

Sustainable voting behavior of asset managers: Do they walk the walk?¹

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Abstract

We investigate asset manager characteristics that influence ESG voting patterns using a decade of voting data with more than 20 million observations. Asset managers predominantly vote against social and environmental proposals. Especially, large and passive asset managers vote the least in favor of these proposals and despite the increased attention to sustainability integration, they hardly vote more in favor of these proposals than a decade ago. Moreover, signatories of the PRI do not vote more often in favor of environmental and social issues. Our results have important implications for investors striving for direct impact on the sustainability agenda of corporates.

Keywords: Voting, Sustainability, Responsible Investing, ESG, Governance, Active ownership, Asset managers, Passive, Active, PRI, Mutual funds

JEL Classification: G10, G32, Q56

1. INTRODUCTION

A tectonic shift to sustainable investing is shaking up the asset management industry. Sustainable equity funds, that integrate environmental, social, and governance (ESG) criteria, have tripled in size from \$200 billion in 2010 to \$600 billion in 2020, setting new inflow records year after year (Flood, 2020). According to PwC, assets invested in sustainable funds will outpace regular investment funds by 2025 (FT, 2020). By investing in funds that integrate ESG criteria into portfolios, asset owners aim to contribute to a better world through investments in companies that align with their preferences. The primary role of the asset manager is to construct a portfolio that meets these sustainability requirements. However, their duties do not end there. As the holder of the shares in a company, asset managers can also cast their vote at shareholder meetings, thus steering the corporate sustainability agenda.

Though most asset managers have integrated ESG criteria into their (public) voting policies, it is important to validate whether voting records truly reflects their dedication to these issues. As society finds ESG integration increasingly important, it is reasonable to assume that investors expect fund managers to vote in favor of ESG related proposals (Bauer et al., 2018). The purpose of this study is therefore to investigate how the largest U.S. asset managers vote on subjects related to ESG, by using over 20 million voting records filed in Form N-PX with the U.S. Securities and Exchange Commission (SEC) over the period 2009 until 2018. As U.S. asset managers are legally obliged to share these voting records with the SEC, this source presents a thorough and extensive dataset to assess a decade of voting behavior.

While previous studies do investigate the voting record of asset managers and look for trends between similar funds (Griffin [2020]; He et al. [2018]), our study is the first to describe specific asset manager characteristics that influence ESG voting patterns. In particular, we evaluate the

relations using a decade of voting observations based on a unique, comprehensive dataset. Especially we focus on the environmental and social proposals, which have received little attention. We believe it is important to shed light on the voting records related to these two groups of proposals as their outcomes have a *direct* impact on the sustainability agenda of corporates, whereas governance proposals mostly have an *indirect* effect only.

This paper contributes to the literature on at least four dimensions. First, when analyzing the large-scale dataset, we find that few proposals (less than 1%) related to environmental and social issues are brought forward, either by boards or shareholders. This distribution is consistent across time, implying that while the absolute number of votes on environmental and social issues has increased over the recent decade, the relative number of these specific proposals being put forward by management or active shareholders has not changed. This stagnation of filing environmental and social proposals seems to contradict the increased interest in responsible and sustainable investing over the last decade. While asset owners and managers alike have expressed an increased interest in especially environmental and social issues, this interest is clearly not reflected in the number of proposals.

Second, we find that asset managers vote *against* the majority of all environmental and social proposals. For example, in 2018, only 38% and 27% of all environmental and social votes respectively were voted in favor of. Notably, although the majority of the mentioned proposals are rejected by asset managers, we measure a positive trend and observe that the total group of asset managers have increased their voting in favor of ESG proposals over time. Akin to larger firms receiving higher ESG scores (Drempetic et al., 2020), we expect that an asset manager's approval rate of environmental and social proposals increases with its size. They can have larger voting teams compared to smaller asset managers, allowing them to assess more proposals and more

thoroughly. However, our analyses show that larger asset managers, do not vote more in favor of environmental and social proposals than small- and mid-sized managers. Also, despite the increased intention to sustainability integration, they hardly vote more in favor of these proposals than a decade ago.

Third, an important question we address in this study is whether there are differences in ESG voting behavior between passive and active managers. An argument for active voting strategies that is often used by passive managers, relies on their role as fiduciaries. In their role as a fiduciary, they are expected to actively participate and engage with the companies in their portfolios (Griffin, 2020). Now that investors have an increased interest in improving the ESG objectives of the companies they own, it is the passive manager's fiduciary duty to act on this (e.g. through actively voting). Closely tied to this duty, is their long-term focus. Due to the relatively low turnover of the indices they track, passive managers are expected to buy and hold their assets for a longer time (Strine, 2014). As a result of this long-term focus, they are expected to use their voting power for issues that are good on the longer term. Especially considering their (combined) substantial stake in most U.S. listed companies, these largest asset managers can leverage their position to push for objectives that look beyond the next quarter and thus act as a true long-term shareholder.

On the other hand, an argument against an active voting and engagement strategy for passive managers often stems from the incompatibility of passively tracking an index and having an active stance on ESG issues (Blitz and De Groot, 2020). Critics argue that passive managers cannot act on the information (good and bad) that they obtain (Bebchuk and Hirst, 2019) as they are constrained to replicating or closely tracking an index, which effectively entails being invested in all index constituents. They cannot exploit mispricing or other informational advantages they may have. Additionally, they cannot exit underperforming firms like active funds can (e.g., when

engagement was not successful). Because passive funds that track the same index are homogeneous, the asset managers are encouraged to decrease expense ratios and mostly compete on costs. The resulting downward pressure on fund expense ratios has pushed fund managers towards maximizing economies of scale and standardization across many parts of their operations. Consequently, cost areas as voting and engagement have become standardized in a quest to become a low-cost leader in index investments.

We find that large and passive asset managers vote significantly less in favor of environmental and social proposals compared to medium-sized and active managers, while there is less variability among asset managers on governance proposals. This becomes clear when we analyze the three largest asset managers in the world: BlackRock, Vanguard, and State Street. These managers – frequently labeled the ‘Big Three’ (Fichtner et al., 2017) – manage the majority of their assets in funds that track market-capitalization weighted indices, often labeled as passive assets. While the Big Three stress their dedication to long-term shareholder objectives including environmental, social, and governance objectives, literature and empirical evidence of said dedication is inconclusive (Mercereau et al. [2019]; Reiser and Tucker [2020]). We find that the Big Three only voted 18% and 10% of the times in favor of environmental and social proposals respectively in 2018. Moreover, we observe that large and passive managers vote significantly less in favor of ESG proposals than their peers from 2013 onwards. This difference has increased through time, since it is even larger than in the first half of the sample.

Fourth, we continue our study by investigating whether being a member of the Principles for Responsible Investment (PRI) has impact on the ESG voting behavior of asset managers. The total number of signatories, i.e., asset owners, investment managers and service providers, of the PRI has grown steadily since its foundation in 2006 with over three thousand signatories and members

in 2021. Although signatories promise to incorporate ESG issues into investment analysis and decision-making processes (PRI, 2019), the PRI leaves it up to asset managers to decide how they choose to integrate ESG issues. As signatories have pledged to integrate ESG into their investment processes, it is safe to assume that their commitment to sustainability is reflected in their voting behavior on ESG related topics. This is specifically exemplified by the second principle: “We will be active owners and incorporate ESG issues into our ownership policies and practices,” (PRI, 2019).

We recognize that not all environmental and social proposals are inherently good, and that asset managers should not blindly vote in favor of all proposals². However, an asset manager’s voting record on these topics should at least reflect a willingness and commitment of the manager to take these environmental and sustainable matters to heart. Especially PRI signatories are expected to ‘walk the walk’ by showing support for sound ESG proposals. However, our analyses do not support this: members do not vote in favor of ESG proposals more often than non-members. Besides being a member or not, the duration of membership may share information on the intrinsic motivation of asset managers on this topic, since earlier signatories could be expected to have a stronger commitment to ESG issues. Our analyses indicate that this appears to be insignificant, and asset managers that have a longer membership tenure have no better voting records than more recent signatories.

2. VOTING DATA

² Requesting the board of a major oil firm to immediately stop drilling for oil – instead of requesting the board to come up with a transition plan that describes how the company wants to lower oil production and increase the production of renewable energy - would be an example of a weak environmental proposal.

In this section we describe the voting data we use in our study and the additional data measures we use for our study.

2.1. Voting data

Since 2004, U.S. registered mutual funds are required by the U.S. Securities and Exchange Commission (SEC) to report their votes in all shareholder meetings by filing Form N-PX. In this filing with the SEC, the investment manager specifies on behalf of which fund it voted, the holding company, the proposal, and how the investment manager voted on the proposal. As this data is publicly available through the SEC, various sources compile votes and make records available through public and private databases. As per Fichtner et al. (2017), we use data made available by Institutional Shareholder Services (ISS) - obtained through Wharton Research Data Services (WRDS). The sample we collect covers the period of January 2009 to June 2018, corresponding to ten years of filings. The data is aggregated on a fund level, meaning each fund vote represents many more underlying individual shares. The total number of shares owned by each fund at the time of casting the vote is not disclosed in the filing. Votes cast on behalf of other parties, for example in a mandate or when assets are pooled for engagement, are not included in the dataset.

Each data point includes the following data: institution (i.e., the investment manager), fund name, company (i.e., host of the annual meeting), an ISS agenda identifier, a description of the issue, whether the proposal is made by management or shareholders, the management recommendation, and the vote of the fund.³ The ISS agenda identifier allows various proposals of a similar nature to be grouped together. For example, all proposals regarding director compensation are grouped into

³ For example, at Facebook, Inc.'s annual shareholder meeting in 2018, a shareholder proposed the company should report on the gender pay-gap in place at the company. The firm's board of directors recommended shareholders vote against this proposal. The data from ISS then reveals that many shareholders followed the board recommendation.

one identifier. We remove votes related to director appointments and auditor ratifications, which account for more than half of all votes, as to not tilt the data to these two topics. We also delete all votes that do not have a fund vote (or management recommendation) of ‘For’ or ‘Against’, as it allows the dataset to have a binary dependent variable.⁴ The complete sample includes votes from over 650 unique asset managers across the period, many of which enter and leave the sample throughout. Therefore, we reduce the sample to only include the largest fifty asset managers by number of votes. These fifty asset managers are responsible for 75% of all fund votes across the full sample, and close to 70% of global AuM in equity funds. Ultimately, the final dataset consists of 21.3 million observations from January 2009 to June 2018. In Appendix 1, we list the asset managers used in the sample, and the average number of votes cast per year.

In order to specifically study the voting behavior of asset managers regarding Environmental, Social, and Governance issues, we first identify all proposals that are related to these topics. As opposed to evaluating hundreds of thousands of individual proposals, we use approximately 550 ISS Agenda Identifiers to assess groups of proposals. For each unique identifier, we gather a sample of representative proposals and classify the complete group accordingly. We allocate each ISS Agenda Identifier to a broader topic (e.g., board-related, compensation, etc.) and group the identifier under Environmental, Social, Governance⁵, or non-ESG. Using the fifty largest asset managers by votes cast in the sample period, the total number of proposals and votes per year are outlined in Exhibit 1, as well as the relative percentage of proposals and votes per ESG-theme.

⁴ Instances where a fund withdraws or abstains from voting are removed with this action, as well as votes on proposals that do not have a ‘For’ or ‘Against’ option, such as votes on the frequency of say-on-pay.

⁵ The election of directors and ratification of auditors are the most common topics at annual shareholder meetings, accounting for more than 60 per cent of all votes cast. As the primary objective of our research is not to evaluate director and auditor approval ratings, we remove the votes related to these topics to prevent tilting the results based on these two categories.

[INSERT EXHIBIT 1 ABOUT HERE]

We observe that, due to its broad interpretation, around 70% of all proposals are related to governance issues. Nearly all proposals related to the board, compensation, or changes to a firm's articles or statutes are classified as governance issues. Conversely, few proposals related to environmental and social issues are brought forward: only 0.1% and 0.4% of all proposals are related to environmental and social issues respectively. This distribution is consistent across the years, implying that regardless of increased interest in sustainability issues, we do not observe that relatively more proposals on these subjects have been put forward by management or active shareholders.

The stagnant and low level of environmental and social proposals seems to contradict the growing interest in responsible and sustainable investing. While asset owners and managers alike have expressed an increased interest in addressing environmental and social issues, this is not reflected in the number of proposals put forward over the last decade. But should it be reflected in the statistics? After all, one can argue whether it is the duty or responsibility of the principal or shareholder to interfere with these matters, or whether they need to be resolved by the agents – the management – in the everyday practice of the running the corporation? As put forward by Kölbel et al. (2018), ultimately it is the responsibility of shareholders to steer the agenda of the corporation – by filing shareholder proposals – if decisions of management yield unsatisfying results, whether related to environmental, social or governance issues.

We recognize that most shareholders will put these proposals only on the agenda of the annual general meeting (AGM) if direct engagement with companies on these topics have failed: engagement precedes shareholder resolutions. However, if asset owners and managers have stepped up their engagement activities on environmental and social issues, it is reasonable to

assume that not all these activities have been successful, thus warranting at least an increase in the number of shareholder resolutions on these topics. This absence of proposals may also stem from a lack of initiative from corporate boards, while these managers are in the position to put environmental or social proposals on the agenda of the AGM, especially if the matters are of strategic importance. As documented (Eccles and Klimenko, 2019), boards ‘believe that pursuing a sustainability agenda runs counter to the wishes of their shareholders’. This is reflected by the initiators of environmental and social proposals: only 1% (40%) of all environmental (social) proposals are brought forward by management. If management puts a social proposal on the agenda, it is exclusively related to charitable and political donations (accounting for 40% of all social proposals between 2009 and 2018). And if shareholder proposals related to environmental and social issues are put on the agenda, they tend to receive little management support: less than 1% of all environmental and social proposals are endorsed by management. These findings provide a new perspective on agency theory in the age of sustainability, as it uncovers a wide gap between the sustainability objectives of principals (investors) and the willingness of their agents (boards) to fulfill them.

2.2. Additional data sources

In addition to the main dataset from ISS, we use auxiliary data sources to supplement the dataset with additional information. For information on individual manager’s assets under management (AuM) in equity funds, data is retrieved from Broadridge Financial Solutions.⁶ As AuM data on

⁶ Broadridge Financial Solutions is a U.S. service provider that (among other activities) provides data and analytics on the global asset management industry through its Global Market Intelligence tool. The tool provides assets under management, cash flows, and characteristics of more than eighty thousand funds globally.

three of the fifty asset managers was not available, we excluded them from our sample.⁷ The AuM of remaining managers has been split into active and passive equity funds. We label asset managers with more than fifty per cent of their total equity AuM in passive funds as passive managers, and the remainder as active managers. In all recorded years, approximately one in four asset managers is classified as a passive manager.

Exhibit 2 displays the distribution of asset managers and their AuM as of 2018. Eleven asset managers are classified as passive and these managers are spread evenly across the sample, although the largest two managers are also passive managers. However, the difference in AuM between all managers in the sample is substantial. The AuM ranges from 3.3 billion U.S. Dollars to 3.1 trillion U.S. Dollars, nearly a thousand-fold difference.

[INSERT EXHIBIT 2 ABOUT HERE]

Additionally, we retrieve data from the PRI, which has over three thousand asset owners, investment managers, and service providers, pledging to integrate ESG factors into investment and ownership decisions (PRI, 2019). The PRI assesses signatories on their responsible investment efforts and transparency, and assigns each signatory a rating. Although the PRI is an advocate of transparency in responsible investing, the ratings of its signatories are not publicly available. Due to this limitation, the only publicly available information on PRI signatories, is their date of signing. Still, this is valuable information, as signatories of the PRI commit themselves to ESG integration in their portfolios. Moreover, the duration of membership may share information on the intrinsic motivation of asset managers on this topic.

⁷ While most asset managers list their assets under management on their website, breakdowns between funds, segregated accounts, or equity and fixed income splits are not accessible. Furthermore, historical data on an annual basis is rarely listed or unavailable, for example due to mergers and acquisitions of asset managers.

[INSERT EXHIBIT 3 ABOUT HERE]

The total number of signatories to the PRI has grown steadily since its foundation in 2006. Many asset owners demand that their fund managers are signatories to the PRI, which can be one of the drivers for its growth, in addition to the low cost of membership. While at the start of our sample only seven asset managers had signed the principles, this grew to 31 by the end of the sample period. These asset managers represent a significant share of the total AuM in our sample.

3. ESG VOTING BEHAVIOR AND ASSET MANAGER CHARACTERISTICS

In this section we investigate the relationship between asset manager characteristics and ESG voting behavior and focus on environmental and social proposals. Responsible investing to many investors is about making an impact on society and creating a healthy living environment in the future - governance proposals rarely bring about such direct change, as they primarily focus on the internal characteristics of the firm.⁸ Therefore, we investigate whether the size of asset managers, their level of activeness and membership of the PRI is related to asset manager's voting behavior on environmental and social proposals.

In our first analysis, we investigate the environmental, social and governance approval rates over time. For that, we aggregate the voting data of each asset manager per sustainability theme. For each of the years in our sample from 2009 to 2018, we express each asset manager's voting record as a percentage of votes in favor of proposals related to environmental and social topics.

⁸ While governance proposals are more common, they are also widely supported with little variability between asset managers. In 2018, the asset managers in the sample voted in favor of governance proposals between 76% and 92% of all proposals.

[INSERT EXHIBIT 4 ABOUT HERE]

Exhibit 4 presents the overall approval rates of environmental, social, and governance proposals by all asset managers in our sample between 2009 and 2018. We observe that asset managers predominantly vote against social and environmental proposals, while the acceptance rate is high for governance proposal. Moreover, while we find little change in the acceptance of governance proposals, we do observe an increase in overall votes in favor of environmental and social issues. In 2009, 19% (18%) of fund-votes were in favor of environmental (social) proposals, based on equal weighting of fund votes. This grew to 38% (27%) of fund-votes in favor of environmental (social) proposals in 2018.

3.1. ESG voting behavior and size

We continue by analyzing the relation between the size (AuM) of an asset manager and its voting behavior. We would expect that large asset managers have more resources to spend on sustainability integration and that therefore an asset manager's approval of environmental and social proposals increases with its size.

[INSERT EXHIBIT 5 ABOUT HERE]

To analyze the relation between the size of an asset manager and its voting behavior, we investigate the percentage of votes in favor of proposals per size group of asset managers. Exhibit 5 presents the results, where we show the percentage of environmental and social proposals per calendar year for the Big Three, the largest quartile, the asset managers in the middle quartiles, along with the asset managers in the smallest quartile. We observe that there are substantial differences in the voting patterns of asset managers, based on their AuM. In particular, the largest asset managers vote in favor of fewer environmental and social proposals than the small and mid-size asset

managers from 2013 onwards. For example, in 2018 the Big Three voted in favor of environmental proposals in 18% of the cases, compared to 42% for the smallest managers; a difference of almost 25%. We find a similar difference for social proposals. In addition, we observe that the mid-sized managers even vote more in favor of proposals than the smallest managers. This could be because mid-sized managers could have resources enough to spend on voting and are likely not too large, while not being so large to focus on low costs only.

These differences between small and large managers have expanded over time, mainly due to the observation that small and mid-sized asset managers have largely increased their voting in favor of environmental and social proposals. Where the smallest (mid-sized) managers only voted 11% (24%) in favor of environmental proposals in 2009, this increased to 42% (53%) in 2018, which is a change of around 30%. However, for the largest managers (top quartile), this increase is only 8% over the same sample period. We find a similar pattern for social proposals. Here the smallest (mid-sized) managers only voted 13% (22%) in favor of social proposals in 2009, this increased to 36% (39%) in 2018, which is a change of around 20%. For the largest managers (top quartile), we observe a small decrease of around 3% over the same sample period.

To summarize, the analysis indicates that large asset managers, despite having more economies of scale, do not vote more in favor of environmental and social related proposals. Also, despite the increased attention to sustainability integration, they hardly vote more in favor of these proposals than a decade ago.⁹ A possible explanation could be the focus on maintaining a low-cost base.

⁹ The difference in voting behavior of asset managers of different sizes is not prevalent when studying governance proposals, as shown in Appendix 2. We find that in recent years, the variability between the top, middle, and bottom quartiles is less than one percentage point, while the Big Three vote slightly more often in favor than the other quartiles.

3.2. ESG voting behavior and activeness

In addition to the effect of an asset manager's size on its voting behavior, we also study the effect of whether an asset manager is an active or passive manager. We classify asset managers with more than 50% of their equity fund assets in passive funds as a passive manager. Due to the highly centralized voting structures in place at most asset managers as documented by Fichtner et al. (2017), we choose to characterize each asset manager by their main activity. Given the limited incentives for passive managers to take an active voting stance (Bebchuk and Hirst [2019]; Blitz and De Groot [2020]), and the aim to minimize costs and maximize economies of scale, we expect passive managers to vote in favor of significantly fewer environmental and social proposals than active asset managers.

[INSERT EXHIBIT 6 ABOUT HERE]

Exhibit 6 displays the difference in voting behavior by active and passive asset managers over the sample period 2009 until 2018. While active managers voted in favor of approximately 15% more environmental proposals than passive managers in 2012, this difference has shrunk since then, and even reaching parity in 2018. This growth in approval for environmental proposals by passive managers is largely driven by medium-sized asset managers. As we find in Section 3.1, the percentage of votes in favor by the Big Three has only increased marginally over the past decade, while medium sized asset managers have increased their approval of environmental proposals substantially. We find a less profound voting difference between active and passive managers on social proposals.

3.3. ESG voting behavior and PRI signatories

By signing the Principles for Responsible Investment, asset managers pledge to integrate ESG criteria into their decision-making process. It would therefore be expected that asset managers that have signed the PRI, would also vote in favor of ESG proposals more frequently. However, as Exhibit 7 suggests, signatories of the PRI consistently vote less in favor of environmental and social issues than non-signatories.

[INSERT EXHIBIT 7 ABOUT HERE]

The voting behavior of the Big Three has a significant downward pressure on the average voting behavior of PRI signatories. In 2014, when Vanguard signed the principles, the percentage of PRI signatory votes in favor of environmental proposals dropped 3 percentage points, while the average of non-signatories voting in favor of such proposals increased by 12%. However, while the Big Three have a large share of the votes in each year, the difference between signatories and non-signatories persists when excluding the Big Three from the sample.¹⁰

The low percentage of votes in favor of environmental and social proposals by PRI signatories is a direct result of the seemingly conflicting mandates the PRI was given: having large signatories to boost the total assets pledged may have led to less dedicated and more opportunistic signatories. Asset managers that manage more than \$50 billion pay approximately \$18,000 in fees to the PRI annually, an insignificant cost for these managers. An increasing number of asset owners requires its investment managers to be PRI signatories, and because the PRI do not publish their ratings of asset managers, those who score poorly will elect not to disclose the assessment. Furthermore, as

¹⁰ We present the voting records of PRI and non-PRI signatories, excluding the Big Three, in Appendix 3.

the rating of asset managers does not depend on their voting behavior, asset managers that vote against most environmental and social proposals can still obtain a high rating.

3.4. ESG voting behavior and combined asset manager's characteristics

In addition to reviewing voting behavior from individual perspectives, we also use a regression analysis to further analyze the characteristics of asset managers and their voting behavior. Regressions allow us to analyze the influence of various manager characteristics on voting behavior and test for significance. We use a weighted least-squares regression, where an asset manager's characteristics are weighted by the number of fund-votes the asset manager cast in that year. Moreover, because an asset manager's voting behavior is likely to depend on its voting behavior in previous years, we account for clustered standard errors to correct for autocorrelation when computing t-statistics, where each asset manager constitutes one cluster (Petersen, 2009).

In the regressions, we use various characteristics as described before, including the asset manager's size in assets under management, whether the asset manager is an active or passive manager, and PRI membership and tenure. The variables *AUM_Middle* and *AUM_Top* are dummy variables, denoting that an asset manager's assets under management in equity funds (in a specific year) is in the middle quartiles or top quartile respectively.¹¹ In line with Section 3.1, we divide the asset managers in four quartile groups, while maintaining large enough groups to draw meaningful conclusions. In Appendix 4 we present the voting behavior of asset managers in tertiles, quartiles, quintiles, and deciles. We show that the hump-shaped nature in approval rates for environmental and social proposals is consistent across different sized groups of asset managers. The variable

¹¹ In 2018, an asset manager was classified as a small asset manager if assets under management in equity funds were below \$30 billion. The largest quartile of asset managers consists of those with assets under management more than \$200 billion.

Passive is a dummy variable that takes the value 1 if more than fifty per cent of an asset manager's assets are invested in passive funds and 0 otherwise. We also use variables to analyze the interaction-effect between an asset manager's size and passiveness through *AUM_Middle*Passive* and *AUM_Top*Passive*. Lastly, we use a dummy variable *PRI* to denote an asset manager's membership to the PRI, and a discrete variable *PRI_Years* that describes how many years an asset manager has been a signatory to the PRI.

[INSERT EXHIBIT 8 ABOUT HERE]

In Exhibit 8 we present the results of the regressions for environmental and social proposals. The first regression only includes dummies for top and mid-sized asset managers. From Panel A, we observe that the smallest managers vote 29% in favor of environmental proposals (the intercept), while 39.3% of mid-sized managers vote in favor. The largest managers only vote 13% in favor and this number is statistically significant with 90% confidence. This hump-shape is in line with our findings in Section 3.1 and Appendix 4.¹² The second regression shows that although passive managers vote less often in favor of environmental proposals, this relation is not statistically different. When combining size and activeness in one regression (3), results remain similar to the stand-alone regressions.

We then continue by adding the effects of an asset manager being a signatory to the PRI (4). In Section 3.3, we find that non-signatories vote in favor of significantly more environmental and social proposals than PRI signatories. The regression results provide no statistically significant difference in the voting behavior of signatories and non-signatories, and we also do not find a

¹² We present voting records on environmental and social proposals grouped by various AuM buckets in Appendix 4. Regression results for these AuM buckets are available upon request.

statistically significant effect of a signatory's tenure. Thus, we do not find any evidence of PRI signatories (both new and old) being more in favor of environmental and social proposals.

Finally, we add two interaction variables to the regression (5), namely a dummy for large, passive managers and mid-sized passive managers. The signs of the variables remain the same. We observe that active, mid-sized managers vote significantly more (18%) in favor of environmental proposals compared to their smaller counterparts. Moreover, we observe that large, passive managers vote significantly less ($15\% = -4.3 + 24.8 - 35.8\%$) in favor compared to small, active managers. This is consistent with our earlier findings, as the Big Three vote least in favor of environmental and social proposals compared to the other size buckets. Although these asset managers have the most resources available to build strong voting teams, they do not leverage their size to push environmental and social proposals forward.

The regression results in Exhibit 8 also suggest that the differences between active and passive asset managers are largest among the managers in the top AuM quartile. While it is predicted that active (passive) asset managers in the middle quartiles vote in favor of 39% (37%) of environmental proposals, active (passive) managers in the top quartile are expected to vote in favor of 16% (5%) of proposals.¹³

Panel B of Exhibit 8 shows the regression results for the social proposals. We find similar results where the signs of the variables are almost the same, apart from the PRI variable, which are here negative but still insignificant. Also here we observe that the differences between active and passive asset managers are largest among the managers in the top AuM quartile. Active (passive)

¹³The predicted values are found by adding the relevant coefficients from the regression analysis, i.e. the Intercept, and AuM_Middle or AUM_Top, and for passive managers: Passive, and AUM_Middle:Passive or AUM_Top:Passive. PRI membership is not considered.

managers in the middle quartiles vote in favor of 31% (32%) of proposals, the largest managers vote in favor of 15% (10%) of proposals.

3.5 ESG voting behavior in sub-samples

In previous sections, we observe various trends in the approval rates of environmental and social proposals. As presented in Exhibit 4, we find that especially after 2012 the acceptance of environmental and social proposals increases significantly. This trend is also visible in other sections, in which we explore size, activeness, and PRI effects. However, within the size groups, we recognize that this change is largely driven by the smallest and mid-sized quartiles, while the largest (including the Big Three) have remained stagnant in their approval of environmental and social proposals. We therefore split our sample in two sub-periods and analyze whether the relation between the different asset managers characteristics and approval rates are different in the second part of our sample. We therefore perform the last and most extensive regression of Exhibit 9 on the period from 2009 to 2012 and on the period from 2013 to 2018. Results are presented in Exhibit 9.

[INSERT EXHIBIT 9 ABOUT HERE]

After 2012, we find that the differences between the largest and smaller asset managers has grown substantially. While in the first part of our sample the differences between asset managers were smaller, in the second part of the sample the adoption of environmentally and socially friendly voting policies differs more when observing the coefficients. For example, in the first part of the sample, the difference in votes in favor of environmental proposals between large, passive managers and small, active managers is -25%, in the second part of the sample, this is -47%. Also for social proposals, this difference is more than 20% larger in the second part of the sample. We

observe a net-negative effect for passive asset managers in the middle and top quartiles of AuM on environmental and social proposals: large and passive managers vote significantly less often in favor of these proposals than their peers.

4. CONCLUSIONS AND RECOMMENDATIONS

The ongoing growth in assets under management of sustainable investment strategies signals a world that has entered the era of sustainability. In this era both corporates and investors need to take upon their responsibility in the pursuit of integrating sustainability in corporate strategies and business models. Voting is a powerful mechanism that allows shareholders to steer the corporate agenda towards sustainability focused decision making, especially if engagement fails. However, our research - covering a decade of US shareholder voting by the largest 50 asset managers - reveals that both the number of proposals brought forward on social and environmental issues is low as well as the votes in favor of these proposals. Especially large and passive asset managers vote least often in favor. Being a signatory of the PRI is not a differentiator, since these do not tend to vote more in favor of sustainability related proposals than the asset managers that are not part of this network. Data over the years 2017 and 2018 may provide some indications for a change as the percentage of votes in favor of sustainability seems to be slowly on the rise.

Given these results on the number of proposals and the voting behavior of asset managers, what can be done to significantly increase both outcomes, thereby reflecting a corporate world that not only ‘talks the talk’ but also ‘walks the walk’? We believe various actors need to step up their game. First and foremost, asset owners can urge their asset managers to increase the number of shareholder proposals filed on sustainable (environmental and social) topics. This may be an

important first step as the current low figures may provide further proof to directors that these topics are not really on top of mind of investors.

In addition to filing proposals, asset owners can challenge the sustainable voting behavior of their asset managers. We believe that, given the outcome of our analyses on voting behavior of PRI members, being a member or signatory of the PRI will prove to be not much of a differentiator anymore to asset owners in the selection process of an asset manager. Asset owners that aim to select a sustainable asset manager may consider raising the bar¹⁴. If assessment of the sustainable voting practices of managers becomes an integral part of manager selection, due diligence and monitoring, it may encourage asset managers to rethink their voting policies and start ‘practicing what they preach’ in advertisements on sustainable investing. Asset managers taking up the baton by filing shareholder proposals and voting favorably on sustainable topics, may spark a change in boardroom perceptions on this topic as well, which inevitability will spur directors as well to put sustainable proposals on the agenda of shareholder meetings themselves.

However, we acknowledge that filing numerous of shareholder proposals may be a daunting task for many asset managers given the thousands of listed companies and the vast amount of work involved to put just one proposal on the agenda of a corporate. Even if asset managers are willing to step up their game, there is probably only so much they can do given the high costs of covering a significant part of the investable universe. In addition, as documented by Lund (2017), voting and engagement policies may be prone to free-riding: asset managers reap the rewards of successful voting and engagement conducted by fellow managers without incurring the costs.

¹⁴ A starting point for differentiation among PRI signatories may be the classification of ‘PRI Leaders’: signatories that stand out in the application of sustainability in investment processes. See also: <https://www.unpri.org/the-pri-leaders-group/173.tag>

We believe these problems can be addressed if asset managers join forces and mutually coordinate the steering of corporate agendas. Coordination of corporate engagement efforts among asset managers may lower the costs of these activities for each manager while increasing the effectiveness of each dollar spent in terms of impact on corporate decision making (Dimson et al., 2020). The PRI already facilitates knowledge sharing among members by hosting online message boards¹⁵. We recommend the PRI, as the representative of advocates of sustainable investing, to further increase knowledge and information sharing among members and to encourage them to team up in developing joint engagement policies and agendas. We believe this recommendation reflects the objective of the PRI to encourage sustainable investing. These actions would perfectly match the long-term objective of the PRI: “to act in the interests of the financial markets and economies in which they operate and ultimately of the environment and society as a whole”, and principle 2 and 5 of their responsible investment code: ‘We will be active owners and incorporate ESG issues into our ownership policies and practices’ and ‘We will work together to enhance our effectiveness in implementing the Principles’ (PRI, 2019).

Irrespective of this envisioned coordination we believe PRI may serve as guardian of integrating sustainability in investment processes. Becoming a signatory of PRI is relatively straightforward and at the moment there is no validation or check being done on the member’s responses that are used to assign ratings. Our research demonstrates that this does not change corporate agendas as signatories predominantly vote against social and environmental proposals. Therefore, we recommend the PRI to further enhance the assessment and scoring process by requiring managers to provide more proof of engagement activities (e.g. filing a significant number of shareholder proposals each year) and demonstrate pro-sustainable voting behavior as a pre-requisite to be

¹⁵ See also: <https://collaborate.unpri.org/>.

awarded a high PRI score. In addition, we recommend the PRI to provide full transparency on the input (answers provided by managers), the process (grading by PRI) and outcome (the score) of the scoring system that is in place. Currently, the scoring methodology is disclosed, but the input and outcome of the assessment process could be further aligned. We believe increased transparency will push asset managers to accelerate their efforts, as having a top-notch rating by PRI may have – in the age of sustainable investing – the same importance as having a high credit rating for companies and governments.

Finally, we recommend other countries – especially the European Union – to oblige asset managers and owners to centrally file their voting records and make this information publicly available. Thanks to US legislation, this transparency is already available for funds domiciled in the US (N-PX database). If the European Union would follow suit and disclose these voting records not only for investment funds, but also for non-public investment vehicles (e.g. segregated accounts), the ultimate beneficial owners (e.g. pensioners, buyers of insurance products) would be able to see to which extent the asset managers involved are truly putting their money to work in a sustainable manner.

We propose two directions for potential future research: shedding light on the role of proxy advisers and voting on director approvals. Starting with the latter, we believe this topic may be pivotal in steering the corporate agenda on sustainability given the approximately sixty million director fund-votes casted in the last ten years. Given this large number - and the limited size of voting and engagement teams at asset managers - we wonder whether these teams are truly able to assess if these directors are ‘up for the sustainable job’ and whether elected directors advocate pursuing a sustainable corporate agenda or not. Furthermore, as asset managers rely on the voting recommendations of proxy advisers like ISS or Glass Lewis, we believe their guidance may

influence a large share of global shareholder votes. Previous studies have investigated the decision-making process and transparency of these advisers (e.g. Choi et al. [2010] or Verdam [2007]), however, the extent to which the recommendations of proxy advisers affect the votes of asset managers remains unclear. More specifically, studies that focus on the degree of correlation between proxy advisers' general recommendations and asset managers votes can provide valuable insights in who is actually steering the corporate sustainability agenda.

Exhibit 1: Percentage and number of proposals and votes per year on environmental, social, governance, and non-ESG issues

Data from January 2009 to June 2018.

Year	Environmental		Social		Governance		Non-ESG		Total	
	Proposals	Votes	Proposals	Votes	Proposals	Votes	Proposals	Votes	Proposals	Votes
2009	0.10%	0.92%	0.49%	3.64%	71.81%	76.26%	27.60%	19.18%	47,382	1,123,532
2010	0.17%	1.56%	0.44%	3.34%	74.18%	78.96%	25.20%	16.14%	46,032	1,077,170
2011	0.11%	0.82%	0.40%	2.17%	74.45%	81.73%	25.03%	15.28%	58,237	1,627,205
2012	0.09%	0.74%	0.48%	2.64%	74.11%	81.59%	25.32%	15.03%	57,977	1,759,176
2013	0.09%	0.78%	0.54%	2.17%	73.79%	81.08%	25.58%	15.97%	64,142	1,979,685
2014	0.10%	0.79%	0.61%	2.23%	73.80%	80.61%	25.49%	16.38%	70,622	2,454,509
2015	0.12%	0.89%	0.47%	1.93%	70.43%	79.35%	28.98%	17.83%	82,256	2,612,036
2016	0.09%	0.87%	0.35%	1.86%	64.75%	78.96%	34.81%	18.31%	108,994	2,841,295
2017	0.08%	0.91%	0.36%	2.18%	65.11%	78.57%	34.45%	18.34%	114,617	3,634,376
2018	0.08%	0.66%	0.40%	2.14%	65.04%	79.33%	34.48%	17.87%	87,048	2,214,937
Total	0.10%	0.86%	0.44%	2.28%	69.67%	79.65%	29.79%	17.21%	737,307	21,323,921

Exhibit 2: AuM of the asset managers in equity funds

In billions of U.S. Dollars (as of 2018) for the asset managers in the sample. Only assets in equity funds are included: other asset classes and mandates are excluded. An asset manager is classified as a passive manager if at least fifty percent of equity assets are in passive equity funds.

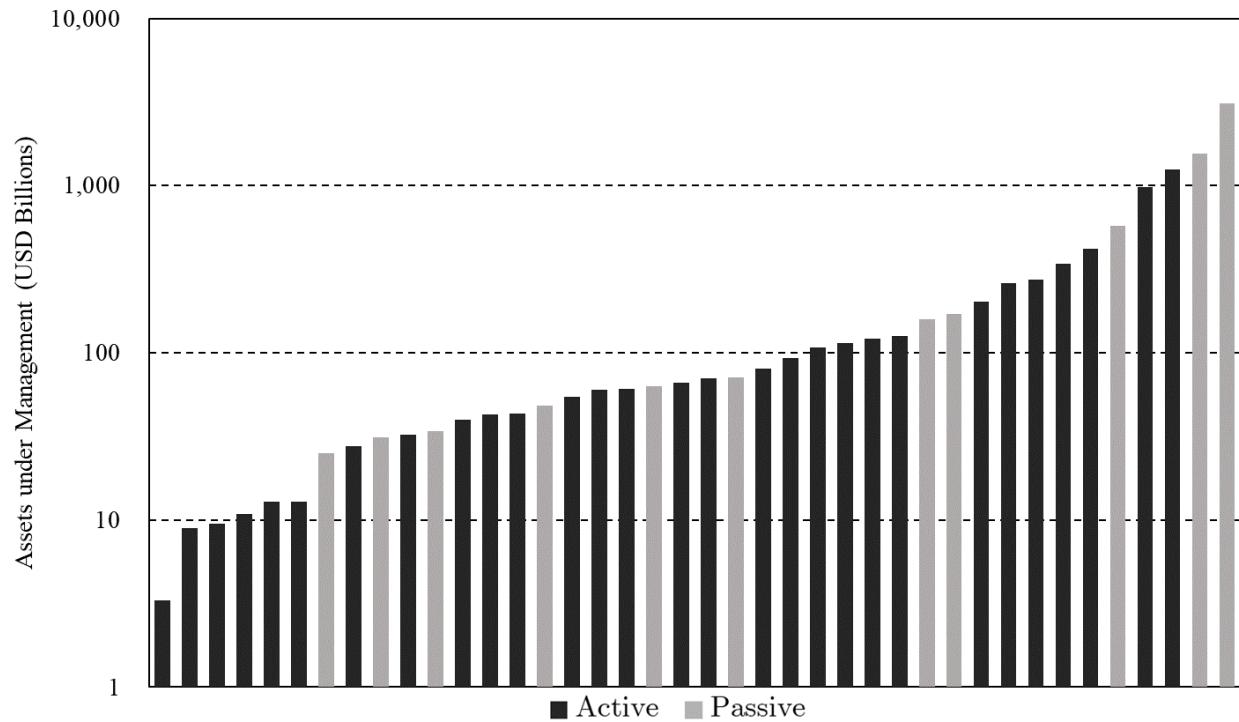


Exhibit 3: New and cumulative signatories to PRI

For the asset managers in our sample, the share of the total AuM in the sample (left axis), and the total number of signatories to the PRI in each year (right axis).

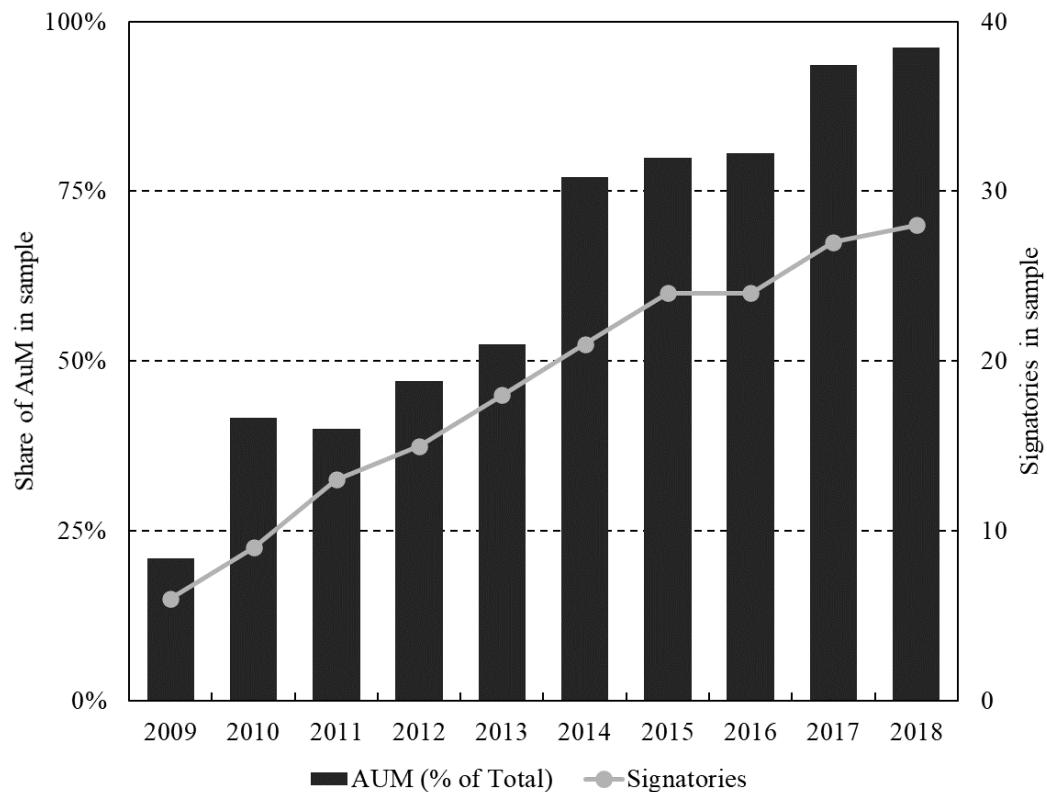


Exhibit 4: Environmental, social, and governance approval rates over time

Percentage of environmental, social, and governance proposals voted in favor of by all asset managers in the sample. Equal weighting of fund votes.

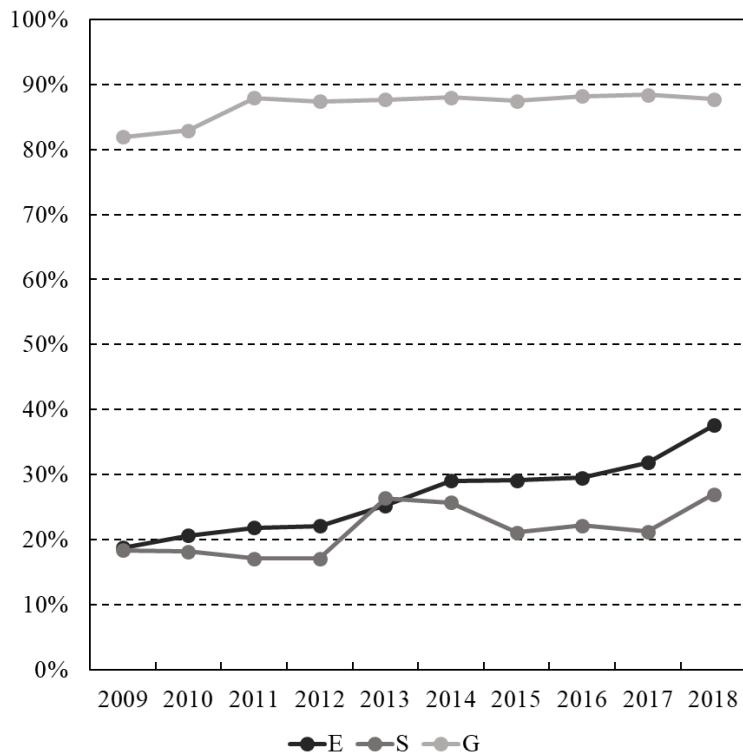


Exhibit 5: Environmental and social votes by size

Percentage of environmental (left graph) and social (right graph) proposals voted in favor of, sorted by assets under management. Equal weighting of fund votes. Top (bottom) quartile refers to the 25% largest (smallest) asset managers.

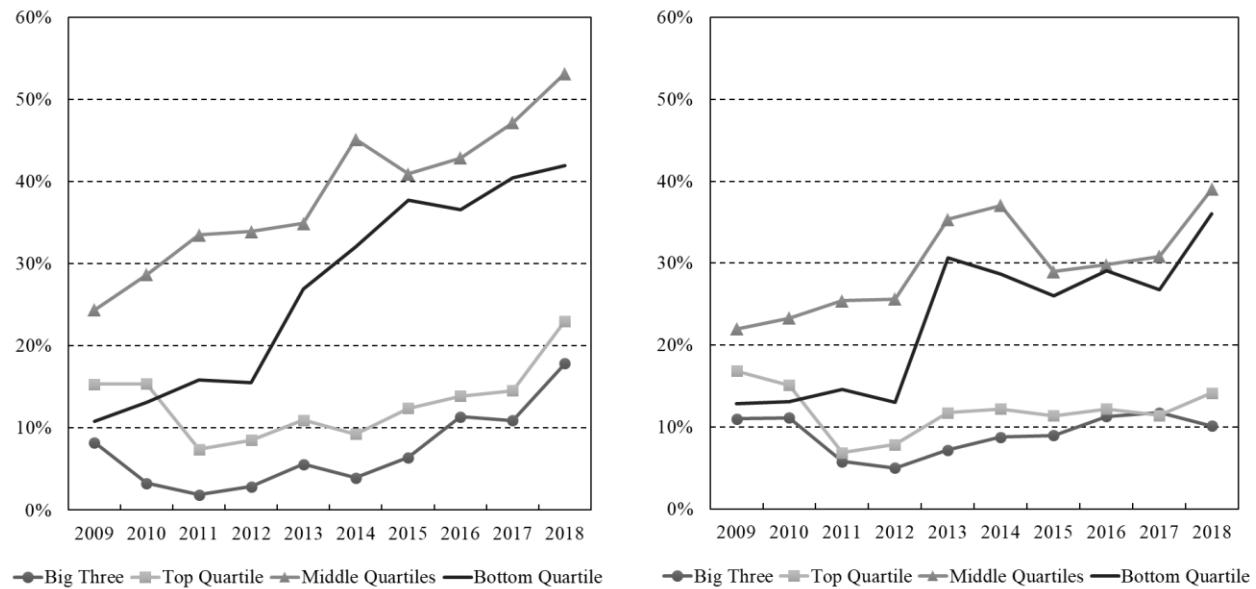


Exhibit 6: Environmental and social votes by activeness

Percentage of environmental (left graph) and social (right graph) proposals voted in favor of, sorted by the activeness of an asset manager. An asset manager is classified as passive if at least half of its equity assets are in passive funds in a given year. Equal weighting of fund votes.

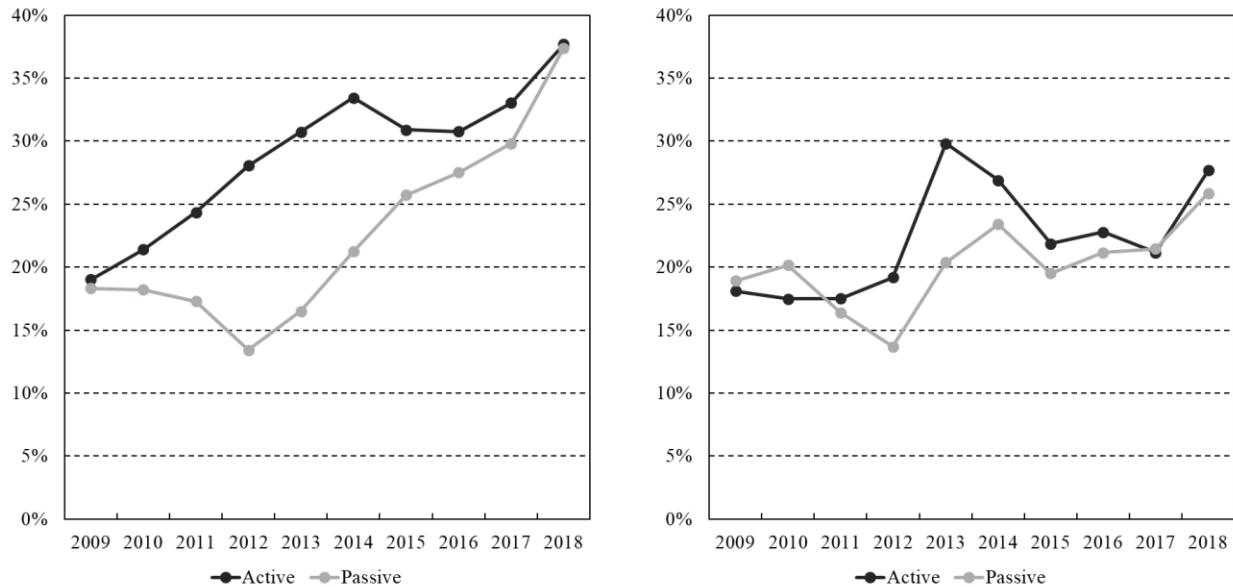


Exhibit 7: Environmental and social votes by PRI signatories

Percentage of environmental (left graph) and social (right graph) proposals voted in favor of, sorted by the PRI signatories and non-signatories. An asset manager is classified as a signatory if it was a signatory at any given point in time in a given year. Equal weighting of fund votes.

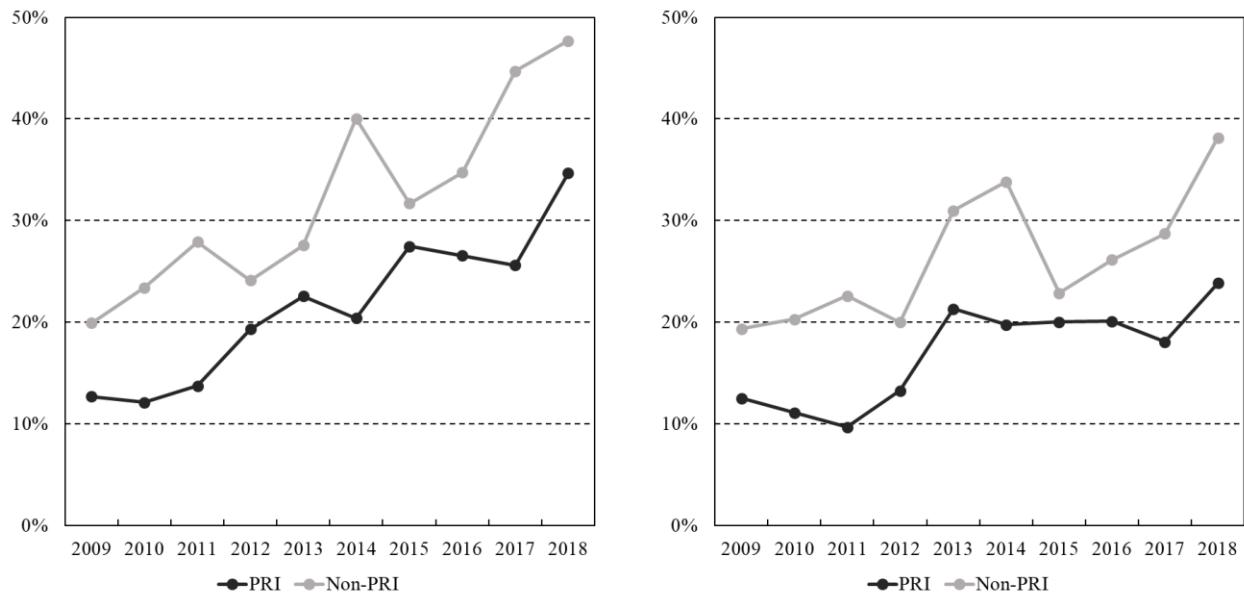


Exhibit 8: Regression results environmental and social proposals

Regressions over the complete sample from January 2009 through June 2018 for environmental proposals (Panel A) and social proposals (Panel B). Regressions are weighted by the number of votes on environmental or social topics by an asset manager in a year. Dependent variable is the percentage of votes in favor of environmental/social proposals by an asset manager. Standard errors are robust to cluster autocorrelation. Z-statistics of individual regressors displayed in parentheses. * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

	(1)	(2)	(3)	(4)	(5)
<i>Panel A: Environmental Proposals</i>					
Intercept	29.111*** (3.430)	29.607*** (7.468)	28.931*** (3.636)	28.823*** (3.634)	20.218*** (2.850)
AUM_Middle	10.312 (1.103)		10.371 (1.135)	9.802 (1.075)	18.506** (2.021)
AUM_Top	-15.684* (-1.697)		-15.762* (-1.651)	-17.425* (-1.775)	-4.290 (-0.506)
Passive		-5.474 (-0.578)	0.506 (0.070)	0.546 (0.075)	24.787 (1.451)
AUM_Middle:Passive					-26.356 (-1.429)
AUM_Top:Passive					-35.784** (-1.973)
PRI_Signed				0.756 (0.107)	0.799 (0.115)
PRI_Signed_Years				0.261 (0.293)	0.577 (0.728)
Adjusted R-Squared	0.200	0.008	0.198	0.196	0.256
<i>Panel B: Social Proposals</i>					
Intercept	23.356*** (3.554)	22.878*** (7.336)	22.631*** (3.706)	22.713*** (3.723)	17.288*** (2.927)
AUM_Middle	7.419 (1.036)		7.690 (1.118)	8.455 (1.237)	13.816* (1.886)
AUM_Top	-11.486 (-1.641)		-11.773 (-1.640)	-10.055 (-1.405)	-2.026 (-0.301)
Passive		-2.489 (-0.364)	2.083 (0.410)	2.108 (0.419)	17.763 (1.280)
AUM_Middle:Passive					-16.629 (-1.199)
AUM_Top:Passive					-22.547 (-1.542)
PRI_Signed				-1.169 (-0.389)	-1.070 (-0.231)
PRI_Signed_Years				-0.222 (-0.389)	-0.043 (-0.076)
Adjusted R-Squared	0.175	0.001	0.176	0.174	0.210

Exhibit 9: Regression results environmental and social proposals

Regressions results for environmental proposals (Panel A) and social proposals (Panel B). Regressions contain three specifications: over the complete sample, from January 2009 through December 2012, and from January 2013 through June 2018. Regressions are weighted by the number of votes on environmental or social topics by an asset manager in a year. Dependent variable is the percentage of votes in favor of environmental/social proposals by an asset manager. Standard errors are robust to cluster autocorrelation. Z-statistics of individual regressors displayed in parentheses. * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

	Full Sample	2009 - 2012	2013 - 2018
<i>Panel A: Environmental Proposals</i>			
Intercept	20.218*** (2.850)	10.648** (2.152)	23.796*** (3.055)
AUM_Middle	18.506** (2.021)	23.423*** (3.182)	19.127** (1.987)
AUM_Top	-4.290 (-0.506)	14.719** (2.375)	-9.148 (-0.962)
Passive	24.787 (1.451)	10.123 (0.858)	37.577*** (2.667)
AUM_Middle:Passive	-26.356 (-1.429)	-8.910 (-0.581)	-43.460** (-2.510)
AUM_Top:Passive	-35.784** (-1.973)	-24.911** (-2.042)	-46.892*** (-2.962)
PRI_Signed	0.799 (0.115)	-12.877* (-1.651)	5.089 (0.608)
PRI_Signed_Years	0.577 (0.728)	1.443 (0.864)	-0.126 (-0.152)
Adjusted R-Squared	0.256	0.209	0.361
<i>Panel B: Social Proposals</i>			
Intercept	17.288*** (2.927)	11.133** (2.478)	19.915*** (3.007)
AUM_Middle	13.816* (1.886)	14.852*** (2.564)	15.354* (1.853)
AUM_Top	-2.026 (-0.301)	8.746* (1.665)	-5.608 (-0.716)
Passive	17.763 (1.280)	6.045 (0.643)	29.733** (2.453)
AUM_Middle:Passive	-16.629 (-1.199)	2.250 (0.218)	-34.423** (-2.522)
AUM_Top:Passive	-22.547 (-1.542)	-12.229 (-1.265)	-33.183** (-2.478)
PRI_Signed	-1.070 (-0.231)	-10.465* (-1.891)	2.776 (0.480)
PRI_Signed_Years	-0.043 (-0.076)	0.538 (0.553)	-0.664 (-1.123)
Adjusted R-Squared	0.210	0.209	0.313

References

- Bauer, R., Ruof, T., and Smeets, P. (2018). Get Real! Individuals Prefer More Sustainable Investments. *Available at SSRN*, pages 1–53.
- Bebchuk, L. A. and Hirst, S. (2019). Index Funds and the Future of Corporate Governance: Theory, Evidence and Policy. *Columbia Law Review*, 119:2029–2146.
- Blitz, D. and de Groot, W. (2020). Passive Investing and Sustainability Integration Are Fundamentally Irreconcilable Investment Philosophies. *The Journal of Portfolio Management*, 45:7-11.
- Choi, S., Fisch, J., and Kahan, M. (2010). The Power of Proxy Advisors: Myth or Reality. *Emory Law Journal*, 59:869–918.
- Dimson, E., Karakaş, O., and Li, X. (2020). Coordinated Engagements. *European Corporate Governance Institute – Finance Working Paper No. 721/2021*.
- Drempetic, S., Klein, C., and Zwergel, B. (2020). The Influence of Firm Size on the ESG Score: Corporate Sustainability Ratings Under Review. *Journal of Business Ethics*, 167:333–360.
- Eccles, R., and Klimenko, S. (2019). The investor revolution, *Harvard Business Review*, May–June
- Fichtner, J., Heemskerk, E. M., and Garcia-Bernardo, J. (2017). Hidden Power of the Big Three? Passive Index Funds, Re-concentration of Corporate Ownership, and New Financial Risk. *Business and Politics*, 19:298–326.
- Flood, C. (2020). Record Sums Deployed into Sustainable Investment Funds.
- FT, ESG funds forecast to outnumber conventional funds by 2025 | Financial Times (ft.com), Retrieved on 29 November 2020 from: <https://www.ft.com/content/5cd6e923-81e0-4557-8cff-a02fb5e01d42>
- Griffin, C. N. (2020). Environmental & Social Voting at Index Funds. *Working Paper*, pages 1-36.
- He, Y.E., Kahraman, B., and Lowry, M. (2018). Mutual Fund Voting on Environmental and Social Proposals. *Available at SSRN*, pages 1-48.
- Kölböl, J., Heeb, F., Paetzold, F. and Busch, T. (2019) Can Sustainable Investing Save the World? Reviewing the Mechanisms of Investor Impact.
- Lund, D. S. (2017). The Case Against Passive Shareholder Voting. *Coase-Sandor Working Paper Series in Law and Economics*, page 846.
- Mercereau, B., Sertă, J. P. C. C., and Gavini, C. (2019). Promoting Sustainability Using Passive Funds. *The Journal of Index Investing*, 10:43–62.
- Petersen, M.A. (2009). Estimating Standard Errors in Finance Panel Data Sets: Comparing Approaches. *The Review of Financial Studies*, 22:435–480.
- PRI (2019). Principles for Responsible Investment. *Technical report*, United Nations Principles for Responsible Investment.

Reiser, D. B. and Tucker, A. M. (2020). Buyer Beware: Variation and Opacity in ESG and ESG Index Funds. *Cardozo Law Review*, 41:1921–2018.

Strine, L. E. (2014). Can We Do Better by Ordinary Investors? A Pragmatic Reaction to the Dueling Ideological Mythologists of Corporate Law. *Columbia Law Review*, 114:449–502.

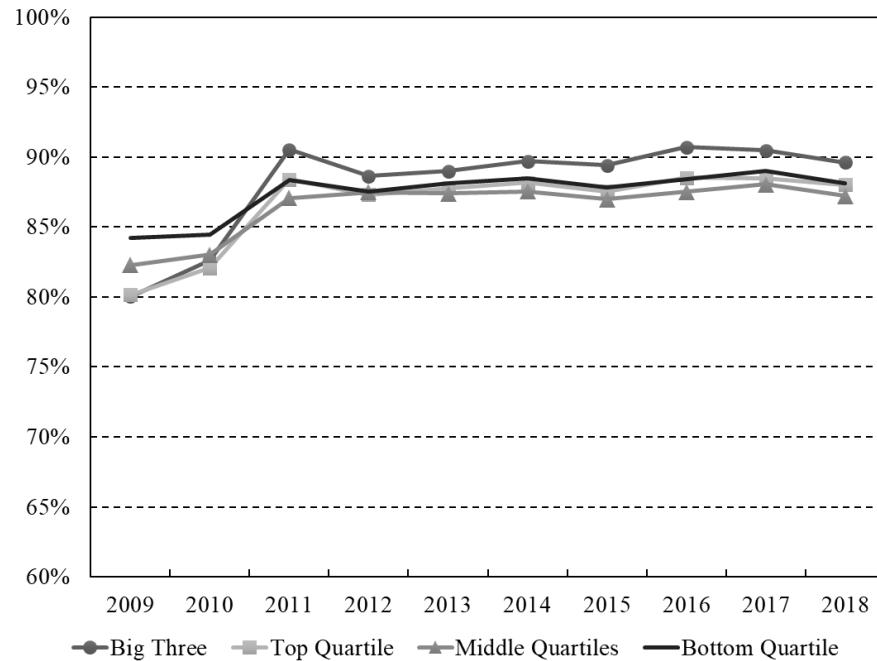
Verdam, A. (2007). An Exploration of the Role of Proxy Advisors in Proxy Voting. *Available at SSRN*, pages 1–24.

Appendix 1: Asset managers in dataset

Asset Manager	Average Votes per Year
BlackRock Advisors, Inc.	228,477
Vanguard Group, Inc.	181,189
Fidelity	168,953
Dimensional Fund Advisors, Inc.	143,587
State Street Global Advisors	101,682
AXA Equitable Funds Management Group	89,583
DBX Strategic Advisors LLC	65,968
Voya Investment Management, LLC	55,260
WisdomTree Asset Management	53,694
EQ ADVISORS TRUST	50,502
TIAA-CREF Asset Management LLC	50,357
Prudential Investments LLC	48,334
T. Rowe Price Associates, Inc. (MD)	46,696
Charles Schwab Investment Management, Inc.	42,256
Barclays Global Investors NA (CA)	40,697
AllianceBernstein LP	36,000
Wells Fargo Funds Management, LLC	35,603
Northern Trust Global Investments	34,070
PowerShares Capital Management LLC	33,385
SEI Investments Management Corporation	33,216
MassMutual Financial Group	32,523
Rydex Investments	31,648
Columbia Management Advisors, Inc.	31,371
JPMorgan Asset Management, Inc. (US)	30,612
Goldman Sachs Asset Management LP (US)	29,730
First Trust Advisors L.P.	29,158
Pacific Life Fund Advisors	28,736
Thrivent Investment Management, Inc.	28,454
ProFund Advisors LLC	27,692
Morgan Stanley Investment Management Inc.	27,629
Grantham, Mayo, Van Otterloo LLC	26,927
Massachusetts Financial Services Company	25,939
Nationwide Fund Advisors	25,561
ProShare Advisors LLC	25,473
Putnam Investment Management, Inc.	24,426
Variable Annuity Life Insurance Company	22,216
AIG SunAmerica Asset Management Corp.	21,171
American Century Investment Management, Inc.	20,846
INVESTCO Institutional (N.A.), Inc.	19,368
USAA Investment Management Company	18,550
Capital Research & Management Co.	18,241
New York Life Investment Management LLC	17,388
Allianz Funds	16,877
Optique Capital Management, Inc.	16,665
Deutsche Asset Management	16,297
Janus Capital Management LLC	15,997
Jackson National Asset Management, LLC	4,751

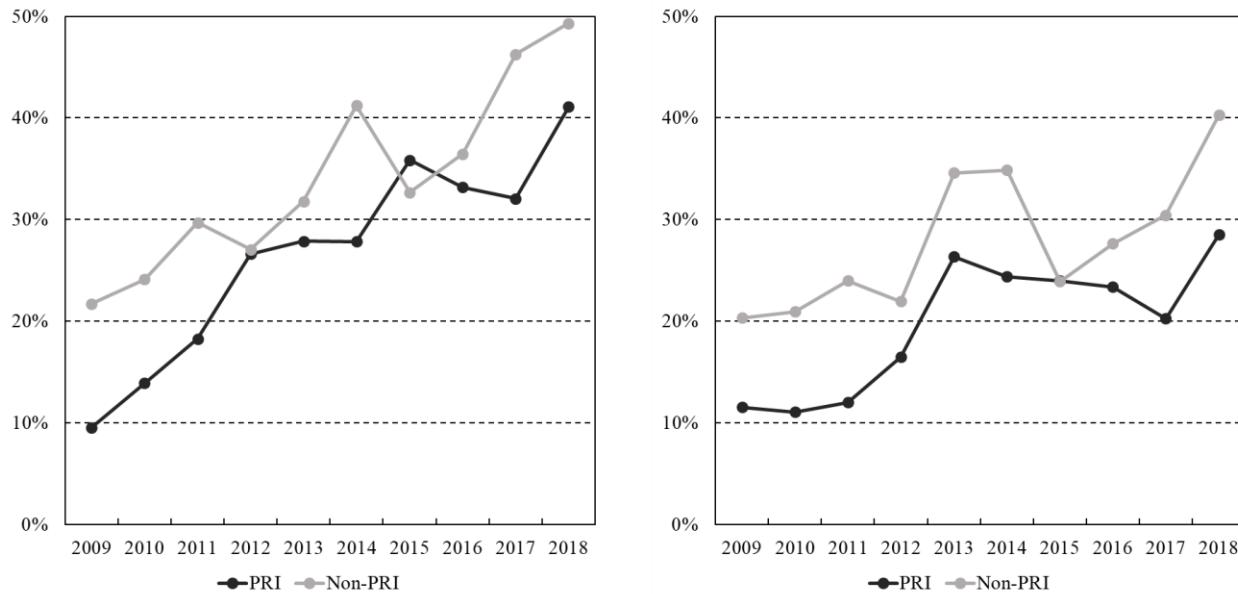
Appendix 2: Governance votes by size

Percentage of governance proposals voted in favor of, sorted by assets under management. Equal weighting of fund votes. Equal weighting of fund votes. Top (bottom) quartile refers to the 25% largest (smallest) asset managers.



Appendix 3: Environmental and social votes by PRI and non-PRI signatories, excluding the Big Three

Percentage of environmental (left graph) and social (right graph) proposals voted in favor of, sorted by the PRI signatories and non-signatories. An asset manager is classified as a signatory if it was a signatory at any given point in time in a given year. Equal weighting of fund votes.



Appendix 4: Environmental and social proposal voting behavior by different AuM buckets

Voting behavior of asset managers on environmental and social proposals from 2009 through 2018. Asset managers are sorted based on their assets under management in a given year, and assigned to a bucket. We use various methods: tertiles, quartiles, quintiles, and deciles.

