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Index Funds and Corporate Governance: Evidence from State Street Global Advisors

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Abstract

The Big Three index fund managers, BlackRock, Vanguard and State Street Global Advisors, continue to wield an increasingly large share of global equity. The question remains as to what extent they are able to use their large stakes to affect governance. I shed light on the mechanisms of proxy voting and behind-the-scenes engagements they use to exert institutional voice. My findings demonstrate a large degree of heterogeneity exists between the Big Three in their proxy voting. Disagreement largely occurs with respect to director elections, pay approval and other shareholder proposals. Vanguard and BlackRock cast a significantly higher proportion of their votes in favour of management relative to State Street. This is consistent across proposals of all types. Using publicly available engagement data from State Street, I demonstrate private engagement informs proxy voting. Engagements appear to act as a means of obtaining private firm-specific information, and I document significant differences between State Street's voting behaviour at shareholder meetings with and without engagement. State Street's votes appear to be motivated by fundamentals, and there is strong evidence to suggest they actively monitor portfolio firms.

Declaration

This essay is the sole work of the author whose name appears on the title page. It contains no material which the author has previously submitted for assessment at the University of Melbourne or elsewhere. To the best of the author's knowledge, the essay contains no material previously written or published by another person except where reference is made in the text of the essay

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Signature of Student

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1 Introduction

Significant upheaval is underway in the world of financial investment. Assets are increasingly being invested via investment advisors and asset management firms. A growing proportion of this capital is being allocated to index funds. Indexing is growing in popularity everywhere (Bhattacharya and Galpin, 2011), with over 40% of investment in U.S. equity now passively managed as of 2017 compared to less than 8% in 1997 (Cremers, Fulkerson, and Riley, 2019). The question surrounding how index funds will affect corporate governance persists. This paper makes an empirical contribution to the ongoing debate surrounding the monitoring of modern index fund managers.

Broadly speaking, there are two types of asset managers: index funds and active funds. Active fund managers follow a traditional 'stock picking' investment philosophy, and their performance is generally dependent on two aspects in particular: security selection and market timing (Rompotis, 2011). Security selection relates to the notion that an active manager may be able to select an undervalued or underperforming stock that will overperform its peers. Similarly; market timing relates to the manager's ability to increase (decrease) exposure to the market during expansion (recession). This style of investment management is characterised by the well-known channels of 'voice' and 'exit' typically associated with blockholders, where the former can be represented as undertaking an action to enhance firm value, such as informing strategic decision making, directly confronting managers or researching a shareholder proposal (Edmans and Holderness, 2017), whilst the latter relates to the ability of the fund manager to sell and threaten the sale of their shares if the firm underperforms (Admati and Pfleiderer, 2009).

On the contrary, per Morningstar, passively managed funds are funds whose "investment securities are not chosen by a portfolio manager, but instead are automatically selected to match an index or part of the market".[1] One such index is the large cap Standard & Poors 500, tracked by well-known funds such as the Vanguard 500 Index Fund, the State Street Global Advisors' SPDR S&P 500 ETF and the BlackRock iShares Core S&P 500 ETF. The theoretical foundation for index investment is the zero-sum game, which states that, at any given time, the aggregate market return is equal to the asset-weighted return of all market participants (Rowley, Walker and Zhu, 2019). The zero-sum game suggests that before costs, the return on the average actively managed dollar is equal to that of the average passively managed dollar, and that after costs, the return on the average active dollar is strictly less than that of the average passive dollar (Sharpe, 1991). Today, market share within indexing is dominated by the above three firms, collectively referred to as the Big Three.[2] In 2016, they represented over 90% of all AuM in passive equity funds (Fitchner, Garcia-Bernardo, and Heemskerk, 2017) and were the three largest asset managers in the world (Table 1). These three firms are projected to vote 34% of S&P 500 shares within the next decade (Bebchuk and Hirst, 2019b).

Naturally, one would assume index funds tracking the same index should hold identical portfolios. Although this would be the case in an ideal world, practical considerations result in both excess return and tracking error.[3] The existence of these two phenomena mean that index fund managers hold not identical, but rather very similar

[1] https://www.morningstar.com/InvGlossary/passively-managed-fund.aspx
[2] See Fitchner, Garcia-Bernardo and Heemskerk (2017) for the first usage of 'The Big Three'
[3] Excess return is defined as the performance of the index fund relative to its benchmark index, and tracking error is defined as the annualised standard deviation of excess return.
See:https://advisors.vanguard.com/VGApp/iip/site/advisor/etfcenter/article/ETF_IndexTracking

portfolios. Excess return is generally negative for index funds, due to the return on the fund being lower than that of the benchmark, net of fees. Pure index funds have also been empirically demonstrated to have close to zero tracking error (Cremers and Petajisto, 2009) and there are no resulting practical implications within the context of the Big Three's respective S&P 500 portfolios in my analysis. Via Form N-PX filings with the SEC, I observe consistency across the shareholder meetings of S&P 500 firms at which the Big Three have cast votes over the full sample period.

Nonetheless, the funds management industry has historically been dominated by active fund managers (Figure 1). Academics have long debated the merit of active management since Jensen (1968), and the resulting sentiment is best summarized by Carhart (1997) seminal paper; which finds no evidence supporting the existence of skilled active managers. However, it took the 2008 global financial crisis for the ramifications of this literature to take hold in practice. Since 2008, active equity funds have steadily seen outflows (Figure 3), with recent research exacerbating this movement. Much of the recent literature can be traced to Cremers and Petajisto (2009), where they introduce active share[4] as a new measure of portfolio management, and find that not only is it a strong predictor of future outperformance, but that significance heterogeneity exists between the levels of active share amongst funds marketed as 'active', highlighting the rarity of skilled active managers. This idea of rarity is reaffirmed by Heaton, Polson, and Witte (2017), who demonstrate that randomly selecting a subset of securities from a benchmark index greatly increases the likelihood of underperforming that index, suggesting the probability of successful active management is even smaller than previously imagined.

[4] Active Share is defined as the proportion of the portfolio that differs to the fund's benchmark index.

A great deal of work supporting indexing has helped this shift alongside criticism of active investing. Rowley and Kwon (2015) demonstrate a negative relationship between expense ratio and excess return, and Rompotis (2011) finds no evidence that active ETF managers possess security selection and market timing ability. Soe and Polrier (2016) of Standard & Poors show that 92.15% of large-cap active managers trailed the S&P 500 over a 15-year period ending Dec. 2016, and similar research from Morningstar found low expense ratios were the best predictors of future relative outperformance (Kinnel, 2010). Given the median expense ratio of index funds is 0.43% compared to 1.12% for active funds (Heath, Macciocchi, Micahely, and Ringgenberg, 2019), these findings have greatly helped to push fund flows away from active management towards index funds in the last decade. This huge growth was marked by a milestone 2019 as for the first time ever, AuM (assets under management) of index funds reached parity with active funds. [5]

[5] See Figure 2 and https://www.bloomberg.com/news/articles/2019-09-11/passive-u-s-equity-funds-eclipse-active-in-epic-industry-shift

Figure 1: Percentage of US equity investments in index and active funds 2009 to 2018. Source: Morningstar Direct https://www.morningstar.com/blog/2019/01/28/us-fund-flows-trends.html

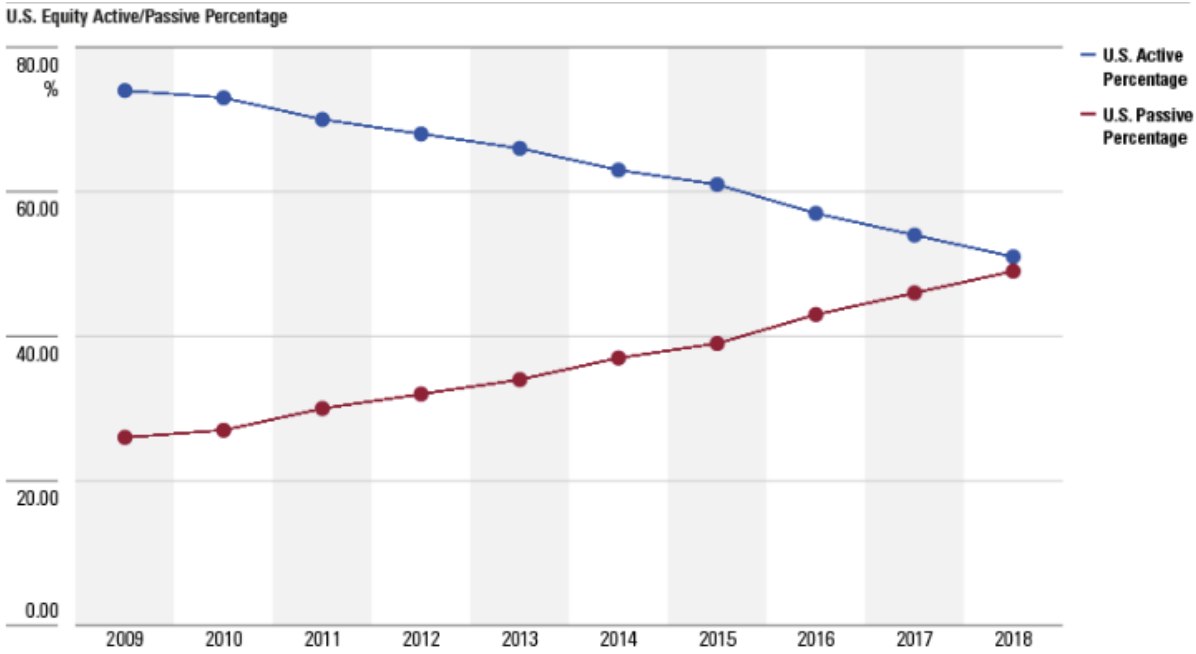

Figure 2: Notional amount invested in US equity in index & active assets 1998 to 2019. Source: Morningstar Direct https://www.morningstar.com/blog/2019/06/12/asset-parity.html

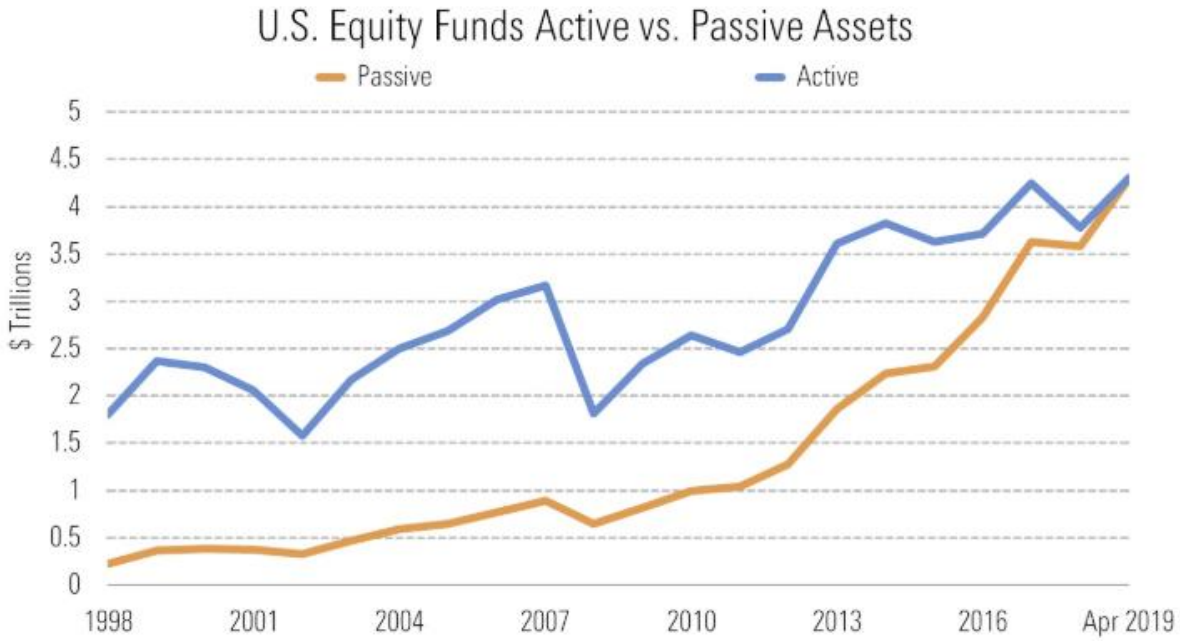

Figure 3: Fund flows from index and active US Equity Funds from 2007 to 2018. Source: Morningstar Direct https://www.morningstar.com/blog/2019/06/12/asset-parity.html

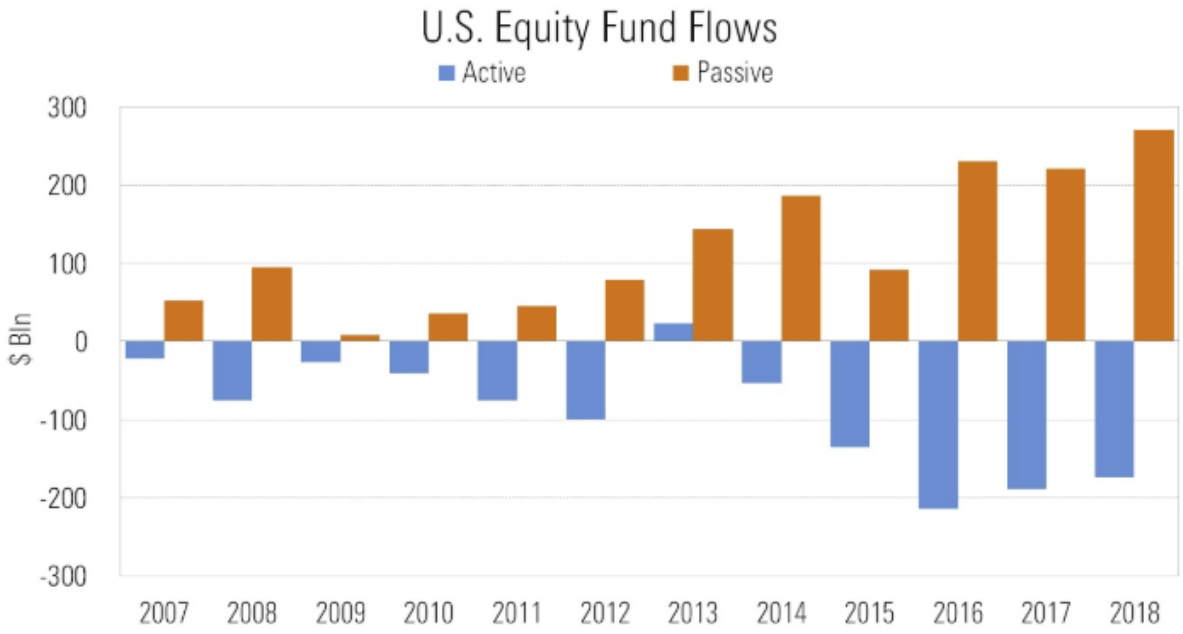

Table 1: Top 15 U.S. Asset Managers (Equity), June 2016.
Source: Fitchner, Garcia-Bernardo, and Heemskerk (2017).

Name	Total AuM (Equity)	AuM in Passive Index Funds (Equity)	Share of Passive Index Funds (Equity)
BlackRock	*2,644*	*2,166*	*81.3%*
Vanguard	*2,270*	*1,839*	*81.1%*
State Street	*1,377*	*1,275*	*96.9%*
Fidelity	1,004	170	16.9%
Invesco	377	85	22.5%
T. Rowe Price	337	30	8.9%
BNY Mellon	247	14	6.9%
Capital Group	838	0	0%
Wellington Mgmt.	476	0	0%
JP Morgan Chase	342	0	0%
Affiliated Managers	336	0	0%
Franklin Templeton	297	0	0%
Goldman Sachs	254	0	0%
Dimensional F. Adv.	245	0	0%
Legg Mason	204	0	0%

Nonetheless there is a clear difference in the level of autonomy afforded to the active manager and the index manager. For the index fund manager, at any given time, the choice of which securities to invest in is solely dependent on the constituents of the respective index, and index funds will always have full market exposure by definition. The index fund manager implicitly has no control over the composition or duration of their portfolio holdings. I refer henceforth to index managers as a class of investors characterised by these traits.

The aforementioned unique characteristics of index funds have clear implications for the tools available to index fund managers in the monitoring of portfolio firms. As they cannot exit, they may exert influence only through 'voice'. They do this through using their large blocks as leverage for private engagements and to vote at annual meetings, using centralized voting strategies to amplify their influence - demonstrating internal disagreement orders of magnitude less relative to other active fund families (Fitchner, Garcia-Bernardo, and Heemskerk, 2017). Although the exact definition of engagement varies amongst the Big Three, the essence remains the same: an engagement involves a private interaction with one or more directors.[6] The leaders of the Big Three champion engagement and the use of institutional voice, with former Vanguard Chairman and CEO F. William McNabb III writing in his 2017 letter to CEOs, "As essentially permanent owners of the companies you lead, we have a special obligation to be engaged stewards actively focused on the long term".[7]

Nevertheless, it is not solely because they index that the Big Three warrant discussion. Indexing has long been a feature of institutional investment. Instead the Big Three are of

[6] https://www.wsj.com/articles/at-blackrock-vanguard-and-state-street-engagement-has-different-meanings-1516449600
[7] https://about.vanguard.com/investment-stewardship/governance-letter-to-companies.pdf

substantial interest for three major reasons: 1) that indexing is at the core of their business models, 2) their oligopoly within the index fund market, and 3) their respective sizes. The last aspect marks a key difference between the index and active fund industries – active AuM is split across many small funds and few large players whilst index market share is concentrated amongst the Big Three (Fitchner and Heemskerk, 2019).

Given their size, support of the Big Three may be the difference maker in key proposals such as proxy contests and shareholder proposals. Such was the case in 2015 when well-known activist Nelson Peltz failed to gain a seat on the board of DuPont following the Big Three voting their 16.7% combined stake against him, despite garnering substantial shareholder support and a positive market reaction upon announcement.[8] Thus, understanding the extent to which the Big Three generate firm-specific research and monitor portfolio firms is pivotal, especially as all three employ the services of proxy advisory firms such as ISS, who have endured heavy criticism for their reliance on a one-size-fits-all governance approach (Rose, 2007). Questions have also been raised at index funds' incentives to monitor (See Posner, Morton, and Weyl, 2017; Lund, 2018), with many of these concerns stemming from the low fee environment in which index funds now compete - competition and economies of scale have driven fees close to zero, with Fidelity even introducing the zero-fee Fidelity ZERO Total Market Index Fund in 2018.[9] Others are more optimistic about the Big Three's stewardship promises (See Kahan and Rock, 2019; Appel, Gormley, and Keim, 2016).

The link between the channels of voting and engagement used by index funds to exert influence over portfolio firms is yet to be explored, as engagements occur behind the

[8] https://fortune.com/2015/06/11/vanguard-blackrock-could-beat-peltz-icahn/
[9] https://fundresearch.fidelity.com/mutual-funds/summary/31635T708

scenes and data pertaining to engagement is largely kept private. Fitchner, Garcia-Bernado, and Heemskerk (2017) hypothesize that the Big Three may exert 'hidden power' through private engagements, and some have speculated engagement may even be used as a vehicle to exploit common ownership of competing firms (Azar, Schmalz, and Tecu, 2018). However, the effectiveness of these engagements is widely debated. Private engagements may not actually impact governance and be an adequate substitute for other stewardship tools (Bebchuk and Hirst, 2019a). In addition, the usage of proxy advisors may result in sub-optimal governance outcomes (Larker, McCall, and Ormazabal, 2015), but survey evidence suggests that engagement and the use of proxy advisors are compliments (McCahery, Sautner, and Starks, 2016).

Whilst proxy voting is extremely transparent due to institutional asset managers being mandated to report their annual voting records, private engagements are not, as no such reporting is mandated by the SEC. As a result, there is ample variation amongst the Big Three in terms of their level of engagement disclosure. Although the most recent 2019 reporting season has seen State Street, BlackRock and Vanguard all disclose their private engagements, this is just the first year all three firms have done so. Even then, the level of disclosure remains inconsistent. BlackRock provides only the names of the portfolio companies they had dialogue with,[10] whilst Vanguard provides some information as to what the topic of engagement was,[11] and State Street goes even further to supply additional information regarding the engagement intensity.[12] State Street has supplied this

[10] https://www.blackrock.com/corporate/literature/publication/blk-annual-stewardship-report-2019.pdf
[11] https://about.vanguard.com/investment-stewardship/perspectives-and-commentary/2019_investment_stewardship_annual_report.pdf
[12] https://www.ssga.com/investment-topics/environmental-social-governance/2019/09/annual-asset-stewardship-report-2018.pdf

information since 2014, whilst BlackRock began disclosure in 2018 and Vanguard in 2019. Hence, in engagement disclosure, State Street leads the Big Three.

In this paper, I contribute empirically to the index fund literature in two ways. Firstly, using a sample of votes cast at S&P 500 shareholder meetings across 2014 – 2018, I explore the extent to which the Big Three differ in their proxy voting behaviour. Secondly, I contribute to the discussion on behind-the-scenes engagement, leveraging State Street's publicly accessible engagement data to investigate how it informs the proxy voting process.

I find evidence of substantial heterogeneity within the voting behaviour of the Big Three, consistent with Matvos and Ostrovsky (2010). Notably, BlackRock and Vanguard are significantly more management friendly than State Street. As a result, I find evidence of significant disagreement amongst the Big Three across a range of agenda items, mostly in relation to director elections and shareholder-sponsored proposals. Finally, State Street's proxy voting cannot be explained by ISS or management recommendations alone. Over the sample period they cast roughly 35% more 'Withhold' and 'Against' votes on director elections than ISS. Our evidence suggests that State Street employs a specialised proxy voting strategy beyond simply following management or ISS.

In Section 5.2, I show that engagement holds significant explanatory power over State Street's voting behaviour, lending credence to the observations made via summary statistics in Section 5.1. Multiple engagements in a given year are likely to result in a 5.86% lower likelihood of State Street following ISS' recommendation on a contentious[13] governance/compensation related agenda item, and a single engagement is also associated

[13] Contentious issues are defined as those where management and ISS provide opposing recommendations.

with a 5.36% greater likelihood of State Street voting for the re-election of contentious directors. I show private engagements act as a channel for State Street to obtain private, firm-specific information, and have a significant, measurable effect on their proxy voting behaviour.

2 Literature review

A large body of work covers blockholders and corporate governance (see Edmans and Holderness, 2017 for a review). A blockholder is a shareholder with a significant shareholding, and the literature has defined and widely adopted a threshold of 5% ownership for blockholder classification. The need for shareholder monitoring arises as a result of the fundamental agency problem that stems from the separation of ownership and control, where corporate managers make decisions on behalf of consequence bearing shareholders. However, monitoring faces a significant challenge in the free-rider problem. The agency problems between managers and shareholders are not easily overcome through monitoring by a single shareholder, as the monitoring shareholder must bear the full cost of monitoring alone, whilst the benefits are diffusely spread amongst all shareholders of the firm (Berle and Means, 1932). Nonetheless, blockholders are well positioned to act as effective monitors due to both their sophistication and size, which enables them to spread the costs of monitoring over a large asset base (Black, 1992). This monitoring may come in the form of intervention (Shleifer and Vishny, 1986) and also through punishing management via the threat of exit and exit itself (Admati and Pfleiderer, 2009). Notably, empirical studies that aim to identify causation face a well-known endogeneity problem (Demsetz and Lehn, 1985); in that clean identification is difficult due to reverse causality. This arises due to multiple motivations a blockholder may have for purchasing shares in a given firm – and although one such motivation may be that the

firm stands to benefit the most from monitoring, evidently, there are many more reasons a blockholder might purchase shares.

Nonetheless, the above definition of blockholder is a broad one, and in practice, there are many types of blockholders. Empirical studies such as Cronqvist and Fahlenbrach (2009), Hadlock and Schwartz-Ziv (2019) and Volkova (2018) which attempt to classify distinct types of blockholders highlight this heterogeneity. Blockholders may be individuals, strategic investors, corporations, financial institutions and more, each with their own idiosyncratic investment determinants. Volkova (2018) notes three dimensions of diversity across blockholders: identity, portfolio size, and investment horizon. Both within the context of Hadlock and Schwartz-Ziv (2019) and the framework originating from Barclay and Holderness (1989) added to by Volkova (2018), index funds fall under the category of generic financial institutions or institutional investors.

Institutional investors are the subject of much of blockholder literature. Notably, they suffer from an additional agency problem, in the form of conflicts of interest between portfolio managers and the investors in their funds (Barber, 2007). Nonetheless, Michaely and Shaw (1994) demonstrate institutional investors are better informed than retail investors and at a substantial advantage when it comes to acquiring information. This may be as a result of institutional investors being better positioned to use firm-specific information, as they are able to use such information to both speculate and intervene to improve a firm's performance (Khan and Winton, 2002). Gillian and Starks (2000) provide empirical evidence in support of the latter aspect, demonstrating that proposals put forward by active institutional investors are more likely to be successful than those by individual investors. Moreover, the presence of institutional investors has been found

to be associated with a number of firm outcomes – ranging from executive compensation (Hartzell and Starks, 2003), to payout policy (Grinstein and Michaely, 2005), to leverage (Michaely, Popadak, and Vincent, 2015). Finally, there are strong financial incentives for institutional investors to be active shareholders, as a 1% increase in the value of a portfolio firm may result in as much as a $335,900 gain for the largest institutions (Lewellen and Lewellen, 2018). Recent evidence suggests institutional investors are now using private engagement as a means of activism. Engagement between portfolio firms and investors is at an all-time high - in 2014, almost 50% of issuers and investors initiated more than 10 engagements, compared with 30% in 2011 (Goldstein, 2015). Finally, given institutional investors are more likely to recall loaned sharers prior to the proxy date, and that they forgo lending revenue to do so (Aggarwal, Saffi, and Sturgess, 2015), the value of proxy voting too as a channel of voice and activism cannot be understated.

Nonetheless, whilst index funds are institutional investors; they possess unique enough characteristics to warrant a separate discussion. Firstly, I note an important difference between the usage of indexing as an investment strategy, and index funds themselves. There is a large body of literature that concentrates on the benefits of the former (see Fragkiskos, 2014), but much less on the latter. U.S. public pension funds were one of the earliest adopters of indexing as an investment strategy, and their activism has been studied in depth. Barber (2007) estimates that between 1992 and 2005, CalPERS, the California Public Employees' Retirement System, one of the most well-known public pension funds in the U.S, created $3.1 billion in total wealth through their shareholder activism. Crutchley, Hudson, and Jensen (1998) further demonstrate that the extent of the increase in shareholder wealth associated with CalPERS' activism was dependent on the aggressiveness and visibility of said activism. Finally, the success of this activist targeting

may also be credited to a coordinated effort on behalf of a coalition of such funds acting together (Opler and Sokobin, 1996). Nonetheless, these funds are not truly comparable to modern index funds for two reasons: 1) they indexed only a portion of their funds, and 2) their fiduciary duty was not solely to track a benchmark's performance. These pension funds engaged in indexing primarily as a means of cost reduction and hence retained the ability to 'exit' (Fitchner and Heemskerk, 2019).

Since then, fund managers have become delineated into purely active or passive strategies. The availability of index funds has led to actively managed funds increasing their active share (Cremers, Ferreira, Matos, and Starks, 2016) and as a result, recent studies have adopted a narrower scope to address index funds in isolation.

Two schools have emerged in the discussion surrounding the efficacy of index funds as corporate stewards – one in support and another against. The former rests on the idea that since an indexing strategy leads to the inability to divest shares of underperforming companies, this should place a greater emphasis on activism relative to an active fund manager (Romano, 1993). Gallagher, Gardner, and Swan (2013) suggest short-term blockholders apply influence through trading, while long-term blockholders take a more active approach to monitoring (Chen, Harford, and Li, 2007). This argument is further supported by the size of index funds' positions, as position size is positively related to the magnitude of the impact of institutional ownership on governance (Cronqvist and Fahlenbrach, 2009). Furthermore, larger funds can spread the cost of researching firm-specific information over a larger asset base and funds with lower turnover can spread these costs over time, as they are better positioned to realise gains from active voting that may come slowly over an extended period (Cunat, Gine, and Guadalupe, 2012). Given

Vanguard has an average turnover rate of 5%,[14] index funds are some of the best positioned asset managers to realise any long-term gains from monitoring.

The alternative interpretation stems from the notion index funds may be less inclined to acquire private information relative to other institutional investors, as they have less ability to trade on any information they acquire (Parrino, Sias, and Starks, 2003) and may be impacted by resource constraints, given the breadth of their portfolios (Ekholm and Maury, 2014; Fich, Harford, and Tran, 2015). Romano (1993) proposes that "even for the passive index fund manager, the cost of corporate governance activism is likely to outweigh the pro rata benefit for all but the very largest investors" (p. 833). This view that resource constraints may negatively affect monitoring is supported by Bebchuk and Hirst (2019a), who demonstrate BlackRock, Vanguard and State Street have 45, 21, and 12 personnel managing portfolios consisting of 11246, 13225 and 12291 firms respectively.

Nonetheless, there is ample empirical evidence in support of both these views. Empirical studies into the effects of index fund ownership on governance typically use the well-known annual reconstitution of the Russel 1000/2000 indices to combat the previously mentioned endogeneity problem (Appel, Gormley, and Keim, 2016; Fahlenbrach and Schmidt, 2016; Boone and White, 2015; Mullins, 2014; Crane, Michenaud, and Weston, 2016; Fich, Harford, and Tran, 2015). These studies treat the index reconstitution as an exogenous shock to index fund ownership and exploit the fact that the Russell Indices are value-weighted, with stocks at the top of the Russell 2000 having a much higher weighing in index-tracking investors' portfolios then stocks as the

[14] https://www.vanguardinvestments.com.au/retail/au/jsp/investor-resources/education/index-funds.jsp?lang=en#/Tax

bottom of the Russell 1000. Higher index fund ownership is associated with more independent directors, removal of takeover defences, more equal voting rights (Appel, Gormely, and Keim, 2016), greater management disclosure, analyst following and liquidity (Boone and White, 2015) and greater dividends and share repurchases (Crane, Michenaud, and Weston, 2016).

Contrastingly, Schmidt and Fahlenbrach (2016) document adverse effects of index fund ownership in the form of higher CEO power and worse mergers and acquisitions. This may be as a result of an increased level of management friendliness from index funds, stemming from a lack of incentive to actively vote. Index funds conduct relatively less research in comparison to their active peers (Iliev, Kalodimos, and Lowry, 2019) and evidence suggests index funds are 12.5% less likely to vote against management on both consensus and contentious issues (Heath, Macciocchi, Michaely, and Ringgenberg, 2019), due to low benefits of monitoring, positive costs of monitoring and additional costs from disagreeing with management.

Finally, activist investors may play a key part in the way index funds affect governance. Activist and index investors may work complementarily to perform the role of monitor. This idea is founded on the rational reticence of institutional investors, in that they are willing to support governance proposals but not propose them (Gilson and Gordon, 2013). Jahnke (2019) notes activist campaigns have begun to target larger 'mega cap' companies, such as Nestle, Unilever, Procter and Gamble and DowDuPont, firms for which index managers' stakes will be relatively high, due to their weights in their respective indices. As they hold a significant proportion of voting shares, their mobilisation may significantly reduce the costs of activism, a hypothesis reaffirmed by

anecdotal evidence based on interviews with activist investors, who 'have learnt to work' with index managers (Jahnke, 2019). Greater index fund ownership is associated with more aggressive activist campaigns, increased usage of proxy fights and settlements (Appel, Gormley, and Keim, 2016) and a higher likelihood of activist success (Appel, Gormley, and Keim, 2018).

Nonetheless, the usage of overall measures of passive institutional ownership mean observed outcomes cannot be attributed to any index managers in particular, despite concentration of index market share amongst the Big Three. Theoretical studies into the Big Three's capacity to effectively monitor portfolio firms have largely followed the discussion of index funds. Disagreement within the literature largely stems from differing interpretations on how the scale and scope of the Big Three may affect incentives to govern. The size of their stakes in portfolio firms may increase the importance of their vote and also enable them to reap the most reward from monitoring than any other shareholders, whilst the scope of their holdings allows them to benefit the most through setting market-wide governance standards (Kahan and Rock, 2019) and makes the cost of engagement negligible (Jahnke, 2019). As they compete for fund flows not only with other index funds but active funds too, they are incentivized to be activist shareholders (Fisch, Hamdani, and Solomon, 2019). Additionally, the significant reputational benefits associated with activism, such as marketing and the warding off of regulation[15] (Kahan and Rock, 2019), offer strong incentives for index funds to monitor. Contrastingly, the alternative interpretation argues that size will exacerbate the free-rider problem in the index fund industry, as rewards from activism will be reaped by all funds tracking the

[15] For an example of regulatory pressure on the Big Three; https://www.ft.com/content/4cd1e06a-2a44-11e5-acfb-cbd2e1c81cca

index (Bebchuk and Hirst, 2019a), and that scope may provide a lack of financial incentives to go beyond a 'one-size-fits-all' approach to monitoring (Lund, 2018).

3 Data

Via interviews with asset managers, Jahnke (2019) finds engagement is typically a domestic exercise; as domestic firms represent investors' largest holdings both as a percentage of fund assets and a percentage of portfolio firm equity held. Per tables 2 and 3, this is true of State Street with the bulk of their annual engagements occurring in North America, despite North America representing only a fraction of State Street's overall proxy voting. On average, 66.8% of annual engagements are conducted with North American companies, despite only 31.4% of total proxy voting being attributed to the region. Given the range of global equities they offer as investment products, it stands to reason that the number of total proxy votes in each geographical region should be high. However, for State Street, majority of their business comes from US equity, and hence a large proportion of their assets is concentrated domestically. Thus, at a glance, it appears State Street allocates their engagements according to position size. Hence, given that BlackRock and Vanguard too are United States domiciled institutional investors, and the popularity of their respective S&P 500 products, I limit the scope of my analysis to S&P 500 firms.

Although S&P 500 securities are often a component in many indices and appear in the portfolios of many individual funds and ETFs, index fund families vote as one (Fitchner, Garcia-Bernardo, and Heemskerk, 2017). Hence, I download the Form N-PX mutual fund voting data filed by State Street, BlackRock and Vanguard from the EDGAR system, obtaining the direction of votes cast on behalf of their respective S&P 500 funds at all shareholder meetings for the five years spanning the 2014 – 2018 reporting periods.

Table 2: State Street Global Advisors' yearly engagements by location. Source: State Street Global Advisors Engagements Database.

	North America	**United Kingdom**	**Europe (ex-UK)**	**Australia**	**Japan**	**Rest of the World**
2014	69%	10%	9%	5%	4%	3%
2015	67%	13%	10%	5%	3%	2%
2016	66%	10%	11%	5%	4%	4%
2017	67%	8%	14%	5%	4%	2%
2018	65%	8%	13%	6%	5%	3%
Mean	66.8%	9.8%	11.4%	5.2%	4%	2.8%

Table 3: State Street Global Advisors' annual proxy voting by location. Source: State Street Global Advisors Engagements Database.

	North America	**United Kingdom**	**Europe (ex-UK)**	**Australia**	**Japan**	**Rest of the World**
2014	33%	6%	13%	3%	10%	35%
2015	34%	5%	13%	3%	10%	35%
2016	31%	5%	14%	3%	9%	38%
2017	30%	5%	12%	3%	10%	40%
2018	29%	4%	12%	2%	13%	40%
Mean	31.4%	5%	12.8%	2.8%	10.4%	37.6%

The annual reporting period for the Form N-PX is the standard financial year. These forms can be found under the State Street Equity 500 Index Portfolio, iShares Core S&P 500 ETF and Vanguard 500 Index Fund headers within the firms' respective N-PX filings. Proposal outcomes and additional proposal related data are obtained through ISS Voting Results. From this ISS dataset, I retrieve proposal outcomes, ISS' recommendations and proposal descriptions for each proposal in the sample. Additionally, I also retrieve director characteristics from ISS Director Data, and this information is merged with all proposals concerning director elections. Finally, I remove proposals where data is missing for any one of the Big Three, and where ISS data is unavailable. This leaves a total of 32844 proposals at 2510 unique shareholder meetings from 2014 – 2018.

In addition, monthly stock price data for each firm in the dataset is retrieved from the Centre for Research in Security Prices (CRSP), and the market capitalisation of each firm at the time of a given shareholder meeting is then calculated as the sum of outstanding shares multiplied by the share price for each share class associated with the firm, using the most recent price and outstanding share data prior to the meeting date. For each shareholder meeting in the voting dataset, I also collect data in relation to State Street's holdings in the firm. This holdings data is obtained through EDGAR, via the quarterly 13-F HR forms that mutual funds are mandated to file by the SEC. I use the reported holdings as of their most recent 13-F HR form to estimate State Street's holdings in a firm on a given meeting date.

This data is then used to calculate the weight of the security in State Street's portfolio, defined as the dollar value of the holding divided by the total value of the holdings, where the total value of the holdings is equal to the sum of the individual holdings for that period.

State Street's ownership stake is then also generated as the dollar value of their holdings divided by the total market capitalisation of the firm.

I then retrieve data on State Street's private engagements from their annual stewardship reports. The most recent Annual Stewardship Report details 2018 calendar year engagements and was uploaded to the State Street website in September of 2019.[16] Previous years' stewardship reports, dating back five years, can be accessed through links on the State Street website. Data on individual engagements can be found in the appendicies of these Annual Stewardship reports. There is significant variation in the number of engagements State Street held with a given firm in the 5 years spanning the sample period (Table 5).

In their stewardship reports, from 2014-2018, State Street provides the names of the portfolio companies engaged, along with where they are headquartered. Each year, State Street also provides additional information for each engagement. However, the extra information attached to each engagement has recently changed as of the 2018 stewardship report (See Figure 5 for an excerpt from the stewardship reports showing the differences in this reporting). The extra information provided is largely self-explanatory. The only contentious column is 'Comprehensive Engagement'. This column relates to how the engagement was conducted, as State Street conducts engagements both face to face, over conference calls and via letter. In their 2018 stewardship report, State Street writes "We engaged with 1,533 companies during 2018, of which 686 were comprehensive engagements conducted in-person or via conference calls and 847 were through letter-

[16] https://www.ssga.com/global/en/our-insights/publications/annual-stewardship-report-2018.html

writing campaigns." Hence, I interpret State Street's classification of an engagement as 'comprehensive' to mean it took place in-person or via conference call.

From 2014 to 2017, in the reporting of engagements, State Street provided the following extra descriptive variables: 'Multiple Engagements', indicating whether engagement occurred more than once in that year, 'Governance', 'Pay' and 'ES', indicating if the respective topic was covered in an engagement and finally 'Proxy/M&A', if the engagement was related to a proxy contest or M&A activity. All engagements from 2014 - 2017 disclosed formally in the appendix of their stewardship reports can be considered comprehensive engagements, as during this period, State Street did not provide data on individual 'non-comprehensive' engagements conducted via letter.

The 2018 report saw State Street begin reporting both comprehensive and non-comprehensive 'letter' engagements individually and the extra descriptive variables in their reports change. As shown in Figure 4, State Street added 'Comprehensive Engagement' and 'Letter', in place of 'Pay' and 'Proxy Contest/M&A'. Hence, these details are absent for 2018 engagement data in my consolidated engagement database. As this additional information is not consistent throughout the whole sample period, I omit these engagement-topic related variables from regressions pertaining to the entire sample and use this data only in regressions restricted to 2014 - 2017. I also exclude all engagements by letter and include only comprehensive engagements.

Lastly, note an engagement may be recorded as having covered multiple topics; i.e. an engagement may be recorded as having covered both governance and environmental/social issues (See Figure 4). Governance and Pay are consistently the most common topics of engagement (Table 4).

Figure 4: Excerpt from State Street Global Advisors' Annual Stewardship Reports.

Note the change in format following 2017. Source: State Street Global Advisors

2017 Annual Stewardship Report

Company Name	Market	Multiple Engagements	Governance	Proxy Contest/ M&A	Pay	ES
3D Systems Corp.	USA		●		●	●
3i Group plc	UK		●		●	
3M Company	USA		●			●
Abbott Laboratories	USA		●			
AbbVie Inc.	USA		●			●
Abengoa	EU-Others		●		●	
Accenture plc	UK					●
ACI Worldwide, Inc.	USA				●	

2018 Annual Stewardship Report

Name	Market	Letter	Comprehensive Engagement	Multiple Engagements	Governance	Environmental/ Social
3D Systems Corporation	USA		●		●	●
3M Company	USA	●	●	●	●	
77 Bank Ltd.	Japan	●				●
A. O. Smith Corporation	USA	●				
Abbott Laboratories	USA	●				
AbbVie Inc.	USA	●	●	●	●	●
Acacia Research Corporation	USA		●			
ACADIA Pharmaceuticals Inc.	USA		●		●	
Accenture plc	EU-Ireland	●	●	●	●	●

Table 4: State Street Global Advisors' yearly engagements by category.

This data pertains to global engagements. The reported percentages sum to 100 as these figures are taken directly from figures within State Street reports. Source: State Street Global Advisors Annual Stewardship Reports.

	Comprehensive Engagements	**Governance**	**Proxy Contest**	**M&A**	**Pay**	**Environmental/Social**
2014	610	43%	4%	3%	36%	14%
2015	636	47%	3%	3%	28%	19%
2016	611	46%	2%	3%	30%	19%
2017	676	40%	4%	1%	31%	24%
2018	686	39%	4%	2%	28%	27%

Table 5: State Street Global Advisor's private engagements per firm (United States only)

Source: State Street Global Advisors Annual Stewardship Reports.

2014 – 2018	**Number of engagements per firm**
Mean	1.94
Minimum	1.00
1st Quartile	1.00
2nd Quartile (Median)	1.00
3rd Quartile	3.00
Maximum	6.00
Unique U.S. companies engaged	1137
Total U.S. engagements	2201

4 Theory and research design

As per their 2019 Global Proxy Voting and Engagement Principles, State Street remark they "maximize [their] voting power and engagement by maintaining a centralized proxy voting and active ownership process covering all holdings, regardless of strategy…. fiduciary responsibilities of share ownership and voting … are carried out with a single voice and objective."[17] Given State Street's proxy voting and engagement is coordinated at the fund family level; stewardship activity and outcomes can be attributed to the fund family. These principles also note State Street's use of Institutional Shareholder Services (ISS) as a proxy voting agent, a role entailing execution of voting and the provision of research, for both specific proposals and broader governance issues.

A small body of work examines the effect ISS may have on proxy voting. As a subscriber to ISS, this is directly relevant to State Street. Proxy advisory firms such as ISS are becoming increasingly important as data aggregators and information agents (Fields and Bew, 2012; Choi, Fisch, and Kahan, 2009). Importantly, there is a noted lack of consensus amongst researchers in reconciling the growth of investor-issuer engagement and proxy firms' influence. Malenko and Shen (2016) find evidence of ISS recommendations significantly influencing shareholder votes, whilst contrastingly, Choi, Fisch, and Kahan (2009) demonstrate that the impact of ISS recommendations is significantly diminished once company and firm specific factors are controlled for. Additionally, Matvos and Ostrovsky (2010) find significant heterogeneity in index funds' voting behaviour after controlling for ISS recommendations, suggesting that some index funds may indeed be uninfluenced by ISS and actively vote.

[17] https://www.ssga.com/global/en/our-insights/viewpoints/2019-global-proxy-voting-and-engagement-principles.html

Finally, there is concern that a fund's propensity to vote with management may be influenced by business ties between the fund and the firm (Davis and Kim, 2007; Cvijanovic, Dasgupta, and Zachariadis, 2016). However, a causal effect is difficult to identify as voting with management is a characteristic of these funds in general (Ashraf, Jayaraman, and Ryan, 2012). Nonetheless, of the Big Three, State Street has the smallest defined contribution business by far; managing only $209 billion in index fund assets for U.S. pension plans, compared to $865 billion at Vanguard and $600 billion at BlackRock,[18] alleviating this concern to a degree.

The research design begins with the different preferences for public and private information of institutional investors. State Street, as a large index tracking investor with no option to exit; is a cross between a 'quasi-indexer' and a 'dedicated' investor in the framework developed by Bushee and Noe (2000) for classification of institutional investors. Quasi-indexers are characterised by large, diversified portfolios, such as that of State Street, but they remain able to sell their holdings. On the other hand, dedicated investors are characterised by large, stable holdings in only a handful of firms. State Street is then a 'dedicated-indexer', and this has important implications for their informational preferences. As a result of their extended ownership, dedicated investors can engage directly with firm managers (Admati and Pfleiderer, 2009; Edmans and Manso, 2010) and rely more on private information.

There is historical evidence engagement can be an effective tool when utilised by institutional investors. They can be used to help bring about changes in governance with a high chance of success (Carelton, Nelson, and Weisbach, 1998), increases in operating

[18] https://www.pionline.com/article/20190218/PRINT/190219881/ssga-failing-to-keep-pace-in-passive-assets-marathon

performance (Dimson, Karakas, and Li, 2015) and also positive mean abnormal returns (Becht et. al, 2008). This points to engagement playing a key role in information gathering for institutional investors who choose to conduct them. I hypothesise engagements may act as a form of firm-specific research, and that State Street utilises engagements to elicit private information from the firm to better inform their proxy voting. Hence, differences should be observed in State Street's proxy voting at shareholder meetings with and without engagement, as State Street should be less likely to passively follow ISS recommendations when engagement has occurred.

I develop a model to measure the extent to which State Street is an active voter following Iliev and Lowry (2014). Beginning by analysing State Street's voting decisions in the presence of ISS, for each agenda item, both State Street and ISS will receive a signal. Both these signals are noisy. ISS receives their signal about the true type and then makes a voting recommendation. State Street then receives their own private signal, along with management and ISS' recommendation and then must choose which direction to vote. Iliev and Lowry (2014) demonstrate formally that a fund's decision to follow its own signal versus that of ISS depends on the relative precision of the two signals, as funds with less precise information are more likely to value ISS's signal over their own, and will thus follow the recommendation of ISS. The model suggests that an increase in the precision of the fund's signal will lead to a higher probability of the fund voting differently to the ISS recommendation. This effect should be stronger for contentious issues, which can be proxied by when management and ISS provide opposing recommendations (Heath, Macciocchi, Michaely, and Ringgenberg, 2019; Iliev and Lowry, 2014).

Hence, I split the data into two subsamples; one consisting of 'contentious' issues, and the other 'consensus' issues, where ISS and management agree. Subsamples are used in place of interaction terms as interaction terms within probit models are difficult to interpret and cannot be interpreted directly (Ai and Norton, 2003; Greene, 2010). I also further differentiate between director elections and other types of proposals, given there is evidence mutual funds treat director elections differently (Choi, Fisch, and Kahan, 2013). A proposal is coded as a director election only when the proposal contains the string 'Elect Director' or 'Elect … as (a) Director'. Other types of proposals simply consist of the remaining agenda items that cannot be classified as director elections, which include compensation and governance items. The motivation for this subsampling comes as director elections are homogenous – they are all sponsored by management,[19] and every firm will have directors up for election each year - relative to other types of proposals which are more contentious and less homogeneous (Iliev and Lowry, 2014). The dataset reinforces this result - 2.8% of director elections can be classified as contentious whereas 19.5% of other agenda items can be labelled as such. The models are then specified as follows:

4.1 Probit model for other agenda items

$$Y_{it} = Probit(\beta_0 Engagement_{it} + \beta_1 MultipleEngagements_{it} + \beta_2 PortfolioWeight_{it} + \beta_3 OwnershipStake_{it} + \beta_4 Shareholder_{it} + \gamma_{it}) \quad (1)$$

I run each model with two different dependent variables. In Column 1 (2) of Tables 10 and 11, Y_{it} is a dummy variable equal to 1 if State Street voted in accordance with the

[19] 0.0015% of Director elections are shareholder sponsored. I omit these from the director elections sample and instead discuss them via summary statistics in Section 5.1.

management (ISS) recommendation and 0 otherwise. In Tables 10 and 11 the dependent variable, 'Vote with Mgt (ISS)', is coded as 1 if State Street *exactly* followed management's (ISS') recommendation, i.e. voting 'Against' for Against, 'Abstain' for Abstain, and 'For' on a recommendation of For. The regression is also run using an alternative, stricter, definition of voting with management (ISS) for robustness. This definition is that coined by Heath, Macciochi, Michaely, and Ringgenberg (2019), where following a recommendation is defined as voting 'For' on a recommendation of 'For' and voting *either* 'Against' or 'Abstain' on a recommendation of 'Against' or 'Abstain' (Table 14).

I proxy the clarity of State Street's unobservable signal on a given proposal by whether State Street has recorded an engagement with the firm in that year. The dummy variable *Engagement* equals 1 if State Street has recorded an engagement with the firm in the year of the proposal and 0 otherwise. Furthermore, I use the 'Multiple Engagements' column in the stewardship dataset to proxy engagement intensity; the dummy variable *MultipleEngagements* is equal to 1 if State Street has listed the firm as being the subject of multiple engagements in that year and 0 otherwise.

Moreover, an index fund's level of active voting is greatly dependent on the size of their ownership stakes, both with respect to the firm's outstanding equity and their own portfolios (Iliev and Lowry, 2014). Hence, two variables are included to account for the State Street - firm relationship: *PortfolioWeight*, the percentage of total State Street net assets invested in then firm, and *OwnershipStake*, the percent of firm equity owned by State Street. Furthermore, an indicator variable, *Shareholder* is also included in Equation 1. This dummy variable is equal to 1 if the proposal is shareholder-sponsored and 0 otherwise, as if an index fund is to affect governance through private engagement with

directors, the tendency to vote with management should only appear for management-sponsored proposals (Heath, Macciochi, Michaely, and Ringgenberg, 2019).

Finally, I control for any governance or short-term financial performance related effects, with γ_{it}, a 1 x 9 vector of control variables. In light of questions regarding a lack of concern from index funds for financial underperformance (Bebchuk and Hirst, 2019a), I include excess return as a measure of financial-performance, defined as the return on the firm's equity over the last year minus the return on the S&P 500 for the same period. The governance variables consist of entrenchment related indicator variables such as whether the firm employs majority voting and more, and their inclusion is largely motivated by Appel, Gormley, and Keim (2016) who demonstrate passive institutional ownership is associated with changes in a number of governance outcomes.

4.2 Probit model for director elections

$$Y_{it} = Probit(\beta_0 Engagement_{it} + \beta_1 MultipleEngagements_{it} + \beta_2 PortfolioWeight_{it} + \beta_3 OwnershipStake_{it} + \gamma_{it}) \quad (2)$$

The dependent variables and independent variables of interest are the same as Equation 1, with the exception of the *Shareholder* indicator variable which is omitted as all director elections in our sample are management sponsored.

The only difference between the model for director elections and Equation 1 lies in γ_{it}, which is here specified as 1 x 17 vector of control variables. In addition to all the controls used in Equation 1, I include an extra 8 controls pertaining to director characteristics, such as tenure, age and more. The full list of all control variables can be found in the appendix.

Additionally, using summary statistics, I examine the voting behaviour of the Big Three. This analysis is founded on the idea that as that as trackers of the same index and being relatively close in size, they should have relatively homogenous incentives, and hence each engage in proxy voting in a manner that maximises the index's value. In this way, I provide insight as to whether the Big Three devote attention to monitoring, or instead engage in cost-cutting proxy voting procedures, such as defaulting to management or ISS' recommendations.

5 Results

5.1 Proxy voting dynamics

Using summary statistics to examine the cross-sectional variation in the proxy voting behaviour between the Big Three, I find evidence of substantial heterogeneity amongst the three firms' proxy voting. My results are consistent with Matvos and Ostrovsky (2010) who report similar findings in an earlier sample of S&P 500 index funds' votes on director elections. Of the Big Three, State Street appears to deviate the most from management recommendations, despite being the smallest of the three in terms of AuM (Table 1). I observe that a significantly higher proportion of Vanguard and BlackRock's votes over the sample period are cast in accordance with management. State Street is consistently the least management friendly, and this result holds across a number of specifications.[20]

Over the sample period, with respect to all votes, State Street cast on average 94% of their votes in line with management's recommendation, whilst Vanguard and BlackRock cast 97.4% and 97.8% of their votes for management respectively. In addition, whilst State Street voted the smallest percentage of their votes for management, they also

[20] Management friendliness is defined as the propensity to vote with management's recommendation.

followed ISS recommendations the least; 92.5% of the time versus 93.1% for Vanguard and 92.7% for BlackRock (Table 6). Furthermore, there does not appear to be any time-varying trend in this behaviour, with State Street consistently voting the lowest proportion of their votes with management for every year in the sample.

Moreover, delineating contentious and consensus issues, the same phenomenon holds, although this effect is much more pronounced for contentious issues (Table 7). This is true of both management and shareholder sponsored agenda items. On contentious shareholder-proposed agenda items, only 57.1% of State Street's votes were cast in favour of management whereas BlackRock and Vanguard cast 81.2% and 78.4% of their votes in favour of management respectively. On contentious management-sponsored proposals, 56.9% of State Street's votes were for management compared to 73.6% of Vanguard's and 76.3% of BlackRock's.

This disagreement persists over a range of themes. Table 8 lists the most common themes over which the Big Three disagree and how often disagreement occurs for each type of proposal. As expected, consistent with Table 7, a great deal of disagreement occurs on proposals that are typically shareholder sponsored. Column 4 also reports the number of disagreements which can be attributed to State Street voting differently to the other two funds. Much disagreement occurs as a result of State Street voting out of step with Vanguard and BlackRock, a finding consistent with State Street's relatively lower level of overall management friendliness. Table 9 provides a higher level of detail into the nature and direction of this disagreement. State Street cast a combined 946 'Withhold' and 'Against' votes on director elections throughout the sample period; whereas this number was only 208 for Vanguard and 466 for BlackRock. Note that this behaviour cannot be explained solely by ISS recommendations, as ISS only recommended a

combined 661 ‘Against’ and ‘Withhold’ votes for director elections, and the percentage of State Street’s votes cast in alignment with ISS is lower than the proportion in favour of management. Additionally, State Street also cast the most votes against pay approval. Taken together, these facets of State Street’s proxy voting behaviour suggest they engage in a higher degree of firm-specific monitoring relative to BlackRock and Vanguard. State Street may utilise these agenda items to punish poor performance (either with respect to financial performance or engagement outcomes) via voting against the election of directors and expressing their disapproval by voting ‘Against’ on advisory votes for pay approval. Finally, heterogeneity is most visible with respect to shareholder proposals pertaining to the disclosure of political contributions, where State Street voted ‘For’ on 106 separate occasions compared to a mere 8 for BlackRock and 4 for Vanguard, while ISS and management issue blanket recommendations to vote ‘For’ (91% of votes) and ‘Against’ (Table 9) for these proposals, respectively.

This evidence lends itself to both detractors and supporters of index funds’ stewardship. BlackRock and Vanguard vote generally in favour of management, whereas State Street does so much less readily. As the cost of engagement and monitoring is small at their sizes (Jahnke, 2019) and given BlackRock and Vanguard also conduct engagement, one potential explanation for this heterogeneity comes in the form of differing approaches to stave off regulation as a result of their relative sizes. A non-deferential approach to monitoring may face a greater risk of regulatory backlash as a result of managers’ resistance (Bebchuk and Hirst, 2019a) and hence, as BlackRock and Vanguard are relatively bigger than State Street (Tables 1 and 18), their exposure to regulatory risk is far greater. In addition, State Street may instead be motivated by the reputational benefits associated with activism (Kahan and Rock, 2019).

Table 6: Overall propensity to vote in line with management and ISS

Following a management (ISS) recommendation is defined as voting exactly as management (ISS) recommended. Furthermore, all proposals pertaining to "Say on Pay Frequency" are excluded as this vote is of little substance and BlackRock tends to cast their vote for 'Three Years' while Management and ISS both unanimously recommend 'One Year' in every instance.

Source: SEC Edgar (N-PX fillings).

Percentage of overall votes following management recommendation						
	2014	2015	2016	2017	2018	**Mean**
Vanguard	97.1	97.3	97.4	98.3	98.7	97.4
State Street	94.3	93.6	93.3	94.0	95.0	94.0
BlackRock	97.4	97.2	97.6	97.3	97.5	97.8
ISS	92.3	91.6	92.7	92.2	92.2	92.2

Percentage of overall votes following ISS recommendation						
	2014	2015	2016	2017	2018	**Mean**
Vanguard	92.9	92.3	93.6	93.4	93.3	93.1
State Street	93.1	92.8	92.8	92.0	91.9	92.5
BlackRock	93.1	92.7	93.0	92.6	92.3	92.7

Table 7: Propensity to vote in line with management and ISS on shareholder vs management sponsored proposals.

Contentious proposals are defined as those where ISS and management provide opposing recommendations, and consensus proposals are those where ISS and Management provide the same recommendation. '% For Mgt' refers to the proportion of votes cast through the sample period for management and '% For ISS' refers to the proportion of votes cast in favour of ISS' recommendation. The last column is omitted as the values are the same as the third, by construction. Voting with management (ISS) follows the same definition as Table 6.

Source: SEC Edgar (N-PX fillings).

Shareholder Proposal				
	Contentious		Consensus	
	% For Mgt	% For ISS	% For Mgt	% For ISS
State Street	57.1	34.5	95.1	-
Vanguard	78.4	9.7	99.7	-
BlackRock	81.2	18.5	99.8	-

Management Proposal				
	Contentious		Consensus	
	% For Mgt	% For ISS	% For Mgt	% For ISS
State Street	56.9	42.6	97.3	-
Vanguard	73.6	26.4	99.9	-
BlackRock	76.3	21.2	97.5	-

Table 8: Top themes over which the Big Three disagree.

Disagreement is defined as when State Street, Vanguard and BlackRock do not vote in step with each other. Column 2 reports the total number of proposals of that description and Column 3 refers to the number of said proposals with disagreement. Column 4 then reports the number of such proposals where State Street voted differently to *both* BlackRock and Vanguard, for example when Vanguard and BlackRock cast an 'Against' vote and State Street votes 'Withhold' or 'For' and vice versa.

Source: SEC Edgar (N-PX fillings).

Proposal	Total	N	State Street voted differently
Elect Director	23287	1220	736
Advisory Vote to Ratify Named Officers' Compensation	2275	126	71
Political Lobbying Disclosure	182	96	52
Political Contributions Disclosure	128	93	68
Proxy Access	139	83	12
Require Independent Board Chairman	219	51	36
Reduce Supermajority Vote Requirement	160	40	17
GHG Emissions	64	39	23
Climate Change	57	34	22
Report on Sustainability	46	29	22
Advisory Vote on Golden Parachutes	69	28	4
Amend Articles/Bylaws/Charter – Call Special Meetings	114	27	18
Require a Majority Vote for the Election of Directors	33	21	16

Table 9: Votes cast on common themes for S&P 500 companies over the 2014– 2018 reporting period by the Big Three.

Columns 4 and 5 denote the percentage of votes voted in accordance with ISS and Management respectively.

Source: SEC Edgar (N-PX fillings).

Director Elections					
	For	Against	Withhold	% ISS	% Management
Vanguard	23051	57	151	97.6	99.1
State Street	22341	558	388	95.3	96.0
BlackRock	22816	262	204	96.5	98.0
ISS	22626	319	342	-	97.1
Advisory Pay Approval					
	For	Against	Withhold	% ISS	% Management
Vanguard	2214	61	0	92.15	97.3
State Street	2153	112	10	93.03	94.6
BlackRock	2228	47	0	91.76	97.9
ISS	2061	214	0	-	90.6
Political Contributions/Lobbying Disclosure					
	For	Against	Withhold	% ISS	% Management
Vanguard	4	201	105	7.1	64.8
State Street	106	167	37	39.4	53.9
BlackRock	8	302	0	11.3	97.4
ISS	283	27	0	-	8.7
Require Independent Board Chairman					
	For	Against	Withhold	% ISS	% Management
Vanguard	1	215	5	38.9	97.7
State Street	32	189	-	49.8	79.5
BlackRock	14	206	1	43.9	93.6
ISS	136	84	1	-	38.4

5.2 State Street engagement and active voting

Across all specifications, I find engagement has a significant impact on State Street's proxy voting. A single engagement is associated with a higher likelihood of voting with management on director elections, but the effect of engagement on the likelihood of voting with management for non-director items is related to the engagement intensity. I find engagements hold much less explanatory power over consensus proposals, a result consistent with theoretical predictions. Finally, these findings are robust to alternative, stricter definitions for following a vote recommendation (Table 14).

Beginning with non-director proposals, per the first row of table 10, there is little statistical evidence that a single private engagement is likely to affect State Street's proxy voting decisions for contentious items. However; multiple engagements are associated with a 5.86% greater chance of deviating from an ISS recommendation and a 5.56% higher likelihood of voting with management. These coefficients are both significant, the former at the 5% level and the latter the 10% level. The discrepancy between these reported coefficients suggests that voting against ISS's recommendation is not simply the result of a tendency to vote exclusively with management; and that there are cases where State Street votes with neither management nor ISS. This evidence suggests that State Street does not just vote in lockstep with management.

The coefficient on the Shareholder indicator variable provides further evidence of State Street retaining agency over proxy voting. Per the specification in Column 2; the reported coefficient on *Shareholder* is significant at the 1% level and shareholder proposals are associated with a 7.2% lower likelihood of voting with ISS. However, consistent with the framework laid out in Section 4, the shareholder indicator variable has almost no explanatory power when it comes to voting with management. Further

investigation reveals that in regard to shareholder-sponsored proposals, management recommends voting 'Against' 98.6% of the time and ISS recommends voting 'For' 73.1% of the time. This implies that while State Street does demonstrate a lower proclivity to vote with ISS on contentious shareholder sponsored agenda items, they do not simply cast 'Against' votes in favour of management, but 'Withhold' votes. Whether these 'Withhold' votes are equivalent to 'Against' is a separate discussion, although given State Street casts both types of votes they do not appear to be substitutes for one another. State Street 'Withhold' votes are associated with a 9.0% pass rate for such proposals, as opposed to 2.6% for 'Against' votes. Regardless, together with Table 12, which demonstrates that State Street does not engage in blanket voting on shareholder proposals (i.e. their voting decisions are both affected by engagement, and they do not vote in a specific way on each type of proposal), evidence points to State Street actively voting and employing their own informed voting strategy, distinct from that of both ISS and management, directly contradicting the theoretical predictions of the models for index fund incentives developed by Bebchuk and Hirst (2019) and Lund (2018).

Table 11 reports the regression output for the director elections subsample. Note the reported coefficients in Column 2 are simply the negative of Column 1. This is a result of the dependent variable 'Vote with Management' being equal to 1 when 'Vote with ISS' is 0 and vice versa; all votes are cast following either management or ISS' recommendation. Interestingly, for contentious director elections, engagement is associated with a 5.36% greater likelihood of voting with management. As on average State Street classifies 85% of engagements as 'active'[21] – i.e. firms targeted by State

[21] See page 14 of 2017 Annual Stewardship report. https://www.ssga.com/investment-topics/environmental-social-governance/2018/07/annual-stewardship-report-2017.pdf

Street – I propose a novel mechanism where State Street when satisfied with the outcome of an engagement rewards directors through casting votes in support of their re-election. This points to the key role of engagements in information gathering, and their importance in the proxy voting process. Via engagement with the firm's directors, State Street may obtain private information to address concerns raised by both their own proprietary measures and also those of proxy advisors such as ISS. As State Street note in their 2017 Annual Stewardship report; "We actively seek direct dialogue with the board and management of companies we have identified through our screening processes. Such engagements may lead to further monitoring to ensure that the company improves its governance or sustainability practices."[21] This is reaffirmed by the significance, sign and magnitude on *MultipleEngagements* for contentious non-director agenda items in Table 9, which typically relate to the aforementioned issues.

Restricting the sample to 2014 - 2017 and including additional dummy variables related to engagement topic, I find further evidence in support of the aforementioned mechanism. Table 15 and 16 report the output of these regressions. Beginning with contentious director elections (Table 16), the engagement-topic related variables 'Pay' and 'Governance' are highly significant. When it comes to contentious director elections, a 'Pay' related engagement is associated with a 16.9% lower likelihood of voting in favour of the directors' re-election, while a 'Governance' related engagement is associated with a 26.3% lower likelihood. As for other contentious agenda items (Table 15), an engagement related to 'Governance' is associated with a 6% lower likelihood of voting with management. The negative sign on these engagement topic variables demonstrates that engagement is not solely associated with a greater tendency to vote with management. Engagement on certain topics appears to precede proxy votes cast

against management, suggesting State Street's votes are motivated by firm-specific research and cannot be explained by ISS recommendations or a general tendency to vote for management on contentious issues.

Furthermore, excess returns are positively associated with the likelihood of State Street voting in support of management on contentious director elections (Table 11). A one standard deviation increase in excess return is associated with a 4.4% higher tendency to vote with management; i.e. cast a 'For' vote.[22] This suggests when ISS recommends voting against a director's re-election, short-term financial performance plays an important role in deciding which direction State Street votes, where positive excess performance in the trailing year is rewarded by State Street via voting in favour of the re-election of such directors. The reported coefficients and significance of the director characteristics variables also point to State Street basing their voting decisions on fundamental director characteristics. They are 13.8% more likely to vote in support of the director on a contentious election if the director is a CEO, and 10% more likely to vote in favour if the director is an independent director. On the other hand, if the director attended less than 75% of meetings, State Street is 14.1% more likely to vote against their re-election. The significance and signs of these variables persist even for consensus director elections in Column 3; suggesting State Street withholds support for and even votes against the election of directors for whom both ISS and management recommend voting 'For'. A summary glance reveals State Street cast 464 votes against and withheld 204 votes at 22604 such consensus director elections over the 5-year sample, suggesting above all director fundamentals play the largest role in State Street's voting decisions.

[22] All management recommendations for director elections are 'For', as our sample consists only of management sponsored director elections.

Nonetheless, there is evidence that State Street is more management friendly to firms in which they hold larger positions. Although the coefficients on the State Street–firm relationship variables[23] are highly significant and of correct sign for contentious issues, this significance and positive sign remains for consensus issues, suggesting that this is an indication not of greater firm-specific research for firms in which State Street hold larger positions, but a higher degree of management friendliness in general for said firms (Tables 10 and 11). These tables report marginal effects, which measure the instantaneous rate of change. For continuous variables, this represents the change in the likelihood of voting with management (ISS) with respect to a minute change in the continuous variable. Hence, for contentious issues, a 0.001 increase in the investment as a % of State Street's holdings is associated with a 2.3% increase in the likelihood of voting with management for non-director items, whilst for director elections this effect is limited to 1.4%. This effect is diminished but remains significant for consensus agenda items. Iliev and Lowry (2014) report a similar relationship between position size and propensity to vote with management.

Overall, evidence suggests State Street is an active monitor when it comes to S&P 500 firms. Engagements appear to play a key role in State Street's proxy voting. State Street's voting appears motivated by fundamentals and cannot be explained by management or ISS recommendations. Consistent with Fields and Bew (2012) and Choi, Fisch, and Kahan (2009), State Street's use of ISS appears primarily motivated by their services as a data aggregator, as data pertaining to governance and director fundamentals are all available through ISS.

[23] The weight of the position in State Street's portfolio and the proportion of firm equity held by State Street

Table 10: Probit model for voting – Non-director proposals

The sample includes all agenda items that are not classified as director elections, consisting of 9610 proposals at 2509 meetings. Each observation represents a vote cast by State Street on an 'other' proposal between 2014-2018. The reported coefficients are the marginal effects - the change in the probability to vote with management for an infinitesimal change in each independent, continuous variable and, the discrete change in the probability for dummy variables. The z-statistics are reported below in parentheses. Asterisks denote significance. A single asterisk corresponds to the 10% level, two the 5% level and three the 1% level. The two categories 'Contentious' and 'Consensus denote the subsamples. 'Contentious' refers to all proposals where the ISS recommendation differed to the management recommendation. 'Consensus' refers to those proposals where ISS recommended the same as management. For Column 1, the dependent variable is a dummy variable equal to 1 if State Street voted with management. For Column 2, the dependent variable is defined as a dummy variable equal to 1 if State Street voted with ISS and 0 otherwise. In Column 3, the dependent variable can be thought as of voting with either; as by definition ISS and management provide the same recommendation for consensus issues. Voting with a recommendation is defined as *exactly* following the recommendation – i.e. voting 'Against' for Against, 'Abstain' for Abstain, etc.

Other Proposals	Contentious		Consensus
	Dep.Var: Vote with Mgt	Dep.Var: Vote with ISS	
Engagement variables			
Private engagement	0.0180 (0.6810)	-0.0125 (-0.5576)	0.0022 (0.6418)
Multiple engagements	0.0556* (1.8771)	-0.0586** (-2.1914)	-0.0057 (-1.1316)
State Street-firm relationship proxies			
Investment as % of State Street holdings	22.769*** (5.8493)	-19.655*** (-5.5418)	2.2353** (2.5413)
Investment as % of firm equity	1.9260** (1.9805)	-1.9154** (-2.1363)	-0.0751 (-0.6418)

Proposal specific			
Shareholder sponsored	0.0001 (-0.0029)	-0.0717*** (-3.1686)	-0.0089 (-1.6171)
Firm financial performance			
Excess Return	0.2985 (0.5922)	-0.9436 (-1.6278)	0.0394 (0.5239)
Governance			
Classified Board	-0.0904** (-2.3599)	0.0708** (2.2066)	0.0020 (0.4289)
Dual Class share structure	-0.1231 (-0.9175)	0.2143 (1.6166)	-0.0087 (-0.7154)
Fair price	0.0485 (1.3666)	-0.0245 (-0.7978)	0.0034 (0.7644)
Golden parachute	0.1632*** (5.6937)	-0.1342*** (-5.5029)	0.0053 (1.4818)
Limit rights for shareholders to call meetings	0.1407*** (5.3162)	-0.1368*** (-6.2165)	0.0052* (1.8480)
Poison pill	-0.0167 (-0.2782)	0.0430 (0.8584)	-0.0202*** (-3.1747)
Unequal voting	0.0523 (0.3994)	-0.1432 (-1.0882)	0.0012 (0.0962)
Majority vote	0.3055*** (8.5007)	-0.2500*** (-8.1514)	0.0045 (0.9868)
McFadden R^2	11.8%	14.3%	2.0%
Observations	1867	1867	7734

Table 11: Probit model for voting – Director elections

The sample is restricted to director elections. All director elections are management sponsored proposals. The sample is comprised of 23249 director elections at 2390 meetings from 2014-2018. Columns follow the format of Table 10. The dependent variables are defined as they are in Table 10.

Director Elections	Contentious		Consensus
	Dep.Var: Vote with Mgt	Dep.Var: Vote with ISS	
Engagement variables			
Private engagement	0.0536**	-0.0536**	-0.0005
	(2.0884)	(-2.0884)	(-0.5411)
Multiple engagements	-0.0312	0.0312	0.0031*
	(-0.9053)	(0.9053)	(1.9548)
State Street-firm relationship proxies			
Investment as % of State Street holdings	13.763**	-13.763**	1.0118***
	(2.2913)	(-2.2913)	(4.1524)
Investment as % of firm equity	1.1331	-1.1331	0.4078***
	(1.0684)	(-1.0684)	(5.6806)
Firm fundamentals			
Excess Return	2.5618**	-2.5618**	-0.0152
	(2.5594)	(-2.5594)	(-0.6169)
Governance			
Classified Board	-0.0972***	0.0972***	-0.0195 ***
	(-2.6578)	(2.6578)	(-7.2121)
Dual Class share structure	-1.3875	1.3875	-0.0035
	(-0.0013)	(0.0013)	(-0.8697)
Fair price	0.0705	-0.0705	-0.0031***
	(1.4036)	(-1.4036)	(-2.6308)
Golden parachute	0.1259***	-0.1259***	0.0124***

	(3.7544)	(-3.7544)	(7.6455)
Limit rights for shareholders to call meetings	0.0377 (1.3161)	-0.0377 (-1.3161)	-0.0002 (-0.2242)
Poison pill	-0.1775*** (-2.8568)	0.1775*** (2.8568)	0.0031 (1.3100)
Unequal voting	1.3337 (0.0012)	-1.3337 (-0.0012)	0.0016 (0.3968)
Majority vote	0.0588 (1.7537)	-0.0588 (-1.7537)	0.0065*** (4.5086)
Director Characteristics			
Independent Director	0.1009*** (2.7894)	-0.1009*** (-2.7894)	0.0105*** (5.7933)
Insider	-0.0030 (-0.0625)	0.0030 (0.0625)	0.0050** (2.5576)
Director is CEO	0.1380** (2.4792)	-0.1380** (-2.4792)	0.0141*** (5.0474)
Outside board seats held	-0.0526*** (-4.1030)	0.0526*** (4.1030)	0.0010** (2.3062)
Attended <75% of meetings	-0.1410* (-1.9537)	0.1410* (1.9537)	-0.0156*** (-2.5800)
Tenure	-0.0025 (-1.4775)	0.0025 (1.4775)	-0.0011*** (-7.4366)
Director above 65	0.0169 (0.5445)	-0.0169 (-0.5445)	0.0013 (1.2361)
Female	0.0590 (1.4859)	-0.0590 (-1.4859)	0.0012 (1.0189)
McFadden R^2	25.3%	25.3%	30.3%
Observations	648	648	22601

Table 12: State Street voting at shareholder proposals

The below table contains shareholder proposals that were proposed in at least 25 firm meetings. Column 2 reports the number of meetings in which the agenda item was proposed. Column 3 shows the percentage of those proposals ISS recommended to vote for management and Column 4 is the percentage of State Street's votes that follow management recommendation for all proposals of that type. Finally, Column 5 (6) presents the same variable restricting the sample only to proposals to firms for whom State Street did (did not) record an engagement in the proposal year.

			% Proposals State Street for Management		
Shareholder Proposal	N.	% ISS For Mgt	All	Engagement	No Engagement
Require Independent Board Chairman	229	38%	78%	78%	78%
Proxy Access	205	5%	39%	43%	28%
Political Lobbying Disclosure	169	11%	66%	69%	57%
Provide Right to Act by Written Consent	132	10%	94%	93%	97%
Political contributions disclosure	120	9%	35%	37%	31%
Amend Articles–Call Special Meeting	114	4%	83%	85%	74%
Vesting of Equity Awards	72	3%	76%	75%	77%
GHG Emissions	60	22%	52%	51%	55%
Require a Majority Vote for Directors	49	4%	4%	3%	5%
Stock retention	49	14%	40%	39%	41%
Report on Sustainability	45	20%	40%	39%	41%
Report on Climate Change	36	25%	46%	43%	56%

6 Conclusion

Index funds will continue to play a key role in the corporate governance ecosystem. Vanguard, BlackRock, and State Street each vote all of their shares. Understanding to what extent each will play the role of corporate monitor is of critical importance. In terms of proxy voting at S&P 500 firms, the Big Three exhibit strong heterogeneity. Vanguard and BlackRock demonstrate a much higher degree of management friendliness than State Street, despite the AuM of both firms being almost double that of State Street. This is consistent across a wide range of specifications. This is interesting as both Vanguard and BlackRock also conduct engagement. One explanation for this behaviour may be Vanguard and BlackRock's relatively higher exposure to regulatory backlash, given they hold significantly larger positions than State Street, which translate ultimately into less antagonistic voting strategies. This is supported by my results which show State Street is friendlier to firms in which it holds larger positions.

The results of the model for active voting buttress the observations made via summary statistics. State Street's engagement appears to play a key role in information-gathering and the proxy voting process, holding significant explanatory power over their votes cast on contentious agenda items. They are significantly less likely to passively follow an ISS recommendation when engagement has taken place. Moreover, nor does State Street appear to blindly follow management recommendations. There is strong evidence their voting behaviour is closely linked to fundamentals. Director characteristics play a large role in determining how State Street vote on director elections, and they remain a significant factor even for directors that both ISS and management recommend voting in support of. Contrary to conceived notions of index fund monitoring, State Street

maintains a high degree of autonomy over their proxy voting, and much of this autonomy is engagement driven.

Future research should examine the extent of index funds' monitoring beyond domestic and large-cap firms. Additionally, given BlackRock and Vanguard have begun disclosure of their engagements, future work should use this data to conduct further exploratory study on the link between engagement and proxy voting.

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8 Appendix

8.1 Variable descriptions

Detailed data sources can be found in Section 3. Governance variables are obtained from ISS; Firm variables are obtained from CRSP; holdings data from EDGAR and finally engagement data from State Street Annual Investment Stewardship Reports. Standard deviations are not reported for dummy variables.

Engagement variables

Variable	Definition	Mean	Standard deviation
Private Engagement	Dummy equal to 1 if State Street has recorded a private engagement with the firm in the same year.	0.5184	-
Multiple engagements	Dummy variable equal to 1 if State Street has listed the firm as having multiple engagements in their engagements data.	0.1414	-
Pay[24]	Dummy variable equal to 1 if State Street has reported Pay as a topic of engagement.	0.2028	-
Proxy Contest[24]	Dummy variable equal to 1 if State Street has recorded the engagement as in relation to a proxy contest.	0.0179	-
Environmental/ Social	Dummy variable equal to 1 if State Street has reported Environmental/Social as a topic of engagement.	0.2045	-
Governance	Dummy variable equal to 1 if State Street has reported Governance as a topic of engagement.	0.3138	-

Fund-firm relationship variables

Variable	Definition	Mean	Standard deviation
Investment as % of State Street holdings	The ratio of State Street holdings in the firm to fund total net assets.	0.0020	0.0030
Investment as % of firm equity	The ratio of State Street fund holdings in the firm to firm equity value.	0.0453	0.0131

[24] Note as per Section 3, Pay and Proxy Contest are only reported for pre-2018 engagements. I report the mean for the sample restricted to 2014-2017.

Proposal Characteristics

Variable	Definition	Mean	Standard deviation
ISS Recommendation for Management	Dummy variable equal to 1 if ISS has recommended to vote in the same direction as management has.	0.9202	-
Shareholder proposal	Dummy equal to 1 if the proposal is Shareholder-sponsored.	0.0643	-

Governance Variables

Variable	Definition	Mean	Standard deviation
Classified Board	Dummy variable equal to 1 if the firm has a classified board structure.	0.0649	-
Dual Class share structure	Dummy variable equal to 1 if the firm has a dual class share structure.	0.0513	-
Fair Price	Dummy variable equal to 1 if the firm has fair price clause.	0.1400	-
Golden Parachute	Dummy variable equal to 1 if the firm has a golden parachute.	0.7753	-
Limit rights for shareholders to call special meetings	Dummy variable equal to 1 if the firm has limitations on the rights of shareholders to call special meetings.	0.6905	-
Poison pill	Dummy variable equal to 1 if the firm has a poison pill.	0.0306	-
Unequal voting	A dummy variable equal to 1 if the firm has unequal voting.	0.0553	-
Majority Vote	Dummy variable equal to 1 if the firm employs a majority vote structure for the election of directors.	0.9001	-

Director Characteristics

Variable	Definition	Mean	Standard deviation
Independent Director	Dummy variable equal to 1 if the director has been classified as an independent director by ISS.	0.8442	-
Insider	Dummy variable equal to 1 if the director is affiliated to the firm as an employee or insider	0.01194	-
CEO	Dummy variable equal to 1 if the director is the CEO of the firm or another firm	0.1242	-
Number of outside board seats held	A discrete continuous variable equal to the number of external board seats the director holds in the year of the proposal	1.0464	1.0487
Attended less than 75%	Dummy variable equal to 1 if the director has attended less than 75% of board meetings in the last year.	0.0031	-
Tenure	A discrete continuous variable equal to the length of time the director has served as a director for that firm	8.4687	7.3448
Above 65	A dummy variable equal to 1 if the director is above the age of 65	0.3940	-
Female	A dummy variable equal to 1 if the director is female	0.2148	-

Table 13: Correlation matrix

The below table reports the correlations coefficients between a range of engagement-related variables and firm-specific variables over a sample of 2514 unique shareholder meetings.

	Private Engagement	**Multiple Engagements**	**Pay**	**Environmental /Social**	**Governance**	**Excess Return**	**Log (assets)**
Private Engagement	1.0000	0.3870	0.4612	0.5221	0.6965	0.0491	0.2444
Multiple Engagements	0.3870	1.0000	0.1459	0.357	0.5217	0.0734	0.2044
Pay	0.4612	0.1459	1.0000	0.2674	0.4485	-0.0640	0.1845
Environmental/Social	0.5521	0.3457	0.2674	1.0000	0.4818	-0.0030	0.2172
Governance	0.6965	0.5217	0.4485	0.4818	1.0000	-0.0342	0.2497
Excess Return	0.0491	0.0734	-0.0640	-0.0030	-0.0342	1.0000	0.0210
Log(assets)	0.2244	0.2044	0.1845	0.2172	0.2497	0.0210	1.0000

Table 14: Probit model for non-director proposals using alternative definition of following recommendation

This is the same regression as Table 10 with an alternative definition for following recommendations. Here, following a recommendation is defined as voting 'For' on a recommendation of 'For', and voting *either* 'Against' or 'Abstain' on a recommendation of 'Against' or 'Abstain'. In this case, voting with management on a contentious issue necessarily implies voting against ISS and vice versa. Hence Column 3 is the negative of Column 2.

Other Proposals	Contentious		Consensus
	Dep.Var: Vote with Mgt	Dep.Var: Vote with ISS	
Engagement variables			
Private engagement	0.0108 (0.4797)	0.0108 (0.4797)	0.0022 (0.6418)
Multiple engagements	0.0490* (1.8559)	-0.0490* (1.8559)	-0.0057 (-1.1316)
State Street-firm relationship proxies			
Investment as % of State Street holdings	19.573*** (5.5353)	-18.919*** (5.3912)	2.2353** (2.5413)
Investment as % of firm equity	1.8390** (2.0636)	-1.8419** (2.0833)	-0.0751 (-0.6418)
Proposal specific			
Shareholder sponsored	0.0840*** (3.7433)	-0.0839*** (3.7778)	-0.0089 (-1.6171)
Firm financial performance			
Excess Return	0.9062 (1.5831)	-0.5475 (-1.0569)	0.0394 (0.5239)

Governance			
Classified Board	-0.0736** (-2.2300)	0.0607** (2.1332)	0.0020 (0.4289)
Dual Class share structure	-0.2118 (-1.6062)	0.3252** (2.3805)	-0.0087 (-0.7154)
Fair price	0.0289 (0.9409)	-0.0335 (-1.1179)	0.0034 (0.7644)
Golden parachute	0.1323*** (5.4395)	-0.1571*** (-7.1032)	0.0053 (1.4818)
Limit rights for shareholders to call meetings	0.1400*** (6.3784)	-0.1179*** (-5.6571)	0.0052* (1.8480)
Poison pill	-0.0414 (-0.8298)	0.1402*** (3.2127)	-0.0202*** (-3.1747)
Unequal voting	0.1426 (1.0894)	-0.3100** (-2.2607)	0.0012 (0.0962)
Majority vote	0.2455*** (8.0342)	-0.1913*** (-7.0333)	0.0045 (0.9868)
McFadden R^2	14.3%	11.4%	2.0%
Observations	1867	2640	7734

Table 15: Probit model for non-director proposals using additional engagement data.

This is the same regression as Table 10 with additional engagement-specific regressors related to the topic of engagement. 'Governance', 'Pay' and 'ES', are all dummy variables equal to 1 if State Street recorded an engagement as pertaining to that topic, respectively. I omit 'Proxy Contest' to avoid the dummy variable trap. Note engagements can cover more than one topic. The sample is restricted to votes cast between 2014 and the end of 2017, as this is the period for which State Street reported this additional information. This regression uses the same stricter definition for following a management (ISS) recommendation as Table 14.

Other Proposals	Contentious		Consensus
	Dep.Var: Vote with Mgt	Dep.Var: Vote with ISS	
Engagement variables			
Private engagement	0.0657**	-0.0657**	-0.0044
	(2.0119)	(-2.0119)	(-0.5677)
Multiple engagements	-0.102	0.102	-0.0055
	(-0.3346)	(0.3346)	(-0.7570)
Governance	-0.0605**	0.0605**	0.0031
	(-2.3842)	(2.3842)	(0.4652)
Pay	-0.0157	0.0157	0.0040
	(-0.6124)	(0.6124)	(0.7243)
Environmental/Social	-0.0156	0.0156	0.0017
	(-0.6065)	(0.6065)	(0.3026)
State Street-firm relationship proxies			
Investment as % of State Street holdings	19.5101***	-19.5101***	2.4255**
	(4.8160)	(-4.8160)	(2.3828)
Investment as % of firm equity	1.9656**	-1.9656**	-0.1584
	(2.1950)	(-2.1950)	(-1.3357)
Firm fundamentals			
Excess Return	0.4766	-0.4766	-0.0471
	(0.9874)	(-0.9874)	(0.6115)

Proposal specific			
Shareholder sponsored	0.0620*** (2.6285)	-0.0620*** (-2.6285)	-0.0029 (-0.4430)
Governance			
Classified Board	-0.0652** (-2.0834)	0.0652** (2.0834)	0.0025 (0.4988)
Dual Class share structure	-1.8770 (-1.5372)	1.8770 (1.5372)	-0.0091 (-0.6831)
Fair price	0.0314 (1.0465)	-0.0314 (-1.0465)	0.0037 (0.7769)
Golden parachute	0.1102*** (4.1451)	-0.1102*** (-4.1451)	0.0067* (1.7390)
Limit rights for shareholders to call meetings	0.1008*** (4.1261)	-0.1008*** (-4.1261)	0.0054* (1.7645)
Poison pill	-0.0403 (-0.8460)	0.0403 (0.8460)	-0.0213*** (-3.2515)
Unequal voting	0.1049 (0.8757)	-0.1049 (-0.8757)	0.0044 (0.3110)
Majority vote	0.2182*** (5.8966)	-0.2182*** (-5.8966)	0.0039 (0.7810)
McFadden R^2	14.3%	14.3%	2.2%
Observations	1867	1867	6552

Table 16: Probit model for director elections using additional engagement information.

This is the same regression as Table 11 with the inclusion of extra engagement-specific regressors related to the topic of engagement. 'Governance', 'Pay' and 'ES', are all dummy variables equal to 1 if State Street recorded an engagement as pertaining to that topic, respectively. I omit 'Proxy Contest' to avoid the dummy variable trap. Note engagements can cover more than one topic. The sample is restricted to votes cast between 2014 and the end of 2017, as this is the period for which State Street reported this additional information. This regression uses the same stricter definition for following a management (ISS) recommendation as Table 14.

Director Elections	Contentious		Consensus
	Dep.Var: Vote with Mgt	Dep.Var: Vote with ISS	Vote with Mgt
Engagement variables			
Private engagement	0.4207***	-0.4207***	0.0047*
	(2.8928)	(-2.8928)	(1.8663)
Multiple engagements	-0.0598	0.0598	0.0010
	(-0.6437)	(0.6437)	(0.5665)
Governance	-0.2629**	0.2629**	-0.0096***
	(-2.2095)	(2.2095)	(-3.7741)
Pay	-0.1689***	0.1689***	0.0030**
	(-2.6123)	(2.6123)	(2.2100)
Environmental/Social	0.0429	-0.0429	0.0038***
	(0.7053)	(-0.7053)	(2.6294)
State Street-firm relationship proxies			
Investment as % of State Street holdings	4.9452	-4.9452	0.8161***
	(0.5520)	(-0.5520)	(3.8483)
Investment as % of firm equity	1.7421	-1.7421	0.3382***
	(1.1187)	(-1.1187)	(5.400)
Firm fundamentals			
Excess Return	3.6683**	-3.6683**	-0.0080
	(2.4659)	(-2.4659)	(-0.3700)
Governance			

Classified Board	-0.1520** (-2.5350)	0.1520** (2.5350)	-0.0169*** (-6.7255)
Dual Class share structure	-1.8473 (-0.0025)	1.8473 (0.0025)	-0.0011 (-0.2955)
Fair price	0.1690** (2.0479)	-0.1690** (-2.0479)	-0.0038*** (-3.4934)
Golden parachute	0.1212*** (2.6486)	-0.1212*** (-2.6486)	0.0107*** (7.3838)
Limit rights for shareholders to call meetings	0.0591 (1.3101)	-0.0591 (-1.3101)	0.0000 (0.0370)
Poison pill	-0.2905*** (-3.4074)	0.2905*** (3.4074)	0.0030 (1.4193)
Unequal voting	1.7802 (0.0025)	-1.7802 (-0.0025)	-0.0004 (0.0960)
Majority vote	0.0544 (1.0630)	-0.0544 (-1.0630)	0.0044*** (3.5096)
Director Characteristics			
Independent Director	0.1534*** (2.7947)	-0.1534*** (-2.7947)	0.0097*** (5.6714)
Insider	-0.0141 (-0.1828)	0.0141 (0.1828)	0.0100** (2.4300)
Director is CEO	0.2561*** (3.0103)	-0.2561*** (-3.0103)	0.0117*** (4.6533)
Outside board seats held	-0.0808*** (-4.4248)	0.0808*** (4.4248)	0.0010** (2.0616)
Attended <75% of meetings	-0.1686 (-1.5731)	0.1686 (1.5731)	-0.0115** (-1.9840)
Tenure	-0.0028 (-1.0829)	0.0028 (1.0829)	-0.0010*** (-7.1158)
Director above 65	0.0250 (0.5146)	-0.0250 (-0.5146)	0.0009 (0.9655)
Female	0.0529 (0.8991)	-0.0529 (-0.8991)	-0.0003 (-0.2660)
McFadden R^2	25.9%	25.9%	30.8%
Observations	520	520	18401

Table 17: State Street Global Advisors' annual engagements by intensity, and nature. Note that data pertaining to the number of annual active and reactive engagements comes directly from the body of the stewardship reports. Formal disclosure of individual engagements in the appendices of these reports do not include information about whether an individual engagement was active or reactive. Data is only available as to how many engagements overall can be classified as active and reactive.

Source: State Street Global Advisors Engagements Database.

	Comprehensive Engagements	**Engagements via letter**	**Multiple engagements**	**Active**	**Reactive**
2014	610	400	82	60%	40%
2015	636	500	82	65%	35%
2016	611	1020	53	76%	24%
2017	676	1621	66	85%	15%
2018	686	847	86	85%	15%

Table 18: The top 15 Global Blockholders of Corporate Ownership, March 2016

This table lists the number of blocks (worldwide) held by each asset manager larger than 3%, 5%, and 10% respectively. The Big Three are in italics.

Source: Fitchner, Garcia-Bernardo, and Heemskerk (2017).

Rank	Name (Country)	Holdings > 3%	Holdings > 5%	Holdings > 10%
1	*BlackRock (U.S.)*	*3648*	*2632*	*375*
2	*Vanguard (U.S.)*	*2821*	*1855*	*163*
3	Fidelity (U.S.)	1956	1309	506
4	Dim. Fund. Adv. (U.S.)	1708	590	4
5	*State Street (U.S.)*	*1113*	*281*	*13*
6	Capital Group (U.S.)	844	528	121
7	Wellington Mgmt. (U.S.)	765	480	117
8	JP Morgan Chase (U.S.)	745	311	49
9	Franklin Templeton (U.S.)	743	440	117
10	T. Rowe Price (U.S.)	685	399	124
11	Invesco (U.S.)	601	289	85
12	Affiliated Mgrs. (U.S.)	562	248	40
13	Schroders (U.K.)	532	355	108
14	Legg Mason (U.S.)	527	252	49
15	Morgan Stanley (U.S.)	458	217	34