved when all litigation-averse investors vote against it and each rational investor votes for it with probability $\frac{1}{2}$. Since N is large, if one investor deviates (e.g., joins the other group in voting), the approval probabilities are still approximately β and γ, respectively.[18]

I proceed to derive the following symmetric equilibrium under each informational regime:

Proposition 1 *When $\alpha < \frac{1}{2}$, the Nash equilibrium of this game is:*

1. *If $\phi > \beta ep\rho\alpha$, the PA always reports $m = A$, and sets fee $f = \frac{1}{2}\frac{1}{2}\beta pC$. Only litigation-averse investors buy the report. PA's profit is $\phi + f\alpha - \frac{1}{2}\beta ep\rho\alpha$.*

2. *If $\phi < ep\rho$, the PA reports truthfully, and sets fee $f = \min[\frac{1}{2}\frac{1}{2}(1-e)pC, \frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}]$. Both litigation-averse and rational investors buy the report. PA's profit is $\frac{1}{2}\phi + f$.*

[17] $\beta = 1 - F\left((\frac{1}{2} - \alpha)N; (1-\alpha)N, \frac{1}{2}\right)$ and $\gamma = 1 - F\left(\frac{1}{2}N; (1-\alpha)N, \frac{1}{2}\right)$. And $F(\cdot)$ follows a binomial distribution.

[18] If one litigation-averse investor votes the same way as the rational investors, the actual approval probabilities are $\hat{\beta} = 1 - F\left((\frac{1}{2} - \alpha)N + 1; (1-\alpha)N, \frac{1}{2}\right); \hat{\gamma} = 1 - F\left(\frac{1}{2}N + 1; (1-\alpha)N, \frac{1}{2}\right)$, respectively. Similarly, if one rational investor votes the same way as the litigation-averse investors, the actual approval probabilities become $\check{\beta} = 1 - F\left((\frac{1}{2} - \alpha)N - 1; (1-\alpha)N, \frac{1}{2}\right); \check{\gamma} = 1 - F\left(\frac{1}{2}N - 1; (1-\alpha)N, \frac{1}{2}\right)$, respectively.

The proof is in the Appendix.

This proposition demonstrates that the PA can maximize the present value of its profits by choosing either of the two informational regimes depending on rational investors' belief and parameter values. If rational investors believe the PA is conflicted, it maximizes its profit by always reporting $m = A$ when consulting fee ϕ is greater than expected reputation cost $\beta ep\rho\alpha$. The PA sets price f at a level that equals the benefit of additional information for litigation-averse investors. This reputation loss is from litigation-averse investors only since they are the ones who buy PA's report. Since the PA recommends $m = A$, with probability β an "o" proposal passes and with probability ep it leads to a loss that is discovered by investors. Conditional on these events, the reputation cost is $\rho\alpha$. For a low reputation cost ρ and a small number of litigation-averse investors (a small α), the PA takes advantage of litigation-averse investors by always reporting $m = A$. Voting behavior of rational investors also plays a role here because collectively they determine the probability of approval β.

Note that for reasonable parameter values, there is no equilibrium in which (1) the PA reports truthfully (when $\phi < \beta ep\rho\alpha$), and (2) only litigation-averse investors buy the report. Because the PA will lower fee f to a level at which it is beneficial for both types of investors to purchase its report.

There is another equilibrium in which both types of investors buy PA's report. If rational investors believe the PA is truthful, it will report truthfully when its consulting profit is less than expected reputation cost. The PA sets a fee that is lower than the cost of voting based on ex ante beliefs for either type of investors. Note this equilibrium does not depend on the value of α.

When $\alpha > \frac{1}{2}$, on the other hand, the PA completely determines vote outcomes.

Proposition 2 *When $\alpha > \frac{1}{2}$, the Nash equilibrium of the game is:*

1. *If $\phi > ep\rho\alpha$, the PA always reports $m = A$, and sets fee $f = \frac{1}{2}\frac{1}{2}pC$. Only litigation-averse investors buy the report. PA's profit is $\phi + f\alpha - \frac{1}{2}ep\rho\alpha$.*
2. *If $\phi < ep\rho$, the PA reports truthfully, and sets fee $f = \min[\frac{1}{2}\frac{1}{2}(1-e)pC, \frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}]$. Both litigation-averse and rational investors buy the report. PA's profit is $\frac{1}{2}\phi + f$.*

The proof is similar to that of Proposition 1. In the case that rational investors believe the PA is conflicted, it always reports $m = A$ when consulting fee ϕ is greater than expected reputation cost $ep\rho\alpha$. Note that this reputation cost is greater than the corresponding one when $\alpha < \frac{1}{2}$. It is because now litigation-averse investors are the majority, and with probability 1 an "o" proposal passes and it leads to a loss with some probability.

2.2 Competition among PAs

I now analyze a game where two PAs compete in selling reports to investors. Incumbent player PA 1 sells reports to investors as well as consulting services to corporations, while new entrant PA 2

sells reports only to investors. As in Bolton, Freixas and Shapiro (2012), we can think of these PAs as providing differentiated reports given that they receive imperfect signals of the proposal's type. For simplicity, I assume that both PAs retrieve independent signals of the same precision $e > \frac{1}{2}$.[19] An investor may want to purchase both reports to obtain more information. The timing of the moves is similar to the monopoly game:

1. Two PAs post fees f_i for their proxy reports of a company, where $i \in \{1, 2\}$.
2. Institutional investors of the company decide whether to buy one, both or neither report.
3. The company issues a management proposal for shareholder vote.
4. The PAs retrieve their signals $s_i \in \{a, o\}$ and make reports of $m_i \in \{A, O\}$, where $i \in \{1, 2\}$.
5. The company uses PA 1's consulting services for fee ϕ if recommendation is "A"; otherwise the company does not use PA 1's services.
6. Outcome of the proposal realizes if approved. With probability p a loss occurs and that is found out by investors only if the state is "o". The PAs incur respective reputation costs ρ_1 and ρ_2 from investors who buy their reports.

Since PA 2 does not provide consulting services, in equilibrium it always truthfully relays its signal because recommending $m = A$ when retrieving an "o" signal does not yield additional profits. However, PA 1 may be conflicted when its consulting fee is greater than expected reputation cost. Understanding both PAs' incentives, rational investors will choose to purchase a report from PA 2 when it charges a fee that makes these investors indifferent toward buying its report or not.[20] PA 2 attempts to charge a price that makes it beneficial for both litigation-averse and rational investors to purchase its report. However, anticipating this, PA 1 will lower its price to a point that makes litigation-averse investors indifferent towards purchasing a report from either PA. PA 2, on the other hand, can lower its price only to a level that makes it no worse off by serving both types of investors than only serving rational investors. Litigation-averse investors thus will purchase a report from PA 1. Understanding PA 1's strategy, PA 2 raises its fee and sells reports to rational investors only. This price competition leads to the following lemma:

Lemma 1 *There exists no equilibrium in which both types of investors purchase reports from PA 2 only.*

[19] In a richer model, one can also differentiate the qualities of PAs' signals. For example, we may assume that PA 1 retrieves a signal of higher precision ($e_1 > e_2$). This reflects the fact that PA 1 is more experienced than new entrant PA 2, and it thus receives a more "precise" signal.

[20] In a "truthful" equilibrium in which both PAs relay their signals truthfully, rational investors will be indifferent about purchasing reports from either PA if the PAs charge the same price. For simplicity, I assume that rational investors will only purchase a report from PA 2 in this case.

The proof is in the Appendix.

Price competition from PA 1 leads to market segmentation: litigation-averse investors purchase a report from PA 1, while rational investors buy a report from PA 2. In such an equilibrium featuring segmentation, competition plays two roles. First, although litigation-averse investors stick to incumbent player PA 1, they now have an outside option (buying PA 2's report instead) created by competition. The existence of competitor PA 2, can serve as a disciplinary device for PA 1, at least ex post (see Hörner, 2002). In case a loss occurs, litigation-averse investors may be able to observe PA 2's report, and thus make a more informed guess about PA 1's truthfulness. When the PAs disagree on their recommendations, litigation-averse investors may examine PA 1's report more carefully. Choi, Fisch and Kahan (2010) suggest that some investors automatically vote for the board's nominees if both PAs issue "For" recommendations, but not if one of them issues a "Withhold" recommendation.

In practice, companies regularly learn proxy advisors' voting recommendations after votes are cast, and could pass on the information to investors if requested. It is reasonable to assume that with this extra information on hand, litigation-averse investors will be more likely to discover whether PA 1 is conflicted compared with the monopoly case. Define $\tilde{p}$ as the probability that a loss occurs and that is discovered by investors when the PAs disagree on their recommendations. So we have $\tilde{p} > p$, where p is the corresponding probability under monopoly.

For simplicity, I further assume that investors can not decide whether PA 1 is conflicted in case a loss occurs after the PAs issue the same recommendation. This is a somewhat extreme assumption and is not essential, but it helps to simplify the analysis. However, it is likely that when investors receive an identical recommendation from both PAs, they are less likely to perform due diligence themselves. The empirical section of this paper shows evidence that when two prominent PAs give the same recommendation for a proposal, the probability of approval is much higher than an average proposal. This suggests that more investors are likely to follow voting recommendations automatically when both PAs issue the same recommendation. It is worth noting that there are potentially other ways to model the effect of competition.[21]

Second, competition affects rational investors' voting behavior. In the monopoly game, these investors vote based on ex ante belief, and now they will follow PA 2 to make informed votes. This matters for vote outcomes when rational investors are the majority ($\alpha < \frac{1}{2}$). As in the monopoly case, I derive symmetric equilibria under each informational regime:

Proposition 3 *When $\alpha < \frac{1}{2}$, the equilibrium of the subgame is:*

1. *PA 1 always reports $m_1 = A$ and sets fee $f_1 = \min[\frac{1}{2}\frac{1}{2}(1-e)pC, \frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}]$. PA 2 reports truthfully and sets fee $f_2 = \frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}$. Litigation-averse investors purchase PA 1's report, and rational investors buy PA 2's report.*

[21] In a richer dynamic model in which reputation ρ is endogenously determined, one can model competition as an option of switching to PA 2's services (see Hörner, 2002).

The proof is in the Appendix.

In this equilibrium, rational investors are the majority and they determine vote outcomes. PA 1 understands that these investors will vote according to PA 2's recommendation. When PA 1 receives an "o" signal, it always reports $m_1 = A$ due to the following reason: if PA 2 retrieves an "a" signal, it reports $m_2 = A$. Since the PAs give an identical recommendation, it is difficult ex post for litigation-averse investors to determine which PA is conflicted. Thus PA 1 will not incur a reputation cost. On the other hand, if PA 2 receives an "o" signal, the proposal is defeated. As a result, PA 1 will not be liable either.

It is worth noting that this case is a "limiting" result. To the extent that PA 1 believes that there is a certain probability that rational investors do not follow PA 2's recommendation (after purchasing its report), the expected reputation cost will be greater than zero. This is because now there is a positive probability that an "o" proposal will be approved. In turn, there is a positive probability that PA 1 will truthfully relay its signal. In other words, PA 1 can adopt a mixed strategy for its truthfulness.

I define q as the probability of being in the "o" state given PAs' signals $s_1 = s_2 = o$. As shown in the proof of Proposition 4, this is the probability that PA 1 incurs a reputation cost when it is conflicted (it recommends $m_1 = A$) in the case $\alpha > \frac{1}{2}$. I now derive the equilibrium of this game when litigation-averse investors are the majority.

Proposition 4 *When $\alpha > \frac{1}{2}$, the equilibrium of the subgame is:*

1. *If $\phi > \frac{1}{2}q\tilde{p}\rho_1\alpha$, PA 1 always reports $m_1 = A$ and sets fee $f_1 = \min[\frac{1}{2}\frac{1}{2}pC, \frac{1}{2}\frac{1}{2}p\tilde{C}]$. PA 2 reports truthfully and sets fee $f_2 = \frac{1}{2}\frac{1}{2}p\tilde{C}$. Litigation-averse investors purchase PA 1's report, and rational investors buy PA 2's report.*

2. *If $\phi < \frac{1}{2}q\tilde{p}\rho_1\alpha$, both PAs report truthfully. PA 1 sets fee $f_1 = \min[\frac{1}{2}\frac{1}{2}(1-e)pC, \frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}]$ and PA 2 sets fee $f_2 = \frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}$. Litigation-averse investors purchase PA 1's report, and rational investors buy PA 2's report.*

The proof is in the Appendix.

This proposition establishes that PA 1 can maximize the present value of its profits by choosing either of the two informational regimes. It maximizes its profit by always reporting $m_1 = A$ when consulting fee ϕ is greater than its expected reputation cost $\frac{1}{2}q\tilde{p}\rho_1\alpha$.[22] This reputation cost is from litigation-averse investors only since they are the ones who buy the report. PA 1 sets fee f_1 at a level that makes litigation-averse investors weakly prefer buying a report from PA 1. Anticipating

[22] When PA 1 retrieves signal $s_1 = o$ and reports $m_1 = A$, and PA 2 retrieves signal $s_2 = o$ and reports $m_2 = O$, the proposal passes because litigation-averse investors are the majority. The associated reputation cost for PA 1 is $q\tilde{p}\rho_1\alpha$. However, when PA 1 retrieves signal $s_1 = o$ and reports $m_1 = A$, and PA 2 receives signal $s_2 = a$ and reports $m_2 = A$, PA 1 does not suffer a reputation cost because it is difficult for investors to determine which PA is conflicted given the same recommendation. Thus the expected reputation cost is $\frac{1}{2}q\tilde{p}\rho_1\alpha$.

this, PA 2 raises the price and just sells the report to rational investors. As in the monopoly game, for a low reputation cost ρ_1 and a small number of litigation-averse investors (a small α), PA 1 takes advantage of the litigation-averse investors by always reporting $m_1 = A$. PA 1, however, will remain truthful when consulting fee ϕ is less than its expected reputation cost.

Each PA charges a different fee for its report between the two informational regimes. This is because for each type of investors, costs of voting based on ex ante beliefs are different between the two cases. In case 1, the proposal is always approved while in case 2, the proposal passes only when PA 1 receives an "a" signal. Thus costs of voting based on ex ante beliefs are higher for both types of investors in case 1.

Competition leads to more truthtelling if PA 1's reputation cost $\frac{1}{2}q\tilde{p}\rho_1\alpha$ is greater than $e\tilde{p}\rho\alpha$, which is its reputation cost under monopoly. This condition requires $\frac{\bar{p}}{p} > \frac{2}{q} \cdot \frac{}{1}$. It can be shown that $\frac{2}{q} < 4$.[23] Therefore, when $\frac{\bar{p}}{p} > 4 \cdot \frac{}{1}$, competition alleviates conflicts of interest arising from PA 1's consulting services. This, of course, is an empirical question. More competition, however, will likely push up $\tilde{p}$, where $\tilde{p}$ equals to the probability that investors discover that a loss has occurred.

In practice, it may be beneficial for litigation-averse investors to subscribe to PA 2's report, in addition to PA 1's. Some asset management firms indeed subscribe to multiple proxy advisory services. This enables these institutional investors to collect more information before votes are cast. When the PAs give conflicting recommendations on the same issue, investors may scrutinize the proposal. When the PAs issue an identical recommendation, investors may feel more confident that they cast the right vote. In the Appendix, I show that under certain assumptions there exist equilibria in which litigation-averse investors subscribe to both PAs' reports, while rational investors purchase a report from PA 2.

2.3 Predictions

The model allows me to address three issues regarding PAs' strategic behavior and shareholder votes. Propositions 1 and 2 show that when consulting profit ϕ is greater than expected reputation cost, the incumbent PA is less likely to report truthfully. This leads to the following predictions:

Prediction 1 *The incumbent PA is more likely to issue favorable recommendations for companies that subscribe to its consulting services, compared with the ones that do not.*

Prediction 2 *The incumbent PA is more likely to issue favorable recommendations for companies that pay more consulting fees.*

With competition, the likelihood that the incumbent PA is conflicted (receives an "o" signal and reports $m_1 = A$) depends on parameter α – the fraction of litigation-averse investors. When

[23] Since $q = \frac{e^2}{e^2+(1-e)^2}$, $\frac{2}{q} = 2\left[1 + \frac{(1-e)^2}{e^2}\right] < 4$. Note that $e > \frac{1}{2}$.

$\alpha > \frac{1}{2}$, the vote outcome is determined by litigation-averse investors. If the incumbent PA is conflicted, there is a greater chance that it will be discovered because investors now can access the new entrant's recommendation ex post. This is because when the PAs disagree on their recommendations, litigation-averse investors may examine the incumbent PA's report more carefully. The incumbent PA thus is more likely to report truthfully under competition than monopoly. When $\alpha < \frac{1}{2}$, however, the incumbent PA will not be caught if it is conflicted. The reason is that if the new entrant receives an "o" signal (and it reports $m_2 = O$), the proposal is defeated given that rational investors determine vote outcomes. We therefore have the following prediction:

Prediction 3 *When $\alpha > \frac{1}{2}$, the incumbent PA is more likely to report truthfully under competition than monopoly. The fraction of cases where the incumbent recommends \For", and the new entrant recommends \Against" are diminishing as competition intensi es. When $\alpha < \frac{1}{2}$, the incumbent PA is always con icted.*

Prediction 3 reveals that effects of competition on the incumbent PA's truthfulness depend on the value of α, the proportion of litigation-averse investors. It is a priori not clear which group of investors are the majority. Whether competition plays a disciplinary role thus is an empirical question. I test the effect of competition in Section 6.

Prediction 4 *Under competition, when two PAs give con icting recommendations, the proposal is less likely to be approved. However, when the PAs issue an identical recommendation, there is a stronger correlation between the recommendation and vote outcome.*

Note that this prediction is embedded in the derivation of Propositions 3 and 4. Due to market segmentation, litigation-averse (rational) investors tend to follow the incumbent (new entrant) PA. When the PAs give the same recommendation for a proposal, investors tend to vote the same way. When the PAs disagree on the proposal, the likelihood that it will pass is smaller.

The remaining sections will take these predictions to the data. Due to data constraints, Predictions 1 and 2 will not be tested directly.

3 Background and Business Model

This section explains in detail important market and regulatory developments in the proxy advisory industry. In 1988, the Department of Labor issued a letter mandating that pension funds have a fiduciary duty to vote their proxies in the best interest of their clients. This prompted managers of employee retirement plans to seek advice from ISS, which was established in 1985 and was the only proxy advisor at that time.

In the 1990s and early 2000s, ISS's dominance in the industry continued to rise, thanks to growing fiduciary obligations of institutional investors and increased shareholder activism in the

aftermath of the dot-com bust. Institutional investors hired proxy advisory firms to help them assess corporate governance practices at public companies.

In 2003, the SEC reinforced fiduciary duties of investment advisors with respect to proxy voting through widened application of the Investment Advisers Act of 1940. These expanded rules require mutual funds to publicly disclose their voting records, as well as adopt policies and procedures to ensure that they vote proxies in the best interests of clients. These requirements led to a rapid increase in demand for proxy advisory and governance services.

Since 2004, many large corporations (80% of S&P 500 companies) have adopted some majority voting standard for director elections, thanks to a number of shareholder initiatives and a series of amendments[24] that facilitate the adoption of majority voting by company boards. This has greatly increased leverages that investors and proxy advisors have over directors. To curb bad compensation practices that potentially contributed to the 2008-2009 financial crisis, the Dodd-Frank Act (Section 951) requires companies to hold a non-binding shareholder say-on-pay vote at least once every three years to "approve" executive compensation. This new requirement applies to all shareholder meetings held after January 21, 2011. "The overall effect of say-on-pay will be to increase the influence of proxy advisory firms as investors grapple with more than 16,000 additional proxy votes in 2011, many of which require an understanding of each company's pay philosophy and arrangements."[25]

As required by the Dodd-Frank Act, the SEC in 2010 approved rules to eliminate broker discretionary voting in uncontested elections as well as executive compensation matters, including say-on-pay votes. This rule change is thought to be significant because brokers tend to cast uninstructed broker votes in favor of management and can comprise up to 20 percent of total proxy votes. Combined with majority voting, it could result in more directors failing to achieve majority support from shareholders. The elimination of broker non-votes will likely enhance institutional investors' power. This in turn increases the influence of proxy advisory firms.

3.1 Major Proxy Advisors

Today, the proxy advisory industry is dominated by just two firms: ISS and Glass Lewis. This duopoly structure has allowed them to have a significant influence on pay and corporate governance policy. Since 1985, ISS has become a leading player in both proxy advisory services and corporate governance ratings. It is currently owned by MSCI Inc.,[26] a leading provider of investment decision support tools to investors worldwide. As of 2007, ISS had 1,700 institutional clients, and a market share of 61%, based on clients' equity assets. Its clients included 24 of the top 25 mutual funds,

[24] Model Business Corporation Act (MBCA) and the Delaware General Corporation Law were amended to facilitate the adoption of majority voting by company boards or by shareholders.

[25] Center on Executive Compensation (2011).

[26] In early 2007, ISS was purchased by RiskMetrics Group Inc., a leading provider of risk assessment and wealth management products. In 2010, RiskMetrics was acquired by MSCI Inc. in a transaction valued at $1.57 billion.

25 of the top 25 asset managers, and 17 of the top 25 public pension funds. ISS's core business includes proxy research and voting recommendations. It also provides web-based voting services and consulting services to corporate issuers through ISS Corporate Services, Inc. (ICS), a wholly-owned subsidiary of ISS. ICS provides products and services on executive compensation, corporate governance ratings, voting analytics and governance research. ISS's business model of selling data and consulting services to corporations while advising investors how to vote on proposals of the same issuers has led to charges that ISS is seriously conflicted. In 2011, approximately 21.2% of ISS's total revenue was generated from its ICS subsidiary.[27] Despite vehement criticism for potential conflicts of interest created by its consulting services, ISS has been reluctant to spin off this business because of its high profitability.[28] In fact, some industry experts believe that without this highly profitable business, ISS's operations would be, at best, only marginally profitable.

Glass Lewis[29] was founded in early 2003, and has quickly established itself as ISS's main competitor, controlling 37% of the market share in 2007. At the end of 2010, Glass Lewis acquired Proxy Governance, Inc.'s 100 clients after the latter exited the market, further increasing its market share. In 2011, it covered around 23,000 companies in more than 100 countries, inching closer to ISS's coverage of 26,000 companies. A 2004 New York Times article reported that "Glass Lewis has unseated [ISS] ... from its position as the undisputed leader in the field." Like ISS, Glass Lewis provides proxy research and vote recommendations to institutional shareholders. Glass Lewis's ability to quickly cut into ISS's market share owes partly to the fact that it does not sell corporate governance services to corporations. Many investors view Glass Lewis as less conflicted. A Glass Lewis executive stated in an email: "We do not advise or consult with corporations regarding their proxies; we believe to do so would compromise our ability to objectively evaluate those proxies and advise our clients on how to vote their shares." Unlike ISS, Glass Lewis is not registered as an investment advisor and hence is not directly regulated by the SEC.

After Proxy Governance's exit at the end of 2010, there remain two other for-profit proxy advisory firms, Egan-Jones Proxy Services and Marco Consulting Group. A new firm, ProxyTell, LLC, appears to have entered the market in 2012. They collectively own less than 2% of the market share, and thus is not a part of this research.

3.2 Concerns over Conflicts of Interest

The most common concern about proxy advisory firms, especially ISS, is potential conflicts of interest inherent in their business model. As discussed above, ISS provides services to both insti-

[27] See MSCI Inc. Annual Report (Form 10-K) for fiscal year 2011.

[28] Much of the consulting revenue results from charging corporations for use of the ISS compensation model.

[29] According to co-founder Gregory P. Taxin, the firm was named for two Supreme Court justices who fought for individual rights and ethical corporate practices. "'Glass' is derived from the surname of William O. Douglas, a former Securities and Exchange Commission chairman and a justice from 1939 to 1975, while 'Lewis' is a bow to Louis D. Brandeis, a justice from 1916 to 1939 who wrote *Other People's Money and How the Bankers Use It.*" (see Morgenson, 2004)

tutional investors and corporate issuers on the same governance issues, while Glass Lewis serves only institutional investors. A 2007 GAO study summarizes ISS's potential conflicts of interest as follows: "For example, some industry professionals stated that ISS could help a corporate client design an executive compensation proposal to be voted on by shareholders and subsequently make a recommendation to investor clients to vote for this proposal. Some industry professionals also contend that corporations could feel obligated to subscribe to ISS's consulting services in order to obtain favorable proxy vote recommendations on their proposals and favorable corporate governance ratings."

Responding to these public charges, ISS has installed a "Chinese Wall" between its proxy advisory services and corporate consulting services, creating a separate subsidiary ICS to serve corporate issuers. According to ISS, the "Chinese Wall" includes "legal, physical and technological separations." ISS also makes substantial disclosure to its institutional clients, as well as adopts a "Code of Ethics" that applies to all employees regarding conflicts of interest. However, these measures do not solve inherent conflicts of interest embedded in its business model. This paper studies whether ISS's potential conflicts have become actual conflicts, and whether increased competition from Glass Lewis has mitigated them.

Although this type of conflict is widely considered the most damaging, by no means it is the only source of potential conflicts of interest. For example, the fact that proxy advisory firms are owned by parent companies providing other financial services to clients has drawn scrutiny. ISS is owned by MSCI Inc., a leading provider of investment decision support tools to institutions, and Glass Lewis is an indirect wholly-owned subsidiary of the Ontario Teachers' Pension Plan Board (OTPP), a large activist pension fund in Canada. These issues are beyond the scope of this paper.

3.3 Recent Regulatory Developments

It is surprising that proxy advisory firms are subject to little regulation despite their impact upon investors and the importance of proxy voting to corporate governance and capital markets. The principal governmental oversight for these firms is the Investment Advisers Act of 1940, but proxy advisors can easily escape such regulations. At the present time, the only real oversight comes from institutional investors, who have little incentive to monitor because proxy advisors provide cost-effective services which benefit their clients.

Concerns over conflicts of interest and other issues (such as barrier to competition, a lack of transparency, potential inaccuracies and limited engagement with issuers) have led to two GAO studies and a concept release on the U.S. proxy system issued by the SEC in July 2010. SEC Chairman Mary Schapiro noted that both companies and investors "have raised concerns that proxy advisory firms may be subject to conflicts of interest or may fail to conduct adequate research and base recommendations on erroneous or incomplete facts." According to a June 2012 article in the CFO Journal, the SEC will be issuing an interpretive guidance to advise investors about

their fiduciary duties in assessing information provided by proxy advisors and potential conflicts of interest. The SEC is unlikely to address a perceived lack of competition among proxy advisors or otherwise limit the use of proxy advisors. Instead, this guidance will focus on existing rules on investor fiduciary duty and conflicts of interest.

In June 2012, the Canadian Securities Administrators (CSA) also issued a white paper on possible regulation of proxy advisory firms. The CSA aims to address regulatory concerns about the services provided by proxy advisory firms and their potential impact on the capital markets. In March 2012, the European Securities and Markets Authority (ESMA) published a discussion paper that considers possible policy options on proxy advisory firms. In the same month, the French Autorité des Marchés Financiers (AMF) proposed practice recommendations for proxy advisory firms. However, as of today, no rules have yet been adopted by any country.

4 Data Description

This study draws data from a number of sources. My primary datasets are ISS's Voting Analytics database and Glass Lewis's Proxy Paper database. Both datasets cover shareholder meetings during the period 2004 – 2011. Voting Analytics provides the identity of companies, description of ballot items, shareholder meeting dates, management and ISS recommendations, and the number of "For" and "Withhold/Against" votes, as well as other information. It covers all Russell 3000 companies[30] since 2005, and includes most of the Russell 3000 companies before 2005. This dataset is becoming popular among corporate governance experts, as well as academics. Most exsiting papers use only data before 2005 (see Cai, Garner and Walkling, 2009; Matvos and Ostrovsky, 2010). My dataset on Voting Analytics is comprehensive and the most up-to-date.

Glass Lewis's Proxy Paper database contains similar information to Voting Analytics.[31] My paper is unique in its reliance upon Glass Lewis in addition to Voting Analytics, and only this allows for the analysis of effects of competition on incumbent advisor ISS's recommendations during the period 2004-2011. Prior research has only explored a small portion of the data. Choi, Fisch and Kahan (2010) use Glass Lewis's voting recommendations for director elections at S&P 1500 companies in 2005 and 2006. Ertimur, Ferri and Oesch (2012) focus on say-on-pay recommendations at S&P 1500 companies in 2011. My own work matches these two databases using CUSIP, meeting date and ballot item number. I exclude proxy contests[32] which yields 26,304 shareholder meetings at 4,807 unique companies.

[30] These are the largest 3,000 publicly held U.S. companies based on total market capitalization, which represents approximately 98% of the investable U.S. equity market.

[31] In addition to Russell 3000 companies, Glass Lewis's Proxy Paper database covers smaller firms.

[32] This paper studies uncontested management proposals, both theoretically and empirically. In a proxy contest, a group of dissident shareholders seek shareholder support for their own slate of director nominees, rather than the board's nominees. The purpose of launching proxy contests is to gain corporate control. This mechanism is more complex than uncontested management proposals, and is beyond the scope of this paper. Interested readers are referred to Brav, Jiang, Partnoy and Thomas, 2008, Klein and Zur, 2009, and Fos (2011).

For the same period, I collect numbers of ISS and Glass Lewis's institutional clients, total client assets, as well as numbers of U.S. meetings covered, all of which are annual figures. The main sources are LexisNexis[33] and Glass Lewis's website. Evolution of Glass Lewis's market share based on client assets is plotted in Figure 1.

I obtain additional data from following sources: stock information from Center in Research for Security Prices (CRSP), company accounting data from Compustat, Top-5 executives' compensation and stock holdings from ExecuComp, firm governance characteristics from RiskMetrics, and institutional holdings from Thomson-Reuters (13F). Voting data are matched with these datasets on CUSIP and fiscal year. This is my main dataset. Additionally, I match director characteristics, also obtained from RiskMetrics, to the voting data, using director last name, CUSIP and year.

4.1 Voting and Company Characteristics: 2004-2011

Every public company in the U.S. holds an annual general meeting to elect the Board of Directors and to transact other businesses such as executive compensation plans, ratification of auditors, merger and acquisition. Starting January 2011, companies are required to submit say-on-pay proposals for shareholder approval. In my sample, 90% of companies use a plurality voting system for directors under which shareholders can vote "For", "Withhold" or "Abstain." ISS and Glass Lewis make "For" or "Withhold" recommendations. The remaining 10% of firms use a majority voting rule[34] under which ISS and Glass Lewis recommend "For" or "Against." Under a plurality rule, a director will be elected in uncontested meetings even if she receives less than 50% of the base. Under a majority rule, a director has to step down if she fails to receive 50% of total votes. The base for director elections is usually defined as "For+Against/Withhold." Thus I measure director election outcomes as the number of "For" votes divided by the sum of "For" and "Against/Withhold" votes. ISS and Glass Lewis recommend "For" or "Against" for all other ballot items. The base for these items is usually "For+Against+Abstain."

In Panel A of Table 2, I calculate the percent of "For" recommendations for executive compensation plans and say-on-pay proposals for each company-year pair. I also calculate the average percent of "For" recommendations for directors within each company in a given year. They are done for ISS and Glass Lewis separately for the period 2004-2011.[35]

I also control for previous-year firm performance using both market-based and accounting-based returns. The market-based return is a firm's stock return in the 12 months prior to its annual meeting. I also use 1-year excess return, 3-year excess return or abnormal return from Fama-French (1993) three factor models. The results are similar and are not reported due to

[33] LexisNexis maintains the world's largest electronic database for legal, news and business information.
[34] Many large companies, 80% of S&P 500 companies, have adopted a majority voting rule.
[35] Since say-on-pay proposals started in January 2011, associated metrics are calculated for 2011 only.

space.[36] For the accounting-based return, I use industry-adjusted return on assets (ROA).[37] ROA is defined as EBITDA divided by total assets.

Since 2007, RiskMetrics no longer produces the governance index of Gompers, Ishii and Metrick (2003). I use an alternative governance indicator which equals 1 if a company has both a classified board and a poison pill (see Bebchuk and Cohen, 2005; Cai, Garner and Walkling, 2009). A combination of a classified board and a poison pill makes corporate control change more difficult, and is seen as a decrease in corporate governance quality. In the sample, 29% of firms have both policies in place. I collect information on board size, the percent of independent directors and institutional and management ownerships. The median board in my sample has nine members and comprises 75% independent directors. Institutional investors hold almost three-quarters of the shares. These figures are consistent with findings in the extant literature (e.g., Cai, Garner and Walkling, 2009).

As in Walkling and Long (1984) and Hartzell, Ofek and Yermack (2004), I use abnormal executive compensation as a measure of corporate governance. I estimate abnormal compensation as the residual from a linear compensation regression of all ExecuComp firms during my sample period. I include log assets, prior-year stock return, and industry and year dummies as independent variables.

Voting mechanism is important when we analyze the effect of voting recommendations on the actual votes. For example, for firms having confidential voting in place, shareholders may be tougher with management proposals because firm policy prevents management from knowing how shareholders vote their proxy cards. Shareholders will be less concerned about retaliation from managers. Unequal voting provisions,[38] on the other hand, usually benefit the management because managers are often given more votes per share than recent purchasers (time-phased voting). All the above statistics are shown in Panel B of Table 2.

5 Influence of Voting Recommendations

Before empirically analyzing potential conflicts of interest and how competition can reduce these conflicts, I provide evidence on how proxy advisors influence vote outcomes. A major concern

and tease out their relative magnitudes. A vote outcome is a function of voting recommendations as well as firm performance and governance characteristics. I analyze compensation plans, say-on-pay proposals and director elections separately. Columns (1)-(2) of Table 3 show investors' reactions to compensation recommendations. A positive ISS (Glass Lewis) recommendation was associated with 23.8% (8.3%) more votes for a compensation proposal. These estimates are in line with Cai, Garner and Walkling (2009) and Choi, Fisch, and Kahan (2009).[39] In the Internet Appendix, I also show that ISS's influence had declined from the previous period (2004-2007) to the recent period (2008-2011), while Glass Lewis's influence had been on the rise. Vote results are related to voting mechanisms as well. Compensation plans at firms with unequal voting (dual class shares) received higher votes, possibly from managers.

Mandatory say-on-pay proposals began in early 2011, so with the data I have, it is possible only to compare influences of ISS and Glass Lewis's recommendations for that year. Consistent with results for compensation plans and director elections, columns (3)-(4) show that ISS's (Glass Lewis's) endorsement was associated with an increase of votes by 23.8% (12.6%). These magnitudes are in line with findings in Ertimur, Ferri and Oesch (2012). Interestingly, a "For" recommendation from Glass Lewis on top of ISS's endorsement only added 6% to the vote, which suggests that the marginal value of an additional "For" recommendation would be small.

Columns (5)-(6) show investors' reactions to director recommendations. The remaining unexplained portion of a positive ISS (Glass Lewis) recommendation still increased average votes for a firm by 21.7% (5.8%). As shown in the Internet Appendix, although influences of both ISS and Glass Lewis had increased since the previous period (2004-2007), the increase for Glass Lewis was more dramatic.

The aim of this section is to show that proxy advisory firms play some important role in proxy voting, though there is not necessarily a causal relationship between voting recommendations and vote outcomes. As Choi, Fisch, and Kahan (2010) point out, "investors may select a proxy advisor based on their ex-ante agreement with the bases upon which the advisor formulates its recommendations."

6 Effects of Competition

In this section, I propose two ways to investigate impacts of competition on decisions of incumbent advisor ISS. First, I show that there was a convergence of recommendations at the firm level as Glass Lewis's market share increased. In particular, following Glass Lewis's entry the fraction of differing recommendations (ISS recommended "For," Glass Lewis recommended "Against/Withhold") went down significantly, while the fraction of differing recommendations (ISS recommended "Against/Withhold," Glass Lewis recommended "For") barely dropped. Second, I

[39] Cai, Garner and Walkling (2009) first estimate a regression model of ISS's recommendations based on firm performance and governance characteristics, and then use the residuals from this model as their ISS variables.

examine whether ISS adjusted its recommendations for a company after Glass Lewis began to cover that firm for the first time. To the extent that conflicts of interest mainly arise when ISS serves both corporate clients and investors, this is a measure of the disciplinary effect of competition. Effects of competition on ISS's recommendations should be mostly felt at companies that subscribed to its consulting services. After all, ISS was more likely to be conflicted in issuing voting recommendations for these companies because these firms contributed a significant portion of its profits. Given information on ISS's corporate client base, we can test whether ISS mostly responded to rival coverage of its corporate clients rather than its non-client firms.

6.1 Competition and Convergence of Recommendations

6.1.1 Estimation Strategy: Fixed Effects

To quantitatively examine effects of competition on the convergence of recommendations for the period 2004-2011, I first regress the firm-level spread between ISS's and Glass Lewis's "For" recommendations on Glass Lewis's market share and a large number of firm observable characteristics:

$$ISS\_AvgFor_{ijt} - GL\_AvgFor_{ijt} = \alpha + \delta \cdot GL\_MktShr_t + X'_{ijt}\beta + \psi_i + \eta_t + \mu_j \cdot t + \epsilon_{ijt} \qquad (1)$$

In equation (1), the dependent variable is the difference between ISS's and Glass Lewis's recommendations for firm i in industry j in year t. GL_MktShr_t is Glass Lewis's market share in year t. X_{ijt} is a vector of firm characteristics including size, performance metrics, executive compensation measures, governance indicators and institutional and management holdings. Year fixed-effects η_t control for economy-wide trends that affect recommendations, and company fixed-effects ψ_i control for all time-invariant firm-level variables. I further include industry-specific time trends $\mu_j \cdot t$ to account for differential linear trends in recommendations across industries. The coefficient of interest is δ, which measures how the spread between these two advisors' recommendations changes as Glass Lewis's market share increases. Standard errors are clustered at the firm level.

To separately identify the direction of changes in ISS's recommendations, I first replace the dependent variable in equation (1) by the fraction of differing recommendations at the firm level (ISS "For," Glass Lewis "Against/Withhold"). I then use the fraction of differing recommendations in the other direction (ISS "Against/Withhold," Glass Lewis "For"). Our coefficient of interest is again δ, which now gauges how the fraction of differing recommendations evolves following Glass Lewis's entry.

6.1.2 Competition Metric

The intensity of competition can be measured by Glass Lewis's market share. Since Glass Lewis entered the proxy advisory market, it has increased its market share substantially. There are potentially multiple ways to calculate its market share, and my main measure is Glass Lewis

clients' total assets divided by the sum of Glass Lewis and ISS's client assets.[40] Industry experts and academics have used this ratio to gauge competition in this industry (see Belinfanti, 2010). This measure is also similar to Becker and Milbourn's (2011) measure for credit rating agencies. Figure 1 shows evolution of Glass Lewis's client assets (in trillions of dollars) as well as its market share. Due to the fact that ISS's client assets have remained relatively stable over the years (between 23 and 25.5 trillion dollars), Glass Lewis's market share has closely resembled its client assets. As a robustness check, I also use alternative measures for market share based on the number of institutional shareholders, as well as coverage of U.S. companies. The results are similar, as shown in Tables B.1, B.2 and B.3.

6.1.3 Results

Before conducting regression analysis, it is useful to visualize whether there is an overall decline of differing recommendations between ISS and Glass Lewis. Figure 2(A) shows that the average percent of differing recommendations (ISS "For", Glass Lewis "Against/Withhold") at the firm level has trended down since 2004. I do not include year 2003 in this analysis because Glass Lewis did not provide recommendations for individual directors in 2003. On the other hand, there is no clear pattern for the average percent of differing recommendations in the opposite direction (ISS "Against/Withhold", Glass Lewis "For"), as shown in Figure 2(B). This supports our theory that with increased competition, ISS has substantially lowered its frequency of "For" recommendations.

To see if there indeed is a general decline of differing recommendations for the same firms since 2004, I restrict my sample to firms that never exited the Russell 3000 family. This creates a balanced panel of 2,264 companies. Running regressions for the unbalanced panel (not reported), I find similar results. First, I regress the firm-level spread between ISS's and Glass Lewis's "For" recommendations on Glass Lewis's market share. As shown in Table 4, the difference between ISS's and Glass Lewis's "For" recommendations dropped by nearly 1.7 percentage points for a 10 percentage points increase in Glass Lewis's market share during 2004-2011. This suggests that with Glass Lewis's entry, ISS became more likely to switch from making "For" recommendations to "Against/Withhold" than from making "Against/Withhold" recommendations to "For".

As shown in Table 5, there is a significant correlation between Glass Lewis's market share and the fraction of differing recommendations (ISS "For," Glass Lewis "Against/Withhold") at the firm level. For a 10 percentage points increase in competition, this fraction of differing recommendations decreased by 6 percentage points. Note that better governance quality as measured in slower growth in executive compensation or higher ratio of independent directors contributes to less dispersion in recommendations. This is intuitive in that better governance quality, especially slower growth in compensation, reduces information asymmetry. It therefore will be more costly

[40] For any given client asset, there is some likelihood of overlap among proxy advisors since some clients use the services of several firms.

for a conflicted proxy advisor to issue biased recommendations, leading to a higher probability of identical recommendations from both advisory firms.

However, the fraction of differing recommendations of the opposite direction (ISS recommended "Against/Withhold," Glass Lewis recommended "For") barely dropped following Glass Lewis's entry. Columns (1)-(4) of Table 6 shows that for a 10 percentage points increase in competition, this fraction of differing recommendations decreased by only 1 percentage point. Overall, these results suggest that competition resulted in a less friendly posture of ISS towards corporations generally.

One might be concerned that the convergence of recommendations was attributed to changes in ISS's or Glass Lewis's proxy guidelines. I check published proxy guidelines by ISS and Glass Lewis for the period 2004-2011, and find no evidence of substantial changes regarding major types of management proposals. I also calculate ISS's and Glass Lewis's overall ratios of "For" for management proposals at the firm level, and find no evidence of any trend. The range is 83%-89% for ISS, and 70%-81% for Glass Lewis (see Figure 3). Some scholars point out that Proxy Governance was also a credible player before it exited the market in 2010. Proxy Governance client assets were around 1 trillion dollars for my sample period. I re-run regression (1) taking into account Proxy Governance's market share, and obtain similar results as in Tables 4-6 (not reported). Reverse causality is less of a concern because if investors expected that ISS was going to be more truthful (less likely to inflate the quality of management proposals), they would tend to subscribe to ISS more often. This will likely inflict a positive bias on my results. In other words, absent reverse causality, the magnitudes may be even larger. However, omitted variables at the firm level may bias the results. Next I resort to a plausibly exogenous shock – the event that Glass Lewis began to cover a stock for the first time – to analyze effects of competition on ISS's recommendations.

6.2 Impact of Glass Lewis's coverage

6.2.1 Estimation Strategy: Exploring an Exogenous Shock

When a proxy advisor obtains a new institutional client, by contract it must cover all portfolio firms of the client. One Glass Lewis executive has remarked: "When we get a new client, we make reports for all the firms in their portfolio." Prior to establishing the relationship, however, the advisory firm does not know which companies are in its prospective client's portfolio.[41] Thus the very fact that Glass Lewis began to cover a company for the first time served as an exogenous shock to ISS's recommendations. Glass Lewis's coverage provided investors an alternative source of information, and ISS might adjust its recommendations in the subsequent year for that company.

[41] Institutional investors managing assets over $100 million must report their holdings on Form 13F with the SEC on a quarterly basis. An advisory firm could access this information through SEC's website. However, Form 13F is allowed to be filed within 45 days of the end of a calendar quarter.

To evaluate this effect, I regress the change in ISS's average "For" recommendation for company i from year $t-1$ to t on a dummy indicating Glass Lewis's new coverage in year $t-1$, and a large number of firm characteristics and fixed effects:

$$\Delta ISS\_AvgFor_{ijt} = \alpha + \delta \cdot GL\_Coverage_{ijt-1} + X'_{ijt}\beta + \eta_t + \mu_j \cdot t + \epsilon_{ijt} \quad (2)$$

In equation (2), time fixed-effects η_t control for economy-wide trends, and industry-specific time trends $\mu_j \cdot t$ account for differential linear trends that might affect ISS's recommendations. Standard errors are clustered at the firm level. The coefficient of interest δ, equivalent to a difference-in-differences estimator, measures impacts of increased competition on ISS's recommendations.

The effect of competition is expected to be larger if that company was ISS's corporate client, due to conflicts of interest shown in Section 2. To test this hypothesis, a list of ISS's corporate clients is needed. Were the corporate client data not proprietary, I can add to equation (2) an interaction term $GL\_Coverage_{ijt-1} \cdot Corp\_Client_{it}$, where $Corp\_Client_{it}$ is a dummy that equals 1 if company i is ISS's corporate client in year t. The coefficient on such an interaction term captures the effect of competition on ISS's recommendations for these client firms.

6.2.2 Validity of Estimation Strategy

Glass Lewis's coverage of a firm for the first time can serve as a credible exogenous shock to ISS's recommendation for that firm. However, one may worry that that company might respond to Glass Lewis's coverage, thus might have different characteristics from companies Glass Lewis already covered. This would likely bias the results. To check this, I regress firm level characteristics at t on the dummy $GL\_Coverage_{ijt-1}$ and three basic firm controls - size, return on assets and stock return. In Table 7, none of the coefficients are significant at the 5% level except institutional holdings. This is intuitive because the probability that Glass Lewis had already covered a company is lower if institutional holdings of that company were lower. After all, it is institutional investors who hired proxy advisors in the first place. I control institutional holdings in Tables 8 and 9 to eleminate such potential bias.

6.2.3 Results

Columns (1)-(4) of Table 8 present effects of Glass Lewis coverage using the entire sample. After Glass Lewis covered a company for the first time, ISS's average "For" recommendations decreased by 1.3 to 1.9 percentage points in the following year. This translates into a decrease in "For" recommendations by 1.9% to 2.3% given that ISS's average recommendation for management proposals was 84%. It is important to note that this is only an imperfect measure of the disciplinary effect of competition. Many Russell 3000 companies did not subscribe to ISS's consulting services. The effect of competition is expected to be larger for the set of ISS's corporate clients as conflict of

interest would mainly arise from serving these firms. We will be able to test this prediction with a list of ISS's corporate clients.

Table 9 provides robustness checks by looking at whether Glass Lewis's coverage affects ISS's recommendations, regardless of whether the firm was already covered or not. Columns (1)-(4) show that ISS's "For" recommendations were around 4 percentage points lower when the firm was covered by Glass Lewis. This suggests that ISS did not only respond to Glass Lewis's initial coverage of a firm, it might still become tougher as Glass Lewis continued to cover it.

7 Discussion

This paper studies conflicts of interest arising from serving both shareholders and corporate issuers, and how competition among proxy advisors can alleviate these conflicts. As mentioned in Section 3, although this type of conflicts are widely considered the most damaging, there exist other types of potential conflicts. These include: (1) potential conflicts related to making recommendations on proposals sponsored by institutional clients; (2) potential conflicts when owners, directors or officers of proxy advisory firms serving on public company boards that have proposals on which the proxy advisors are making voting recommendations; (3) potential conflicts when the proxy advisors or their parent companies provide other services to clients. Both ISS and Glass Lewis have all of these conflicts. Although these types of conflicts are considered much smaller than the inherent conflicts arising from serving both investors and corporations, it will be interesting to analyze these types of conflicts in future studies.

Notice that this paper does not discuss conflicts of interest for shareholder proposals, which comprise about 10.3% of my sample, excluding director elections. Shareholder proposals can be divided into three categories: corporate governance, executive compensation and social policy. Each of these categories is interesting in its own right (see e.g., Cuñat, Gine and Guadalupe, 2012; Karpoff, Malatesta and Wdd 1996; Randall and Cotter, 2007; Gillan and Starks, 2000; Agrawal 2008; Ertimur, Ferri and Stubben, 2010). However, these proposals are considered to be more complicated than management proposals. A shareholder proposing the measure could be a client of ISS, Glass Lewis or both. Without knowing which investors use either advisory firm's services, it would be difficult to analyze the potential conflicts.

8 Conclusion

With ever growing institutional shareholdings and recent regulatory reforms to enhance shareholder rights, proxy advisory firms, ISS and Glass Lewis in particular, have become powerful in shaping corporate governance. Industry experts have long criticized potential conflicts of interest and a lack of competition in the business model. This paper is the first to document the fact that increased competition can alleviate ISS's potential conflicts arising from serving both investors and corporate

issuers investors own. I show that ISS's and Glass Lewis's recommendations for management proposals at the firm level converged rapidly when Glass Lewis's market share grew for the period 2004-2011. This convergence was largely attributed to the fact that with Glass Lewis's entry, ISS became more likely to switch from making "For" recommendations to "Against/Withhold" than from making "Against/Withhold" recommendations to "For". Furthermore, ISS endorsed a company's proposals less frequently when Glass Lewis began to cover it for the first time. As expected, data suggest that actual vote outcomes were strongly correlated with recommendations from both proxy advisors, and Glass Lewis became more influential as it achieved higher market share.

Evidence supports the model prediction that conflicts of interest inevitably arise when a proxy advisor provides services to both shareholders and corporate issuers. Although increased competition can largely reduce the magnitude of these conflicts, competition itself may not be enough to completely eliminate them. The SEC is currently planning to issue an interpretative guidance to require proxy advisors to disclose "any significant relationship" with issuers or a shareholder proponent. This is an encouraging development. However, ultimately the SEC should ban proxy advisory firms from providing advisory services to institutional investors, while at the same time providing consulting services to corporate issuers on the matters of proxy votes. Also, proxy advisory firms should be required to fully disclose other conflicts.

It should be noted that while this paper supports the view that greater competition is desirable in the proxy advisory industry, the readiness of investors to support more than a few advisory firms remains unclear. An alternative solution is to promote a non-profit model for proxy advisors to eliminate conflicts of interest and to better serve the public interest. Other major issues in the industry include significant inaccuracies and a lack of transparency in decision-making. One example is that corporate issuers cannot access Glass Lewis's reports before they are published, increasing the chance of inaccuracies. These issues deserve careful study.

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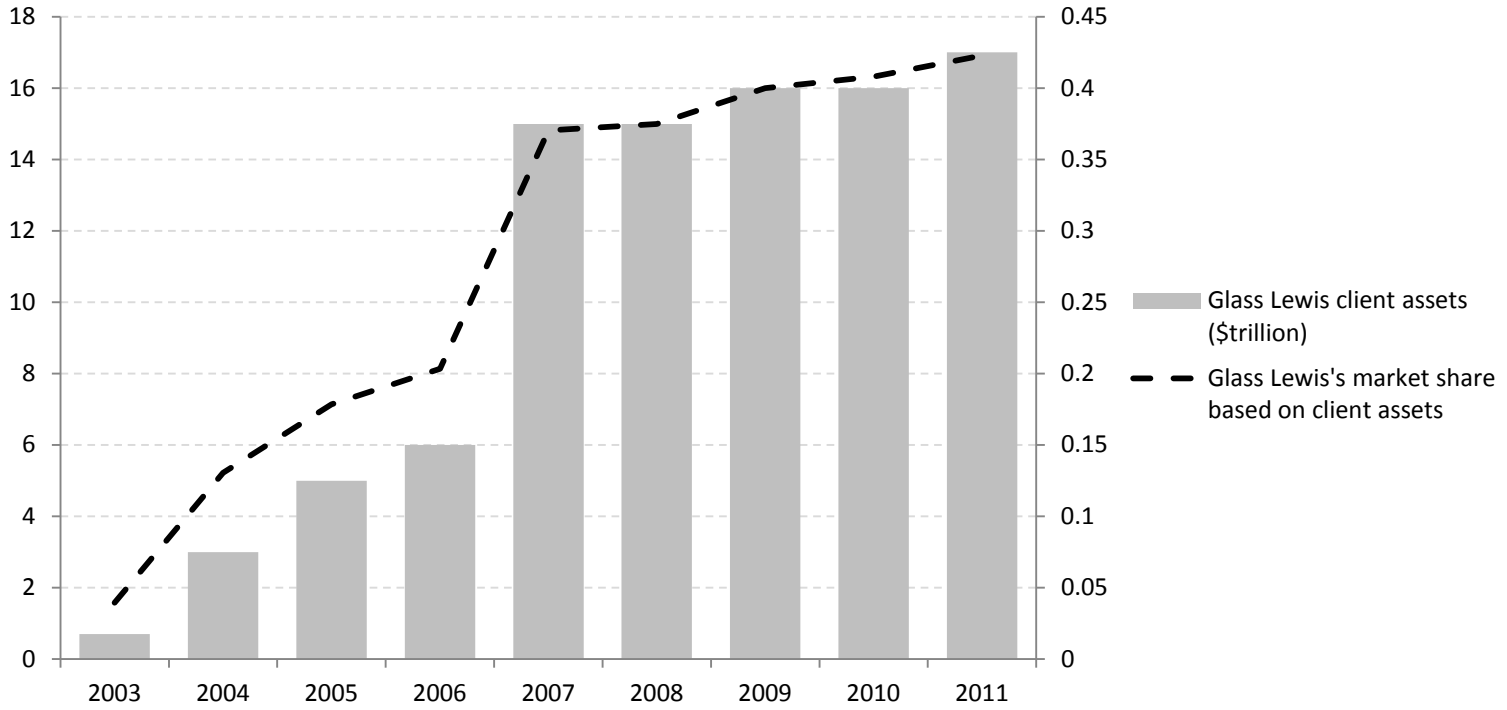
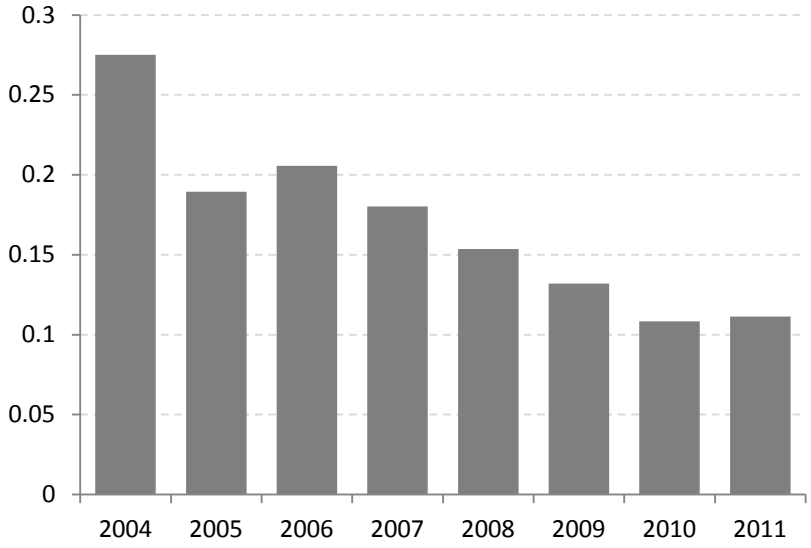
Figure 1: Evolution of Glass Lewis's market share



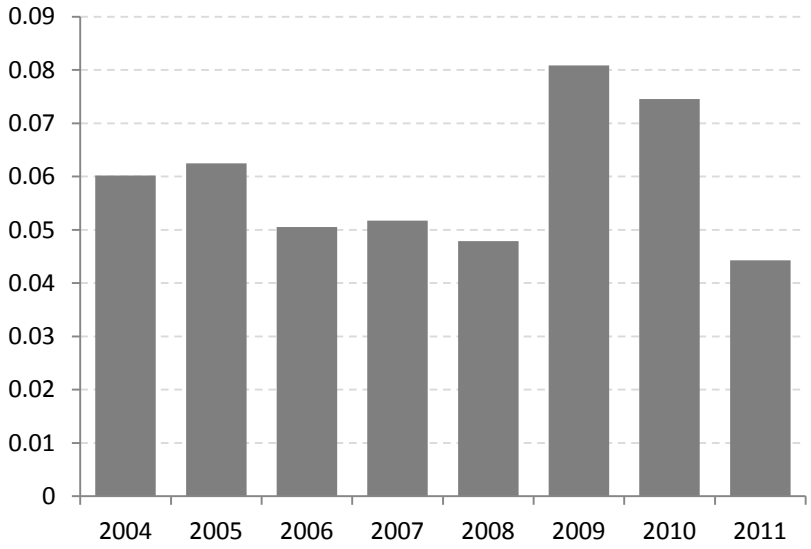
The solid bars (left axis) plot Glass Lewis client assets for the period 2003-2011. The dashed line (right axis) plots Glass Lewis's market share for the same period. It is calculated as below

$$\text{Glass Lewis's market share} = \frac{\text{Glass Lewis client assets}}{\text{ISS client assets} + \text{Glass Lewis client assets}}$$

Figure 2: Fraction of differing recommendations for management proposals decreased during 2004-2011



(A) Fraction of differing recommendations (ISS "For," Glass Lewis "Against/Withhold") decreased



(B) Fraction of differing recommendations (ISS "Against/Withhold," Glass Lewis "For") had no clear trend

Figure 3: Average firm-level "For" recommendations for management proposals from ISS and Glass Lewis during 2004-2011

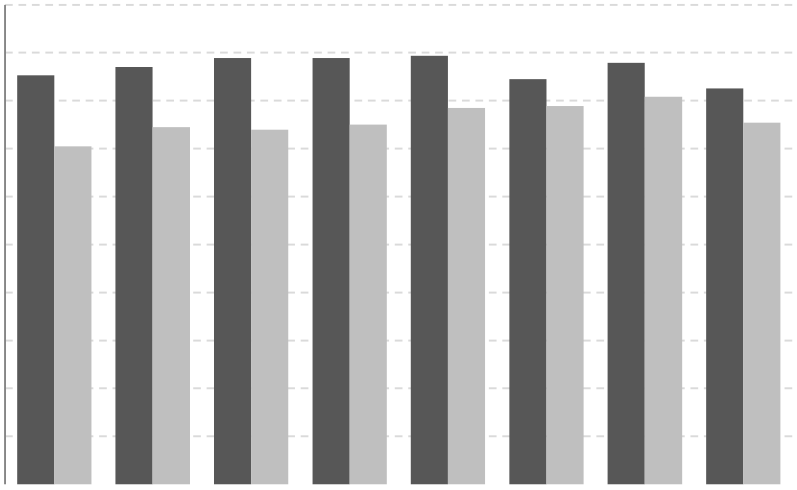


Table 1: Variable Definitions

Variable	Definition
Assets	Total assets in billions of dollars
Prior year industry-adjusted ROA	Earnings before interest, taxes, depreciation, and amortization divided by total assets at the end of the previous fiscal year. I adjust ROA by the industry median (all Compustat firm/year at 4-digit SIC level)
Prior year return	The 12 months buy-and-hold return prior to shareholder meeting
Book-to-market	The market value of equity divided by the book value of equity
Leverage	(Book value of debt -cash)/Total assets
Capex-to-assets	Capital expenditures less the sale of PP&E divided by total assets
Abnormal executive compensation ($million)	Residual from a compensation regression where the dependent variable is the total CEO compensation and the independent variable include log assets, prior-year stock return, industry and year dummies, estimated with all ExecuComp firms for 2004-2011
YOY change in executive compensation	Percentage change in total executive compensation year-on-year
Cash/total compensation	The ratio of salary and cash bonus to total compensation
Classified board	A Classified Board (or "staggered" board) is one in which the directors are placed into different classes and serve overlapping terms
Poison pill	It provides shareholders with special rights in the case of a triggering event such as a hostile takeover bid. Typical poison pills give the holders of the target's stock other than the bidder the right to purchase stock in the target or the bidder's company at a steep discount, making the target unattractive or diluting the acquirer's voting power
Board size	The number of board members
Independent director	A director that has no material connection to the company other than a board seat
Compensation activism in past 3 years	Equals to 1 if there was a shareholder proposal targeting compensation practice in the past three years
Institutional holdings	Percent of outstanding shares held by intuitional investors
Management holdings	Percent of outstanding shares held by top-5 company executives
Confidential voting dummy	Equals one if firm policy prevents management from knowing how shareholders vote their proxy cards
Unequal voting dummy	Equals 1 if the firm has two or more classes of shares with unequal voting power, and 0 otherwise
Cumulative voting dummy	Equals 1 if the firm has a voting system whereby shareholders can cumulate votes for a single director candidate
Majority voting for directors dummy	Equals 1 if the firm's directors are elected only if they receive more than 50% of the votes

Table 2: Summary statistics

This table presents summary statistics for characteristics of management proposals, firm characteristics, and compensation and governance variables for Russell 3000 companies from 2004 to 2011. Details of the sample are discussed in Section 4. All variables are defined as in Table 1.

Panel A: Average "For" recommendations and votes per firm-year

	ISS "For"	Glass Lewis "For"	Average "For" Vote
Executive compensation plan	0.80	0.74	0.83
Say-on-pay proposal (2011 only)	0.88	0.79	0.91
Director election (firm level average)	0.88	0.77	0.95
All management proposals (firm level average)	0.85	0.70	0.93

Panel B: Firm characteristics, compensation and governance variables

	N	Mean	Median	SD
Firm characteristics				
Assets ($billions)	22,100	11.23	1.28	79.26
Prior year industry-adjusted ROA	19,243	0.03	0.02	0.28
Prior year stock return	22,347	0.16	0.09	0.75
Book-to-market	19,991	0.63	0.49	1.58
Leverage	22,035	0.56	0.55	0.34
Capex-to-assets	19,655	0.05	0.03	0.06
Compensation measures				
Abnormal executive compensation ($millions)	12,347	-0.31	-1.06	4.06
YOY change in executive compensation	12,663	0.40	0.10	5.59
Cash/total compensation	13,040	0.42	0.37	0.22
Governance measures				
Classified board & poison pill	11,265	0.29		
Board size	9,644	9.38	9.00	2.47
Ratio of independent directors	9,644	0.74	0.75	0.14
Institutional holdings	21,918	0.69	0.75	0.25
Management holdings	13,079	0.02	0	0.08
Voting mechanism				
Confidential voting dummy	11,265	0.13		
Cumulative voting dummy	11,265	0.08		
Unequal voting dummy	11,265	0.01		
Majority voting for directors dummy	24,954	0.10		

Table 3: Investors' reactions to voting recommendations during 2004-2011

The dependent variable is the fraction of favorable votes for management proposals. ISS (Glass Lewis) "For" equals 1 if ISS (Glass Lewis) recommends for a management proposal. All other variables are defined as in Table I. Robust s

Table 4: Convergence of recommendations during 2004-2011

The dependent variable is fraction of ISS's "For" recommendations minus fraction of Glass Lewis's "For" recommendations at the firm level. All independent variables are defined as in Table I. Robust standard errors (clustered at the firm level) are reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable: fraction of ISS's "For" recommendations less fraction of Glass Lewis's "For" recommendations at firm level			
	(1)	(2)	(3)	(4)
Glass Lewis's market share (client assets)	-0.135***	-0.157***	-0.172***	-0.170***
	(0.048)	(0.055)	(0.065)	(0.066)
Log assets	-0.021**	-0.029***	-0.033**	-0.031**
	(0.008)	(0.011)	(0.015)	(0.015)
Ind-adj ROA	-0.022	-0.076*	-0.082	-0.065
	(0.018)	(0.046)	(0.066)	(0.067)
Prior-year stock return	0.002	0.002	0.011	0.013
	(0.004)	(0.006)	(0.008)	(0.009)
Leverage				0.072*
				(0.042)
Capex/Assets				0.213
				(0.136)
Abnormal executive compensation ($millions)		-0.0004	-0.001	-0.001
		(0.002)	(0.002)	(0.003)
ΔExecutive compensation YOY		-0.001***	-0.001***	-0.001***
		(0.0002)	(0.0002)	(0.0003)
Cash/total compensation		0.025	0.017	0.017
		(0.022)	(0.028)	(0.028)
Classified board*poison pill			-0.017	-0.016
			(0.014)	(0.014)
Board size			-0.0005	-0.0007
			(0.003)	(0.003)
Ratio of independent directors			-0.029	-0.043
			(0.043)	(0.043)
Institutional holdings				-0.012
				(0.046)
Management holdings				0.027
				(0.062)
Constant	0.269***	0.369***	0.446***	0.386***
	(0.060)	(0.088)	(0.126)	(0.132)
Firm FE	√	√	√	√
Fiscal-year FE	√	√	√	√
Industry-year trend	√	√	√	√
Observations	17,732	10,859	8,067	7,929
R-squared	0.39	0.33	0.33	0.33

Table 5: Direction of convergence in recommendations during 2004-2011

The dependent variable is fraction of differing recommendations for management proposals at the firm level (ISS "For," Glass Lewis "Against/Withhold"). All independent variables are defined as in Table I. Robust standard errors (clustered at the firm level) are reported in parentheses. ∗, ∗∗, and ∗∗∗ denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable: fraction of differing recommendations at firm level (ISS "For," Glass Lewis "Against/Withhold")			
	(1)	(2)	(3)	(4)
Glass Lewis's market share (client assets)	-0.632***	-0.600***	-0.553***	-0.559***
	(0.032)	(0.041)	(0.053)	(0.054)
Log assets	-0.028***	-0.043***	-0.049***	-0.047***
	(0.008)	(0.012)	(0.014)	(0.014)
Ind-adj ROA	-0.020	-0.132***	-0.091	-0.042
	(0.019)	(0.050)	(0.066)	(0.066)
Prior-year stock return	-3.0e-4	-2.1e-05	-4.2e-4	-7.4e-4
	(0.004)	(0.005)	(0.008)	(0.008)
Leverage				0.107***
				(0.040)
Capex/Assets				-0.043
				(0.134)
Abnormal executive compensation ($millions)		0.001	0.002	0.002
		(0.001)	(0.002)	(0.002)
ΔExecutive compensation YOY		0.001***	0.001***	0.001***
		(0.0002)	(0.0002)	(0.0002)
Cash/total compensation		-0.001	-0.006	-0.004
		(0.019)	(0.024)	(0.024)
Classified board*poison pill			-0.018	-0.019
			(0.013)	(0.013)
Board size			0.001	0.001
			(0.003)	(0.003)
Ratio of independent directors			-0.084**	-0.090**
			(0.042)	(0.041)
Institutional holdings				-0.063
				(0.052)
Management holdings				0.041
				(0.055)
Constant	0.610***	0.731***	0.783***	0.758***
	(0.055)	(0.086)	(0.110)	(0.120)
Firm FE	√	√	√	√
Fiscal-year FE	√	√	√	√
Industry-year trend	√	√	√	√
Observations	17,840	10,778	7,702	7,581
R-squared	0.48	0.45	0.39	0.37

Table 6: Direction of convergence in recommendations during 2004-2011

The dependent variable is fraction of differing recommendations for management proposals at the firm level (ISS "Against/Withhold," Glass Lewis "For"). All independent variables are defined as in Table I. Robust standard errors (clustered at the firm level) are reported in parentheses. ∗, ∗∗, and ∗∗∗ denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable: fraction of differing recommendations at firm level (ISS "Against/Withhold," Glass Lewis "For")			
	(1)	(2)	(3)	(4)
Glass Lewis's market share (client assets)	-0.110***	-0.131***	-0.123***	-0.124***
	(0.023)	(0.025)	(0.030)	(0.031)
Log assets	-0.001	-0.004	-0.001	-0.002
	(0.004)	(0.005)	(0.007)	(0.008)
Ind-adj ROA	0.005	0.012	0.036	0.051
	(0.010)	(0.026)	(0.034)	(0.036)
Prior-year stock return	-0.003	-0.003	-0.008*	-0.008**
	(0.002)	(0.003)	(0.004)	(0.004)
Leverage				0.015
				(0.021)
Capex/Assets				-0.165**
				(0.073)
Abnormal executive compensation ($millions)		-0.001	-0.001	-0.001
		(0.001)	(0.001)	(0.001)
ΔExecutive compensation YOY		0.001***	0.001***	0.001**
		(0.0002)	(0.0002)	(0.0002)
Cash/total compensation		-0.009	-0.010	-0.011
		(0.011)	(0.013)	(0.013)
Classified board*poison pill			-0.007	-0.007
			(0.007)	(0.007)
Board size			0.001	0.001
			(0.001)	(0.001)
Ratio of independent directors			-0.031	-0.030
			(0.021)	(0.021)
Institutional holdings				0.003
				(0.024)
Management holdings				-0.004
				(0.033)
Constant	0.075**	0.050	0.104*	0.107*
	(0.029)	(0.041)	(0.058)	(0.062)
Firm FE	√	√	√	√
Fiscal-year FE	√	√	√	√
Industry-year trend	√	√	√	√
Observations	17,732	10,859	8,067	7,929
R-squared	0.46	0.37	0.36	0.37

Table 7: Correlations between firm level characteristics and Glass Lewis's coverage during 2004-2011

All dependent variables are defined as in Table I. Robust standard errors (clustered at the firm level) are reported in parentheses. ∗, ∗∗, and ∗∗∗ denote statistical significance at the 10%, 5%, and 1% levels, respectively. The values of dependent variables are taken at time *t*.

	(1) Abnormal executive compensation	(2) Δexec comp. YOY	(3) Cash/total comp.	(4) Classified board* poison pill	(5) Board size	(6) % indep. directors	(7) Inst. holdings	(8) Mgmt holdings	(9) Leverage	(10) Capex
I{Glass Lewis began	0.121	0.059	0.012	-0.002	0.082	0.006	-0.033***	0.003	0.006	-0.002
coverage at t-1}	(0.108)	(0.063)	(0.008)	(0.011)	(0.069)	(0.006)	(0.006)	(0.003)	(0.005)	(0.001)
Log assets	0.967***	-0.0001	-0.042***	0.025	0.437***	-0.001	0.063***	-0.007***	-0.037***	-0.004***
	(0.165)	(0.154)	(0.008)	(0.018)	(0.085)	(0.006)	(0.006)	(0.002)	(0.011)	(0.001)
Ind-adj ROA	2.056***	1.073	-0.122***	-0.113*	0.0726	-0.001	0.014	-0.017*	-0.182***	-0.002
	(0.457)	(0.678)	(0.038)	(0.063)	(0.281)	(0.024)	(0.014)	(0.009)	(0.050)	(0.005)
Stock return	0.284***	0.167**	-0.021***	3.2e-05	-0.104***	0.002	0.005*	-0.001	-0.004	0.002***
	(0.037)	(0.071)	(0.004)	(0.006)	(0.033)	(0.003)	(0.002)	(0.001)	(0.003)	(0.001)
Constant	-4.923***	0.083	0.678***	0.206	5.730***	0.704***	0.159***	0.073***	0.883***	0.068***
	(1.290)	(1.266)	(0.061)	(0.138)	(0.659)	(0.049)	(0.036)	(0.018)	(0.072)	(0.017)
Firm FE	√	√	√	√	√	√	√	√	√	√
Year FE	√	√	√	√	√	√	√	√	√	√
Observations	12,784	12,432	12,782	11,054	9,511	9,511	19,364	12,817	20,566	20,464
R-squared	0.74	0.22	0.65	0.81	0.87	0.74	0.84	0.41	0.85	0.80

Table 8: Impact of Glass Lewis's coverage on ISS's recommendations during 2004-2011

The dependent variable is the change in ISS's "For" recommendations for management proposals at the firm level. All independent variables are defined as in Table I. Robust standard errors (clustered at the firm level) are reported in parentheses. ∗, ∗∗, and ∗∗∗ denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable: Change in ISS's "For" recommendations at the firm level from *t-1 to t*			
	(1)	(2)	(3)	(4)
I{Glass Lewis started coverage at t-1}	-0.023**	-0.026**	-0.018*	-0.019*
	(0.010)	(0.011)	(0.010)	(0.010)
Log assets		0.033	0.044	0.048
		(0.021)	(0.028)	(0.029)
Ind-adj ROA		0.057	0.049	0.047
		(0.055)	(0.212)	(0.217)
Prior-year stock return		0.013	0.010	0.012
		(0.013)	(0.020)	(0.020)
Leverage				-0.066
				(0.086)
Capex/Assets				-0.143
				(0.410)
Abnormal executive compensation ($millions)			-0.006	-0.008
			(0.006)	(0.006)
ΔExecutive compensation YOY			-0.006***	-0.006***
			(0.001)	(0.001)
Cash/total compensation			-0.057	-0.066
			(0.063)	(0.067)
Classified board*poison pill			0.040*	0.038
			(0.024)	(0.025)
Board size			-0.006	-0.007
			(0.007)	(0.007)
Ratio of independent directors			0.276**	0.289**
			(0.116)	(0.118)
Institutional holdings				-0.078
				(0.091)
Management holdings				-0.032
				(0.124)
Constant	0.093	0.078	-0.045	0.063
	(0.071)	(0.151)	(0.249)	(0.257)
Fiscal-year FE	√	√	√	√
Industry-year trend	√	√	√	√
Observations	21,230	17,197	7,827	7,701
R-squared	0.15	0.16	0.19	0.19

Table 9: Persistent effects of Glass Lewis's coverage on ISS's recommendations

The dependent variable is fraction of ISS's "For" recommendations for management proposals at the firm level. All independent variables are defined as in Table I. Robust standard errors (clustered at the firm level) are reported in parentheses. ∗, ∗∗, and ∗∗∗ denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable: fraction of ISS's "For" recommendations at the firm level at *t*			
	(1)	(2)	(3)	(4)
I{Glass Lewis covered at *t*}	-0.043**	-0.045**	-0.034*	-0.041*
	(0.020)	(0.022)	(0.021)	(0.022)
Log assets		0.007	0.011	0.009
		(0.006)	(0.010)	(0.011)
Ind-adj ROA		0.047	0.033	0.042
		(0.043)	(0.045)	(0.047)
Prior-year stock return		0.002	0.013**	0.014**
		(0.003)	(0.006)	(0.006)
Leverage				-0.016
				(0.030)
Capex/Assets				0.108
				(0.093)
Abnormal executive compensation ($millions)			-0.001	-0.001
			(0.002)	(0.002)
ΔExecutive compensation YOY			-0.001***	-0.001***
			(0.0002)	(0.0002)
Cash/total compensation			-0.020	-0.022
			(0.018)	(0.018)
Classified board*poison pill			0.015	0.016
			(0.010)	(0.010)
Board size			-0.002	-0.001
			(0.002)	(0.002)
Ratio of independent directors			0.084***	0.081***
			(0.028)	(0.028)
Institutional holdings				0.011
				(0.030)
Management holdings				0.028
				(0.048)
Constant	0.782***	0.745***	0.843***	0.815***
	(0.098)	(0.106)	(0.094)	(0.101)
Firm FE	√	√	√	√
Fiscal-year FE	√	√	√	√
Industry-year trend	√	√	√	√
Observations	26,301	20,634	8,927	8,715
R-squared	0.43	0.45	0.40	0.40

A. Theoretical Appendix

Proof of Proposition 1

First, consider the case in which rational investors believe that the PA is conflicted, and therefore do not buy its report. Each of these investors votes for management with probability $\frac{1}{2}$. Litigation-averse investors would like to buy the report given the informational gain is larger than price of the report. With probability β the proposal passes. β is as defined in footnote 17.

When the PA receives signal $s = o$ and reports $m = A$, its profit is

$$\begin{aligned} \pi(A|o) &= \beta(\phi + f\alpha - ep\rho\alpha) + (1-\beta)(\phi + f\alpha) \\ &= \phi + f\alpha - \beta ep\rho\alpha \end{aligned}$$

If the proposal is approved, with probability ep a loss occurs (from PA's point of view) and the PA incurs a reputation cost from litigation-averse investors. With probability $1-\beta$ the proposal stalls, and the PA therefore is not liable. When the PA receives signal $s = o$ and reports $m = O$, it loses its corporate client. Its profit is

$$\pi(O|o) = f\alpha$$

The PA always reports $m = A$ when $\pi(A|o) > \pi(O|o)$ which yields the condition $\phi > \beta ep\rho\alpha$. The PA reports truthfully when $\phi < \beta ep\rho\alpha$. Note that when receiving signal $s = a$ the PA will not be conflicted because recommending against management in this case does not yield additional profit.

Now we pin down fee conditions. With probability $\frac{1}{2}$, the PA receives an "o" signal. When $\phi > \beta ep\rho\alpha$, it reports $m = A$ with probability 1. With probability β the proposal passes and leads to a loss with probability ep. So with probability $\frac{1}{2}\beta ep$ litigation-averse investors suffer a loss of c from clients. The expected total cost of purchasing the report is $f + \frac{1}{2}\beta epc$. Similarly, if a litigation-averse investor deviates to vote based on ex ante belief, with probability $\frac{1}{2}\frac{1}{2}$ it votes for an "o" proposal. The cost of making a wrong vote therefore is $\frac{1}{2}\frac{1}{2}\beta pC$. The profit maximizing PA charges a fee $f = \frac{1}{2}\frac{1}{2}\beta pC - \frac{1}{2}\beta epc$. Since we normalize $c = 0$, $f = \frac{1}{2}\frac{1}{2}\beta pC$. Realizing this, a rational investor does not want to deviate to buy the report. The expected total cost of buying the report is $f + \frac{1}{2}\beta ep\tilde{C}$, which is greater than the cost of voting based on ex ante belief $\frac{1}{2}\frac{1}{2}\beta p\tilde{C}$. Note that $e > \frac{1}{2}$.

Second, when $\phi < \beta ep\rho\alpha$, assume there is an equilirbium in which the PA reports truthfully and only litigation-averse investors buy the report. Litigation-averse investors understand that they will not incur a cost following the PA since the PA is truthful. When $s = o, m = O$, the expected cost is $\frac{1}{2}\gamma epC$ if a litigation-averse investor votes based on ex ante belief. When $s = a, m = A$, the expected cost of voting based on ex ante belief is $\frac{1}{2}\beta(1-e)pC$. Thus the PA charges a fee $f =$

$\frac{1}{2}[\frac{1}{2}\gamma epC+\frac{1}{2}\beta(1-e)pC]$. The corresponding fee for rational investors is $f=\frac{1}{2}[\frac{1}{2}\gamma ep\tilde{C}+\frac{1}{2}\beta(1-e)p\tilde{C}]$. In the general case in which C and $\tilde{C}$ are close enough, the PA will lower its fee to woo both types of investors in order to boost its profit. This therefore can not be an equilibrium.

Finally, we show that there is another equilibrium in which both types of investors buy PA's report. Now If the PA receives signal $s=o$ and reports $m=A$, its profit is

$$\pi(A|o)=\phi+f-ep\rho$$

If the PA receives signal $s=o$ and reports $m=O$, it loses the corporate client. Its profit is

$$\pi(O|o)=f$$

So the PA reports truthfully when $\pi(A|o)<\pi(O|o)$ which yields the condition $\phi<ep\rho$. Now consider the fee condition. If a rational investor deviates and does not buy the PA's report, it will vote for management with probability $\frac{1}{2}$. Since all other investors vote with the PA, the voting result will not change. The cost of deviating is $\frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}$. Similarly, if a litigation-averse investor deviates, the cost is $\frac{1}{2}\frac{1}{2}(1-e)pC$. So PA sets $f=\min[\frac{1}{2}\frac{1}{2}(1-e)pC,\frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}]$.

Proof of Lemma 1

First consider the case where $\alpha<\frac{1}{2}$. Rational investors are the majority. They will determine vote outcomes if they follow PA 2. For a rational investor, voting based on ex ante belief is costly only when PA 2's signal s_2 is "a" because the proposal passes. This happens with probability $\frac{1}{2}$, and the investor votes for management with probability $\frac{1}{2}$. When $s_2=a$, the probability that a loss occurs is $(1-e)p$, so cost for the rational investor is $\frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}$. If PA 2 only retains rational investors, it sets fee $f_2=\frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}$.

Now PA 2 wants to lower its fee to attract litigation-averse investors as well. Let the lowest fee PA 2 is willing to charge be $\tilde{f}_2$. This fee makes PA 2 indifferent towards serving both types of investors or just rational investors. It leads to the following relation

$$\tilde{f}_2\cdot N=f_2\cdot(1-\alpha)N$$

Rearranging, we obtain $\tilde{f}_2=(1-\alpha)\frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}$. However, PA 1 has an incentive to charge a fee $f_1=\tilde{f}_2-\epsilon$ where ϵ is a small number. At this price, litigation-averse investors find it less expensive to purchase PA 1's report. Recall that for litigation-averse investors, following PA 1 does not incur a cost imposed by clients (c is normalized to 0). For these investors, the cost of voting based on ex ante belief is $\frac{1}{2}\frac{1}{2}(1-e)pC$ which will be larger than f_1, in the general case when C and $\tilde{C}$ are close. Therefore litigation-averse investors will switch to PA 1.

Anticipating this, PA 2 raises its fee to $f_2=\frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}$ to serve only rational investors. In

turn, PA 1 sets its fee $f_1 = \min[\frac{1}{2}\frac{1}{2}(1-e)pC, \frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}]$ to serve litigation-averse investors.

The case where $\alpha > \frac{1}{2}$ is similar. Fees charged by both PAs are derived in Proposition 4. We therefore have shown that there exists no equilibrium in which both types of investors buy a report from PA 2.

Proof of Proposition 3

This is the case where $\alpha < \frac{1}{2}$. Rational investors will determine the vote outcome if they follow PA 2. I show there exists an equilibrium in which litigation-averse investors buy PA 1's report and rational investors purchase PA 2's report.

When $s_1 = o, m_1 = A, s_2 = a, m_2 = A$, all investors vote for the management, and the proposal therefore passes. PA 1 does not incur a reputation cost when a loss occurs because PAs' recommendations are the same. It is difficult to determine which PA is conflicted. The profit for PA 1 is

$$\pi_1(A|o) = \phi + f_1\alpha$$

When $s_1 = o, m_1 = A, s_2 = o, m_2 = O$, litigation-averse investors vote for the proposal while rational investors vote against it. Since there are more rational ones ($\alpha < \frac{1}{2}$), the proposal fails to pass. Again PA 1 does not suffer a reputation cost. The profit for PA 1 is

$$\pi_1(A|o) = \phi + f_1\alpha$$

When $s_1 = o, m_1 = O$, no matter what m_2 is, PA 1 does not incur a reputation cost because it is truthful. The profit for PA 1 is

$$\pi_1(O|o) = f_1\alpha$$

Since $\pi_1(A|o) > \pi_1(O|o)$, PA 1 always reports $m_1 = A$.

Now we pin down the fee conditions. As shown in the proof of Lemma 1, PA 2 raises its fee to $f_2 = \frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}$ to serve only the rational investors. PA 1 sets its fee $f_1 = \min[\frac{1}{2}\frac{1}{2}(1-e)pC, \frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}]$ to serve the litigation-averse investors. Note that litigation-averse investors will not deviate to vote based on their ex ante belief because the cost of doing so is $\frac{1}{2}\frac{1}{2}(1-e)pC$, which is larger or equal to f_1.

Proof of Proposition 4

This is the case where $\alpha > \frac{1}{2}$. Litigation-averse investors will determine the vote outcome. I show there exists an equilibrium where litigation-averse investors buy PA 1's report and rational investors purchase PA 2's report.

When $s_1 = o, m_1 = A, s_2 = a, m_2 = A$, all investors vote for management, and the proposal therefore passes. Again, PA 1 does not suffer a reputation cost when a loss occurs because PAs'

recommendations are the same. The profit for PA 1 is

$$\pi_1(A|o) = \phi + f_1\alpha$$

When $s_1 = o, m_1 = A, s_2 = o, m_2 = O$, litigation-averse investors vote for the proposal while rational investors vote against it. Since there are more litigation-averse ones ($\alpha > \frac{1}{2}$), the proposal is approved. The probability that the state is "o" equals $\frac{e^2}{e^2+(1-e)^2}$. For simplicity, define this probability as q. Now PA 1 suffers a reputation cost. The profit for PA 1 is

$$\pi_1(A|o) = \phi + f_1\alpha - q\tilde{p}\rho_1\alpha$$

The expected profit for PA 1 is the weighted average profits under these two scenarios:

$$\mathrm{E}[\pi_1(A|o)] = \phi + f_1\alpha - \frac{1}{2}q\tilde{p}\rho_1\alpha$$

When $s_1 = o, m_1 = O$, no matter what m_2 is, PA 1 does not suffer a reputation loss because it is truthful. The profit for PA 1 is

$$\pi_1(O|o) = f_1\alpha$$

So the PA always reports $m_1 = A$ when $\mathrm{E}[\pi_1(A|o)] > \pi_1(O|o)$ which yields the condition $\phi > \frac{1}{2}q\tilde{p}\rho_1\alpha$.

Now we pin down the fee conditions. Since PA always recommends $m_1 = A$, the proposal will be approved for sure. If a rational investor deviates and votes for the management based on ex ante belief, then with probability $\frac{1}{2}\frac{1}{2}$ it votes for an "o" proposal. The cost of making a wrong vote is $\frac{1}{2}\frac{1}{2}p\tilde{C}$. PA 2 therefore sets fee $f_2 = \frac{1}{2}\frac{1}{2}p\tilde{C}$ to serve rational investors. PA 1 sets its fee $f_1 = \min[\frac{1}{2}\frac{1}{2}pC, \frac{1}{2}\frac{1}{2}p\tilde{C}]$ to serve the litigation-averse investors.

Next I show that when $\phi < \frac{1}{2}q\tilde{p}\rho_1\alpha$, the fee conditions are identical to those in Proposition 3. PA 2 sets the fee to $f_2 = \frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}$ to serve only the rational investors. PA 1 sets its fee $f_1 = \min[\frac{1}{2}\frac{1}{2}(1-e)pC, \frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}]$ to serve the litigation-averse investors.

Other Equilibria Under Competition

Recall that if litigation-averse investors obtain PA 1 and follow its voting recommendation, the litigation cost is $c < C$ when the PA is found out to be conflicted. Note that we normalize c to zero in the main text. Here I do not make this assumption. Litigation-averse investors now may have an incentive to purchase an additional report from PA 2. The reason is that if an institutional investor buys reports from both PAs, it may be more difficult for its clients to win a lawsuit when a loss occurs. Because the investor could argue that she acted in good faith by subscribing to both reports in order to make the best judgment. In practice, some institutional investors subscribe to multiple PAs in order to make a more informed vote.

Note that in the case of conflicting reports, litigation-averse investors are assumed to follow PA 1's recommendation. This is because PA 1 has been in business longer, and is regarded as the more established advisor. It is natural for litigation-averse investors facing conflicting recommendations to follow its recommendation. For simplicity, I assume that litigation-averse investors are immune from clients' lawsuits when obtaining both PAs. I proceed to derive the following symmetric equilibrium under each informational regime:

Proposition 1 *When $\alpha < \frac{1}{2}$, the equilibrium of the subgame is:*

1. *PA 1 always reports $m_1 = A$, and sets $f_1 = \frac{1}{2}\frac{1}{2}(1-e)pC - \frac{1}{2}\frac{1}{2}\frac{1}{2}pc$. Litigation-averse investors buy both reports and rational investors buy only PA 2's report. PA 2 reports truthfully and sets $f_2 = \min[\frac{1}{2}\frac{1}{2}\frac{1}{2}pc, \frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}]$.*

Proof. This is the case where $\alpha < \frac{1}{2}$. Rational investors will determine the vote outcome if they follow PA 2. I show that there exists an equilibrium where litigation-averse investors buy both reports and rational investors buy only PA 2's report. The proof is identical to the proof of Proposition 3 except the fee conditions. PA 1 always reports $m_1 = A$.

We now pin down the fee conditions. For a litigation-averse investor, voting based on ex ante belief is costly only when $s_2 = a$ because the proposal passes. This happens with probability $\frac{1}{2}$, and the investor votes for the management with probability $\frac{1}{2}$. When $s_2 = a$, the probability that a loss occurs is $(1-e)p$, so the expected cost to the litigation-averse investor is $\frac{1}{2}\frac{1}{2}(1-e)pC$.

When the litigation-averse investor only buys a report from PA 1, she incurs a cost when $s_1 = o, s_2 = a$, and the probability that the state is "o" equals $\frac{e(1-e)}{e(1-e)+(1-e)e} = \frac{1}{2}$. So the total cost is $f_1 + \frac{1}{2}\frac{1}{2}\frac{1}{2}pc$.

When the litigation-averse investor buys both reports, she is immune from any costs imposed by her clients, and total cost is $f_1 + f_2$. Then PA 1 will charge a fee $f_1 = \frac{1}{2}\frac{1}{2}(1-e)pC - \frac{1}{2}\frac{1}{2}\frac{1}{2}pc$. PA 2 sets $f_2 \leq \frac{1}{2}\frac{1}{2}\frac{1}{2}pc$.

For a rational investor, voting based on ex ante belief is costly only when $s_2 = a$ because the proposal passes. The cost is $\frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}$. Following PA 2 only leads to total cost f_2. So PA 2 sets its fee $f_2 = \min[\frac{1}{2}\frac{1}{2}\frac{1}{2}pc, \frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}]$.

It is optimal for litigation-averse investors to purchase both reports because this minimizes the cost. Rational investors will buy only PA 2's report because PA 1 is conflicted.

Proposition 2 *When $\alpha > \frac{1}{2}$, the equilibrium of the subgame is:*

1. *If $\phi > \frac{1}{2}q\tilde{p}\rho_1\alpha$, PA 1 always reports $m_1 = A$, and sets $f_1 = \frac{1}{2}\frac{1}{2}pC - \frac{1}{2}\frac{1}{2}pc$. Litigation-averse investors buy both reports and rational investors buy only PA 2's report. PA 2 reports truthfully and sets $f_2 = \min[\frac{1}{2}\frac{1}{2}pc, \frac{1}{2}\frac{1}{2}p\tilde{C}]$.*

2. *If $\phi < \frac{1}{2}q\tilde{p}\rho_1\alpha$, PA 1 reports truthfully, and sets $f_1 = \frac{1}{2}\frac{1}{2}(1-e)pC$. Litigation-averse investors purchase PA 1's report, and rational investors buy PA 2's report. PA 2 is truthful and sets $f_2 = \min[\frac{1}{2}\frac{1}{2}(1-e)pC, \frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}]$.*

Proof This is the case where $\alpha > \frac{1}{2}$. Litigation-averse investors will determine the vote outcome. I show there exists an equilibrium where PA 1 always reports $m_1 = A$, and litigation-averse investors buy both reports and rational investors buy only PA 2's report. The proof is identical to the proof of Proposition 4 except the fee conditions.

Now we pin down the fee conditions. When PA 1 always recommends $m_1 = A$, the proposal will be approved for sure. If a litigation-averse investor deviates and votes for the management based on ex ante belief, then with probability $\frac{1}{2}\frac{1}{2}$ it votes for an "o" proposal. The cost of making a wrong vote is $\frac{1}{2}\frac{1}{2}pC$. If a litigation-averse investor buys only a report from PA 1, the total cost is $f_1 + \frac{1}{2}\frac{1}{2}pc$. The total cost is $f_1 + f_2$ if she purchases both reports. Therefore PA 1 sets $f_1 = \frac{1}{2}\frac{1}{2}pC - \frac{1}{2}\frac{1}{2}pc$ and PA 2 sets $f_2 \leq \frac{1}{2}\frac{1}{2}pc$.

Since rational investors expect that PA 1 is conflicted, they purchase only PA 2's report. The cost of deviating to vote based on ex ante belief is $\frac{1}{2}\frac{1}{2}p\tilde{C}$. PA 2 sets $f_2 = \min[\frac{1}{2}\frac{1}{2}pc, \frac{1}{2}\frac{1}{2}p\tilde{C}]$.

Next I derive the fee conditions when $\phi < \frac{1}{2}q\tilde{p}\rho_1\alpha$. PA 1 will be truthful in this case. For a litigation-averse investor, deviating to vote based on ex ante belief is costly when $s_1 = a$. The associated cost is $\frac{1}{2}\frac{1}{2}(1-e)pC$. Since now PA 1 is truthful, litigation-averse investors purchase only its report. PA 1 sets $f_1 = \frac{1}{2}\frac{1}{2}(1-e)pC$. Similarly, the cost of deviating for rational investors is $\frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}$. Therefore PA 2 sets $f_2 = \min[\frac{1}{2}\frac{1}{2}(1-e)pC, \frac{1}{2}\frac{1}{2}(1-e)p\tilde{C}]$. Since rational investors are indifferent as which report to buy, we assume they purchase PA 2's report.

B. Empirical Appendix

Table B.1. Robustness checks: Convergence of recommendations during 2004-2011

The dependent variable is fraction of ISS's "For" recommendations minus fraction of Glass Lewis's "For" recommendations at the firm level. All independent variables are defined as in Table I. Robust standard errors (clustered at the firm level) are reported in parentheses. ∗, ∗∗, and ∗∗∗ denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable: fraction of ISS's "For" recommendations less fraction of Glass Lewis's "for" recommendations at firm level					
	(1)	(2)	(3)	(4)	(5)	(6)
GL's mkt share (# of clients)	-0.140***	-0.163***	-0.177***			
	(0.050)	(0.057)	(0.068)			
GL's mkt share (# firms covered)				-0.145***	-0.169***	-0.183***
				(0.052)	(0.059)	(0.070)
Log assets	-0.021**	-0.029***	-0.030**	-0.021**	-0.029***	-0.030**
	(0.008)	(0.011)	(0.015)	(0.008)	(0.011)	(0.015)
Ind-adj ROA	-0.022	-0.075*	-0.065	-0.022	-0.076*	-0.065
	(0.018)	(0.046)	(0.067)	(0.018)	(0.046)	(0.067)
Prior-year stock return	0.002	0.002	0.013	0.002	0.002	0.013
	(0.004)	(0.006)	(0.008)	(0.004)	(0.006)	(0.009)
Leverage			0.072*			0.072*
			(0.042)			(0.042)
Capex/Assets			0.213			0.213
			(0.136)			(0.136)
Abnormal exec. compensation ($m)		-0.0004	-0.001		-0.0004	-0.001
		(0.002)	(0.003)		(0.002)	(0.003)
ΔExecutive compensation YOY		-0.001***	-0.001***		-0.001***	-0.001***
		(0.0002)	(0.0003)		(0.0002)	(0.0003)
Cash/total compensation		0.025	0.017		0.025	0.017
		(0.022)	(0.028)		(0.022)	(0.028)
Classified board*poison pill			-0.016			-0.016
			(0.014)			(0.014)
Board size			0.001			0.001
			(0.003)			(0.003)
Ratio of independent directors			-0.043			-0.043
			(0.043)			(0.043)
Institutional holdings			-0.012			-0.012
			(0.046)			(0.046)
Management holdings			0.026			0.027
			(0.062)			(0.062)
Constant	0.269***	0.369***	0.386***	0.280***	0.382***	0.400***
	(0.060)	(0.088)	(0.132)	(0.061)	(0.089)	(0.132)
Firm FE	√	√	√	√	√	√
Fiscal-year FE	√	√	√	√	√	√
Industry-year trend	√	√	√	√	√	√
Observations	17,732	10,859	7,929	17,732	10,859	7,929
R-squared	0.39	0.33	0.33	0.39	0.33	0.33

Table B.2. Robustness checks: Direction of convergence in recommendations (2004-2011)

The dependent variable is fraction of differing recommendations for management proposals at the firm level (ISS "For," Glass Lewis "Against/Withhold"). All independent variables are defined as in Table I. Robust standard errors (clustered at the firm level) are reported in parentheses. ∗, ∗∗, and ∗∗∗ denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable: fraction of differing recommendations at firm level (ISS "For," Glass Lewis "Against/Withhold")					
	(1)	(2)	(3)	(4)	(5)	(6)
GL's mkt share (# of clients)	-0.500***	-0.465***	-0.427***			
	(0.028)	(0.036)	(0.046)			
GL's mkt share (# firms covered)				-1.120***	-1.042***	-0.732***
				(0.063)	(0.081)	(0.103)
Log assets	-0.031***	-0.047***	-0.044***	-0.031***	-0.047***	-0.044***
	(0.008)	(0.011)	(0.013)	(0.008)	(0.011)	(0.013)
Ind-adj ROA	-0.027	-0.132***	-0.063	-0.027	-0.132***	-0.063
	(0.017)	(0.044)	(0.059)	(0.017)	(0.044)	(0.059)
Prior-year stock return	0.003	0.002	0.008	0.003	0.002	0.008
	(0.004)	(0.005)	(0.007)	(0.004)	(0.005)	(0.007)
Leverage			0.096***			0.096***
			(0.036)			(0.036)
Capex/Assets			0.093			0.093
			(0.120)			(0.120)
Abnormal exec. compensation ($m)		-0.0003	-0.001		-0.0003	-0.001
		(0.001)	(0.002)		(0.001)	(0.002)
ΔExecutive compensation YOY		-0.0001	-0.0001		-0.0001	-0.0001
		(0.0002)	(0.0002)		(0.0002)	(0.0002)
Cash/total compensation		0.016	0.018		0.016	0.018
		(0.019)	(0.024)		(0.019)	(0.024)
Classified board*poison pill			-0.016			-0.016
			(0.012)			(0.012)
Board size			0.001			0.002
			(0.003)			(0.003)
Ratio of independent directors			-0.063*			-0.063*
			(0.038)			(0.038)
Institutional holdings			-0.072			-0.072
			(0.049)			(0.049)
Management holdings			0.043			0.043
			(0.051)			(0.051)
Constant	0.532***	0.661***	0.632***	0.856***	0.963***	0.844***
	(0.055)	(0.086)	(0.114)	(0.053)	(0.083)	(0.108)
Firm FE	√	√	√	√	√	√
Fiscal-year FE	√	√	√	√	√	√
Industry-year trend	√	√	√	√	√	√
Observations	17,864	10,803	7,607	17,864	10,803	7,607
R-squared	0.48	0.46	0.35	0.48	0.46	0.35