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22 June 2020

Ms. Vanessa Countryman
Secretary, Securities and Exchange Commission
100 F Street, NE Washington, D.C. 20549
rule-comments@sec.gov

File Number S7-22-19

RE: Amendments to Exemptions from the Proxy Rules for Proxy Voting Advice

Dear Ms. Countryman,

Please find attached a working paper “*Proxy Advice Industry and Its Growing Influence*” I authored. The article presents a depiction of the proxy advisory industry, and part of the results of the paper answers the comments solicited by the proposed rule, for example,

44. “*In instances where proxy voting advice businesses provide voting execution services (pre-population and automatic submission) to clients, are clients likely to review a registrant’s response to voting advice? Should we amend Rules 14a-2(b)(1) and 14a-2(b)(3) so that the availability of the exemptions is conditioned on a proxy voting advice business structuring its electronic voting platform to disable the automatic submission of votes in instances where a registrant has submitted a response to the voting advice?*”

Despite long-standing efforts to understand the proxy advice market, there is no way to identify the firms that supply specific investors with proxy advice, making claims about market shares and the severity of robo-voting conjectural at best. Nevertheless, it is widely believed that ISS and Glass Lewis control 97 percent of the market. However, ISS itself refutes this figure, saying it “is not a statistic we have verified or can confirm”.¹ In this paper, I use a largely unnoticed feature of regulatory filings to identify mutual funds’ voting platforms. I then provide what appears to be the first detailed depiction of the proxy advisory industry and proxy advisers’ influence on their customers.

¹ See, ISS Letter to Senate Banking Committee. <https://www.issgovernance.com/file/duediligence/20180530-iss-letter-to-senate-banking-committee-members.pdf>

Since 2003, mutual funds are required to report their entire voting records to the Securities and Exchange Commission on Form N-PX. A special feature of the form is that the SEC does not require a uniform “information table” for mutual funds to complete. Neither does it provide guidance on how to describe details of proposals. On the other hand, mutual funds rarely execute, manage, or report their votes themselves. Instead, they outsource those tasks to voting platforms. That implies, by linking the filing styles of mutual funds’ N-PX forms with those of voting platforms, that I can identify each fund’s use of different voting platforms.

There are three dominant voting platforms currently on the market: ProxyExchange (owned by ISS), Viewpoint (owned by Glass Lewis), and ProxyEdge (owned by Broadridge). The following figure displays BlackRock and Putnam Investments’ voting records (on their N-PX filings) in Apple Inc.’s 2019 annual meetings. We notice that both the table styles and proposal descriptions are different for the two N-PX forms. By comparing the two forms’ proposal descriptions with those on ISS and Glass Lewis’s own websites, we can infer that BlackRock uses ISS ProxyExchange as its voting platform and Putnam Investment uses Glass Lewis Viewpoint as its voting platform.² From here, I can identify each mutual fund’s purchase of proxy advice.

BlackRock

#	Proposal	Mgt Rec	Vote Cast	Sponsor
1a	Elect Director James Bell	For	For	Management
1b	Elect Director Tim Cook	For	For	Management
1c	Elect Director Al Gore	For	For	Management
1d	Elect Director Bob Iger	For	For	Management
1e	Elect Director Andrea Jung	For	For	Management
1f	Elect Director Art Levinson	For	For	Management
1g	Elect Director Ron Sugar	For	For	Management
1h	Elect Director Sue Wagner	For	For	Management
2	Ratify Ernst & Young LLP as Auditors	For	For	Management
3	Advisory Vote to Ratify Named Executive Officers’ Compensation	For	For	Management
4	Proxy Access Amendments	Against	Against	Shareholder
5	Disclose Board Diversity and Qualifications	Against	Against	Shareholder

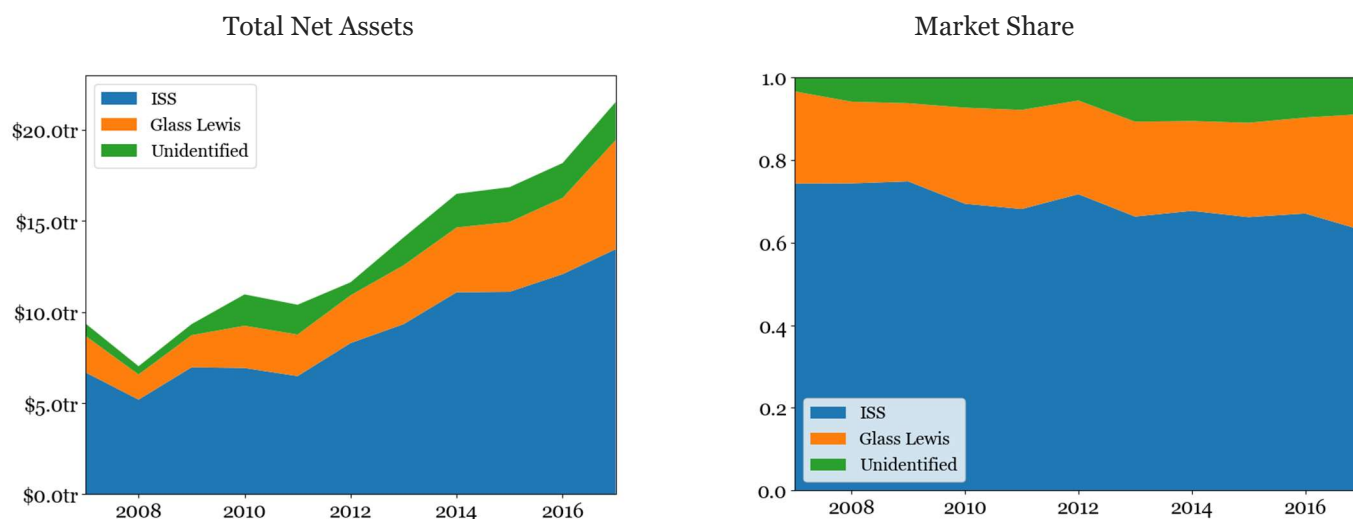
Putnam Investments

Ticker	Security ID:	Meeting Date	Meeting Status		
AAPL	CUSIP 037833100	03/01/2019	Voted		
Meeting Type	Country of Trade				
Annual	United States				
Issue No.	Description	Proponent	Mgmt Rec	Vote Cast	For/Agnst Mgmt
1	Elect James A. Bell	Mgmt	For	For	For
2	Elect Timothy D. Cook	Mgmt	For	For	For
3	Elect Albert A. Gore	Mgmt	For	For	For
4	Elect Robert A. Iger	Mgmt	For	For	For
5	Elect Andrea Jung	Mgmt	For	For	For
6	Elect Arthur D. Levinson	Mgmt	For	For	For
7	Elect Ronald D. Sugar	Mgmt	For	For	For
8	Elect Susan L. Wagner	Mgmt	For	For	For
9	Ratification of Auditor	Mgmt	For	For	For
10	Advisory Vote on Executive Compensation	Mgmt	For	For	For
11	Shareholder Proposal Regarding Proxy Access Bylaw Amendment	ShrHldr	Against	Against	For
12	Shareholder Proposal Regarding Disclosure of Board Qualifications	ShrHldr	Against	Against	For

With the identification of each mutual fund’s purchase of proxy service from either ISS or Glass Lewis, I provide what appears to be the first look at the dynamics of the proxy advice market. The following figures display the total net assets managed by ISS and Glass Lewis’ customers and their relative market shares. In 2017, ISS controls 63 percent of the proxy service market for mutual funds in the U.S. (\$13.4 trillion

² For the proposal description by ISS ProxyExchange, see <http://vds.issproxy.com/SearchPage.php?CustomerID=1615>. For the proposal description by Glass Lewis Viewpoint, see <https://viewpoint.glasslewis.net/webdisclosure/search.aspx?glpcustuserid=PUTO16>

assets from 134 fund families), and Glass Lewis controls 28 percent of the market (\$6.0 trillion assets from 27 fund families). That implies ISS and Glass Lewis jointly control 91 percent of the market. Contrary to popular belief, I find that the proxy advice market has become less concentrated over the last decade. In 2007, ISS and Glass Lewis jointly controlled 96.5 percent of the market. The result shows that ISS is gradually losing market share to Glass Lewis and boutique proxy advisors.



There are two reasons investors can vote in accordance with ISS' recommendations. First, they can agree on the fundamentals of the proposal. Alternatively, investors can agree with ISS because they listen to its proxy advice regardless of the fundamentals. The difficulty in disentangling these two possibilities is that we do not observe the proposal-specific fundamentals. Hence, most efforts to estimate ISS' influence from investors' votes are defeated by the omitted variable.

Fortunately, with the information on proxy advisers' customer bases, I can compare the votes of ISS' customers with the votes of other investors who do not purchase ISS advice. This method implicitly controls for the proposal-specific factors because both groups are facing the same fundamentals. The only difference is that one has access to ISS' proxy advice and the other does not. In 2012, ISS customers were 17 percent more likely than other investors to vote against a director when ISS recommended they do. That implies ISS can influence 17 percent of its customers' votes on director elections in 2012. The influence of ISS on director elections increased to 27 percent in 2017. Similarly, I find that ISS' influence on say-on-pay proposals increased from 18 percent to 26 percent during 2012-2017.

Accurately measuring the extent to which investors automatically execute votes is particularly important in the light of the SEC's proposed rule giving companies a chance to respond to a proxy adviser's analysis before recommendations are sent to investors. The rule is designed to reduce proxy advisers' factual

errors, but it will become effective only if investors do review the advice. As the SEC asked, “In instances where proxy voting advice businesses provide voting execution services (pre-population and automatic submission) to clients, are clients likely to review a registrant’s response to voting advice?”

I find that the fraction of ISS customers blindly following its recommendations grew from 12 percent in 2006 to 23 percent in 2017. That implies that, without disabling the automatic voting mechanism, the rule will be much less effective in fixing factual errors: 23 percent of ISS clients are not going to review the registrant’s response even if they are given a chance to do so. In addition, I find that mutual funds with index funds are 10 percent more likely than others to robo-vote with ISS’ advice.

Sincerely,

A handwritten signature in black ink, appearing to read "Chong Shu". The signature is written in a cursive, slightly slanted style.

Chong Shu

Proxy Advice Industry and Its Growing Influence

Chong Shu*

May 30, 2020

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Abstract

This paper documents the evolving proxy advice industry and its growing influence on investors' votes. Using an innovative method, I identify mutual funds' purchases of proxy advice. As of 2017, ISS controls 63% of the market for mutual funds in the U.S. and Glass Lewis controls 28% of the market. Over the years, the industry has become less concentrated: in 2007, ISS controlled 74% of the market. However, ISS's one-size-fits-all recommendation has a strong and growing influence over its customers' votes. From 2006 to 2017, the fraction of ISS's customers who robo-vote grows from 12% to 23%. The growing influence of ISS is manifested in director elections, say-on-pay proposals, and other shareholder-sponsored proposals.

Keywords: Proxy Advisor, Mutual Fund Voting, Robo-Vote

JEL Classification: G23, G34, G38, G40

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1 Introduction

Governance of public corporations has been plagued by rational apathetic shareholders ([Berle and Means, 1932](#)). Facing collective action problems, investors developed little interest in casting votes informatively in corporate annual meetings. Proxy advisory firms can fill the gap by exploring the economy of scale, hoping to solve the free-rider problem. However, the proxy advice market in the U.S. has consolidated into two firms: ISS and Glass Lewis. That leads to little diversity of information, and their proxy advice has been criticized to contain factual errors and yield enormous influence over shareholders' votes. In 2019, the SEC proposed a rule just to tackle this issue. But, before all that, we need to have an accurate picture of the proxy advice market.

Over the years, regulators, practitioners, and academics all develop interests in understanding the dynamics of the proxy advisory industry.¹ However, there is currently no way for scholars to identify investors' proxy advice suppliers, so all claims about market share, advisors' influence on their customers, the fraction of robo-voters, etc. are at best conjectural.² In this paper, I use a previously unnoticed feature of regulatory filings to identify mutual funds' voting platforms. With this information in hand, I provide what appears to be the first detailed characterization of the proxy advisory industry and proxy advisors' influence on their buying customers.

Most of the previous studies on the influence of proxy advisors, although finding a meaningful correlation between ISS's recommendation and investors' votes, cannot control for the fact that investors may vote in the same direction as ISS simply because they both agree on the proposal. Hence, the correlation between votes and recommendations is not equivalent to how much votes ISS can sway due to the fact that investors listen to its advice. This is also noted by ISS itself: "Media reports substantially overstate the extent of ISS' influence by failing to control for the underlying company-specific factors that influence voting outcomes". In this paper, with the unique help from the information on ISS's customer base, I can implicitly control for those underlying company-specific factors by comparing the votes of ISS's customers and other investors who don't have access ISS's proxy advice. In other words, if the correlation is only due to the underlying company-specific factors, we wouldn't find a difference between the votes of the two groups as they are facing the same fundamentals.

To identify the customer bases for proxy advisors, I take advantage of mutual funds' reg-

¹For example, in the SEC's proposed rule in 2019, it cites a comment letter from the Center on Executive Compensation stating that "two firms controlling roughly 97% of the market share".

²There is a widely circulated conjecture that ISS and Glass Lewis "control" 97% of the proxy advisory industry. This number was widely cited by journalists, such as WSJ, Economist and Reuters, and academics, such as [Glassman and Peirce \(2014\)](#), [Larcker et al. \(2015\)](#), and [Copland et al. \(2018\)](#), etc. The initial source appeared to be a GAO report in 2007 that estimated the market share by directly requesting the information on clients' total equity assets from proxy advisors. The estimation relies on the assumption that Egan-Jones, the third-largest proxy advisor, controls 0% of the market. ISS itself is refuting this estimation: "this is not a statistic we have verified".

ulatory filings for their vote disclosure. Since 2003, mutual funds are required to report their entire vote records to SEC on Form N-PX. A special feature for the Form N-PX is that the SEC does not require or provide a unified “information table” for mutual funds to fill in. Neither does it provide guidance on how to describe details of proposals. Another feature for the proxy advice industry is that both ISS and Glass Lewis provide vote management and vote reporting as added services to their proxy advice customers. Some purchasing funds use this vote disclosure service (VDS), hosted on their proxy advisors’ websites, as a tool to communicate their corporate stewardship effort to investors. The combination of those facts enables me to identify each mutual fund’s proxy service provider by comparing its N-PX form’s reporting style and proposal descriptions with those of ISS or Glass Lewis’s VDS websites.

As for the competitive landscape of the proxy advice market, there is currently no academic study estimating each proxy advisor’s market share. Nevertheless, there is a widely circulated conjecture that ISS and Glass Lewis “control” 97% of the proxy advisory industry. However, the calculation of this number appeared to be inferred from a 2007 GAO survey which Egan-Jones didn’t respond to. Not only can’t this decade-old survey tell us anything about the proxy advice market today, but also ISS itself refuted this number’s accuracy in a letter sent to the Senate Banking Committee: “this is not a statistic we have verified or can confirm”. Fortunately, with the identification of mutual funds’ proxy service providers, I can estimate the dynamics of ISS and Glass Lewis’ market shares. In 2017, ISS controls 63% of the proxy service market for mutual funds in the U.S. (\$13.4 trillion assets from 134 fund families) and Glass Lewis controls 28% of the market (\$6.0 trillion assets from 27 fund families). That implies ISS and Glass Lewis jointly control 91% of the market.³ Contrary to popular belief, I find that the proxy advice market has become less concentrated over the last decade. In 2007, ISS and Glass Lewis jointly controlled 96.5% of the market, consistent with the market share calculated from the 2007 GAO report. The result shows that ISS is gradually losing its relative market share to both Glass Lewis and other boutique proxy advisors.

Fund families that purchase from different proxy advisors exhibit different characteristics. For example, funds that use neither ISS or Glass Lewis’s voting systems have fewer assets under management and have fewer ballots to votes on. Many of them are boutique mutual funds that only have a few companies in their holdings. They either use the voting platform developed by Broadridge, a fintech firm, or other smaller proxy advisors such as Egan-Jones, Segal Marco Advisors, or ProxyVote Plus. Among ISS and Glass Lewis’s customers, fund families that purchase from Glass Lewis have more ballots to vote and are more likely to provide institutional funds. More interestingly, their voting patterns reveal that they have quite distinct ideologies. Using the ideology score developed by [Bolton et al. \(2020\)](#), I find that ISS’s customers care more about social issues but less on corporate governance issues.

³For the rest 9% of mutual funds, they use either the voting platform developed by Broadridge, a fintech firm, or other boutique proxy advisors.

I find that ISS has enormous influence over its customers' votes on proposals of almost any type. For example, when ISS recommends against the election of a certain director, its customers are 21% more likely than other investors to vote against the director. When ISS recommends against a say-on-pay proposal, its customers are 20% more likely than other investors to vote against it. For governance-related proposals, ISS's customers are 21% more likely to vote against golden parachute if ISS is against it, 15% more likely to vote for an independent board chair if ISS supports it. The same patterns also occur for social-related proposals. As argued earlier, by comparing the voting results of ISS's customers and other investors, I implicitly controlled for the underlying proposal-specific factors because the two groups are facing the same fundamentals and the same ISS recommendations. The only difference is that one has access to ISS's proxy advice and the other one does not. It hence isolates the influence of ISS's proxy advice.

Another important but often ignored influence of proxy advisors is their certification effects: how much votes can ISS influence when it certifies management's recommendations. This is important information because many investors don't dig into the proposals when their proxy advisors agree with the management. As the head of BlackRock's corporate governance once said, the firm doesn't comb through every shareholder proposal but only when proxy advisors have identified an issue. The difficulty to estimate ISS's certification effect is that researchers don't observe the hypothetical scenario where investors don't see the certification. As a result, most research focuses only on ISS's influence when it starts to disagree with the management (Cai et al., 2009; Malenko and Shen, 2016). In this paper, I can estimate this certification effect by comparing the votes of ISS's customers, who can see ISS's certification, with those of other investors on proposals that ISS agrees with the management. I find that ISS's certification can result in a 2% additional likelihood for its customers to support the management. This is a meaningful increase because unconditionally investors already support management over 90% of times.

Using a one-shot change in ISS voting guidelines, Malenko and Shen (2016) provide a clean identification for ISS's effects on say-on-pay proposals from 2010 to 2011. Similar to my result, they find a strong influence of ISS's recommendation. Unique to my approach, I can also estimate ISS's influence on any other proposal types and across different years. This enables me to answer important questions such as whether ISS's influence is ever-growing, which concerns observers such as the ones at the Business Roundtable.⁴ Indeed, I do find that after 2012, there is an upward trend for ISS's influence for both director elections and say-on-pay proposals. Interestingly, the result also shows that there is a spike on ISS's influence during the 2008 financial crisis. This provides suggestive evidence that investors rationally allocate their attention during stress times.

Another way to gauge ISS's influence is to look at a fund's voting pattern right after it switches into or out of ISS's customer base. In my sample, there are a total of 32 fund families that switched

⁴For a Business Roundtable's letter to SEC on Proxy Advisory Firms, see <https://www.businessroundtable.org/archive/resources/letter-to-chairman-white-on-proxy-advisory-firms>

into ISS's voting platform and 46 fund families that switched out of it. Using a diff-in-diff setup, I estimate that after a fund becomes an ISS's customer, its agreement with ISS increases by 22% on contentious director elections. Similarly, after a fund stops being an ISS's customer, its agreement with ISS decreases by 20% on contentious director elections. Those results are consistent with the cross-sectional comparison between ISS's customers and non-customers. It provides additional support that ISS's recommendations have a strong influence over its customers' votes.

The problem with robo-voting has also sparked great concerns for many practitioners and academics (Iliev and Lowry, 2015; Doyle, 2018; Placenti, 2018). However, without knowing proxy advisors' customer bases, researchers tend to underestimate the severity of the issue by inflating the denominators. Being able to accurately measure the extent to which investors automatically execute votes becomes particularly important in the face of the SEC's proposed rule in 2019. The newly proposed rule gives companies chances to respond to proxy advisor's analysis before recommendations being sent to investors in order to reduce proxy advice's factual errors. But the rule will become effective only if investors do review the response rather than robo-vote with their proxy advisors. As asked by SEC itself, "are clients likely to review a registrant's response to voting advice"? In this paper, I find that the fraction of ISS's customers blindly following its recommendations grows from 12% in 2006 to 23% in 2017. That implies without disabling the automatic voting mechanism, the rule will have a much lesser effect on mitigating the damage from proxy advice's factual errors.

One immediate question to ask is what drives proxy advisors' influence on their customers. Kempf et al. (2017) show that investors' attention is limited so they perform less monitoring when distracted. If that's the case, one would expect a greater influence of ISS during stress times. Indeed, I find a positive relationship between market volatility and ISS's influence on its customers. In addition, I also find that ISS's certification effect is greater on funds with more ballots to vote. This suggests that large funds purchase proxy advice to alert them with potential issues. Both results support the hypothesis that investors allocate their attention rationally.

The paper is related to a growing literature on proxy advisors. The research on the influence of ISS's recommendations has produced inconclusive results. Cai et al. (2009), Iliev and Lowry (2015), Larcker et al. (2015), and Malenko and Shen (2016), show that ISS can exert great influence over investors' votes, ranging from 19% to 25% of votes. On the contrary, Choi et al. (2009) show a much dampened effect, 6%–10%. Among them, Malenko and Shen (2016) provide causal interpretations by utilizing a cutoff in ISS's voting guideline. None of those papers, however, provide a granular picture for ISS's influence on its own customers. Theoretical works on proxy advisors are sparse but growing. Malenko and Malenko (2019) develops a model to study the information provision of proxy advisors. Recent works such as Levit and Tsoy (2019), Ma and Xiong (2020), and Matsusaka and Shu (2020) study proxy advisors' distorted incentives for providing accurate advice.

There are two main contributions of this paper. To the best of my knowledge, this paper is

the first to identify each mutual funds' proxy service supplier. With this information, I provide what appears to be the first detailed characterization of the proxy advice industry. Second, by comparing the voting patterns of ISS's customer and other investors, this paper estimates ISS's influence by implicitly controlling the proposal-specific factors. Complementary to [Malenko and Shen \(2016\)](#)'s estimation, my approach is able to generalize to all proposals and all years. My approach can also study an often ignored influence of proxy advisors: how much votes can they influence when their recommendations certify management's recommendations.

2 Data and Methodology

2.1 Data Sources and Sample Selection

Data are compiled across several sources. The main sample contains the entire mutual fund voting records after 2003. Since 2003, mutual funds are required to report their votes on Form N-PX to be submitted to SEC. I collected those forms directly from the SEC's EDGAR website. I then linked N-PX forms to voting records provided by ISS Voting Analytics using their accession numbers, the unique identifier to EDGAR submissions. The ISS Voting Analytics dataset tabulates mutual funds' votes on those N-PX forms. The dataset also provides each proposal's final voting outcome for Russell 3000 firms. The voting outcomes are collected from companies' 8-K filings. Because NP-X accession numbers only appear for filings after 2006 in Voting Analytics dataset, I restrict the sample to all mutual funds' votes in Russell 3000 companies' annual and special meetings during 2006-2017. The final sample contains 82 million votes (fund-proposal level) from 15886 N-PX forms. It covers 20654 mutual funds' voting records in 438793 proposals.

I collect mutual funds' characteristics from the CRSP Mutual Fund Database, which provides information on each fund's name, total net assets, fund family, flag for an index fund, and physical locations, etc. I then merge the CRSP dataset with my main voting dataset using CIK numbers.⁵ The CIK number is a unique ten-digit number SEC assigns to EDGAR filers. The ISS Voting Analytics does not provide mutual funds' CIK numbers. So I collected each fund's CIK number from header files of their N-PX forms. Information on mutual funds' ideology preferences is provided by [Bolton et al. \(2020\)](#). I merge it with my main dataset using "institutionid", the Voting Analytics' fund-family identifier.

⁵As noted by [Matvos and Ostrovsky \(2010\)](#) and [Iliev and Lowry \(2015\)](#), there is no unique fund identifier common to both ISS Voting Analytics and CRSP. They proceed by matching the two datasets using fund names. Unlike their methods, I match the two datasets by CIKs. Using CIK to match results in more precision except for the fact that different mutual funds under the same fund family can use identical CIK. This is not a concern for my analysis because I aggregate each mutual fund's voting and proxy advisor to fund-family level as in [Bolton et al. \(2020\)](#) and [Iliev et al. \(2018\)](#). Section 2.3 provide more details

2.2 Identify Vote Management Platform and Proxy Advisor

For N-PX filings, a mutual fund must disclose (a) information on the issuer (CUSIP, ticker, meeting date, etc), (b) a brief identification for the proposal, and (c) how it voted. Unlike for Form 13-F, the SEC does not provide or require a unified “information table” for mutual funds to fill in.⁶ This gives mutual funds or their proxy service providers freedom to determine how to tabulate their votes and what constitutes of a brief identification for the proposal. For example, for the Proposal 5 in Apple Inc’ 2019 annual meetings, BlackRock’s N-PX form described it as “Disclose Board Diversity and Qualification”, JP Morgan Funds’ form described it as “A shareholder proposal entitled True Diversity Board Policy”, and TIAA funds’ form described it as “Shareholder Proposal regarding Disclosure and Board Qualifitication”. The “information tables” on the three funds’ N-PX forms also exhibit different formats.

Another observation about mutual funds’ voting is that they rarely execute and manage voting records themselves. This fact is also observed in my data that will be explained shortly. Instead, they outsource those tasks to voting platforms. The reason is obvious: most mutual funds have to cast/manage/report thousands of votes each year, a complicated and time-consuming process. There are three dominant voting platforms currently on the market: ProxyExchange[®], Viewpoint[®], and ProxyEdge[®]. All three platforms provide vote disclosure services (VDS) that tabulate funds’ final votes and garnish the required N-PX reports. In addition, some of their customers choose to display their votes on the platform’s VDS website. Because it’s only voluntary for mutual funds to display votes on the platform’s VDS website (as opposed to the required N-PX forms on EDGAR), it’s not possible to identify every mutual fund’s voting platform from these VDS websites. Fortunately, the three platforms garnish N-PX forms and their VDS websites with similar formats and identical proposal descriptions. That implies I can identify all mutual funds’ voting platforms by comparing proposal descriptions and table formats of their N-PX forms with that of the three platforms’ VDS websites.

For the three voting platforms, owners of two happen to be proxy advisors: ISS owns ProxyExchange and Glass Lewis owns Viewpoint. The third platform, ProxyEdge, is owned by Broadridge, a fintech firm. Under the fact that users of ISS’s ProxyExchange also purchase ISS’s proxy advice and users of Glass Lewis’s Viewpoint purchase Glass Lewis’s proxy advice, I am able to identify the proxy advice supplier of each mutual fund who is found to be a user of ProxyExchange or Viewpoint.⁷ For the funds that are found to use Broadridge’s ProxyEdge, I am unable to identify their proxy advice supplier (As of 2017, they constitute of 5% of the mutual fund

⁶For Form 13-F, the SEC provides a prescribed 8-column table that mutual funds must fill in. However, the SEC does not provide a similar “information table” for Form N-PX. Instead, it only provides “a guide in preparing the report”. See, <https://www.sec.gov/about/forms/formn-px.pdf>. Over the years, petitions have been made to standardize the information tables. See, <https://www.sec.gov/comments/265-28/26528-5158657-183432.pdf>.

⁷From ProxyExchange’s marketing documents, ISS mentioned that it’s “one integrated platform for proxy research, voting, and reporting.” From Viewpoint’s marketing documents, Glass Lewis mentioned that “in-depth Proxy Paper reports are accessible for every meeting you vote”.

market. They are small mutual funds that usually have very few companies in their portfolio).

Figure 1 provides one example for each of the four most-used N-PX table formats (denoted A.1, A.2, B, C). To ensure comparison, all tables display some mutual fund's voting records for Apple Inc's annual meeting in 2019. They are filed by BlackRock, Fidelity, Putnam Investments, and John Hancock Financial, respectively. By comparing their distinct proposal descriptions with the three voting platforms' VDS websites, I find that type A.1 and A.2 correspond to ISS's ProxyExchange, type B corresponds to Glass Lewis's Viewpoint, and type C corresponds to Broadridge's ProxyEdge.⁸ In Online Appendix, I describe in detail how I link the four N-PX table styles to their respective voting platforms. From here, I can identify each mutual fund's voting platform (and hence its proxy advice supplier). It's worth noting that Vanguard has its own unique N-PX format; that implies Vanguard manages its vote by itself.⁹ From Vanguard's prospectus, we know that it purchases proxy advice from both ISS and Glass Lewis.

2.3 Aggregating to Fund-Family

The purchase of proxy advice (and the subsequent voting) is generally decided at the fund-family level (Morningstar, 2017; Bolton et al., 2020). For example, in BlackRock's Prospectus, we know that BlackRock (rather than iShares S&P 500 Index Fund) retained ISS to provide proxy advice, vote execution, and recordkeeping.¹⁰ I hence aggregate fund level observations to fund-family level using the CRSP's definition of the fund family. The aggregation involves a two-step process. In the first step, I aggregate fund level observations (82 million votes from 20654 funds) to CIK level (39 million votes from 2250 CIKs). Using CIK-year as the identifier, I then merge the voting data with the CRSP Mutual Fund dataset to get information on each CIK's fund-family and its characteristics. I can match 84% of observations (33 million votes) with CRSP and the rest votes come from funds that are not covered by CRSP. In the second step, I aggregate CIK level observations to fund-family level using "mgmt_cd", the CRSP identifier for fund-families. After the process, the aggregated dataset contains 15 million votes from 500 fund-families. It covers 420343 number of proposals from 7893 companies. In Online Appendix, I provide examples for each of the three voting platforms. To avoid verbosity, I occasionally refer a fund-family as a fund for the rest of the paper.

⁸ It's interesting to know that ISS's ProxyExchange has two different VDS websites and hence two different formats. From a lawsuit disclosure (<https://www.sec.gov/litigation/admin/2013/ia-3611.pdf>), we know that ISS's platform has two different interfaces. They have different disclosure formats and VDS websites (vds.issgovernance.com and vds.issproxy.com).

⁹ In addition, State Street has its own unique N-PX format from 2008-2011. After that, it uses ISS ProxyExchange.

¹⁰ See, <https://www.sec.gov/Archives/edgar/data/844779/000119312506201228/d497.htm>. Another way to confirm this is to look at proxy advisors' VDS websites. For example, Glass Lewis's VDS website grouped all TIAA funds together. That suggests the decision to purchase Glass Lewis's service is most likely aggregated at the TIAA family level. See, <https://viewpoint.glasslewis.net/webdisclosure/search.aspx?glpcustuserid=TIA129>. In my data, I find only 0.3% of fund-years can be identified to use both ISS and Glass Lewis's system. They tend to be in the transition years when the fund switches voting platforms.

Table 1.A displays the number of fund votes and the number of proposals during my sample years. They are separated by different proposal types. As part of the Dodd-Frank Act, Say-on-pay proposals become mandatory after 2011 and they have to be brought up by management every 1 to 3 years. Before that, shareholders can sponsor them as a governance measure. Because they are different in nature, I treat them differently before and after 2011. Table 1.B and 1.C report summary statistics at the proposal and fund-family level.

3 Descriptive Statistics for the Proxy Advice Industry

3.1 Market Trend

The proxy advisory industry in the U.S. has become effectively consolidated into two firms: ISS and Glass Lewis. Most observers believe that ISS and Glass Lewis jointly controls 97% of the entire market. News articles from the Wall Street Journal, the Economist, Forbes, and Reuters all cited this number.¹¹ Academic papers, such as Copland et al. (2018), Larcker et al. (2015), and Glassman and Peirce (2014) relied on this number as the premise of their analysis. Rule-makings such as the one proposed by SEC in 2019 also hinged on this number. Therefore, it is imperative that we have an accurate and current picture of the proxy advisory industry.

However, the widely cited market share of 97% that ISS and Glass Lewis jointly control came from a decade-old survey done by GAO in 2007. Even more troubling is that the estimation relies on proxy advisors' self-reporting and assumes that Egan-Jones, the third-largest proxy advisor, controls 0% of the market because the firm did not respond to the survey. As ISS mentioned in a letter sent to the Senate Banking Committee, "While we have seen the widely circulated conjecture that two firms "control" 97% of the proxy advisory industry, this is not a statistic we have verified or can confirm."¹² The challenge to get a clear picture for the proxy advisory industry is that proxy advisors don't and can't disclose their client bases as they are trade secrets. This fact is clearly stipulated in the agreement between investors and ISS: "[ISS] not disclose the Fund Information to any person or business entity other than a limited number of employees or officers of the Supplier on a need-to-know basis."¹³ Therefore, so far, there is currently no way for scholars to identify each proxy advisor's market share.

Fortunately, with the identification of each mutual fund's voting platform, I can infer their purchases of proxy advice. To calculate the proxy advice market, I sum up each proxy advisory firm's customers' total assets under management and then compute each firm's market shares. Figure 2 displays the evolving market for different proxy service providers of the U.S. mutual

¹¹WSJ: "SEC Takes Action Aimed at Proxy Advisers for Shareholders"; Economist: "Proxy advisers come under fire"; Forbes: "The Law of Unintended Consequences: The Case of Proxy Advisory Firms"

¹²See, <https://www.issgovernance.com/file/duediligence/20180530-iss-letter-to-senate-banking-committee-members.pdf>

¹³The stipulation of the agreement was disclosed to the public by a lawsuit against ISS. See note 8.

funds. Panel A displays the total assets under management for the customers of each proxy service provider, and Panel B calculates the relative market shares. The left figures of Panel A and B group the market by voting platforms, which are directly identified from N-PX filings as explained above. The right figures group the market by proxy advisory firms. Vanguard appears to have its distinct N-PX table style. However, from its prospectus, we know that it purchases proxy advice from both ISS and Glass Lewis throughout my sample. I hence split the total assets of Vanguard equally to ISS and Glass Lewis's market.

We first notice that there is enormous growth for the size of the proxy advice industry from 2007 to 2017. That's because the underlying mutual fund industry is growing: both for the number of existing funds and for the average size of each fund. The combined assets of mutual funds that ISS and Glass Lewis advise grow from \$8.7 trillion to \$19.4 trillion, an 123% increase. During the same period, the Russell 3000 index grows by 62%. The result suggests that as the mutual fund industry accumulates more voting powers, it becomes increasingly important that they cast votes informatively and their proxy advisors provide accurate information.

Somewhat unexpected, I find that the proxy advice market for U.S. mutual funds has become less concentrated. In 2017, ISS and Glass Lewis jointly controls 91% of the market, compared with 96.5% in 2007. That implies although there is enormous growth for both ISS and Glass Lewis's total market, ISS is gradually losing its relative market share (from 74% in 2007 to 63% in 2017) to both Glass Lewis and other boutique proxy advisors. However, this result doesn't imply the influence of ISS is damping. As we will see later in section 4.2, ISS has a strong and growing influence over its customers' votes.

It's worth noting that the above estimation is a slightly conservative estimation for the market share of ISS and Glass Lewis. That's because even though I am able to precisely identify each mutual fund's voting system (ISS, Glass Lewis, Broadridge, or others), in some cases, a mega-fund may use one voting system but purchases proxy advice from multiple firms. In addition, the calculation of the market share only focuses on the mutual fund industry. Albeit with the caveat, I believe that the results still provide a useful picture for us to understand the evolving competitive landscape for the proxy advisory industry.

3.2 Fund characteristics

It will be interesting to know whether funds that purchase from different proxy service firms possess different characteristics. Table 2.A provides snapshots of funds' characteristics in 2007, 2012, and 2017 if they use ISS, Glass Lewis, or Broadridge's voting systems respectively. Comparing customers of ISS with those of Glass Lewis, we notice that ISS's customers are on average slightly smaller and have fewer ballots to vote.

Table 2.B uses OLS regressions to illustrate the correlation between fund-families' characteristics and their decisions on whether to use ISS, Glass Lewis, or neither. Because mutual funds do not change their proxy advisors frequently, it's important that we cluster standard errors at

the fund-family level. The top table of 2.B excludes funds that use neither ISS or Glass Lewis's voting platforms in order to restrict our attention to the two proxy advisors. The result shows that ISS's customers have fewer ballots to vote and are less likely to provide institutional funds. To interpret the result, an 1% increase in the number of ballots will lead to a 2% decrease in the likelihood of the fund choosing ISS over Glass Lewis.

The bottom table of 2.B includes other funds that use neither ISS or Glass Lewis. I use them as the baseline group in the OLS regression. The regression is a linear version of the multi-logit regression for better interpretation. The result shows that those funds are on average smaller, have fewer ballots to vote, have larger management fees, and smaller expense ratios. Many of them are boutique funds that have only a few companies in their portfolios and hundreds of ballots to vote on. It's unsurprising to see they are more likely to purchase the proxy advice from boutique advisors if at all.

3.3 Investor Ideologies

Recent papers such as [Matsusaka and Shu \(2020\)](#) and [Ma and Xiong \(2020\)](#) ask the question of what constitutes a "good" proxy advice when investors have heterogeneous ideologies such as environmental sustainability and protection of human rights. This is also noted in the SEC's 2019 proposed rule: "proxy voting advice business clients may have goals other than, or in addition to, share value maximization. Because investors may be willing to forgo share value, we are unable conclusively to infer recommendation quality from stock market reactions." In this section, we want to answer what are the ideologies preferred by each proxy advisor's customers, and are they different?

Using the ideology score developed by [Bolton et al. \(2020\)](#), I study whether ISS and Glass Lewis's customers have different preferences for social-related and governance-related issues. They estimated each investor's preference using the W-NOMINATE method to scale investors' votes in 2012. The ideology scores are directly provided by the authors. I use their estimates of the two-dimensional model excluding director elections. The exclusion is to ensure that the scores are not unduly driven by director elections and is preferred by the original authors. The two scores, both in the range of $[-1, +1]$, are interpreted as being socially-oriented and tough-on-governance. The polarity of the scores is arbitrary and I keep the original authors' convention: socially oriented investors have a lower score in the first dimension and tough-on-governance investors have a larger score in the second dimension.

Figure 3.A scatter plots each fund's ideology scores in 2012. They are grouped by the identity of their proxy advisors where ISS's customers are plotted in blue color and Glass Lewis's customers are plotted in red color. We can immediately notice that ISS and Glass Lewis's customers are clustered together: ISS's customers on the lower left and Glass Lewis's customers on the upper right. This implies that funds that purchase from ISS and Glass Lewis do exhibit different preferences on social and governance issues. Figure 3.B plots the distribution of the social and

governance scores for funds that purchase advice from ISS and Glass Lewis.

The results of figure 3 show that funds that purchase advice from ISS care more about social issues (have a lower score in the first dimension) but less about governance issues (have a lower score in the second dimension). The opposite is true for Glass Lewis's customers: they care less about social issues but more on governance issues. This finding lends credit to [Matsusaka and Shu \(2020\)](#)'s theoretical argument that funds take into account of ideologies when choosing where to purchase the proxy advice. Table 3 reports the results of the OLS regression of a fund's ideology scores as a function of whether it purchases the advice from ISS. We see that after controlling for fund characteristics, the findings still stand. In addition, this table shows fund families that offer any ESG product have preferences towards social issues, a finding that lends validity to [Bolton et al. \(2020\)](#)'s methodology.

Two possible mechanisms can explain the result. First, funds that purchase ISS or Glass Lewis's proxy advice can be inherently different. Investors with different ideology preferences self-select into different proxy advisors: socially-oriented investors choose ISS and governance-oriented investors choose Glass Lewis. Alternatively, because ideology scores are the revealed preferences estimated from investors' votes, they can be directly influenced by proxy advisors' own ideologies. For example, if ISS itself is socially-oriented, it's unsurprising to see that the votes of its customers are socially-oriented. Disentangling those two channels has important policy implications and deserves more future research. For example, it's important to know whether ISS is a minority activist trying to use its recommendations as a way to advance a social and cultural agenda, or whether it simply represents the customers' preferences.

4 Influence of ISS's Recommendations

4.1 Investors' Agreement with ISS: Customers and Non-customers

There are two reasons why investors can vote in the same direction as ISS's recommendations. First, they can agree on the fundamentals of the proposal. For example, in 2017, ISS supported the compensation package for Berkshire Hathaway's Warren Buffet and Charles Munger, who both earn a salary of \$100,000 a year. Most of Berkshire Hathaway's shareholders also voted to support it (not surprisingly). In fact, the proposal got 99.7% of the total votes. In this example, the agreement between shareholders' votes and ISS's recommendation will probably not be a good measure for ISS's influence on investors' votes. Alternatively, investors can agree with ISS because some of them listen to its proxy advice regardless of the fundamentals. Suppose now ISS changed its recommendation and started to oppose the same proposal without anything changed. If under this hypothetical scenario, 10% of the votes started to be against the proposal, we are fairly confident to conclude that ISS can sway 10% of investors' votes. The difficulty to disentangle those two channels is that we don't observe the proposal-specific fundamentals and we cannot arbitrarily change ISS's recommendations. Hence, most efforts to estimate ISS's

influence from investors' votes are troubled by the endogeneity issue.

Fortunately, with the unique help from the information on proxy advisors' customer bases, I can compare with the votes of ISS's customers and the votes of other investors who don't purchase its advice. This method implicitly controls for the proposal-specific factors because both groups are facing the same fundamentals. The only difference is that one has access to ISS's proxy advice and the other one does. Using the previous example as an illustration, if both 99.7% of votes from ISS's customers and 99.7% of votes from non-customers supported the proposal, then we can conclude that ISS has little influence on this particular proposal. On the other hand, if 99.7% of the votes from ISS's customers supported it but only 97.7% of the votes from other investors supported it, we can conclude that ISS can affect 2% of its customers' votes on this proposal.

To do so, I use the following OLS regression to estimate ISS's influence. Each observation is one fund-vote: i represents the fund, p represents the proposal, and t represents the year, which is subsumed in p . Similar to [Iliev and Lowry \(2015\)](#), I aggregate "Against" and "Withhold" together as negative votes. The dependent variable agree_ISS_{ipt} is a dummy that denotes whether the vote is the same as ISS's recommendation. The explanatory variable of interest is ISS_Customer_{it} , which equals to one if the fund is an ISS customer. The regression includes fund characteristics as controls and more importantly, it includes proposal fixed effect. This will control for the unobserved proposal-specific factors. I cluster standard errors at the fund-family level.

$$\text{agree_ISS}_{ipt} = \beta_0 + \beta_1 \cdot \text{ISS_Customer}_{it} + \gamma' \cdot \mathbf{Z} + \varepsilon_p + \varepsilon_{ipt} \quad (1)$$

Both my method and [Malenko and Shen \(2016\)](#)'s regression-discontinuity (RD) method aim to isolate ISS's influence from the unobserved proposal-specific fundamentals. There are several differences when interpreting our results. The RD method compares investors' votes when they face *different* recommendations with *similar* fundamentals. For my approach, I compare the votes of investors who have or don't have access to ISS's advice for the *same* proposal and the *same* ISS recommendations. That implies, without relying on the change of ISS's recommendations, I can estimate ISS's influence even for proposals that are not contentious, i.e., when management and ISS both support the proposal. I denote this influence of ISS as its **certification effect**. This is important information when gauging ISS's influences because many investors simply move on and don't dig into the proposal when their proxy advisors agree with the management. As the head of BlackRock's corporate governance once said, the firm doesn't comb through every shareholder proposal but only when proxy advisors have identified an issue.¹⁴ On the contrary, [Malenko and Shen \(2016\)](#)'s method can only estimate how much votes ISS can sway when ISS starts to recommend against the proposal. I denote this influence of ISS as its **sway effect**. My

¹⁴See, <https://www.nytimes.com/2013/05/19/business/blackrock-a-shareholding-giant-is-quietly-stirring.html>. In my sample, 89% of director elections and 86% of say-on-pay proposals are not contentious (Table 1.B)

approach can measure both the certification effect and the sway effect by estimating equation 1 on proposals for which ISS supports or oppose the management.

Table 4.A reports the results for the estimation of equation 1 for different proposal types. On average, ISS customers are 4% more likely than other investors to agree with its recommendations. As we mentioned earlier, most proposals are not contentious. That implies the baseline agreement with ISS is already high (90%), so the 4% increase is a meaningful influence of ISS's recommendations. For ISS's certification effect, table 4.B suggests that ISS's support of a proposal can increase 2% additional supporting votes from its customers if ISS certifies management's recommendations. Using the above example of BlackRock as an illustration, the fund will be 2% more likely to comb through the details of the proposal if it hadn't subscribed to ISS and can't see its certification. For ISS's sway effect, table 4.C repeats the analysis by including only contentious proposals. The results imply that funds who purchase ISS's advice are 21% more likely than investors who don't purchase the advice to choose ISS's stance over management's. This implies ISS has an enormous amount of influence to sway its customer votes. It is particularly problematic if it results from factual errors of ISS's analysis.

Another interesting finding is that for social-related proposals, ISS does not have much certification effect: it can't influence much of its customers' votes when it agrees with the management (i.e., opposes the social proposal). However, it can have a large influence to sway customers' votes when it disagrees with the management (i.e. support the social proposal). This result echos the findings in section 3.3 that ISS's customers have ideologies that are more socially oriented.

4.2 Trend for ISS's influence

As mentioned earlier, compared with [Malenko and Shen \(2016\)](#), my approach can estimate ISS's influence on every proposal type and in every year. That enables me to answer important questions such as whether ISS's influence is ever-growing. A priori, the answer is not obvious. On one hand, the equity market has become more and more passive and passive funds conduct significantly less research on corporate governance ([Iliev et al., 2018](#)). If that's the case, we expect that ISS will have a greater influence on its customers' votes. On the other hand, investors have over the years developed stronger views on social and governance issues. For example, BlackRock's CEO Larry Fink sent letters to all CEOs in its portfolios demanding firms to be aware of the ESG risk. If this is the case, we would expect investors to rely less on proxy advisors. The controversy is also manifested in a survey done by Bloomberg: "practitioners disagreed on whether the proxy advisory firms' influence has grown, decreased, or stayed about the same".

To answer this question, I repeat the estimation of ISS's sway effect for each year. Figure 4 shows that after 2012, the influence of ISS is indeed growing for director elections, say-on-pay proposals, and other shareholder sponsored proposals. For example, in 2012, ISS can sway 17% of its customers' votes on director elections when it recommends voting against the director. The influence increased to 27% in 2017. ISS's sway effect on say-on-pay proposals increased from

18% to 26%. The same pattern also applies to governance-related and social-related proposals. Another intriguing finding from this figure is that there appears to be a spike for ISS’s influence during the 2008 financial crisis. This provides suggestive evidence that investors rationally allocate their attention during stress times (Kacperczyk et al., 2016; Kempf et al., 2017). Section 5 will discuss it in more details.

4.3 Switching In or Out of ISS’s Customer Base

Another way to gauge ISS’s influence is to look at a fund’s voting pattern right after it switches into or out of ISS’s customer base. Throughout my sample, there are a total of 32 fund families that switched from other voting platforms to ISS’s (10 from Glass Lewis), and 46 ISS’s customers switched to other platforms (23 to Glass Lewis). If ISS’s recommendations have an influence on its customers, we will expect that those funds’ voting patterns will change immediately after the switch. To see this, I use the following diff-in-diff setup to estimate the treatment effects of having access to ISS’s proxy advice on how much a fund agrees with ISS.

$$\text{agree_ISS}_{i,t+1} - \text{agree_ISS}_{i,t} = \beta_0 + \beta_1 \cdot \text{switch}_{it} + \gamma' \cdot \mathbf{Z} + \varepsilon_{it} \quad (2)$$

where $\text{agree_ISS}_{i,t}$ is the fraction of fund i ’s votes that agree with ISS in year t . As in equation 1, this fraction can be calculated for different proposal types. The explanatory variable of our interest, switch_{it} , denotes whether the fund (a) switched in, or (b) switched out of ISS’s customer base in year t , where (a) and (b) are used for separate regressions. Each observation is a fund-year and standard errors are clustered at fund level. To relate equation 1 with 2, the latter compares a fund’s votes before and after it switches proxy advisors while using the non-switching funds as the control group. It is similar to adding fund fixed effect to the equation 1.

Table 5 reports the estimation results for equation 2. Table 5.A (or 5.B) shows what happens to a fund’s votes after it starts (or stops) using ISS’s voting platform. We see that after a fund starts purchasing ISS’s proxy advice, its votes become 2% more likely than before to be in the same direction as ISS’s recommendations. As mentioned earlier, this is not a trivial change since most proposals are not contentious and the unconditional mean of agreeing with ISS is already over 90% (table 1.C). For contentious proposals, after a fund starts to purchase ISS’s proxy advice, its votes will become 15% more likely than before to be swayed by ISS (52% is the unconditional mean). Similarly, we find opposite voting patterns for ISS’s customers who switch out of its service. The fraction of switching investors’ votes that are in the same direction as ISS decreases by 5% overall, and by 19% for contentious proposals. Those results are similar to those of section 4.1. In addition, the result again shows that ISS has a large sway effect on its customers’ votes on social-related proposals.

To visually see the effect, figure 5 displays the change of a fund’s voting pattern if it switches in or out of ISS’s customer base. Panel A shows the voting patterns of ISS’s customers that switched out of ISS and Panel B shows the voting patterns for funds that switched into ISS. All

figures' x-axis denotes the relative year to the switching year. The y-axis of left figures displays the fraction of the fund's votes on contentious proposals that agree with ISS in the current year minus that of the same fund in the switching year. This is similar to the calculation from the fund fixed effect. Similarly, the y-axis of right figures displays the fraction of the fund's votes on contentious proposals that agree with ISS in the current year minus that of other non-switching funds in the same year. This is similar to the calculation from the year fixed effect. The result again shows that ISS can exert meaningful influence (around 20% of the votes) on its customers.

4.4 Robo-Voting

Robo-Voting is always a great concern for industry participants and regulators. A survey done in 2020 shows that 90% of retail investors support disabling robo-voting when additional analysis is available from proxy advisors' reports.¹⁵ While there is no uniform definition for robo-voting, it generally denotes the practice of investors automatically relying on proxy advisors' recommendations without evaluating the merits of them or the analysis underpinning them. Another survey done by four major U.S. law firms of over a hundred companies shows that around 20% of the total vote is voted within three business days after ISS issues its recommendations (Placenti, 2018). To mitigate the risk of investors blindly following proxy advice that sometimes contains factual errors, the SEC proposed a rule in 2019 that requires proxy advisors to give registrant (companies) chances to review their analysis before distributing them to investors.

It's important to grasp the prevalence of the robo-voting. For example, in the newly proposed rule, SEC is seeking comments on "In instances where proxy voting advice businesses provide voting execution services (pre-population and automatic submission) to clients, are clients likely to review a registrant's response to voting advice?". Over the years, researchers have attempted to measure the extent to which investors blindly follow the proxy advice (Iliev and Lowry, 2015; Doyle, 2018; Placenti, 2018). However, without knowing proxy advisors' customer bases, they tend to underestimate the severity of the issue by inflating the denominators. For example, Iliev and Lowry (2015) mentioned that "To the extent that some funds rely on a proxy advisory service other than ISS, we actually underestimate the frequency of passive voting." With the help of my dataset, I can more accurately estimate the fraction of robo-voters among investors who have the same proxy advisors.

Iliev and Lowry (2015) and Doyle (2018) flag an investor as a robo-voter if its votes agree with ISS on more than 99 percent of *all proposals*. Instead, I flag an investor as a robo-voter if its votes agree with ISS on more than 99.9 percent of *proposals that ISS and management disagree on*.¹⁶ This is

¹⁵The survey also shows that 47% of retail investors are familiar with the practice of robo-voting. See, <https://www.prnewswire.com/news-releases/spectrem-group-study-reveals-wide-retail-investor-support-for-proposed-sec-amendments--january-10-2020-300984956.html>

¹⁶Given that most proposals are not contentious, using 99 percent agreement with ISS on all proposals will not be an accurate indicator for robo-voting. For example, Doyle (2018) singled out the investor AQR as one of the funds that agree with ISS the most. It follows ISS's recommendations 99.9% of times. However, if we only look at the contentious

a much more restrictive definition because it implies a robo-voter chooses management's stance fewer than 0.1 percent of times. From this definition, it's very unlikely that the high agreement between the robo-voter and ISS is from the underlying proposal-specific factors or their similar ideologies. In Online appendix, I also report the results if I vary the threshold from 99% to 100% or use all proposals as the denominator.

Figure 6.A shows the total number and the fraction of investors who robo-vote with ISS's recommendations over the years. The result echos the concern that the practice of robo-voting is prevalent and ever-growing. In 2017, 31 investors combined managing \$213 billion of assets almost blindly follow ISS recommendations. From 2006 to 2017, the fraction of those robo-voting customers of ISS grows from 12% to 23%. This provides a direct answer to the SEC's question: 23% of ISS's clients are not going to review the registrant's response even if they are given a chance to do so.

So far, we have only considered one form of robo-voting, blindly following ISS's recommendations. However, when making voting decisions, investors have another source of information: managements' recommendations. For investors who purchase neither ISS or Glass Lewis's proxy advice, there is an often-ignored risk that they blindly follow management's recommendations. Indeed, figure 6.B finds that robo-voting with management is also widespread and growing among those investors. I define a robo-voter with management analogously to a robo-voter with ISS: if its votes agree with management on more than 99.9 percent of *proposals that ISS and management disagree on*. In 2017, there are 30 investors, combined managing \$106 billion, almost blindly following management's recommendations.

One immediate question to ask is who are those robo-voters. Are they index investors who are less likely to perform due diligence to review proxy advisors' recommendations as suggested by [Lund \(2017\)](#) and [Iliev et al. \(2018\)](#)? Or are index investors active participants in the space of corporate governance as suggested by [Appel et al. \(2016\)](#)? Table 6 reports the results of OLS regressions on whether a fund is a robo-voter as a function of its characteristics. The result shows that ISS's customers that provide any index fund product are 10% more likely than others to blindly follow its advice. This confirms [Lund \(2017\)](#), who argue that index funds lack incentives to ensure well-run companies because they don't seek to outperform the index. The result, however, is not inconsistent with [Appel et al. \(2016\)](#). They show that passive investors exert influence on corporate governance through their large voting blocs. They treat passive investors as a group that includes mega-funds like BlackRock and Vanguard, while I am studying each individual passive investor's voting behaviors by controlling their sizes. Dropping assets and the number of votes as covariates, the regression will be similar to their argument.

We also see that a one percent increase in ISS customers' assets or the number of ballots will lead to a four percent decrease in the likelihood that it blindly follows ISS's advice. The negative relationship for funds that blindly follow managements' advice. This is an unsurprising

proposals, it agrees with ISS only 97.5% of times, which is not within my definition of robo-voting.

finding because larger funds have greater economic interests at stake so they are more likely to actively participate in voting. They also have resources and the economy of scale for corporate stewardship. The result is consistent with a 2007 survey done by the GAO office that shows small investors have limited resources to conduct their own research and tend to rely more heavily on proxy advisory firms.

5 Additional Investigation and Discussion

5.1 ISS Influence Under Different Market Volatility

Thus far we have established the fact that ISS has a strong influence on its customers' votes. We have also seen that its influence spiked during the 2008 financial crisis. In this section, we want to study what drives ISS's influence on its customers and whether it varies across different market conditions. [Kacperczyk et al. \(2016\)](#) argue that investors' attention is limited and should be allocated rationally when choosing portfolios. For corporate voting, a priori, it's not obvious whether investors will allocate more or less attention during volatile markets. One on hand, investors may be busy attending to their portfolios, hence spending less effort on corporate voting ([Kempf et al., 2017](#)). If that's the case, we would see an increase in ISS's influence during volatile markets. One the other hand, the marginal return for strong corporate governance also increases in volatile markets, hence increasing investors' incentives on corporate voting. If that's the case, we would see a decrease in ISS's influence.

To test the hypothesis, I repeat the analysis in section 4.1 after splitting the sample into different market volatility. Companies usually file proxy statements around 30 to 50 days before the annual meeting before their annual meetings. And ISS issues its recommendations between the date that the proxy statement becomes available and the date of the annual meeting. As a result, I use the 1-month and 2-month average of the VIX index prior to the meeting date as the measure for the market volatility that investors face. Table 7 reports the results. We can see that for both uncontentionous proposals (certification effect) and contentious proposals (sway effect), ISS's influence is greater when the market becomes more volatile. The result is consistent with the hypothesis that investors allocate more attention toward portfolio selections and less toward corporate voting in volatile markets.

5.2 ISS Influence and Fund Characteristics

ISS's influence can also vary for different funds. For example, an ESG investor may be more active in voting on proposals that relate to social issues. Hence we would expect them to be less affected by ISS's recommendations on those proposals (particularly when ISS opposes them). For investors with large ballots, they may not comb through every shareholder proposal, especially when ISS and management agree. To test those hypotheses, I study the relationship between the

characteristics of ISS customers and their votes' agreement with ISS. Table 8 reports the result. The finding is consistent with our conjecture: for funds that have more ballots to vote on, ISS will have a greater influence on them for proposals that ISS and management agree on, i.e. a greater certification effect. However, for proposals that ISS and management don't agree on, the size of funds won't affect their reliance on ISS. This suggests that those large funds purchase proxy advice primarily to alert them with potential issues. However, once the issue is identified, they start their own due diligence. The finding echos what the head of BlackRock's corporate governance effort once said: "BlackRock analysts don't comb through every shareholder proposal. Once those services have identified an issue, BlackRock assigns an analyst to it.". This result again supports the hypothesis that investors allocate their attention rationally. In addition, we see that ESG funds do agree less with ISS on social proposals when ISS agrees with the management (i.e. when ISS recommends against the proposal).

5.3 Potential Biases and Self-selection

One difficulty to estimate proxy advisors' influence is the endogeneity problem arriving from the unobservable firm and proposal characteristics. Thus far, we have nicely addressed this issue by comparing ISS customers' votes with those of other investors of the same proposal. The ISS's influence estimated from this method can be interpreted as the difference between reality and what would happen in a hypothetical world where ISS did not exist. However, one may argue that even if ISS didn't exist, its customers may not vote the same as other investors. That's because investors may self-select into the proxy advisor with whom they have similar ideologies (Matusaka and Shu, 2020). If this is true, ISS's customers will vote more similarly with ISS than other investors regardless of whether it has been advised by ISS or not. In other words, ISS's customers may be inherently different than other investors. This self-selection issue will upward bias the assessment of ISS's influence if estimated from equation 1.

Section 4.3 partly addressed this concern by examining what would happen after a fund switched its proxy advisor. This approach is similar to include the fund fixed effect to equation 1 and hence to control for the time-invariant fund characteristics. We do see from table 5 that after a fund starts to purchase from ISS, the agreement between its votes and ISS's recommendations sharply increases. One may still concern that funds' ideology may be time-variant, and both the decision to switch to ISS and the subsequent votes can result from the changed fund characteristics. In order to further reduce the selection bias, I use the propensity score matching (PSM) method to match ISS's customers with other investors within the same year for their characteristics that appeared in table 2. The PSM method used is a one-to-one matching without replacement and with a tolerance of 0.001 for the score. Figure 7 shows the distribution for fund size, number of votes, and age before and after the matching. It shows the effectiveness of the matching and confirms the common support assumption. Table 9 reports the results of the OLS regressions for equation 1 after the matching. We can see that the estimated influence of ISS is

qualitatively similar to the estimation before matching (table 4).

In addition, to reduce the selection bias from unobserved fund characteristics, I perform an instrumental variable regression using funds' geographic location as the instrument. The inclusion restriction relies on the assumption that a fund is more likely to purchase from ISS if it's geographically closer to its offices. So far, ISS has a total of twelve offices spread across the U.S.. Figure 8 plots the locations of ISS's twelve offices and each mutual fund's location. This lends support to the inclusion restriction as the revealed preference suggests that ISS aims to attract more funds by locating closer to them. I construct the instrument, distance to ISS, as the minimum distance between the fund's location and ISS's twelve offices.¹⁷ I also include the state fixed effect, which is relevant because the relative distance within a state also appears to matter for funds' decisions whether to purchase from ISS. This is suggested by ISS's two offices in New York and three offices in California. The exclusion restriction relies on the fact that funds' geographic locations are unlikely to correlate with their votes' similarity with ISS. Table 10 reports the results. Column 1 shows that if a fund is 1 kilometer further away from ISS's offices, it will be 7% less likely to purchase from it. Column 2-7 estimates how much more ISS's customers agree with its recommendations than other investors. We can see that the results are similar for OLS and IV estimations.

6 Conclusion

The influence of proxy advisors is a matter of continual interest. Many arguments rely on the fact that the industry is a duopoly where the two largest firms ISS and Glass Lewis control 97% of the market. However, this number comes from a decade-old survey and is under several unrealistic assumptions. In this paper, using an innovative method to identify mutual funds' voting platforms, I provide what appears to be the first detailed characterization of the proxy advice market. Over the last decade, the market has become less concentrated. ISS is gradually losing its market share to Glass Lewis and other boutique proxy advisors. As of 2017, ISS controls 63% of the market, which decreased from 74% in 2007.

Nevertheless, the influence of ISS is growing during the last decade. In 2012, ISS can sway 17% of its customers' votes on director elections when it opposes the director. In 2017, it can sway 27% of their votes. In addition, the fraction of ISS's customers who robo-vote grows from 12% in 2006 to 23% in 2017. My finding also suggests that proxy advisors' influence partly results from investors' rational allocation of attention. ISS's recommendations have greater influences during volatile markets, and its recommendations' certification effect is larger on investors with more ballots to vote. This suggests that large funds purchase proxy advice primarily to alert them with

¹⁷They are in Ann Arbor, Boston, Chicago, Denver, Menlo Park, New York (2 locations), Norman, Rockville, San Diego, San Francisco, Stamford. To calculate the distance between two zip codes, I use the haversine formula with the help from python pgeocode package to map zip codes to coordinates.

potential issues.

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Appendix

Figure 1: N-PX Types

This Figure displays one example for each of the four most-used N-PX table formats (denoted A.1, A.2, B, C). All tables show Apple Inc's Annual meeting in 2019. They are filed by BlackRock, Fidelity, Putnam Investments, and John Hancock Financial, respectively. Type A.1 and A.2 correspond to the reporting style of ISS's ProxyExchange, type B corresponds to Glass Lewis's Viewpoint, and type C corresponds to Broadridge's ProxyEdge.

Type A.1: ISS ProxyExchange®

APPLE, INC.				
TICKER: AAPL		SECURITY ID: 037833100		
MEETING DATE: MAR 01, 2019		MEETING TYPE: Annual		
RECORD DATE: JAN 02, 2019				
#	Proposal	Mgt Rec	Vote Cast	Sponsor
1a	Elect Director James Bell	For	For	Management
1b	Elect Director Tim Cook	For	For	Management
1c	Elect Director Al Gore	For	For	Management
1d	Elect Director Bob Iger	For	For	Management
1e	Elect Director Andrea Jung	For	For	Management
1f	Elect Director Art Levinson	For	For	Management
1g	Elect Director Ron Sugar	For	For	Management
1h	Elect Director Sue Wagner	For	For	Management
2	Ratify Ernst & Young LLP as Auditors	For	For	Management
3	Advisory Vote to Ratify Named Executive Officers' Compensation	For	For	Management
4	Proxy Access Amendments	Against	Against	Shareholder
5	Disclose Board Diversity and Qualifications	Against	Against	Shareholder

Type A.2: ISS ProxyExchange®

APPLE, INC.				
MEETING DATE: MAR 01, 2019				
TICKER: AAPL SECURITY ID: 037833100				
Proposal No	Proposal	Proposed By	Management Recommendation	Vote Cast
1a	Elect Director James Bell	Management	For	For
1b	Elect Director Tim Cook	Management	For	For
1c	Elect Director Al Gore	Management	For	For
1d	Elect Director Bob Iger	Management	For	For
1e	Elect Director Andrea Jung	Management	For	For
1f	Elect Director Art Levinson	Management	For	For
1g	Elect Director Ron Sugar	Management	For	For
1h	Elect Director Sue Wagner	Management	For	For
2	Ratify Ernst & Young LLP as Auditors	Management	For	For
3	Advisory Vote to Ratify Named Executive Officers' Compensation	Management	For	For
4	Proxy Access Amendments	Shareholder	Against	Against
5	Disclose Board Diversity and Qualifications	Shareholder	Against	Against

Type B: Glass Lewis Viewpoint®

Ticker	Security ID:	Meeting Date	Meeting Status		
AAPL	CUSIP 037833100	03/01/2019	Voted		
Meeting Type	Country of Trade				
Annual	United States				
Issue No.	Description	Proponent	Mgmt Rec	Vote Cast	For/Agnt Mgmt
1	Elect James A. Bell	Mgmt	For	For	For
2	Elect Timothy D. Cook	Mgmt	For	For	For
3	Elect Albert A. Gore	Mgmt	For	For	For
4	Elect Robert A. Iger	Mgmt	For	For	For
5	Elect Andrea Jung	Mgmt	For	For	For
6	Elect Arthur D. Levinson	Mgmt	For	For	For
7	Elect Ronald D. Sugar	Mgmt	For	For	For
8	Elect Susan L. Wagner	Mgmt	For	For	For
9	Ratification of Auditor	Mgmt	For	For	For
10	Advisory Vote on Executive Compensation	Mgmt	For	For	For
11	Shareholder Proposal Regarding Proxy Access Bylaw Amendment	ShrHoldr	Against	Against	For
12	Shareholder Proposal Regarding Disclosure of Board Qualifications	ShrHoldr	Against	Against	For

Type C: Broadridge ProxyEdge®

APPLE INC.				
SECURITY: 037833100				
MEETING TYPE: Annual				
MEETING DATE: 01-Mar-2019				
TICKER: AAPL				
ISIN: US0378331005				
Agenda Number: 934919359				
Prop.#	Proposal	Proposal Type	Proposal Vote	For/Against Management
1a.	Election of director: James Bell	Mgmt	For	For
1b.	Election of director: Tim Cook	Mgmt	For	For
1c.	Election of director: Al Gore	Mgmt	For	For
1d.	Election of director: Bob Iger	Mgmt	For	For
1e.	Election of director: Andrea Jung	Mgmt	Against	Against
1f.	Election of director: Art Levinson	Mgmt	For	For
1g.	Election of director: Ron Sugar	Mgmt	For	For
1h.	Election of director: Sue Wagner	Mgmt	For	For
2.	Ratification of the appointment of Ernst & Young LLP as Apple's independent registered public accounting firm for 2019	Mgmt	For	For
3.	Advisory vote to approve executive compensation	Mgmt	For	For
4.	A shareholder proposal entitled "Shareholder Proxy Access Amendments"	Shr	Against	For
5.	A shareholder proposal entitled "True Diversity Board Policy"	Shr	Against	For

Table 1: Summary Statistics

(A) Number of Voting (Proposals) by Year

This Table reports the number of voting and proposals during 2006-2017. Of each year, the number of total votings is displayed on the top, and the number of proposals is displayed on the right below with parenthesis. Voting is aggregated at fund family level.

	Director Elections	Say-on-Pay (before 2011)	Say-on-Pay (after 2011)	Compensation: Other	Financial Policy	Golden Parachutes	Adopt Poison Pill	Board Declass.	Proxy Access	Independent Chairman	Political Contributions	Animal Rights	Environmental	Social Proposal
2006	398314 (15711)	151 (4)	0 (0)	25451 (1009)	9981 (408)	0 (0)	95 (4)	3780 (108)	0 (0)	2038 (50)	1907 (35)	0 (0)	684 (14)	2542 (44)
2007	457725 (15747)	2791 (49)	0 (0)	27553 (950)	11833 (474)	0 (0)	106 (4)	3483 (87)	0 (0)	2205 (40)	1862 (33)	0 (0)	1591 (27)	3576 (55)
2008	520593 (16420)	4738 (85)	0 (0)	32282 (1033)	10916 (354)	0 (0)	185 (8)	4896 (145)	0 (0)	1659 (28)	1784 (31)	514 (10)	1537 (25)	74 (1)
2009	642132 (17890)	10699 (310)	0 (0)	41754 (1141)	11809 (382)	0 (0)	615 (20)	4638 (119)	0 (0)	2173 (37)	2168 (32)	858 (14)	1309 (23)	0 (0)
2010	700604 (17714)	10276 (213)	0 (0)	41726 (1058)	10864 (351)	0 (0)	485 (16)	4774 (110)	0 (0)	2831 (42)	2590 (36)	946 (15)	2585 (39)	0 (0)
2011	731016 (20337)	0 (0)	109840 (3148)	41207 (1153)	12060 (395)	1241 (40)	237 (10)	4926 (98)	0 (0)	1966 (30)	4101 (53)	718 (9)	2021 (30)	0 (0)
2012	796741 (21878)	0 (0)	104227 (2580)	40176 (1132)	11609 (421)	2450 (99)	338 (15)	7542 (131)	672 (13)	3963 (56)	6063 (72)	923 (13)	1199 (16)	0 (0)
2013	780276 (23988)	0 (0)	99851 (3045)	44046 (1259)	11726 (487)	3679 (149)	323 (17)	6825 (138)	1091 (17)	4137 (65)	5438 (77)	288 (6)	1795 (23)	33 (2)
2014	933399 (25364)	0 (0)	126707 (3243)	44801 (1238)	13265 (458)	3666 (124)	174 (7)	4854 (103)	2024 (24)	4599 (64)	6798 (86)	424 (6)	3163 (41)	87 (1)
2015	1204522 (25718)	0 (0)	142249 (2779)	58367 (1265)	17397 (503)	6413 (156)	236 (13)	3302 (70)	9224 (105)	6650 (65)	6967 (67)	696 (10)	5038 (50)	144 (1)
2016	1158399 (25126)	0 (0)	134509 (2806)	56581 (1276)	18559 (572)	7415 (174)	159 (5)	3105 (68)	8571 (113)	4604 (49)	7080 (67)	119 (2)	4765 (50)	538 (5)
2017	1168213 (20487)	0 (0)	147836 (2565)	57225 (1073)	16386 (334)	6294 (77)	0 (0)	2871 (54)	3995 (44)	4151 (44)	6223 (58)	264 (3)	4952 (51)	561 (4)

(B) Proposal Characteristics

This Table reports summary statistics for all proposals that can be found in my dataset (except the proposals on say-on-pay frequency). It covers 7893 firms across 2006-2017. After 2011, say-on-pay proposals become mandatory for either every one or three years. I hence split them pre- and post-2011. Except for “# of items”, the numbers in the table represent the mean of each proposal type, where “# of items” denotes the number of occurrences. “Mgmt Sponsor” is a dummy that equals to 1 if the proposal is sponsored by the management. “Mgmt Support” equals to 1 if the proposal is supported by the management. “ISS support” equals to 1 if ISS recommends voting “For”. “% For ISS” denotes the fraction of ISS’s customers that vote “For” the proposal. “% For GL” is defined analogously. “Support rate” denotes the voting outcomes.

	# of Items	Mgmt Sponsor	Mgmt Support	ISS Support	% For (ISS)	% For (GL)	Support Rate
Routine Proposals							
Director Elections	292321	100%	100%	89%	90%	91%	95%
Say-on-Pay (before 2011)	644	59%	59%	86%	76%	52%	70%
Say-on-Pay (after 2011)	25323	100%	100%	88%	88%	87%	91%
Compensation: Other	16035	100%	100%	77%	77%	79%	86%
Financial Policy	5899	100%	100%	91%	92%	92%	81%
Governance Proposals							
Golden Parachutes	983	100%	100%	71%	76%	80%	80%
Adopt Poison Pill	127	100%	97%	59%	54%	39%	66%
Board Declassification	1428	65%	65%	98%	95%	97%	79%
Proxy Access	369	20%	21%	91%	78%	67%	54%
Independent Chairman	703	0%	0%	66%	45%	46%	30%
Social Proposals							
Political Contributions	813	0%	0%	76%	43%	29%	23%
Animal Rights	90	0%	0%	9%	9%	6%	5%
Environmental	465	0%	0%	65%	38%	23%	20%
Social Proposal	193	0%	3%	17%	12%	13%	10%

(C) Mutual Funds

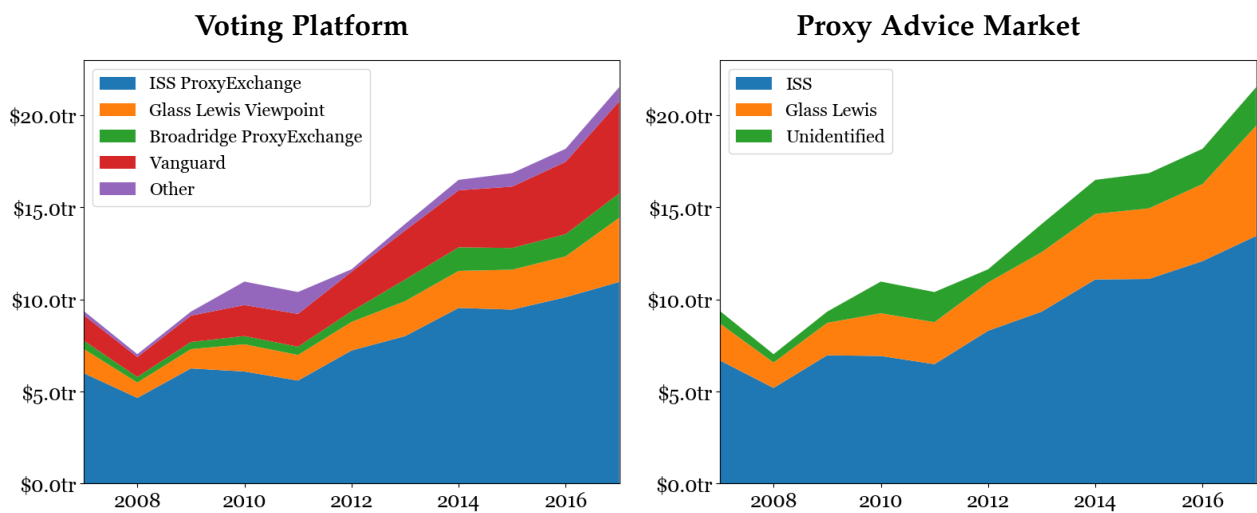
This Table reports summary statistics mutual fund families. The fund family is defined as fund management in CRSP Mutual Fund Dataset (variable mgmt.cd). One observation is a family-year. A fund is a “ESG” fund if its name contains any of the following words: esg, social, climate, environment, impact, responsible, carbon, and fossil. A fund is an “institutional” fund if it’s flagged by CRSP as an institutional fund. A fund is an “index” fund if either it’s flagged by CRSP as an index fund or its name contains any of the following words: index, idx, indx, inds, russell, s & p, s and p, s&p, sandp, sp, dow, dj, msci, bloomberg, kbw, nasdaq, nyse, stoxx, ftse, wilshire, morningstar, 100, 400, 500, 600, 900, 1000, 1500, 2000, 5000, as in [Iliev and Lowry \(2015\)](#). Management fee and expense ratio are the TNA-weighted average numbers for the fund-family. The identity of the voting platforms is inferred from funds’ N-PX filings. “% agree with ISS” denotes the fraction of proposals that the fund-year vote in the same way as ISS recommends. I denote a proposal contentious if ISS’s recommendation is different from the management’s. I flagged a family-year as a robo-voter if it follows ISS more than 99.9% of times for contentious proposals.

	Obs	Mean	Std	5%	25%	Median	75%	95%
Characteristics								
Age of the Mgmt	2,491	29.17	22.78	3.00	14.00	23.00	35.00	80.00
Total Net Asset (in \$10 ⁶)	2,491	60.42	243.81	0.03	0.54	4.43	26.83	236.43
Number of Votes (in 1000)	2,491	5.51	7.03	0.06	0.70	2.41	7.56	22.59
Provide ESG Fund	2,491	0.07	0.26	0.00	0.00	0.00	0.00	1.00
Provide Institutional Fund	2,491	0.76	0.43	0.00	1.00	1.00	1.00	1.00
Provide Index Fund	2,491	0.31	0.46	0.00	0.00	0.00	1.00	1.00
Management Fee	2,474	0.64	0.43	0.13	0.44	0.63	0.86	1.16
Expense Ratio	2,474	0.01	0.00	0.00	0.01	0.01	0.01	0.02
Voting Platform								
Use ISS ProxyExchange [®]	2,491	0.51	0.50	0.00	0.00	1.00	1.00	1.00
Use Glass Lewis Viewpoint [®]	2,491	0.07	0.26	0.00	0.00	0.00	0.00	1.00
Use Broadridge ProxyEdge [®]	2,491	0.25	0.43	0.00	0.00	0.00	1.00	1.00
Unkown Platform	2,491	0.18	0.39	0.00	0.00	0.00	0.00	1.00
Votes								
% agree with ISS	2,491	0.90	0.12	0.71	0.89	0.93	0.97	1.00
% agree with ISS (contentious)	2,441	0.52	0.34	0.00	0.24	0.49	0.86	1.00
Robo - Vote with ISS	2,491	0.08	0.28	0.00	0.00	0.00	0.00	1.00

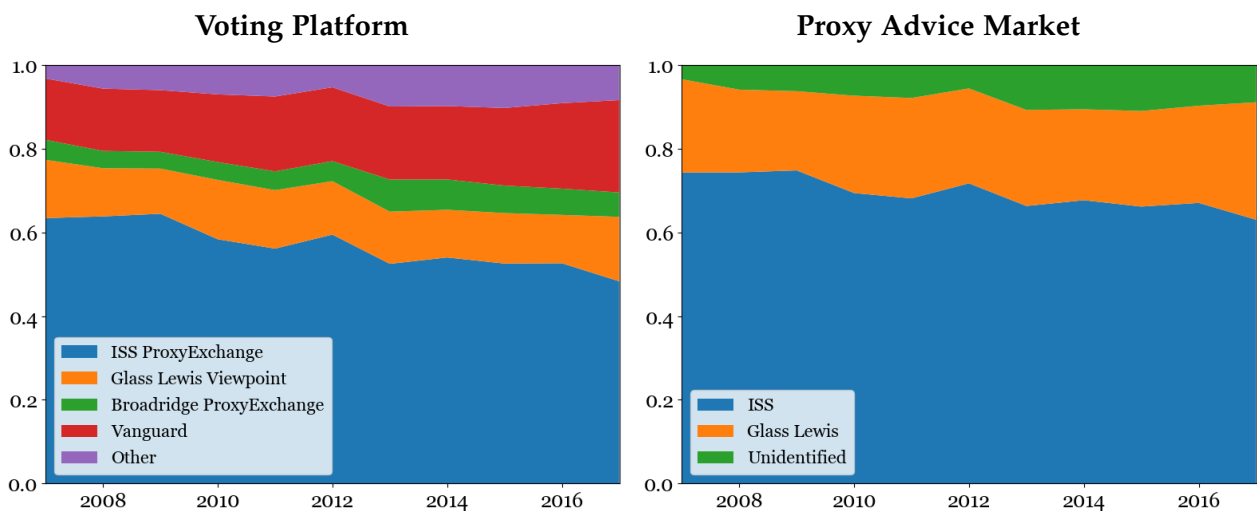
Figure 2: Market Trend of the Proxy Advisory Industry

This Figure shows evolving markets for voting systems and the proxy advice industry. The left figure of Panel A displays the total net assets (TNA) of funds that use different voting systems. Vanguard has its own voting system. The right figure shows the inferred market for the two largest proxy advisors: ISS and Glass Lewis. Since Vanguard purchases proxy advice from both ISS and Glass Lewis, I split its TNA equally. For the funds that use Broadridge's ProxyEdge or whose N-PX does not conform to any known reporting styles, I can't identify their proxy advice supplier. Panel B reports the relative market share for each year. Panel C shows the number of funds that use each of the voting systems, where (+)/(-) denotes the number of funds that switch in/out from other systems in the current year. Both (+) and (-) excludes new funds or funds that disappear from the sample (In other words, (#) + (+) - (-) does not necessarily equal to the next period (#)).

(A) Total Net Asset



(B) Market Share



(C) Number of Funds

	ISS			Glass Lewis			Broadridge		
	#	(+)	(-)	#	(+)	(-)	#	(+)	(-)
2007	94	3	3	3	1	0	38	0	1
2008	98	3	5	3	6	1	38	1	3
2009	109	1	6	4	5	0	37	1	2
2010	103	1	9	15	7	2	38	3	1
2011	97	3	1	18	1	1	52	1	1
2012	96	4	5	18	1	4	57	2	2
2013	89	2	1	20	2	1	59	1	1
2014	109	3	4	20	3	1	67	0	3
2015	124	7	4	28	2	4	75	4	2
2016	124	6	3	26	2	3	77	4	2
2017	133	5	0	26	0	2	80	0	1

Table 2: Descriptive Statistics

(A) Snapshot: 2007, 2012, and 2017

This Table provides the descriptive statistics for fund-families that purchase ISS ProxyExchange, Glass Lewis Viewpoint, and Broadridge ProxyEdge for the year of 2007, 2012 and 2017. The definitions of variables for characteristics and voting are the same as Table 1. The two-dimensional W-NOMINATE scores for mutual funds' ideology in the year of 2012 is provided by Bolton et al. (2020). The two scores, both in the range of (-1,1), are interpreted as (1) socially-oriented, and (2) tough-on-governance. The polarity of the scores is arbitrary and I keep the original authors' convention: socially oriented investors have a lower score in the first dimension and tough-on-governance investors have a larger score in the second dimension. For example, an investor with a score of -0.12 in the first dimension is more socially-oriented than an investor with a score of 0.01.

	2007			2012			2017		
	ISS	GL	BR	ISS	GL	BR	ISS	GL	BR
Characteristics									
Family Age	31.3 (2.4)	71.3 (7.4)	23.8 (3.0)	33.6 (2.4)	30.5 (5.6)	23.2 (2.4)	34.0 (2.1)	35.8 (4.9)	23.6 (2.2)
Asset (\$10 ⁶)	63.7 (16.5)	437 (367)	11.9 (2.9)	75.2 (19.7)	86.2 (52.4)	10.2 (2.9)	82.3 (21.5)	134 (69)	16.5 (8.2)
# votes (1000)	5.46 (0.5)	6.01 (1.5)	2.61 (0.5)	7.59 (0.8)	9.63 (1.8)	3.54 (0.7)	8.82 (0.8)	8.73 (1.7)	3.87 (0.7)
Index Fund	0.38 (0.1)	0.00 (0.0)	0.13 (0.1)	0.41 (0.1)	0.50 (0.1)	0.21 (0.1)	0.42 (0.0)	0.35 (0.1)	0.25 (0.0)
Institutional	0.76 (0.0)	1.00 (0.0)	0.50 (0.1)	0.82 (0.0)	1.00 (0.0)	0.68 (0.1)	0.87 (0.0)	0.96 (0.0)	0.74 (0.0)
ESG Fund	0.07 (0.0)	0.33 (0.3)	0.00 (0.0)	0.06 (0.0)	0.17 (0.1)	0.00 (0.0)	0.17 (0.0)	0.27 (0.1)	0.07 (0.0)
Expense Ratio	0.01 (0.0)	0.01 (0.0)	0.01 (0.0)	0.01 (0.0)	0.01 (0.0)	0.01 (0.0)	0.01 (0.0)	0.01 (0.0)	0.01 (0.0)
Mgmt Fee	0.59 (0.0)	0.43 (0.1)	0.78 (0.1)	0.59 (0.0)	0.53 (0.1)	0.74 (0.0)	0.57 (0.0)	0.59 (0.0)	0.74 (0.0)
Voting									
Agree with ISS	0.92 (0.0)	0.86 (0.0)	0.85 (0.0)	0.94 (0.0)	0.87 (0.0)	0.87 (0.0)	0.94 (0.0)	0.90 (0.0)	0.84 (0.0)
(contentious)	0.62 (0.0)	0.41 (0.1)	0.39 (0.0)	0.70 (0.0)	0.45 (0.0)	0.40 (0.0)	0.71 (0.0)	0.34 (0.0)	0.38 (0.0)
Robo-Voting	0.05 (0.0)	0.00 (0.0)	0.03 (0.0)	0.09 (0.0)	0.00 (0.0)	0.02 (0.0)	0.23 (0.0)	0.00 (0.0)	0.05 (0.0)
Ideology									
(1st) Social	.	.	.	-0.12 (0.0)	0.01 (0.1)	0.10 (0.1)	.	.	.
(2nd) Governance	.	.	.	-0.41 (0.0)	0.57 (0.1)	0.00 (0.1)	.	.	.
N	94	3	38	96	18	57	133	26	80

(B) Proxy Advice Supplier as a Function of Fund Characteristics

This Table illustrates the correlation between fund-families' characteristics and their decisions on whether to purchase proxy voting systems from ISS, Glass Lewis, or neither. The first table compares the fund families' characteristics between ISS and Glass Lewis customers only. Each column is an OLS regression. Every column's dependent variables is a dummy that denotes being an ISS customer in the current year. Columns 1-9 are uni-variate regressions, and Column 10 includes all variables. The second table includes other fund families who don't purchase from either ISS or Glass Lewis. Those fund families are included as the baseline. Each row is an OLS regression. Both tables' Standard Errors are clustered at the fund-family level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

(B.1) Baseline: Glass Lewis's Customers

	Dependent Variable: dummy = 1 if ISS customer								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
log(asset)	-0.00 (0.01)								0.01 (0.02)
log(# votes)		-0.02** (0.01)							-0.02** (0.01)
Age			-0.00 (0.00)						-0.00 (0.00)
Provide Index Fund				0.02 (0.04)					0.07 (0.05)
Provide Inst. Fund					-0.09*** (0.03)				-0.09** (0.05)
Provide ESG Fund						-0.09 (0.09)			-0.10 (0.09)
Expense Ratio							3.10 (3.98)		-0.56 (6.32)
Management Fee								0.04 (0.06)	0.02 (0.08)
Observations	1437	1437	1437	1437	1437	1437	1429	1429	1429

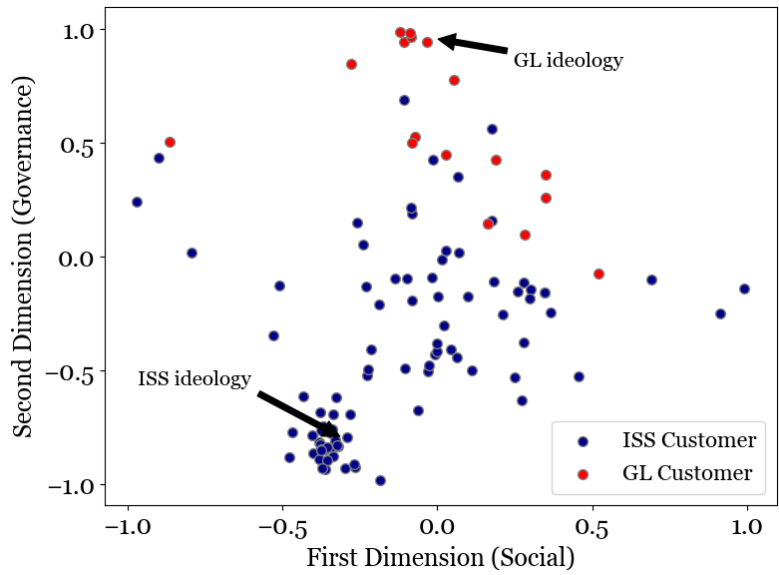
(B.2) Baseline: Funds that are Neither ISS or Glass Lewis's Customers

	log asset	log votes	Age	Index Fund	Inst. Fund	ESG Fund	Expense Ratio	Mgmt. Fee	N
All Others									
	Baseline								
ISS customers	0.07*** (0.01)	0.06*** (0.01)	-0.00 (0.00)	0.04 (0.05)	-0.05 (0.06)	-0.01 (0.10)	12.02** (6.12)	-0.13** (0.05)	2296
GL customers	0.02* (0.01)	0.04*** (0.01)	0.00 (0.00)	0.01 (0.06)	0.05 (0.04)	0.20 (0.16)	3.60 (2.96)	-0.04* (0.02)	1214

Figure 3: Investor Ideology

Panel A plots the ideologies of every mutual fund in 2012. The fund families that purchase ISS’s proxy advice is grouped in blue and the fund families that purchase Glass Lewis’s proxy advice is grouped in red. The ideology (location) of each dot is the two-dimensional W-NOMINATE scores provided by Bolton et al. (2020). Socially oriented investors have a lower score in the first dimension (i.e. appear to the left). Tough-on-governance investors have a larger score in the second dimension (i.e. appear to the top). The ideologies of ISS and Glass Lewis themselves are also pointed. Panel B displays the distribution of ideologies for ISS and GL’s customers. The left figure is on first dimension (social) and the right figure is on the second dimension (governance).

(A) Customers of ISS vs Glass Lewis



(B) Distribution of Ideology

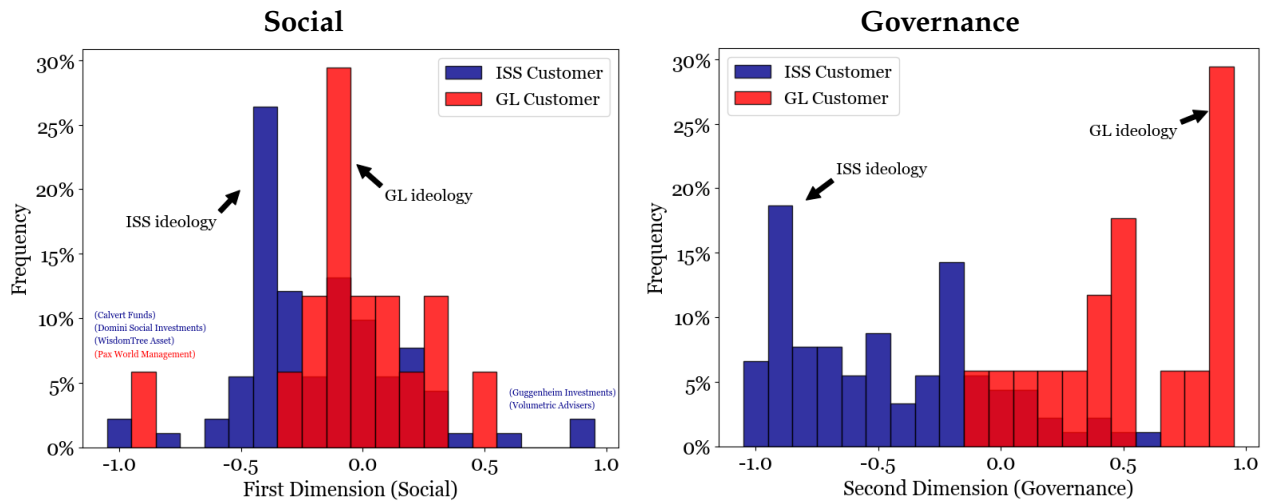


Table 3: Investor Ideology

This Table reports the OLS regressions of investors' ideologies as a function of the identity of their proxy advisors and fund characteristics. One observation is a fund-family in 2012. Columns 1-4 contains fund families that purchase either ISS or Glass Lewis only. Columns 1-5 contains all fund families. The dependent variable of columns 1,2 and 5 is the first-dimension W-NOMINATE score using a two-dimensional method. A lower score represents having greater social orientation. The dependent variable for columns 3, 4, and 6 is the second-dimension W-NOMINATE score. A larger score represents being tougher on governance. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	Baseline:				Baseline:	
	Glass Lewis Customers				Non ISS-Customers	
	1st Dimension		2nd Dimension		1st	2nd
	Social		Governance		Social	Governance
	(1)	(2)	(3)	(4)	(5)	(6)
ISS Customer	-0.12 (0.09)	-0.15* (0.08)	-1.00*** (0.11)	-0.95*** (0.11)	-0.25*** (0.06)	-0.59*** (0.08)
log(asset)		0.02 (0.02)		-0.00 (0.03)	0.02 (0.02)	0.01 (0.02)
log(# votes)		0.05 (0.04)		0.06 (0.05)	0.03 (0.03)	0.02 (0.04)
Age		0.00 (0.00)		0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)
Index Fund		-0.12 (0.07)		-0.05 (0.10)	-0.09 (0.08)	0.03 (0.10)
Inst. Fund		0.02 (0.10)		0.04 (0.13)	-0.02 (0.09)	0.14 (0.11)
ESG Fund		-0.34*** (0.11)		0.11 (0.16)	-0.29** (0.12)	0.14 (0.16)
Expense Ratio		-6.74 (14.37)		-13.89 (19.78)	0.54 (9.50)	10.12 (11.82)
Mgmt. Fee		-0.05 (0.19)		-0.05 (0.26)	0.01 (0.15)	-0.24 (0.19)
Constant	0.00 (0.08)	-0.55 (0.35)	0.59*** (0.10)	0.19 (0.48)	-0.29 (0.30)	-0.12 (0.37)
Observations	107	106	107	106	167	167
Adjusted R ²	0.008	0.162	0.445	0.446	0.085	0.275

Table 4: ISS Influence on its Customers by Proposal Types**(A) Any Proposal (either contentious or contentious)**

This Table reports the OLS regression for whether a fund vote in the same direction as the ISS's recommendation on whether the voting fund family is an ISS customer: $\text{agree_ISS}_{ipt} = \beta_0 + \beta_1 \cdot \text{ISS_Customer}_{it} + \gamma' \cdot Z + \varepsilon_p + \varepsilon_{ipt}$. One observation is a fund-vote. Column 1 includes all proposals, and columns 2-12 include proposals on different proposal types. All columns' dependent variable is a dummy that equals to 1 if the vote is in the same direction as ISS. The independent variable of interest is ISS customer, which is a dummy that equals 1 if the voting fund family is an ISS customer in the current year. All columns include the proposal fixed effect. Standard Errors are clustered at the fund-family level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	All	board election	say on pay	financial policy	golden parachute	poison pill	board declass.	ind. chair	proxy access	political disclos.	environ- mental	animal rights
ISS Customer	0.04*** (0.01)	0.03*** (0.01)	0.06*** (0.01)	0.05*** (0.01)	0.13*** (0.03)	0.10** (0.04)	0.03*** (0.01)	0.16*** (0.03)	0.18*** (0.04)	0.21*** (0.04)	0.16*** (0.03)	-0.00 (0.02)
log(asset)	0.00 (0.00)	0.01* (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00 (0.01)	0.00 (0.01)	0.00 (0.00)	-0.01 (0.01)	-0.04*** (0.01)	-0.03*** (0.01)	-0.01 (0.01)	0.02** (0.01)
log(# votes)	0.02*** (0.00)	0.02*** (0.00)	0.01** (0.01)	0.01** (0.00)	0.01 (0.01)	-0.01 (0.02)	0.02** (0.01)	0.01 (0.01)	0.05*** (0.02)	0.01 (0.02)	0.01 (0.01)	0.02* (0.01)
Age	-0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)	-0.00* (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	0.00* (0.00)	-0.00 (0.00)	-0.00* (0.00)	-0.00 (0.00)
Index Fund	-0.02* (0.01)	-0.03** (0.01)	-0.02 (0.01)	-0.01 (0.01)	-0.00 (0.02)	0.02 (0.04)	-0.02 (0.01)	-0.00 (0.03)	-0.01 (0.03)	0.01 (0.05)	0.01 (0.03)	-0.04 (0.03)
Inst. Fund	0.02* (0.01)	0.02 (0.01)	0.03 (0.02)	0.01 (0.01)	0.09** (0.04)	-0.01 (0.05)	0.07** (0.03)	0.09** (0.03)	0.14*** (0.04)	0.13** (0.05)	0.08** (0.04)	0.01 (0.05)
ESG Fund	-0.02* (0.01)	-0.03* (0.01)	-0.01 (0.02)	-0.01 (0.01)	-0.04 (0.03)	0.03 (0.06)	0.02 (0.02)	-0.06* (0.03)	0.02 (0.05)	-0.03 (0.06)	-0.06 (0.05)	-0.10** (0.04)
Expense Ratio	1.00 (1.70)	1.01 (1.96)	1.52 (2.58)	1.21 (1.41)	-1.07 (4.42)	5.59 (10.32)	-1.57 (3.56)	5.19 (5.03)	-13.16** (5.17)	0.81 (6.71)	1.20 (4.46)	1.47 (3.64)
Mgmt. Fee	0.00 (0.02)	0.00 (0.02)	-0.03 (0.03)	-0.00 (0.01)	0.02 (0.04)	-0.06 (0.12)	-0.01 (0.03)	0.02 (0.06)	0.12** (0.05)	0.08 (0.08)	0.01 (0.06)	-0.00 (0.05)
Constant	0.71*** (0.05)	0.70*** (0.06)	0.72*** (0.06)	0.82*** (0.03)	0.65*** (0.10)	0.73*** (0.22)	0.72*** (0.08)	0.44*** (0.12)	0.52*** (0.15)	0.52*** (0.18)	0.53*** (0.12)	0.61*** (0.11)
Observations	15 · 10 ⁶	11 · 10 ⁶	982422	168564	33179	3020	58402	45272	26837	57926	32932	5854
# of cluster	497	489	451	467	403	221	432	438	414	437	443	319
Adjusted R ²	0.253	0.248	0.219	0.178	0.220	0.075	0.098	0.095	0.214	0.217	0.298	0.258

(B) Uncontentious Proposals – Certification Effect

This Table reports the OLS regression for whether a fund vote in the same direction as the ISS’s recommendation for uncontentious proposals on whether the voting fund family is an ISS customer: $\text{agree_ISS}_{ipt} = \beta_0 + \beta_1 \cdot \text{ISS_Customer}_{it} + \gamma' \cdot \mathbf{Z} + \varepsilon_p + \varepsilon_{ipt}$. I denote a proposal uncontentious if ISS’s recommendation is the same as management’s. One observation is a fund-vote. Column 1 includes all uncontentious proposals, and columns 2-12 include uncontentious proposals on different proposal types. All columns’ dependent variable is a dummy that equals to 1 if the vote is in the same direction as ISS. The independent variable of interest if ISS customer, which is a dummy that equals 1 is the voting fund family is an ISS customer in the current year. All columns include the proposal fixed effect. Standard Errors are clustered at the fund-family level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	All	board election	say on pay	financial policy	golden parachute	poison pill	board declass.	ind. chair	proxy access	political disclos.	environ- mental	animal rights
ISS Customer	0.02** (0.01)	0.02 (0.01)	0.04*** (0.01)	0.04*** (0.01)	0.10*** (0.03)	0.15** (0.06)	0.01 (0.00)	0.19*** (0.05)	0.06** (0.02)	-0.02 (0.02)	-0.03 (0.02)	-0.02 (0.02)
log(asset)	0.00* (0.00)	0.01 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.01 (0.01)	-0.01 (0.02)	0.00 (0.00)	0.02 (0.01)	-0.01 (0.01)	0.02*** (0.01)	0.02*** (0.01)	0.02** (0.01)
log(# votes)	0.02*** (0.00)	0.02*** (0.00)	0.02** (0.01)	0.01*** (0.00)	0.01 (0.01)	0.01 (0.03)	0.01*** (0.00)	0.02 (0.02)	0.01 (0.01)	0.02* (0.01)	0.02* (0.01)	0.02** (0.01)
Age	-0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00** (0.00)	-0.00** (0.00)	0.00 (0.00)	0.00* (0.00)	-0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)
Index Fund	-0.03** (0.01)	-0.03** (0.01)	-0.02 (0.02)	-0.01 (0.01)	-0.02 (0.02)	0.05 (0.06)	-0.01 (0.01)	-0.00 (0.04)	-0.03* (0.02)	-0.03 (0.03)	-0.05* (0.03)	-0.05 (0.03)
Inst. Fund	0.02 (0.01)	0.02 (0.02)	0.03 (0.03)	0.01 (0.01)	0.09** (0.04)	-0.06 (0.06)	0.03* (0.01)	-0.08 (0.06)	0.02 (0.02)	-0.04 (0.03)	-0.00 (0.04)	-0.00 (0.05)
ESG Fund	-0.02* (0.01)	-0.03* (0.02)	-0.01 (0.02)	-0.01 (0.01)	-0.01 (0.04)	0.08 (0.10)	-0.01 (0.01)	-0.10 (0.08)	0.02 (0.02)	-0.12** (0.05)	-0.12** (0.05)	-0.09* (0.05)
Expense Ratio	0.63 (1.85)	0.42 (2.16)	1.69 (2.95)	1.83 (1.36)	0.63 (3.21)	13.57 (11.45)	1.39 (0.99)	3.00 (6.21)	-4.20 (2.89)	5.04 (3.41)	3.61 (3.10)	0.96 (3.85)
Mgmt. Fee	-0.01 (0.02)	-0.00 (0.03)	-0.04 (0.04)	-0.01 (0.01)	-0.02 (0.04)	-0.08 (0.13)	-0.02 (0.01)	-0.08 (0.06)	0.05 (0.03)	-0.04 (0.04)	-0.05 (0.04)	0.00 (0.04)
Constant	0.75*** (0.05)	0.74*** (0.07)	0.74*** (0.06)	0.83*** (0.03)	0.81*** (0.08)	0.56** (0.25)	0.83*** (0.04)	0.48*** (0.17)	0.91*** (0.05)	0.63*** (0.10)	0.64*** (0.10)	0.59*** (0.13)
Observations	13 · 10 ⁶	9767758	873687	160511	22585	1959	38038	16686	6220	11464	12980	5371
# of cluster	497	488	447	467	386	201	418	407	361	379	413	306
Adjusted R ²	0.069	0.058	0.094	0.092	0.131	0.076	0.068	0.088	0.108	0.079	0.058	0.071

(C) Contentious Proposals – Sway Effect

This Table reports the OLS regression for whether a fund vote in the same direction as the ISS’s recommendation for contentious proposals on whether the voting fund family is an ISS customer: $\text{agree.ISS}_{ipt} = \beta_0 + \beta_1 \cdot \text{ISS_Customer}_{it} + \gamma' \cdot \mathbf{Z} + \varepsilon_p + \varepsilon_{ipt}$. I denote a proposal contentious if ISS’s recommendation is different from management’s. One observation is a fund-vote. Column 1 includes all contentious proposals, and columns 2-12 include contentious proposals on different proposal types. All columns’ dependent variable is a dummy that equals to 1 if the vote is in the same direction as ISS. The independent variable of interest is ISS customer, which is a dummy that equals 1 if the voting fund family is an ISS customer in the current year. All columns include the proposal fixed effect. Standard Errors are clustered at the fund-family level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	All	board election	say on pay	financial policy	golden parachute	poison pill	board declass.	ind. chair	proxy access	political disclos.	environ- mental	animal rights
ISS Customer	0.21*** (0.04)	0.21*** (0.05)	0.20*** (0.05)	0.15*** (0.05)	0.21*** (0.07)	0.03 (0.06)	0.08*** (0.03)	0.15*** (0.05)	0.22*** (0.04)	0.26*** (0.05)	0.27*** (0.05)	0.24*** (0.07)
log(asset)	-0.01 (0.01)	0.00 (0.01)	-0.00 (0.02)	-0.00 (0.02)	-0.00 (0.02)	0.03 (0.02)	0.01 (0.01)	-0.03* (0.01)	-0.05*** (0.01)	-0.04*** (0.01)	-0.03** (0.01)	-0.01 (0.02)
log(# votes)	0.00 (0.02)	0.01 (0.03)	-0.01 (0.03)	-0.01 (0.02)	0.00 (0.03)	-0.04 (0.04)	0.02 (0.02)	0.01 (0.02)	0.06*** (0.02)	0.01 (0.03)	0.00 (0.02)	-0.04 (0.04)
Age	-0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	0.00* (0.00)	-0.00 (0.00)	-0.00* (0.00)	-0.00* (0.00)
Index Fund	0.02 (0.04)	0.01 (0.05)	0.02 (0.05)	0.09* (0.05)	0.05 (0.06)	-0.05 (0.06)	-0.05 (0.04)	-0.00 (0.05)	-0.01 (0.04)	0.02 (0.06)	0.06 (0.05)	0.05 (0.08)
Inst. Fund	0.09 (0.06)	0.06 (0.07)	0.11 (0.08)	0.04 (0.06)	0.10 (0.10)	0.10 (0.11)	0.13* (0.07)	0.18*** (0.06)	0.17*** (0.05)	0.16** (0.07)	0.13* (0.07)	0.15 (0.12)
ESG Fund	-0.03 (0.06)	-0.03 (0.07)	-0.06 (0.07)	-0.08 (0.09)	-0.10 (0.08)	-0.08 (0.08)	0.07* (0.04)	-0.04 (0.07)	0.03 (0.06)	-0.01 (0.07)	-0.02 (0.08)	-0.18* (0.10)
Expense Ratio	4.01 (9.41)	8.13 (11.77)	-0.49 (10.70)	-12.83 (12.36)	-3.81 (13.02)	-14.33 (27.30)	-7.16 (10.20)	6.56 (8.81)	-15.86** (6.67)	-0.92 (8.27)	-0.28 (8.50)	-5.55 (14.36)
Mgmt. Fee	0.08 (0.09)	0.09 (0.13)	0.10 (0.11)	0.08 (0.12)	0.11 (0.13)	0.03 (0.27)	0.01 (0.08)	0.08 (0.09)	0.14** (0.06)	0.11 (0.09)	0.05 (0.09)	0.13 (0.17)
Constant	0.33 (0.22)	0.13 (0.28)	0.52** (0.24)	0.57** (0.26)	0.29 (0.28)	1.02** (0.47)	0.50** (0.20)	0.42* (0.22)	0.40** (0.19)	0.50** (0.22)	0.45** (0.21)	0.76* (0.40)
Observations	1408220	748751	108735	8053	10594	1061	20364	28586	20617	46462	19952	483
# of cluster	487	471	442	344	351	157	361	433	403	434	426	164
Adjusted R ²	0.128	0.094	0.126	0.126	0.117	0.135	0.079	0.065	0.187	0.120	0.147	0.125

Figure 4: ISS Influence By Years: 2006 - 2017

This Figure shows how likely a fund family’s vote can be swayed by ISS on proposals on which ISS and Management do not agree. For each proposal types, the figure shows the yearly OLS regression coefficient for $agree_ISS_{ipt} = \beta \cdot ISS_Customer_{it} + \varepsilon_p + \varepsilon_{it}$, similar to Table 4.B except it’s done separately for each year. All regressions include the proposal fixed effect. Standard Errors are clustered at the fund-family level. The shaded area denotes the 95% confidence interval.

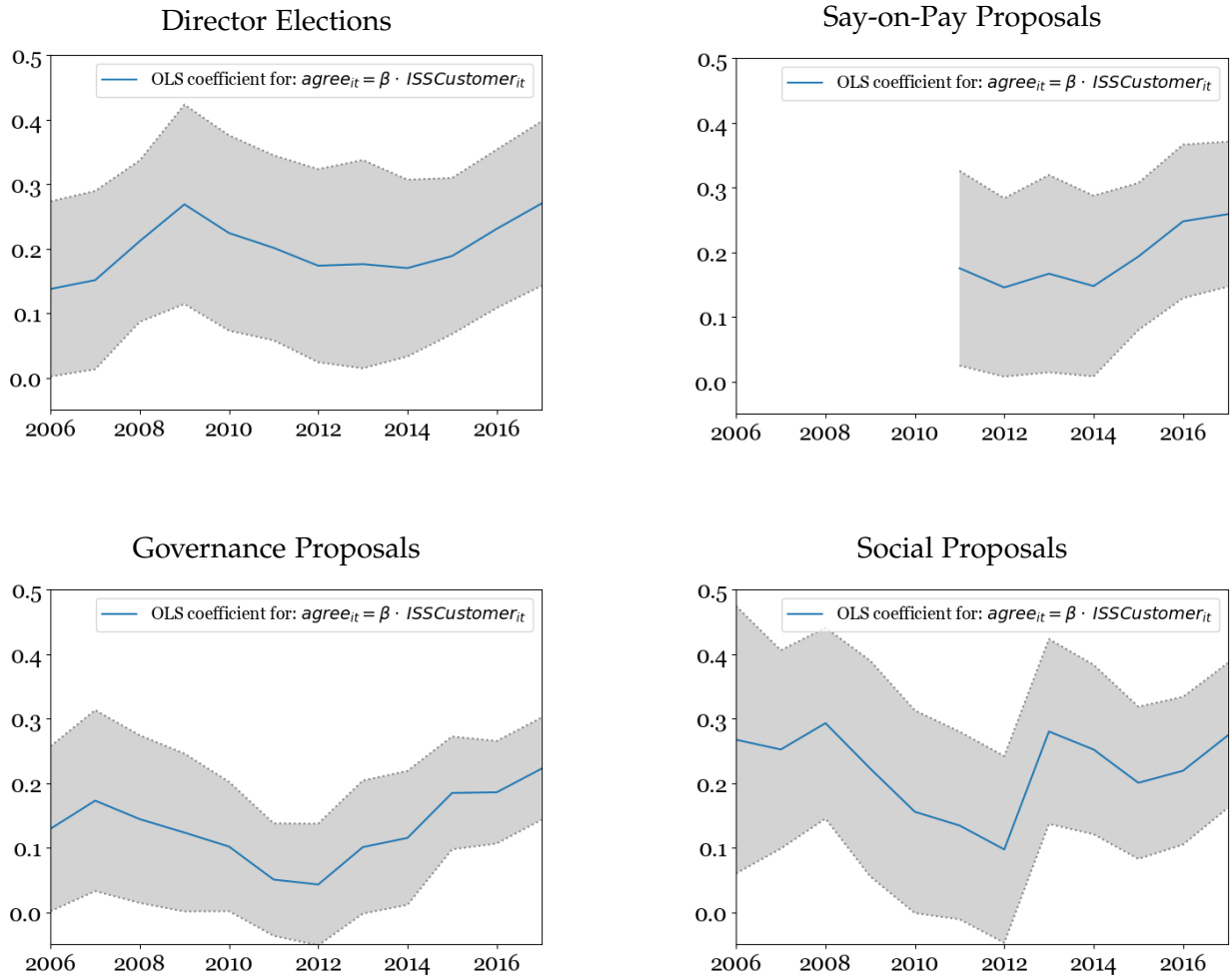


Table 5: Agreement with ISS Before and After Switching

(A) Fund Families that Switched From Other Platforms to ISS

This Table reports the OLS regression for the change of ISS’s influence on a fund family as a function of whether the fund switches from GL’s platform to ISS’s platform in the current year. All columns’ dependent variables are $agree_{it+1} - agree_{it}$, where $agree_{it}$ is the share of fund i ’s votes in certain proposal types that are the same with ISS’s recommendations in year t . Column 1 calculates fund families’ agreement with ISS using all proposals, and Column 2 uses all contentious proposals. Column 3-12 uses contentious proposals of different proposal types to calculate fund families’ agreement with ISS. The independent variable of interest is “GL to ISS”, which is defined as a dummy that equals 1 if the fund family uses GL in the current year but switches to ISS in the following year. Standard Errors are clustered at the fund-family level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable: $agree_{it+1} - agree_{it}$ (how much does the fund i agree more with ISS in the next year)												
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	any	conten- tious	board election	say on pay	financial policy	golden parachute	poison pill	board declass.	ind. chair	proxy access	political disclosure	environ- mental	animal rights
Others → ISS	0.02** (0.01)	0.15** (0.07)	0.22*** (0.08)	0.27*** (0.07)	0.09 (0.16)	0.32*** (0.12)	0.15 (0.10)	0.01 (0.02)	0.04 (0.08)	0.09 (0.13)	0.14 (0.09)	0.15** (0.07)	0.49* (0.25)
log(asset)	0.00 (0.00)	0.00* (0.00)	0.00 (0.00)	0.00 (0.00)	0.01 (0.01)	0.00 (0.01)	0.01 (0.01)	0.00 (0.00)	0.00 (0.00)	0.01* (0.01)	0.00 (0.00)	0.00 (0.00)	0.00 (0.01)
log(# votes)	-0.00 (0.00)	-0.01** (0.00)	-0.00 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.00 (0.01)	-0.06** (0.03)	-0.02*** (0.01)	-0.00 (0.01)	0.01 (0.01)	-0.00 (0.01)	-0.00 (0.01)	-0.00 (0.05)
Age	-0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00* (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)	0.00* (0.00)	0.00 (0.00)	-0.00 (0.00)
Index Fund	-0.00 (0.01)	0.02* (0.01)	0.02 (0.01)	0.02 (0.01)	0.01 (0.02)	0.00 (0.02)	-0.08* (0.04)	0.03** (0.01)	0.00 (0.01)	-0.03 (0.02)	0.01 (0.01)	0.01 (0.01)	-0.07 (0.07)
Inst. Fund	0.00 (0.01)	0.00 (0.01)	-0.00 (0.01)	-0.00 (0.02)	-0.02 (0.03)	-0.03 (0.04)	-0.02 (0.10)	0.01 (0.02)	0.01 (0.02)	0.01 (0.03)	0.01 (0.02)	0.00 (0.02)	0.36** (0.17)
ESG Fund	0.00 (0.00)	-0.00 (0.01)	-0.01 (0.01)	0.00 (0.01)	-0.04* (0.02)	-0.03 (0.02)	0.02 (0.04)	-0.00 (0.01)	-0.03* (0.02)	-0.01 (0.02)	-0.01 (0.02)	-0.03* (0.02)	0.01 (0.05)
Expense Ratio	-1.02* (0.58)	1.72 (1.24)	2.47* (1.38)	1.59 (1.76)	-1.06 (5.42)	-0.69 (5.47)	11.98 (12.07)	1.83 (2.64)	-0.90 (2.10)	0.05 (3.06)	3.24* (1.74)	1.65 (1.72)	17.46 (12.26)
Mgmt. Fee	0.01 (0.00)	-0.02 (0.01)	-0.02 (0.01)	-0.02 (0.01)	0.07 (0.07)	-0.04 (0.04)	-0.18 (0.12)	-0.04 (0.03)	-0.00 (0.03)	-0.02 (0.02)	-0.03 (0.03)	0.01 (0.01)	-0.07 (0.10)
Constant	0.02 (0.03)	0.03 (0.04)	-0.04 (0.05)	-0.01 (0.06)	-0.05 (0.13)	0.04 (0.12)	0.57* (0.34)	0.16*** (0.06)	0.00 (0.06)	-0.14 (0.09)	-0.06 (0.05)	-0.05 (0.06)	-0.28 (0.43)
Observations	1839	1798	1747	1129	931	579	228	1255	1578	823	1608	1396	179
Adjusted R ²	-0.000	0.017	0.016	0.026	-0.003	0.004	0.008	0.002	-0.003	0.005	0.003	0.001	0.001

(B) Fund Families that Switched from ISS to Other Platforms

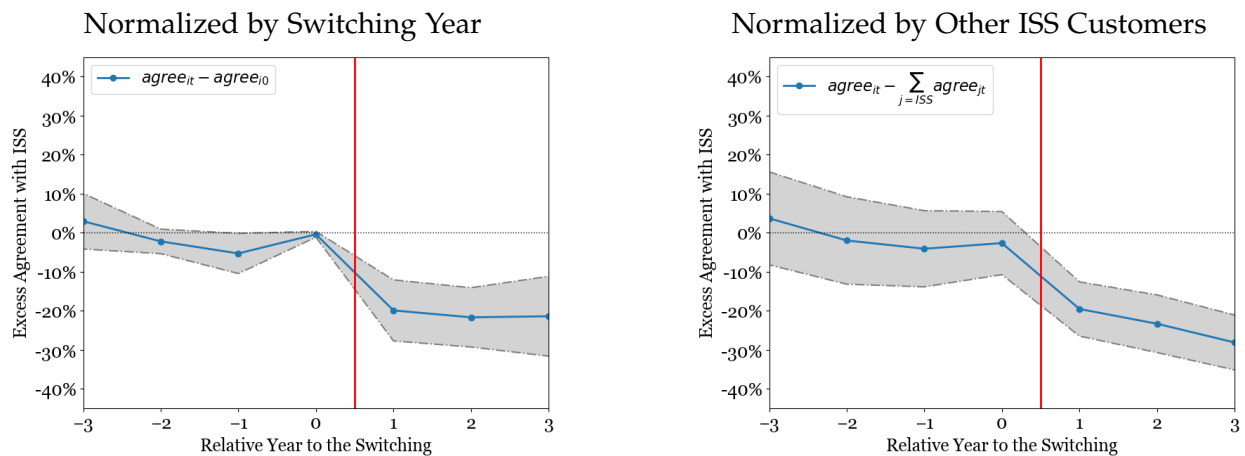
Table reports the OLS regression for the change of ISS's influence on a fund family as a function of whether the fund switches from ISS's platform to GL's platform in the current year. All columns' dependent variables are $\text{agree}_{it+1} - \text{agree}_{it}$, where agree_{it} is the share of fund i 's votes in certain proposal types that are the same with ISS's recommendations in year t . Column 1 calculates fund families agreement with ISS using all proposals, and Column 2 uses all contentious proposals. Column 3-12 uses contentious proposals of different proposal types to calculate fund families' agreement with ISS. The independent variable of interest is "ISS to ISS", which is defined as a dummy that equals 1 if the fund family uses ISS in the current year but switches to GL in the following year. Standard Errors are clustered at the fund-family level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable: $\text{agree}_{it+1} - \text{agree}_{it}$ (how much does the fund i agree more with ISS in the next year)												
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	any	conten- tious	board election	say on pay	financial policy	golden parachute	poison pill	board declass.	ind. chair	proxy access	political disclosure	environ- mental	animal rights
ISS → Others	-0.05*** (0.01)	-0.19*** (0.04)	-0.20*** (0.05)	-0.09 (0.08)	-0.29*** (0.09)	-0.09*** (0.03)	-0.04 (0.11)	-0.04 (0.04)	-0.04 (0.06)	-0.09** (0.04)	-0.25*** (0.06)	-0.27*** (0.08)	-0.66*** (0.25)
log(asset)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.01 (0.01)	0.00 (0.01)	0.01 (0.01)	0.00 (0.00)	0.00 (0.00)	0.01* (0.01)	0.00 (0.00)	0.00 (0.00)	0.00 (0.01)
log(# votes)	-0.00 (0.00)	-0.01** (0.00)	-0.00 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.00 (0.01)	-0.06** (0.03)	-0.02*** (0.01)	-0.00 (0.01)	0.01 (0.01)	-0.00 (0.01)	-0.00 (0.01)	0.01 (0.05)
Age	-0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00* (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)	0.00* (0.00)	0.00 (0.00)	-0.00 (0.00)
Index Fund	-0.00 (0.01)	0.02* (0.01)	0.02 (0.01)	0.02 (0.01)	0.01 (0.02)	0.00 (0.02)	-0.08* (0.04)	0.03** (0.01)	0.00 (0.01)	-0.03* (0.02)	0.01 (0.01)	0.02 (0.01)	-0.09 (0.07)
Inst. Fund	0.00 (0.01)	0.00 (0.01)	-0.00 (0.01)	0.01 (0.02)	-0.02 (0.03)	-0.02 (0.04)	-0.02 (0.10)	0.01 (0.02)	0.01 (0.02)	0.01 (0.03)	0.01 (0.02)	0.00 (0.02)	0.37** (0.18)
ESG Fund	0.00 (0.00)	0.00 (0.01)	-0.00 (0.02)	0.01 (0.02)	-0.03* (0.02)	-0.03 (0.02)	0.02 (0.04)	-0.00 (0.01)	-0.03* (0.02)	-0.01 (0.02)	-0.01 (0.02)	-0.03 (0.02)	-0.02 (0.06)
Expense Ratio	-1.08* (0.58)	1.47 (1.23)	2.15 (1.37)	1.08 (1.73)	-1.22 (5.39)	-1.73 (5.45)	11.98 (12.08)	1.78 (2.64)	-0.98 (2.11)	-0.29 (3.09)	2.86 (1.75)	1.18 (1.73)	15.91 (12.03)
Mgmt. Fee	0.01 (0.00)	-0.02 (0.01)	-0.02 (0.01)	-0.02 (0.01)	0.07 (0.07)	-0.03 (0.04)	-0.18 (0.12)	-0.04 (0.03)	-0.00 (0.03)	-0.02 (0.02)	-0.03 (0.03)	0.01 (0.01)	-0.05 (0.10)
Constant	0.02 (0.03)	0.04 (0.04)	-0.02 (0.05)	0.00 (0.06)	-0.06 (0.13)	0.05 (0.12)	0.55 (0.34)	0.17*** (0.06)	0.01 (0.06)	-0.14 (0.09)	-0.04 (0.05)	-0.04 (0.06)	-0.39 (0.43)
Observations	1839	1798	1747	1129	931	579	228	1255	1578	823	1608	1396	179
Adjusted R ²	0.004	0.025	0.014	0.000	0.008	-0.012	0.006	0.003	-0.003	0.005	0.014	0.014	0.005

Figure 5: Voting Agreement for Funds that switched in or out of ISS

This figure shows the dynamics of a fund family's voting if it switched in or out of ISS's customer base. Panel (A) contains the fund families that have switched out of ISS, and Panel (B) includes fund families that have switched into ISS. The x-axis of all figures denotes the number of years away from switching year. The y axis of left figures of both panels displays the switching fund's voting agreement with ISS in the current year minus that of its own voting during the switching year (i.e. year fixed effect). The y-axis of right figures of both panels displays the switching fund's voting agreement with ISS in the current year minus that of other comparable fund families of the same year (i.e. fund fixed effect). For Panel (A), comparable funds are ISS's customers who didn't switch out of ISS, and for Panel (B), comparable funds are non-customers of ISS who didn't switch in ISS. The shaded area denotes the 90% confidence interval. There are 47 funds that ever switched out of ISS and 33 funds that ever switched into ISS.

(A) Funds that switched out of ISS



(B) Funds that switched into ISS

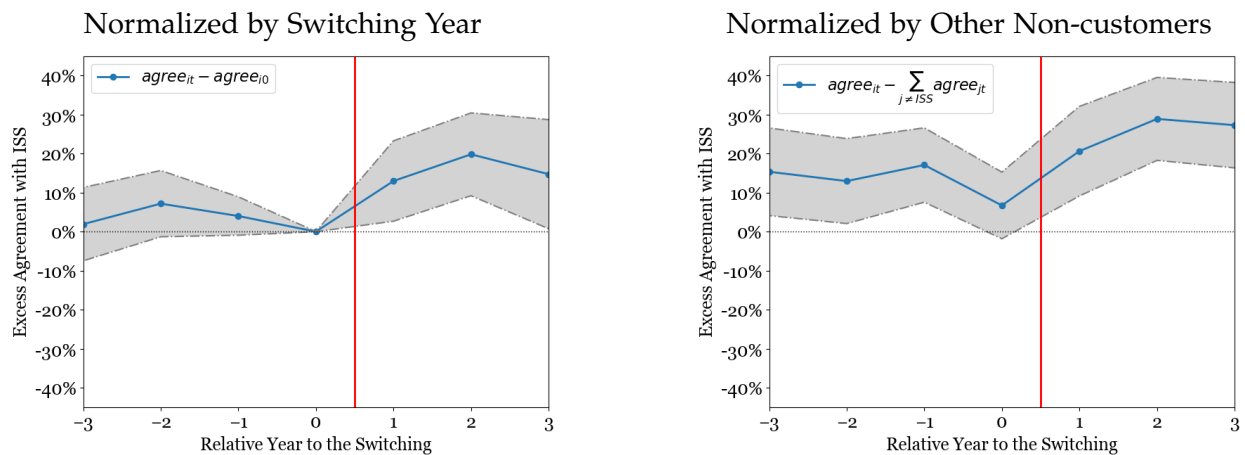
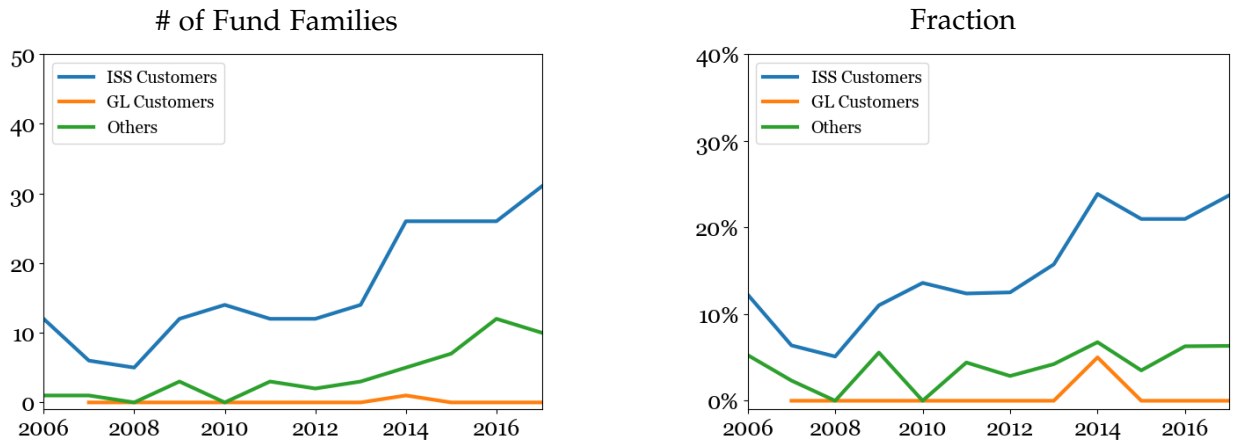


Figure 6: Rebo-Voting with ISS or Management

This figure shows the number and the fraction of ISS and Glass Lewis's customers who robo-vote either with ISS or Management. I denote a fund family robo-votes with ISS if it votes in the same direction as ISS more than 99.9% of times (i.e. follows Management's recommendation less than 0.01% of times) when ISS disagrees with Management. I define robo-voting with Management in similar fashion (follow Management more than 99.9% of times when ISS does not agree with Management). The left figure displays the number of funds that robo-vote. The right figure displays the fraction of funds that robo-vote out of the total number of funds in the same group.

(A) Rebo-Vote with ISS



(B) Rebo-Vote with Management

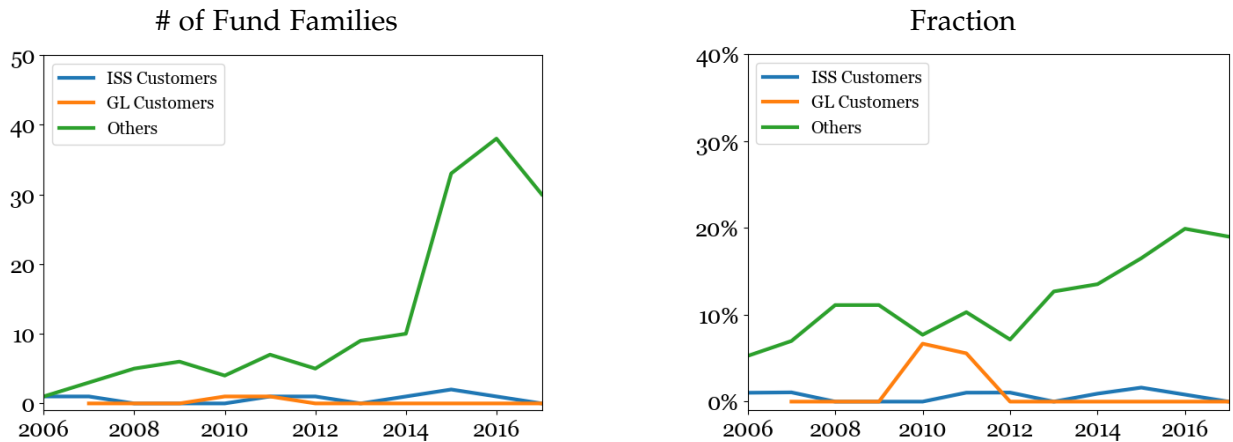


Table 6: Determinants of Robo-Voting

This Table reports the determinants of fund families being robo-voters with either ISS or Management. The dependent variable of column 1-3 is a dummy that equals 1 if the fund votes in the same direction as ISS more than 99.9% of times in the current year (i.e. follows Management's recommendation less than 0.01% of times) when ISS disagrees with Management. The dependent variable of column 4-6 is defined analogously: a dummy that equals 1 if the fund votes in the same direction as Management more than 99.9% of times when ISS disagrees with Management. One observation is a fund-year. All regressions include year fixed effect. Standard Errors are clustered at the fund-family level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	Robo-Vote with ISS			Robo-Vote with Management		
	ISS customer (1)	GL customer (2)	Others (3)	ISS customer (4)	GL customer (5)	Others (6)
log(asset)	-0.04*** (0.01)	0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)	0.01 (0.01)	-0.01* (0.01)
log(# votes)	-0.04*** (0.01)	0.00 (0.00)	-0.00 (0.01)	-0.00 (0.00)	-0.03 (0.03)	-0.05*** (0.01)
Age	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Index Fund	0.10** (0.04)	0.01 (0.01)	0.00 (0.02)	0.01* (0.01)	0.04 (0.03)	0.03 (0.03)
Inst. Fund	0.02 (0.06)	0.00 (0.01)	-0.02 (0.03)	-0.00 (0.01)	0.01 (0.02)	-0.02 (0.04)
ESG Fund	0.04 (0.05)	-0.01 (0.01)	0.03 (0.05)	-0.00 (0.00)	0.02 (0.01)	0.01 (0.06)
Mgmt. Fee	0.11 (0.07)	0.00 (0.01)	-0.01 (0.01)	0.01 (0.01)	0.02 (0.03)	0.03 (0.04)
Constant	0.76*** (0.13)	-0.04 (0.04)	0.09 (0.07)	0.05** (0.03)	0.18 (0.14)	0.47*** (0.09)
Observations	1267	178	1036	1267	178	1036
Adjusted R^2	0.175	-0.038	-0.003	0.012	0.129	0.110
# of cluster	220.00	45.00	290.00	220.00	45.00	290.00

Table 7: ISS Influence Under Different Market Volatility

This Table reports OLS regressions for equation 1 for proposals that happen under different market volatility. Panel (A) includes all uncontentious proposals and Panel (B) includes all contentious proposals. Regressions are separate by the magnitude of 1-month or 2-month average VIX before the annual meeting date. Columns 1-5 of each table use the 1-month (21 trading days) average VIX and columns 6-10 use the 2-month (42 trading days) average VIX. All regressions include proposal fixed effect and control for fund characteristics that appear in table 2. Standard Errors are clustered at the fund-family level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

(A) Uncontentious Proposals

	one month VIX average					two months VIX average				
	(1) all	(2) VIX>10	(3) VIX>20	(4) VIX>30	(5) VIX>40	(6) all	(7) VIX>10	(8) VIX>20	(9) VIX>30	(10) VIX>40
ISS Customer	0.018** (0.008)	0.018** (0.008)	0.022** (0.009)	0.027** (0.012)	0.027** (0.013)	0.018** (0.008)	0.018** (0.008)	0.023** (0.009)	0.027** (0.013)	0.028** (0.014)
Observations	12211291	12194260	2255501	917421	140606	12211291	12211291	2278299	807683	305682
# of cluster	492	492	367	243	190	492	492	373	245	192
Adjusted R ²	0.070	0.070	0.067	0.061	0.066	0.070	0.070	0.066	0.061	0.054

(B) Contentious Proposals

	one month VIX average					two months VIX average				
	(1) all	(2) VIX>10	(3) VIX>20	(4) VIX>30	(5) VIX>40	(6) all	(7) VIX>10	(8) VIX>20	(9) VIX>30	(10) VIX>40
ISS Customer	0.203*** (0.045)	0.203*** (0.045)	0.207*** (0.057)	0.229*** (0.067)	0.221*** (0.068)	0.203*** (0.045)	0.203*** (0.045)	0.208*** (0.055)	0.239*** (0.068)	0.241*** (0.066)
Observations	1271703	1270785	307810	145030	18815	1271703	1271703	306306	128786	50034
# of cluster	482	482	359	240	184	482	482	366	240	189
Adjusted R ²	0.123	0.123	0.109	0.113	0.126	0.123	0.123	0.110	0.116	0.120

Table 8: ISS Influence On Different Funds

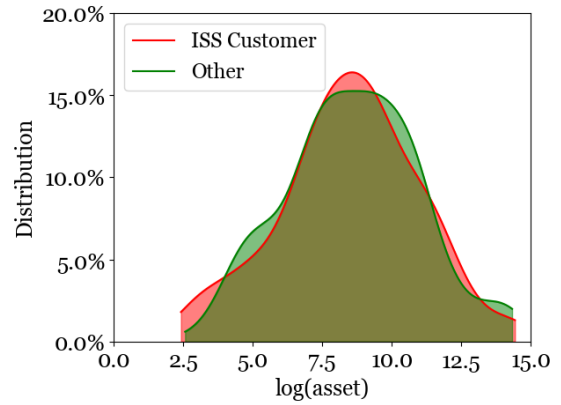
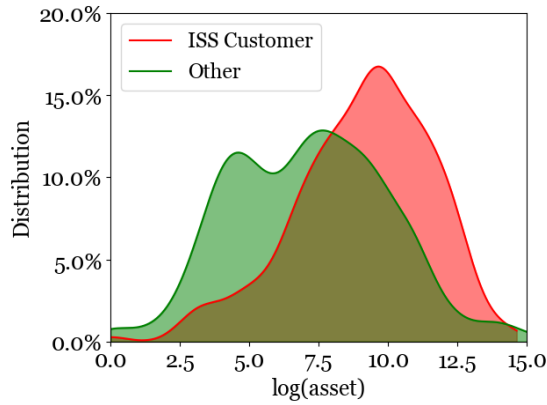
This Table reports the OLS regression of the agreement between ISS customer's votes and its recommendations as a function of funds' characteristics. Columns 1-4 are for uncontentious proposals and columns 5-8 are for contentious proposal. The dependent variable of all columns is a dummy that equals to 1 if the vote is in the same direction as ISS's recommendation. The sample includes votes from ISS's customers only. One observations is a vote. All regressions include proposal fixed effect. Standard Errors are clustered at the fund-family level. **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	Uncontentious Proposals				Contentious Proposals			
	director election (1)	say on pay (2)	govern. proposal (3)	social proposal (4)	director election (5)	say on pay (6)	govern. proposal (7)	social proposal (8)
log(asset)	0.01 (0.01)	0.00 (0.00)	-0.00 (0.00)	0.03*** (0.01)	0.01 (0.02)	-0.03 (0.02)	-0.01 (0.01)	-0.06*** (0.02)
log(# votes)	0.02** (0.01)	0.02*** (0.01)	0.01** (0.01)	0.03** (0.01)	-0.01 (0.04)	-0.05 (0.05)	-0.02 (0.03)	-0.02 (0.04)
Age	0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
Index Fund	-0.03 (0.02)	-0.03** (0.01)	-0.00 (0.01)	-0.04 (0.03)	-0.01 (0.07)	0.02 (0.07)	0.01 (0.04)	0.05 (0.08)
Inst. Fund	0.01 (0.01)	-0.01 (0.01)	0.03 (0.03)	-0.03 (0.05)	0.08 (0.10)	0.14 (0.11)	0.07 (0.05)	0.14 (0.09)
ESG Fund	-0.03 (0.02)	-0.01 (0.03)	-0.03 (0.02)	-0.14** (0.06)	-0.02 (0.09)	0.03 (0.09)	-0.00 (0.04)	-0.01 (0.08)
Expense Ratio	1.53 (2.76)	4.91 (3.68)	-0.45 (2.34)	7.83* (4.74)	13.54 (17.00)	-1.45 (17.96)	10.31 (12.03)	9.67 (13.88)
Mgmt. Fee	-0.00 (0.02)	-0.04 (0.03)	-0.00 (0.02)	-0.07 (0.05)	0.11 (0.20)	0.17 (0.20)	-0.04 (0.09)	0.08 (0.14)
Constant	0.73*** (0.12)	0.76*** (0.08)	0.82*** (0.07)	0.44*** (0.14)	0.50 (0.42)	1.19*** (0.42)	0.95*** (0.29)	1.02*** (0.36)
Observations	6433496	545302	55403	24969	505478	67784	51873	42245
# of cluster	230	186	228	223	229	186	227	226
Adjusted R ²	0.048	0.044	0.091	0.081	0.052	0.075	0.120	0.115

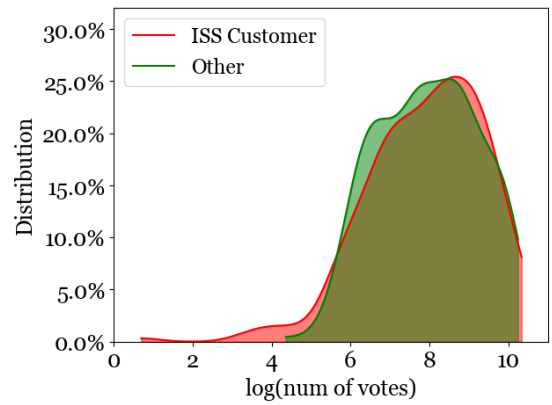
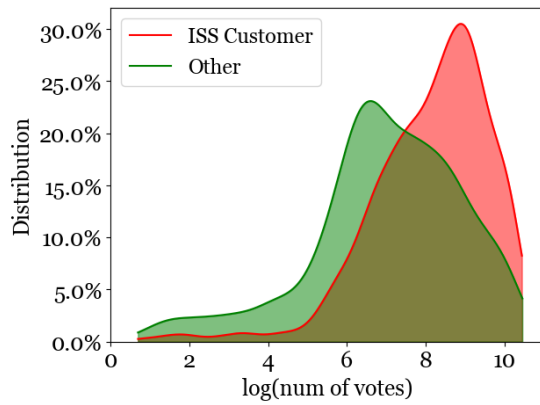
Figure 7: Propensity Score Matching: Before and After

This figure shows the distribution of fund characteristics before and after propensity score matching. The left figures are before matching and the right figures are after matching. The propensity score is estimated by the logit regression on funds' characteristics that appear in table 2. The propensity score matching (PSM) method used is a one-to-one matching without replacement and with a tolerance of 0.001 for the score.

log(asset)



log(# of votes)



family age

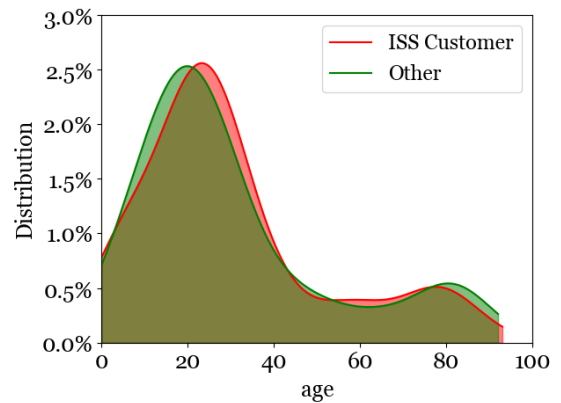
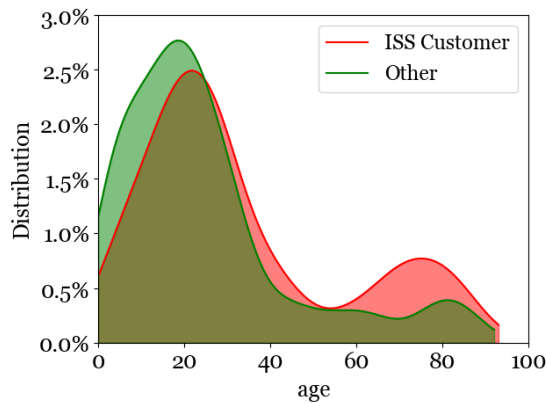


Table 9: ISS Influence on its Customers (Propensity Score Matching)

This Table reports OLS regressions for equation 1, $\text{agree_ISS}_{ipt} = \beta_0 + \beta_1 \cdot \text{ISS_Customer}_{it} + \gamma' \cdot \mathbf{Z} + \varepsilon_p + \varepsilon_{ipt}$, after matching characteristics for funds that do or don't use ISS's platform. Panel (A) includes all uncontentious proposals and Panel (B) includes all contentious proposals. I match an ISS's customer with a non-customer within the same year. The propensity score is estimated by the logit regression on funds' characteristics that appear in table 2. The propensity score matching (PSM) method used is a one-to-one matching without replacement and with a tolerance of 0.001 for the score. All regressions include proposal fixed effect and control for fund characteristics that appear in table 2. Standard Errors are clustered at the fund-family level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

(A) Uncontentious Proposals – Certification Effect

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	All	board election	say on pay	financial policy	golden parachute	poison pill	board declass.	ind. chair	proxy access	political disclos.	environ-mental	animal rights
ISS Customer	0.02** (0.01)	0.02** (0.01)	0.05*** (0.02)	0.05*** (0.01)	0.06** (0.03)	0.20*** (0.07)	0.01 (0.01)	0.20*** (0.06)	0.03** (0.01)	0.01 (0.04)	-0.04 (0.02)	-0.01 (0.02)
Observations	2654386	1915751	173131	30372	4454	410	7506	3459	1410	2370	2764	1065
# of cluster	248	248	219	242	186	91	221	215	174	198	214	148
Adjusted R ²	0.102	0.092	0.110	0.140	0.145	0.164	0.095	0.080	0.125	0.086	0.074	0.069

(B) Contentious Proposals – Sway Effect

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	All	board election	say on pay	financial policy	golden parachute	poison pill	board declass.	ind. chair	proxy access	political disclos.	environ-mental	animal rights
ISS Customer	0.25*** (0.05)	0.27*** (0.06)	0.26*** (0.07)	0.18*** (0.06)	0.23*** (0.08)	0.23*** (0.05)	0.06 (0.05)	0.16*** (0.06)	0.15*** (0.04)	0.26*** (0.07)	0.25*** (0.06)	0.15 (0.11)
Observations	270010	140966	20945	1529	2002	209	3984	5568	4763	9726	4304	113
# of cluster	248	247	217	165	160	68	185	230	196	227	217	68
Adjusted R ²	0.169	0.132	0.154	0.131	0.163	0.252	0.101	0.104	0.217	0.198	0.207	0.101

Figure 8: Location of Mutual Funds and ISS Offices

This Figure plots the location of mutual fund families in my sample for the year 2017. They are grouped by their use of voting platforms. Funds that are ISS's customers are plotted in blue, funds that are Glass Lewis's customers are plotted in red, and other funds are plotted in grey. The figure also plots ISS office locations.

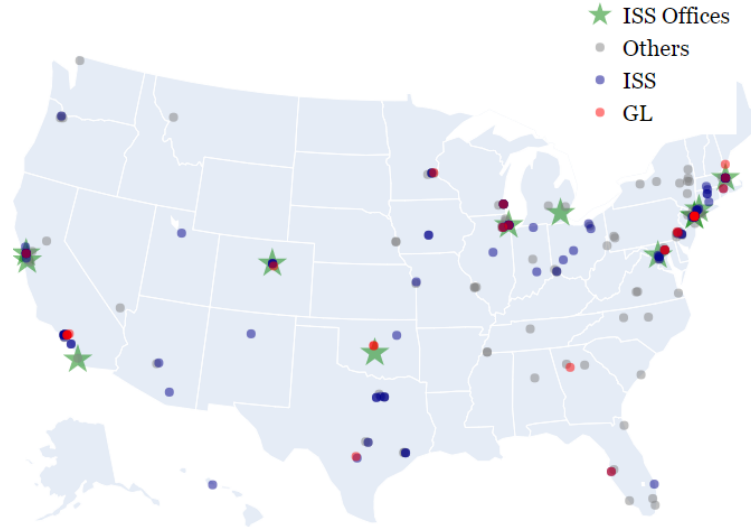


Table 10: Instrumental Variable: Distance to ISS Offices

This Table reports the results of instrumental variable regressions of fund families' agreement with ISS as a function whether the fund is an ISS customer. Column 1 is the first stage regression of whether the fund is an ISS customer as a function of its physical distance to ISS's offices. Columns 2-7 are second stage regressions where the dependent variable is the fraction of a fund family's votes that are in the same direction as ISS's recommendations. One observation is a fund-year. Standard Errors are clustered at the fund level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

$$\begin{aligned} \text{(first stage)} \quad \text{ISS Customer}_{it} &= \text{Distance to ISS}_{it} + \text{state FE} + \varepsilon_{it} \\ \text{(second stage)} \quad \widehat{\%(\text{Agree with ISS})}_{it} &= \widehat{\text{ISS Customer}}_{it} + \varepsilon_{it} \end{aligned}$$

	(1) First Stage	Dependent Variable: Fraction of Votes Agreed with ISS					
		Any Proposal		Uncontentious Only		Contentious Only	
		(2) IV	(3) OLS	(4) IV	(5) OLS	(6) OLS	(7) IV
Distance to ISS	-0.07** (0.03)						
ISS Customer		0.07** (0.03)	0.07*** (0.01)	0.06* (0.03)	0.04*** (0.01)	0.24** (0.10)	0.33*** (0.03)
Observations	2467	2467	2751	2465	2749	2417	2695
# of cluster	469	469	500	469	500	460	491
Adjusted R ²	0.093	0.084	0.082	0.028	0.029	0.211	0.233