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Abstract

Universal owners—large institutional investors with highly diversified and long-term portfolios spanning the entire global capital market—have multiple engagement mechanisms to influence their portfolio companies. Given the costly nature of firm-specific interventions, universal owners have also drawn on systemic governance mechanisms with a wide market effect and low cost such as expectation documents. We focus on Norway’s sovereign wealth fund and its release of an unforeseen key expectation Note in 2012 requesting explicit corporate governance practices from all its portfolio companies. We use this early example of an expectation Note as a natural experiment to examine whether expectation documents have impactful governance consequences for the entire market. We develop a new three-step decomposition approach to explore the effectiveness of expectation documents as an activism mechanism. First, we analyze how portfolio firms adapted to the fund’s new governance expectations and explore their heterogeneous response across ownership levels and firm characteristics. We find a stronger reaction by firms for which direct action is more costly to universal owners. Second, we show how the fund also changed its investment policy to meet its newly stated governance preferences, even at the expense of its financial returns. And finally, we illustrate the new correlation between the firms’ changes toward higher governance scores and the fund’s changes in the investment weights. With this study, we contribute to research on shareholder stewardship by examining a novel and effective governance engagement tactic which is becoming popular in an era of raising pressures for corporations to pursue purpose.

Keywords: Corporate Governance; Institutional Ownership; Expectation Documents

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1. Introduction

Institutional investors have multiple governance mechanisms to exert external control, whether it is via private negotiations with boards (Carleton et al. 1998), shareholder proposals (Cunat et. al. 2012, Flammer 2015), requesting board representation (Appel et al. 2019) or launching proxy fights (Wong 2020). These mechanisms tend to be costly and resource demanding (Gantchev 2013), which is particularly relevant for universal owners—large, active, long-term investors with a globally diversified investment portfolio. Universal owners are constrained to conduct individual costly monitoring as they invest in a significant part of the globe’s public market, comprising thousands of companies. Even when engaging with individual firms as active owners, the monitoring costs may be substantial while the individual firm may represent a small fraction of their portfolio. Therefore, it may not always be cost-effective for universal owners to base their engagement on targeting individual companies. A low-cost and high-reach stewardship strategy for universal owners has been to resort to expectation documents, a governance tool that systemically affects the entire portfolio of firms.

The systemic influence of expectation documents has not been studied in the governance literature, nor do we know about their effectiveness as an activism mechanism. Yet, their importance is growing as universal owners such as BlackRock, Vanguard, and State Street—collectively controlling over 80% of all indexed funds—increasingly use this engagement tactic to widen their influence on their portfolio firms. While Gartenberg et al. (2019) studied calls for corporate purpose and its relationship with firm performance, here we are interested in one call affecting many firms; similar examples include the “Letters to CEOs” by BlackRock’s CEO Larry Fink requesting to disclose “company’s purpose beyond shareholder value maximization” and Vanguard’s “Investment Stewardship Reports.”¹ Beyond these individual investor efforts, several investor communities such as the Institutional Investors Group on Climate Change (IGCC) and the Principles for Responsible Investment (PRI) exercise systemic influence by jointly adhering to collective expectation calls.² With stock ownership being increasingly concentrated in fewer hands who passively manage their assets (Appel et al. 2016), it is of paramount importance to understand whether expectation documents are a cost-effective engagement tool. If indeed expectation documents are effective, they constitute a form of activism that is particularly attractive for owners

¹ Another example is that of Japan’s Government Pension Investment Fund, the world’s largest public pension fund. They revised its investment principles in 2017 to incorporate ESG issues and have encouraged its portfolio companies to improve and disclose their carbon efficiency.

² Platforms that put together multiple investors share with large universal investors the limitations for active monitoring. IGCC has 230 members across 15 countries, with over €30 trillion in assets under management and PRI over 2800 signatories in 60 countries.

that are both universal and active. In the case of universal owners, expectation documents require the public announcement and publication of a single document articulating the expected practices to be adopted by all its portfolio firms. The public announcement of the universal owner's preferences to the entire market enhances its credibility and commitment with the expressed expectations disclosed, and also exerts further pressure to its investee firms. The active nature of these investors grants them the option to adopt additional and more costly complementary actions. For example, expectation documents may be more effective for active owners if their announcement is accompanied by a change in their investment strategies and with a credible threat of exit (Levit 2019). A relevant empirical question is therefore whether expectation documents are effective in generating investee firm responses, and whether active owners complement the disclosure of expectation documents with changes in their own investment and exit strategies.

We follow the governance practices of the Norwegian sovereign wealth fund to study the effectiveness of the systemic influence of active universal owners via expectation documents. Norges Bank Investment Management (NBIM) is the asset manager of the largest fund in this particular asset group of government-backed owners (sovereign wealth funds) and holds on average 1.1% of all listed stocks globally. In November 2012, NBIM unexpectedly released an expectation document (hereinafter "the Note") presenting NBIM's preferences on the corporate governance practices of all its investee firms.³ The Note's request was an explicit call for the improvement of certain corporate governance dimensions of their investee firms. NBIM's rationale for this call was to strengthen companies' long-term financial performance "through better governance." NBIM identifies its set of "good" corporate governance practices that we measure with a governance score. NBIM's Note is an early example of an expectation document for which we have detailed data on the dimensions of corporate governance practices that it targets (i.e., effective board monitoring and strong minority shareholder rights) and hence useful to analyze its effects on firms.

While there is a growing literature exploring the preferences and interactions between active owners and firms, isolating the direct systemic influence of active owners on investee firms' policies has proved difficult, given that both the investors' decisions and firms' policies are jointly codetermined.⁴ A correlation between investor preferences and firm policies could be driven by the investment policy of the investor, by firms catering to the specific preferences of the investor, or by

³ <https://www.nbim.no/en/publications/discussion-notes/2012/corporate-governance/>, November 19th 2012.

⁴ For example, Parrino et al. (2003) explored the entry and management strategies of institutional investors. Edmans and Manso (2011) and Duan and Jiao (2016) showed theoretically how exit strategies that are incentive-compatible for investors can affect firms' actions. Bushee et al. (2014) and Aggarwal et al. (2011) provided evidence regarding how investors and firms match in terms of their policies and preferences. Dimson et al. (2015) found that institutional investor activism on specific firms leads to changes in the firms' CSR policies and is followed by positive abnormal stock returns.

the adjustment of the investor expectations to the characteristics of each firm. This correlation creates an inherent problem of endogeneity. To disentangle the causal impact of the investor's preferences on firm policies, one would need an unexpected change of investor preferences that operates across all firms in a systemic way. The unexpected nature of the Note, its importance, its applicability to the entire portfolio universe, and its focus on specific governance dimensions combine to offer a valuable source of variation that can be considered exogenous from the point of view of the firm.⁵ Hence, our setting presents an interesting opportunity to explore the impact of an expectation document which seeks to exert a systemic influence, at least, on three dimensions: it expects the adoption of a precise set of governance practices; it affects all companies in NBIM's portfolio; and, given the universal reach of the NBIM holdings, it yields an economic influence to the entire market.

We introduce a novel quantitative decomposition to analyze the overall governance effect generated by the release of the Note. This methodology can be generalized to other settings to uncover the effectiveness of any investor activism tool that targets a broad population of firms. In our setting, we show that the overall increase in the governance score of the NBIM portfolio following the release of the Note can be analytically decomposed into three components: i) the increase in the governance score of those firms that were already present in the fund's portfolio at the time of the announcement; ii) the change in the composition of the firms that integrate the fund's portfolio, that is, the entry or exit of firms in the NBIM portfolio; and iii) the new correlation between the firms' changes toward higher governance scores and the fund's changes in the investment weights. We next summarize each of these components.

First, we examine how firms that were part of NBIM's portfolio at the time of the announcement changed their corporate governance to meet NBIM's expectations. We find that investee firms increased their governance score, aligning themselves better with the fund's new governance preferences. This increase in the governance score is clearly present in the extensive margin (i.e., firms inside versus outside of the portfolio) and shows a monotonic influence. Firms for which NBIM represents a higher ownership fraction react more intensely to the Note, while firms in the lowest quartile of NBIM's ownership do not exhibit a significant change in governance after the Note. This suggests that a minimum threshold of ownership is necessary for the expectation document to have an effect on investee firms. This is an interesting characteristic of

⁵ More generally, sovereign wealth funds provide useful evidence about shareholder influence, as they often have public, time-varying preferences on issues beyond stock returns. In this paper, we focus on the Norwegian sovereign wealth fund's fostering "good corporate governance" as part of our empirical strategy. Other examples are New Zealand's fund open stance toward environmentally friendly investments and United Arab Emirates' funds objective of diversifying the country's economy.

expectation documents, given that Fich et al. (2015), Kempf et al. (2017) and Liu et al. (2020) showed that investors rationally devote less monitoring time to firms that have a smaller weight in their portfolio. We also analyze how the effect of the expectation document varies with the fund's intensive margin (i.e., different levels of importance of the firm for NBIM). We find a weak monotonicity of the effect along this dimension, suggesting that the effect of the Note does not strongly depend on the importance of a firm within NBIM's portfolio. In other words, NBIM's influence is rather homogeneous and independent of its portfolio weights. This is a distinctive feature of expectation documents as an engagement tool in that they are a single Note that targets all firms in the same way and aims to achieve a systemic influence.

We further explore the heterogeneous reactions of investee firms according to different firm and institutional characteristics. We find that firms that are smaller, less liquid and exhibit worse financial performance, change more their governance characteristics to align with the stated preferences of the expectation document. Interestingly, smaller firms are precisely those for which it is less cost-effective for a universal owner to conduct a firm-specific stewardship role. Less liquid firms are also those for which the threat of exit is less credible (Edmans and Manso 2011). Our results, therefore, suggest that expectation documents can help to offset some of the inherent limitations in the stewardship strategy of large universal owners. In addition, we uncover a complementarity between the country and pre-existing firm governance scores on the one hand, and the firms' reaction to the Note on the other. Firms in countries where the quality of investor protection is below the median do not significantly improve their governance score following the Note. Moreover, within each country, firms in the lowest pre-existing governance score bracket do not significantly react to NBIM's announcement. This seems to indicate that there is a minimum governance threshold to enact change.

Second, we show that the fund changed its investment policy to meet the Note's preferences. The fund increased its investments in firms with higher pre-existing governance scores (i.e., inherently aligned to the fund's preferences) and decreased its investments in firms with lower pre-existing governance scores. This effect is only significant when we focus on NBIM's discretionary investments and exclude the investments driven by NBIM's benchmark investment policy, demonstrating that this outcome was a deliberate shift in investment strategy. We also provide further evidence of NBIM's commitment to the Note's expectations by showing that NBIM is willing to accept lower financial returns in exchange for "better governance." This set of results, which focus on corporate governance, are in line with other findings in the literature illustrating that broader ESG measures matter in investors' preferences beyond returns (Bauer et al. 2020;

Hartzmark and Sussman 2019; Riedl and Smeets 2017).⁶ This group of results regarding the fund's investment strategy has several roles within our analysis. First, it shows how the fund made changes in its investment strategy aligned with the Note's objectives and plausibly complementing its effectiveness. Second, these results help to validate the identification strategy of our study, showing that it was indeed the Note that led to effective changes within the fund. Finally, they allow us to quantify the relative importance of the firms' reaction and the fund's reaction in changing the governance characteristics of NBIM's portfolio.

In the third component of our decomposition analysis, we explore the new correlations between the firms' changes in governance and the changes in the investment stance of the fund. We uncover that, following the Note, the changes in governance and changes in investment weights become more closely correlated.

Taken together, our results illustrate that all three components are critical to account for the systemic influence in the Note's governance effectiveness. We are able to quantitatively decompose the relative influence of each component on the total governance score of NBIM's portfolio. The most important explanatory factor of the change in the governance score of NBIM's portfolio is the reaction by the firms to the announcement of the Note.

Our work contributes to the existing literature in several ways. First, we analyze the effect of an expectation document—more specifically, a systemic request of alignment in governance preferences of a universal active owner. We are able to causally estimate the investee firms' reaction to investor preferences that are exogenous to the individual firm's characteristics. This novel evidence reveals how governance expectations of universal active owners can change firms' policies in a systemic way. In this sense, we depart from most pre-existing studies examining specific engagement interactions between given funds and given firms which could be driven by the firms' particular needs or properties. Second, we introduce a decomposition methodology to evaluate the overall impact of a portfolio-wide activism tool, i.e., expectation documents. We show evidence of reactions on both sides of the investment relationship following the announcement. That is, we observe how investee firms reacted to NBIM's new governance preferences and how NBIM effectively adapted its investment policies to fulfill its new stated preferences. Third, we explore the effectiveness of portfolio-wide expectation documents as a key corporate governance mechanism. In so doing, we fill a gap in the literature, as the release of expectation documents is becoming part of the toolbox of shareholder engagement and it has not attracted much scholarly

⁶ Our findings are also in line with an announcement made by the chief investment officer of Japan's Government Pension Investment Fund: "as a universal owner, instead of trying to beat the market, our responsibility at GPIF is to make capital markets more sustainable."

attention thus far.⁷ We uncover a heterogeneous response of firms to the release of the Note, across ownership levels and firm characteristics, which speaks to the effectiveness of expectation documents. Finally, we shed some light on the dual objectives of universal owners to maximize financial returns and increase global influence. We show that NBIM is indeed willing to sacrifice financial returns in the short run to achieve its influence and increase the governance level of its portfolio in the long run. These dual objectives may allow universal owners to affect global practices in a systemic way.

2. Active Universal Owners

Institutional investors and their influence on firms have been extensively studied (e.g., Maug 1998; Bushee 2001; Gillan and Starks 2003; Ferreira and Matos 2008; Brav et al. 2010; Denes et al. 2017). Some early work focuses on pension fund activism, such as the CalPERS focus list, targeting specific companies (Smith 1996; Del Guercio and Hawkins 1999). However, more recently attention has shifted to highly vocal activist institutional investors, such as hedge funds, that accumulate substantive ownership and engage in aggressive shareholder activist campaigns (Gillan and Starks 2000; Klein and Zur 2009; Bebchuk et al. 2015 and Brav et al. 2015; Gantchev and Jotikasthira 2018). At the other end of the activism spectrum are institutional owners passively managing their broad portfolios through index and exchange-traded funds. Hawley and Williams (2000) suggested a crossing point between these two forms of engagement, such as when passive investors can vote with activist investors to enact change (Appel et al. 2016). Somewhere in between these two poles—activists and passive investors—are those institutional investors who hold minority positions in hundreds or thousands of firms (universal owners) with the potential to exert systemic influence on the market, and particularly on their portfolio firms, via *active institutional ownership* (Aghion et al. 2013).⁸ Active owners often seek to enhance their portfolio firms' corporate governance practices because this is believed to lead to better firm financial performance in the long run (Dimson et al. 2015; Cremers et al. 2020).

The focus of our paper is on these active institutional owners. These investors tend to have long-term mandates in highly diversified minority holdings, and as such, they are incentivized to

⁷ By analyzing the effect of expectation documents, we depart from the literature that focuses on individual firm interventions that target firm-specific governance issues (as in Dimson et al. 2015), a firm's social and environmental issues (as in Smith 1996, on CalPERS' targeted firms), or preferences that apply to subgroups of firms within a portfolio (as in Barber 2007).

⁸ Our paper may be included in the recent debate about the role of universal owners affecting systemic corporate governance. For example, Bebchuk and Hirst (2019) suggested that the renewed stewardship effort by Vanguard, BlackRock, and State Street should be insufficient due to their incentive structure. However, Fisch et al. (2018) suggested that the competition between passive and active managers for investors would foster stewardship among passive managers, as described by Appel et al. (2016).

monitor managers and strengthen minority shareholder rights to increase the value of their assets under management (Del Guercio and Hawkins 1999). Either directly or through proxy advisors, active owners vote, coordinate, and engage with investees' managers and boards to improve corporate governance practices, such as board independence, board diversity, or minority shareholder protection (Gillan and Starks 2000; Gompers et al. 2003; Bebchuk et al. 2009). Indeed, active owners can exercise "voice" strategies in various ways, including formal engagements via proxy voting in general annual meetings, informal behind-the-scenes conversations with portfolio companies' managers and board members, or by releasing negative screening lists.⁹ In this paper we analyze a rather novel, less costly, universally diffused engagement channel of active ownership: a publicly announced expectation document. This type of call to action has recently become quite popular among institutional asset managers, given the benefits of immediately reaching wide audiences in the increasingly digital world.¹⁰ Others, such as Gormley et al. (2020) have started to investigate the ability of active universal owners to influence firms' governance policies. Our paper proposes a framework to analyze this type of systemic influence and provides evidence of how resource-effective expectation documents can exert change, not only on easily monitored governance issues but also on more complex governance practices. Indeed, Eccles et al. (2014) provide evidence that adopting sustainability policies also affects performance and various corporate organizational processes.

Our study differs from existing research which has explored private interactions between active institutional investors and specific companies. This literature has taken advantage of either access to private information (i.e., conversations, letters, phone calls) from a single investor, such as TIAA-CREF (Carleton et al. 1998), Hermes fund (Becht et al. 2009), or an unidentified responsible investor (Dimson et al. 2015); or survey data research, detailing the behind-the-scenes engagement strategies (McCahery et al. 2016). Other studies looked at investors, mostly on CalPERS, targeting a few selected firms and the negative screening effects on their financial performance (Smith 1996; Nelson 2006; Barber 2007) which proved to be less effective as an engagement strategy (Kim et al. 2019). Our approach is then unique in that we investigate the response of thousands of companies,

⁹ These engagement strategies may vary across types of investors. For example, Briere et al. (2018) contrasted the voting behavior of NBIM with respect to that of BlackRock.

¹⁰ An example of this is Larry Fink's "Letter to CEOs" of 2019 and 2020, where the CEO of BlackRock, the world's largest asset manager with over \$7 trillion in assets under management, asked companies to change specific governance and risk management issues. Specific changes were required in areas such as long-term strategy and purpose, board oversight responsibilities, and climate-change and sustainability reporting. Those who fail to comply will be signaled and face higher capital costs in the future (Larry Fink 2018, 2019). Goldman Sachs (GS) provides another example of how universal owners and advisory firms may exert a systemic influence in the market. With \$1.5 trillion in assets under management, the CEO of GS announced that the advisory firm will not take companies public if they have all-male corporate boards (Son 2020).

and we do not focus on a “negative screening” mechanism, but rather on a positive or “inspiring” expectation document which intends to improve the governance of its targets instead of signaling those who fail to comply. Lastly, this particular expectation document is publicly available and is released by an active universal owner, Norway’s sovereign wealth fund, which we describe in the next section.

3. Context: Norges Bank Investment Management (NBIM)

Sovereign Wealth Funds (SWFs) are government-owned investment funds without explicit liabilities that typically pursue long-term investment strategies (Aguilera et al. 2016). An important characteristic of SWFs is that they often pursue multiple objectives (Clark et al. 2013), pairing financial returns with broader economic and development national goals supported by the government’s long-term policies (Bernstein et al. 2013; Megginson and Fotak 2015). In this paper we focus on NBIM, which manages the world’s largest SWF by assets under management, the Government Pension Fund – Global.¹¹ As of December 2019, NBIM had assets under management worth 10,088 billion Kroner (US\$1.15 trillion) with minority positions in more than 9,200 companies in 74 countries. Equity investments represented more than 70% of its portfolio, and it owns, on average, 1.5% of all equities listed globally. NBIM fits nicely in the above description of an active owner because it is able to engage in a systemic way with its investees by setting portfolio-wide corporate governance expectations that complement the effectiveness of other more costly forms of engagement allowing for a more effective stewardship.

NBIM has an explicit publicly disclosed investment strategy and it uses the FTSE Global Cap index as its benchmark. Norwegian firms are excluded from the index, and the fund also applies time-invariant country corrections that reweight each country to account for its links with the Norwegian economy. However, the fund can *deviate* from this investment benchmark by including, excluding, overweighting, or underweighting any firm in the portfolio. Moreover, the fund can drop firms based on lack of engagement with the fund or inconsistencies with the fund’s ethical guidelines. We are precisely interested in this fund discretion as an engagement tool to shape systemic governance change.

More formally, the investment intensity of NBIM in a given firm i , from country c , at time t can be represented as follows:

$$\text{Investment}_{ict} = I(\text{Ethics}_{it}=1) \times I(\text{Engage}_{it}=1) \times (\text{FTSE Global}_{it} \times \text{Country}_c + \text{Stance}_{it}) \quad (1)$$

¹¹ In spite of the term “pension” in its name, it does not pay pensions; instead it preserves and builds financial wealth for future generations to prepare for the time when oil and natural gas reserves are depleted.

where $I(\text{Ethics}_{it}=1)$ indicates that the firm fulfills the NBIM's Council on Ethics requirements, $I(\text{Engage}_{it}=1)$ indicates that the firm has not been excluded due to lack of individual engagement with the fund, FTSE Global_{it} would be the investment in the firm according to the FTSE Global Cap index and Country_c are time-invariant factors that correct the index at a country level. Stance_{it} is the specific stance (overinvestment or underinvestment) that the fund may have on a given firm relative to the benchmark.

The rich information disclosed by NBIM allows us to (1) identify why a firm is included/excluded in the portfolio, and (2) which changes in investment emanate from discretionary elements (Ethics_{it} , Engage_{it} , or Stance_{it}) or from the mechanical rebalancing of the fund ($\text{FTSE Global}_{it} \times \text{Country}_c$). We use these discretionary and automatic elements of NBIM's investment strategy as part of our identification strategy since they reveal the changes in investment that are exogenous or endogenous to NBIM's preferences.

3.1. A natural experiment: NBIM changes its focus on corporate governance in 2012

NBIM's initial shareholder engagement efforts as an active owner started in 2004 led by the Council on Ethics and focused on negative ethical targeted screening—similar to that of CalPERS. In the expectation document released by NBIM on November 19th, 2012, a “Note” titled *Corporate Governance* stated that an effective corporate governance has a positive, direct, and long-term impact on the value of companies. In this Note, NBIM explicitly declares that from that point onwards, it would request all its portfolio firms to meet certain “corporate governance expectations.”¹² The Note has two unique features: it is the first and only requirement for investee firms to adopt specific corporate governance practices during our sample period, and it portrays an unequivocal universal expectation applicable to every single firm in which NBIM invests (NBIM 2012:7). Second, the Note marks a critical turning point in NBIM's corporate governance strategy, making it a relevant shift in internal preferences. Indeed, months before the announcement of the Note, NBIM dismantled its separate corporate governance unit, created in 2005, which had been supporting ethical issues, and incorporated governance professionals into its equity investment team. This illustrates that the Note marks a key turning point where an internal process of governance preferences became a legitimate signal for external stakeholders on NBIM's

¹² The language of the Note contains statements such as “NBIM's primary corporate-governance focus will consequently be on mechanisms shareholders can use directly and indirectly to influence companies toward sustained business success” and “NBIM operates a corporate-governance program. Setting out generic expectations for good corporate governance is one of several steps in this program and the topic of this discussion note” (NBIM 2012:3).

governance expectations.¹³ It is important to stress that NBIM's shift in governance preferences was unanticipated, when we consider events occurring in an annual basis.

4. Data

4.1. Sample

Our sample consists of a full panel of all firms in the “Environmental, Social and Governance” (ESG) dataset from Eikon (Thomson Reuters), which provides firm-level governance, financial, and accounting data. To determine which of these firms are part of NBIM's portfolio and the level of NBIM's investment, we merge the Eikon universe with NBIM's dataset. The NBIM dataset provides the yearly equity holdings of NBIM since its inception in December 1998. We complement these data with data on the constituents of the FTSE Global Cap Index from the FTSE Russell Help Desk. The Eikon database provides firm-level ESG variables for more than 4,200 public companies, listed in multiple stock exchanges since 2002. Our sample starts in 2006, which is the first year in which NBIM invested in small and mid-cap firms. The coverage of Eikon is also much richer after 2006. Given the structure of our analysis and the timing of the external shock (the Note was released in 2012), in our main specifications, we use yearly data for the period 2009–2015 (to have 3 years before and 3 years after the 2012 event). We collect yearly firm-level information on governance, accounting, and financials for the period 2009–2015. Given the availability of governance and financial data, we obtain a final sample of 4,200 companies per year.¹⁴ All our yearly data is measured at the end of December.

As a measure of firm-level corporate governance, throughout the study we use a single governance index that we obtain from Eikon ESG's management score. According to Eikon, the management score “measures a company's commitment and effectiveness towards following best practice corporate governance principles.” It is the index, from the population of pre-constructed Eikon indices, that most closely matches the content of NBIM's expectation document. The index represents an equally-weighted average of 34 corporate governance indicators, including board independence; CEO–Chairman separation; board diversity; board skills and background; staggered

¹³ In fact, the novelty of this strategy was covered by the financial media in the weeks that followed the Note release in November 2012. For example, CNBC wrote the following: “Norway has just published an important note on what it expects in terms of corporate governance from the companies it invests with” (Carney 2013). Comments from the CEO, Mr. Slyngstad, reported in the *Financial Times* stressed how the fund shifted into active ownership, as follows: “We think it is the responsibility of the larger investors to be more involved in what in the UK is referred to as stewardship and have a dialogue not just with the CEO and CFO but also the chairman of the board” (Milne 2013).

¹⁴ For consistency and to avoid sample attrition, in our main analysis we drop firms that have one or more missing values on our main variable of interest (the governance index) during our main period of analysis (2009–2015). We are left with a sample of approximately 15,000 observations.

boards; or the existence of audit, nomination, and compensation committees.¹⁵

Each governance indicator is first transformed into a “percentile score,” from 0 to 100 according to the ranking of each company for each indicator across the whole sample. Then, the governance index equally weights the 34 rank indicators to assign an overall governance score to each company. This re-ranking procedure is useful, since it nets out aggregate trends in corporate governance and facilitates the interpretation of the results. Since we employ differences-in-differences specifications (comparing treatment and control firms), this re-ranking should not have any qualitative impact in the results. As a robustness check, we also report results based on the indicators themselves, without the ranking transformation.¹⁶ We decompose the ESG management index into three groups based on whether each indicator is explicitly mentioned, partly mentioned, or not mentioned in NBIM’s Note. We use these three governance groups to run additional robustness tests and show the results in section 6.2.2.

Finally, we draw on some additional databases. We measure country-level minority shareholder protection from the Doing Business report of the World Bank. To estimate abnormal returns, we obtained stock price performance and market related data from Eikon, and the global factors (*RMRF*, *SMB*, *HML* and *UMD*) from Kenneth French’s website. To construct monthly returns in U.S. dollars, we employ the *total return index* (which incorporates reinvested dividends) and prices (daily stock closing prices) from Eikon.

4.2. Descriptive statistics

Table 1 reports the summary statistics for our main sample. The governance index takes scores from 0 to 100. The index ranks companies according to the quality of their corporate governance. Scores closer to 100 mean that the company has good governance quality relative to all the companies in Eikon ESG. In our sample, the average company has a governance score of 52.8. The standard deviation is 28.7. The average weight of a firm in NBIM (what we define as the fund weight, which is the fraction of NBIM’s portfolio represented by a firm’s market value) is 0.04%. The average weight that NBIM represents in a firm (what we define as the firm weight, which is the

¹⁵ Eikon provides index scores at the firm level, grouped in the following 3 categories: environmental, social and governance. Within the category of governance, Eikon provides 3 indexes, as follows: Management, Shareholders and CSR. We use the Management Score since it best matches the Note’s focus on governance expectations, and it is Eikon’s most complete index on governance (it includes 34 indicators). The other 2 indexes within the Governance category are Shareholders and CSR, which are much more restrictive and only include 12 and 8 indicators, respectively. A detailed explanation on the construction of the *governance index* is provided in Table A.I of the Online Appendix.

¹⁶ More specifically, to have results on aggregate governance changes that can be interpreted as changes in the “number of indicators” and not as changes in a “ranking index,” we also construct a governance index in levels following Eikon’s methodology. All information and results are included in Section 6.2.2.

fraction of the firm's market value held by NBIM) is 0.84%.

--- Insert Table 1 about here ---

Table A.II in the Online Appendix presents the evolution of the NBIM total equity holdings, as well as the percentage of NBIM holdings that we track in our final sample after the merge with Eikon. Table A.III in the Online Appendix reports summary statistics for firm characteristics, splitting the sample into those that belong to NBIM in December 2011, just before the announcement of the Note and those that do not. Finally, Tables A.IV and A.V in the Online Appendix report the industry and country composition of our sample at the time of the announcement of the Note.

5. Empirical Model: A Three-Step Decomposition Analysis

We propose a three-element decomposition to analyze the effect of the Note on the aggregate governance of NBIM's portfolio. This decomposition can be applied to study the systemic impact of any expectation document, and more broadly of any portfolio-wide activism tool. Our expectation document focuses on corporate governance, so we define G_{it} as the aggregate governance index of the NBIM portfolio $G_{it} = \sum_{i=0}^I w_{it}g_{it}$ where w_{it} is the investment weight of firm i at time t in the NBIM portfolio and g_{it} is the governance score of firm i at time t . The definition of G_{it} allows us to decompose the changes of G_{it} into three different elements. Higher (lower) scores of G_{it} can be interpreted as a better (worse) overall corporate governance quality of NBIM's portfolio according to the preferences stated by NBIM in the Note.

The changes in the overall corporate governance score of the NBIM portfolio (ΔG_{it}) can be decomposed as a function of the changes in investment weights (Δw_{it}) and changes in firm governance scores (Δg_{it}) as follows:¹⁷

$$\Delta G_{it} = \sum_{i=0}^I (w_{it}\Delta g_{it}) + \sum_{i=0}^I \Delta w_{it}g_{it} + \sum_{i=0}^I \Delta w_{it}\Delta g_{it} \quad (2)$$

Thus, the overall change in the governance quality of the NBIM portfolio (ΔG_{it}) can be decomposed into the three terms of equation (2). Each term has a clear economic interpretation that we analyze in the next section. The first term depends on the decision of investee firms to change their governance, potentially to meet NBIM governance expectations. This term has fixed NBIM weights prior to the release of the Note and allows for the firm governance scores to change. Intuitively, it is similar to a standard intent to treat specification in which the treatment depends on fixed predetermined (2011) NBIM investment weights. Similarly, it can be interpreted as a reduced

¹⁷ To reach equation (2) departing from ΔG_{it} , we first define $\Delta G_{it} = \sum_{i=0}^I w_{it+1}g_{it+1} - \sum_{i=0}^I w_{it}g_{it}$. We also define $\Delta w_{it} = w_{it+1} - w_{it}$ and $\Delta g_{it} = g_{it+1} - g_{it}$, to obtain the following expression: $\Delta G_{it} = \sum_{i=0}^I (w_{it} + \Delta w_{it})(g_{it} + \Delta g_{it}) - \sum_{i=0}^I w_{it}g_{it}$. Rearranging terms, we reach equation (2).

form of an instrumental variables (IV) regression, in which we instrument NBIM's post 2012 weights with a cross-sectional snapshot of 2011 weights. In this first term, G_{it} changes are driven by changes in the corporate governance score of NBIM's investee companies.

The second term is the reweighting conducted by NBIM following its new governance strategy. NBIM can exit (enter) firms with worse (better) governance or decrease (increase) its portfolio holdings of firms with worse (better) governance. In this second term, the firms' governance score is fixed prior to the release of the Note, and the changes in G_{it} are only driven by NBIM's investment strategy. Finally, the third term measures firms' changes in corporate governance that come with changes in NBIM's weights. In equilibrium, it can be that NBIM changes its holdings of a firm due to changes in the governance of the firm or vice versa.

6. Main Empirical Results

We use each individual term of the three-way decomposition analysis to organize the remainder of the paper. Before turning to each term, Section 6.1 explores the overall governance score of the NBIM portfolio before and after the release of the Note. Section 6.2 analyzes the first term in equation (2), fixing the NBIM weights prior to the release of the Note and allowing for the investee firm governance scores to change. Next, Section 6.3 focuses on the changes in the investment strategy of NBIM, our second term in equation (2). Section 6.4 explores the third term in equation (2) and shows how the correlation between the changes in governance scores and the changes in investment weights is altered by the Note.¹⁸

6.1. Evidence on the overall change in the governance of NBIM's portfolio

We first conduct a baseline analysis to explore whether the overall governance score of firms included in the NBIM portfolio changes with the announcement relative to the governance score of firms outside the NBIM portfolio. This analysis is instrumental to the rest of the paper as it measures the overall effect (the term ΔG_{it} in equation (2)) that we then decompose. It is also a useful descriptive result given that NBIM's stakeholders may be interested in knowing whether their investments are backing firms whose governance is aligned with the Note's objectives. For this purpose, we estimate cross-sectional regressions for every year (2007 to 2015) of governance score differences between NBIM and non-NBIM firms. Figure 1 and Table 2 show our results.¹⁹ Before the event (2012), we find no significant governance differences across firms inside

¹⁸ See the Online Appendix for a quantitative decomposition of the overall effect onto its three components.

¹⁹ Table A.VI in the Online Appendix shows that results do not change when the regressions are weighted by the logarithm of assets.

and outside the NBIM portfolio and no particular trend of this difference. However, the firms in the NBIM portfolio exhibit significantly higher governance scores in the period following the event (2012–2015) relative to the firms outside the portfolio. The difference between the periods is statistically significant and economically large, amounting to 4.8 to 7.5 score points in the governance index. That is, if there were 100 representative companies, the firms inside the NBIM portfolio would improve their governance score ranking by a range of 4.8 to 7.5 positions after the announcement. As we discussed above, this positive overall effect on governance quality can be due to firms reacting to the NBIM’s new governance preferences (the firms in the NBIM portfolio receive treatment and change their governance practices), or due to a “rebalancing” channel (NBIM drops firms with low governance scores and invests in firms with high governance scores). We explore these components in detail in the following sections to disentangle the channels driving the changes.

--- Insert Figure 1 and Table 2 about here ----

In addition, we find similar results when using continuous measures of the NBIM investment weights and carrying out pooled OLS regressions to estimate the overall effect of the Note on the governance of NBIM’s portfolio.²⁰

Taken together, this set of results shows that the overall governance characteristics of the NBIM portfolio became closer to NBIM’s governance preferences after the 2012 Note. In the next two sections, we analyze which part of this governance change can be attributed to changes in the governance characteristics of the firms in the NBIM portfolio and which part to changes in the investment strategy of NBIM.

6.2. Changes in the governance of NBIM portfolio firms

6.2.1. The effect on the governance of NBIM portfolio firms

In this section, we analyze the change in the governance of NBIM portfolio firms after the release of the 2012 Note. Following the decomposition explained in Section 5, we instrument NBIM’s post 2012 weights with the cross-sectional weights in 2011. In this way, this section

²⁰ The results are shown in Table A.VII of the Online Appendix. We include the full sample of firms in this analysis (including those firms outside the NBIM portfolio with a weight of zero). We use both NBIM fund and firm weights. The NBIM fund weight is the fraction that NBIM’s holding of a given firm represents over the total NBIM portfolio. The NBIM firm weight is the fraction of the firm’s market value held by NBIM. Results show how the portfolio of firms constructed with fund weights increases its average governance score after the announcement by an average of 9.5 percentile scores. This means that firms that increase their average governance score after the release of the Note gain more weight in NBIM’s total portfolio. The results are not statistically significant when we focus on firm weights.

measures the response of firms to the release of the Note in an intent-to-treat structure that uses the fixed holdings of NBIM before the release of the Note as proxies of the NBIM influence after its release. By fixing the weights in 2011, we prevent that changes in the investment strategy of NBIM could act as a confounding factor for the changes in the governance of NBIM portfolio firms (for example, firms with a higher governance score are more likely to be added to the NBIM portfolio after the announcement). We use both reduced form regressions and two-stage least squares (2SLS) regressions. The reduced form results are informative about the direction of the effect of the announcement on the governance changes of firms in the portfolio of NBIM; however, only the 2SLS estimates can be quantitatively interpreted as the treatment on the treated firms.

The reduced form regression is as follows:

$$\text{Governance}_{izt} = \sigma_1 \text{Post}_{(t \geq 2012)} * \text{NBIM}_{iz2011} + \text{Post}_{(t \geq 2012)} * \delta_z + \alpha_t + \mu_i + \varepsilon_{izt} \quad (3)$$

where Governance_{izt} is the governance score of firm i , in country z , in year t , $\text{Post}_{(t \geq 2012)}$ is a dummy variable that takes the value of one after the Note's release (2012–2015), and zero for previous years (2009–2011), NBIM_{iz2011} is a dummy variable equal to one if firm i belongs to the NBIM portfolio in 2011, and zero otherwise. δ_z , α_t and μ_i are country, year and firm dummies, respectively.²¹

In the reduced-form regression we employ a differences-in-differences estimator that compares the evolution of the governance score of the firms included in the portfolio of NBIM in December 2011 (a year before the release of the Note), relative to the governance of those not included.²² In the two-stage least squares (2SLS) regressions, we explicitly instrument the NBIM holdings of the years after the release of the Note (2012–2015), with the NBIM holdings of December 2011.²³ Results are shown in Table 3. The first two columns report results for reduced form regressions, and columns 3, 4 and 5 report results for 2SLS regressions. The results show a significant increase in the governance scores of firms' in the NBIM portfolio starting in 2012. On average, the 2SLS regressions indicate that firms in the NBIM portfolio enhance their governance

²¹ Results are similar if we exclude δ_z from $\text{Post}_{(t \geq 2012)} * \delta_z$, or replace it with country-year dummies ($\text{Year}_t * \delta_z$). We opt for an intermediate approach that neutralizes potential country confounding effects, while retaining more degrees of freedom.

²² Results are similar if we do not include $\text{Post}_{(t \geq 2012)} * \delta_z$, or if we include a more saturated model with country-year dummies ($\text{Year}_t * \delta_z$). We opt for an intermediate approach that neutralizes potential country confounding effects, while retaining more degrees of freedom.

²³ See Table A.VIII of the Online Appendix for first stage regressions showing that the relevance condition of our instrument is satisfied. Note that the first-stage shows that there is enough persistence in NBIM's holdings to make the instrument valid for holdings four years after the release of the Note; allowing us to analyze its long-term effects.

score by 7 score points yearly after the disclosure of the Note relative to firms that are not in the NBIM portfolio. Moreover, by interacting $NBIM_i$ with year dummies (with 2009 as the omitted category) in the 2SLS specification, we can interpret the lagged effects of the changes in governance. The magnitude of the difference in governance among the two groups increases quite sharply in 2012 but also monotonically increases with time after the Note. This momentum, post 2012, is consistent with the idea that some corporate governance changes take time to be implemented.

----- Insert Table 3 about here -----

6.2.2. *Validity of the empirical strategy and robustness tests*

In this section, we show further evidence that firms' changes in governance are driven by the Note hence validating our empirical strategy and ruling out alternative explanations. First, we compare the average characteristics for NBIM and non-NBIM firms in 2010 and 2011. Overall, we find no significant differences between the two groups, evidencing that both groups are indeed comparable, and mitigating concerns that omitted variables could be driving our findings (see Table A.III of the Online Appendix).²⁴

Second, given that NBIM partially tracks the FTSE Global Cap Index, we show that the results of the estimations in Table 3 are not driven by global differential trends in governance practices. For this purpose, in Table 4 we classify firms in 2011 into the following four groups: firms in the portfolio of NBIM that are not in the FTSE Global Cap Index (discretionary portfolio of NBIM), firms in the FTSE Global Cap Index that belong to the NBIM portfolio (nondiscretionary firms, since NBIM's investment strategy follows this benchmark), firms in the FTSE Global Cap Index not held by NBIM, and firms excluded by NBIM's Ethics Council. The omitted group contains firms that belong neither to FTSE nor to NBIM and have not been excluded by the NBIM's Ethics Council.²⁵ We observe that firms that significantly improve their governance score after the Note are the firms in which NBIM is invested. After the announcement, relative to the excluded category, we do not observe a significant increase in the governance scores of firms exclusively listed in the FTSE Global Cap Index. Only firms that are held by NBIM (independently of whether they are also in FTSE) exhibit improvements in governance. Overall, the results in Table 4 demonstrate that the general evolution of the governance score of the firms in the FTSE Global

²⁴ In Tables A.IV and A.V of the Online Appendix we also compare summary statistics by country and industry for NBIM and non-NBIM firms in 2011. We find a similar composition for both groups. Still, to account for heterogeneity at the country level, all our main specifications include Country*Post-event fixed effects.

²⁵ Sample size for each group is 1,946 observations for OnlyNBIM₁₁, 13,076 observations for NBIMFTSE₁₁, 658 observations for OnlyFTSE₁₁, 161 observations for Excluded-ethics₁₁, and 1,547 observations for the omitted group.

Cap Index (NBIM's benchmark) is not a relevant confounding factor for our results.

----- Insert Table 4 about here -----

Third, we conduct a series of additional tests that add further robustness to the results shown in Table 4. In Table A.IX of the Online Appendix we ensure that our findings are not driven by small firms and show that our results are robust to using regressions weighted by firm size. Moreover, to avoid potential biases caused by a reweighting of the NBIM portfolio in 2011 (the year before the event), we lag the instrument a further year to fix the weights of NBIM in 2010 (see Table A.X of the Online Appendix).²⁶ We also rebalance the number of firms in the control group to be make it equal to the number of firms in the treated group. We do this by using nearest-neighbor propensity score matching with replacement (see Table A.XI of the Online Appendix), and find results very similar to those of Table 4.

Fourth, it is important to highlight that our dependent variable (the governance index provided by Eikon ESG) re-ranks firms every year across the whole sample. This procedure offers additional reassurance (beyond the difference-in-differences structure) that our results are not driven by aggregate governance changes. It also reduces the potential effects caused by outliers. However, it is also interesting to replicate the results expressing the different governance elements of the index in levels (i.e., without transforming them into a ranking each year). The qualitative results are likely to be similar, given that both the differences-in-differences procedure and the re-ranking of firms net out aggregate trends. While in our main analysis the coefficients can be interpreted as changes in a ranking, the coefficients on a specification in levels can be interpreted directly as changes in the number of governance indicators. We replicate our analysis but replace the ranked governance index provided by Eikon with a governance index in levels in which we do not re-rank firms every year. We find qualitatively similar results to those in Table 4 (see Table A.XII of the Online Appendix). After the Note, on average, firms in the NBIM portfolio in 2011 improve 0.84 governance indicators per year more than firms outside the NBIM portfolio in 2011.²⁷

²⁶ Fixing the weights in 2010 reinforces the exogeneity of the instrument (strengthens the validity of the exclusion restriction) but decreases its relevance. In column 5 of Table 3 we observe a small and not statistically significant spike in 2011 because there might have been some pre-event moves by NBIM, but in Table A.X of the Online Appendix we show that results are unchanged when we fix NBIM portfolio weights in 2010 as our treatment.

²⁷ To construct a governance index in levels, we follow the methodology used by Eikon to construct indexes. However, instead of ranking the firms for each of the 34 indicators, each firm takes an absolute value between 0 and 1 for each indicator (independently of other firms' governance), where 1 is good governance and 0 is poor governance. Eikon provides a value between 0 and 1 for 29 of the 34 indicators. For the other 5 indicators on board composition and executive compensation (values are reported in €), we linearly rescale and normalize the values to set them between 0 and 1. As in Eikon, the governance index is the equally-weighted sum of the non-missing indicators, so a firm-year observation can take a value between 0 and 34. The weights are calculated excluding indicators with missing data. We drop firms with more than 10% of missing indicators. A

Fifth, throughout the paper, we use the Eikon ESG management index, given that it is the pre-constructed index in Eikon that most closely tracks the content of the Note. However, as a robustness check, we also manually classify the governance indicators of the Eikon management index according to whether these governance practices are highlighted in the Note or not. To do so, we classify the 34 indicators of the governance index into 3 groups. The first group includes the 13 indicators that are explicitly mentioned in the Note. Following the same criteria used for the governance index in levels, we create an index with these 13 indicators. We then create an index with 9 indicators that are partially mentioned or related to the Note and, finally, we create an index with the remaining 12 indicators that are not explicitly mentioned in the Note. We find that the effect is only significant for the index that includes the indicators that are clearly mentioned in the Note (see Table A.XIII of the Online Appendix.). In fact, the coefficient on $NBIM_{11}$ is monotonically increasing as the governance index gets closer to the specific content of the Note. Even when we use the specification used in Table 4, we find that the coefficient on $OnlyNBIM_{11}$ and $NBIMFTSE_{11}$ are only significant for the subgroup of provisions that are mentioned in the Note. That is, the more closely we define the index to the specific content of the Note, the stronger is the reaction of NBIM relative to non-NBIM firms. This provides strong further evidence that the change in governance that we observe after 2012 is a direct reaction to NBIM's expectation document and not due to other governance trends.²⁸

Sixth, we expand our sample years and include 2006, 2007 and 2008 in our analysis. We then replicate Table 3 and confirm that there are no pre-existing differential trends on a longer pre-period sample. The treatment and control groups follow parallel trends before the Note is released in 2012 (see Table A.XIV of the Online Appendix). Finally, we also conduct several placebo tests, defining the placebo pre- and post- periods within the period before the Note (2006–2011) and find no significant results (see Table A.XV of the Online Appendix).

All these results put together provide strong evidence that our findings are driven by the release of the Note and not by aggregate governance changes or other confounding factors. To sum up, we show that before the Note, the treatment and control groups exhibit similar governance quality and there are no pre-trends in the governance index. Additionally, we demonstrate that our results are not driven by global differential trends in governance or NBIM's benchmark, and that in

detailed explanation of the 34 indicators and the construction of Eikon's index is provided in Table A.I of the Online Appendix.

²⁸ In Table A.XIII in the Online Appendix we explain how we classify the 34 indicators into the 3 groups. Note that we prefer not to use this subindex in our main analyses since there is some degree of discretion when classifying indicators. Thus, we restrict all our analyses to the preconstructed governance index provided by Eikon.

fact the changes in governance that we capture are dictated by the indicators that are highlighted in the Note.

6.2.3. *Skin in the firm versus strong voice*

Institutional investor monitoring is likely to depend on both the fraction of the firm held by the institution and the fraction of the institution's portfolio represented by the firm. Fich et al. (2015) showed that institutional monitoring is greater when the firm represents a higher fraction in the institution's portfolio. However, expectation documents constitute a unique form of activism in which a single document is released to influence all portfolio firms equally. In this section, we show that the weight of the firm in NBIM's portfolio will not be as determinant as the weight of NBIM in the firm. The former occurs because through expectation documents the fund exerts the same influence independently of the weight that the firm represents in its portfolio. The latter occurs because the reaction of the firm to the Note may depend on how important of an investor NBIM is for the firm.

In Table 5, we analyze whether the increase in the governance score after the announcement depends on the fraction of the firm held by NBIM or the fraction that the firm represents for NBIM. In columns 1, 2 and 3 of Table 5, we use a linear regression model similar to equation (3) but using a continuous measure of ownership intensity $NBIM_Weight_{iz2011}$. This continuous measure can either be the fraction of the firm held by NBIM in 2011 (column 1), the fraction of NBIM's portfolio represented by the firm in 2011 (column 2) or both (column 3). In columns 4 and 5 we use a more flexible version of this specification in which we replace the $NBIM_Weight_{iz2011}$ with four dummies that measure to which quartile the firm belongs according to these two continuous measures of ownership intensity. The omitted category corresponds to zero weight firms.

Table 5 shows that firms in which NBIM has a higher weight show a greater increase in their governance score after the announcement (column 1). Moreover, as expected, we do not find a significant effect when analyzing fund weights (column 2). The quantile specifications in Table 5 reveal a much richer structure.²⁹ In column 4, the reaction of firms is largely driven by the intensive margin. While firms in the bottom quartile (below 0.062%) of the participation of NBIM in their shareholdings do not significantly react to the announcement, the effect grows monotonically to 7.7 rank points for those firms in which NBIM has a substantial weight within its shareholders.³⁰ It seems that NBIM's influence grows with its share of firm ownership and that it needs a minimum

²⁹ The thresholds for the firm weight quartiles are 0.062%, 0.654%, and 0.972% respectively. The thresholds for the fund weight quartiles are 0.005%, 0.013%, and 0.033% respectively.

³⁰ We conduct Wald tests and find that the differences between the coefficient of the highest quartile and the other three lower quartiles are significant for the firm weights.

threshold of ownership to exert influence on their investee firms.

----- Insert Table 5 about here -----

The analysis of funds' weights in column 5 reveals a different pattern. The reaction of firms seems to be largely driven by the extensive margin. It makes a large difference (4.2 reduced-form score points) to be part of the NBIM portfolio, even if the firm represents a small part of NBIM's investments. This shows that the Note clearly had an effect on firms inside the portfolio of NBIM relative to firms outside the portfolio. However, we do not find important differences when comparing the different quartiles, which suggests that the systemic influence of the Note across all its investee firms does not depend on the weight that firms have in NBIM's portfolio. This result matches the systemic influence that would be expected from a single expectation document applicable to NBIM's entire portfolio. Moreover, this shows that expectation documents can help to cover the gaps left by other forms of stewardship that tend to be more focused on larger investments.

Overall, the results of this section suggest that NBIM has a significant and similar influence on firms that exhibit different levels of importance within its portfolio. This is a unique characteristic of the influence exerted through expectation documents. However, the reaction of firms to this homogeneous influence may be different, and in fact we find that the larger NBIM's shareholder presence, the larger the reaction of firms. This is in line with Appel et al. (2016), who observed how increasing ownership by passive institutional investors, accelerates changes in governance dimensions such as board independence or the removal of takeover defenses. It is also worth emphasizing that the monotonicity of the quantile coefficients in the firm weights lends further support to our hypothesis that the effects that we are capturing are driven by NBIM's influence and not by other potential confounding factors.

6.2.4. Heterogeneous effects

In this section, we explore the heterogeneous reactions of the firms' responses to the Note, contingent on their characteristics before the announcement in 2011. We evaluate the following features: firm total assets, firm total market value, firm performance (EBITDA over revenues), firm liquidity, firm governance score, and the minority investors protection score of the firm's country of incorporation. The results are shown in Table 6 and show heterogeneity in the reaction of firms to the Note and how the expectation document can fill a void in investor engagement. First, we observe that the increase in the governance score after the announcement is larger for smaller firms (columns 1 and 2). This finding suggests that expectation documents can serve as an engagement tool to reach precisely those firms for which a more dedicated stewardship role is less cost-

effective. Indeed, Schwartz-Ziv and Wermers (2020) argued that investors have limited capacity to monitor smaller firms and they focus on bigger firms. Interestingly, we find that the largest firms in the portfolio (top quartile) show a statistically insignificant reaction to the expectation document.

----- Insert Table 6 about here -----

In column 3, we notice that the firms with the worst pre-existing financial performance react more to NBIM's announcement and increase their governance score. This may be because poor performing firms seek to improve their governance to compensate for poor financial results and to remain attractive to NBIM. Conversely, we observe that firms in the highest quartile of pre-existing financial performance do not significantly change their governance. This may be because NBIM might be less demanding in terms of governance scores for firms with higher financial performance. We explore this potential trade-off in Section 6.3.2 and provide further insights to these results. Moreover, these results contribute to the debate on whether active owners should target and engage with profitable or poorly performing firms (Klein and Zur 2009; Becht et al. 2009; Dimson et al. 2015).

In column 4, we observe that firms with high stock liquidity do not react to the announcement, while firms with lower liquidity are much more sensitive to the announcement. This result is interesting, as less liquid firms may be the ones for which the exit mechanism is less of a credible threat (Edmans and Manso 2011). It also extends McCahery et al. (2016)'s finding that active owners pursue high touch engagement with the most illiquid firms. According to both arguments, our results show that the expectation document has a more intense impact on those firms for which other, more resource-consuming engagements are less likely to be cost-effective.

Interestingly, the logic seems to be completely different if we move from the firms' financial characteristics to their institutional features. Gartenberg and Pierce (2017) showed that strategic decisions of firms are influenced by their level of corporate governance. We analyze this and find in column 5 that firms in the two middle quartiles of pre-existing governance scores are the ones who react the most to the announcement. The firms in the lowest quartile of the past governance scores do not react to the expectation document. It may be more costly for these firms to improve their governance score, or they may find themselves too far from NBIM's newly expected standards. Similarly, firms in the highest quartile of the past governance scores react less. This reduced effect might occur either because there is scant room to improve their governance score or because they already fulfill NBIM's expected governance standards.

Finally, in column 6 we observe that firms incorporated in countries with weak national investor protection do not improve their governance scores, while the opposite is true for firms incorporated in countries with stronger investor protection. These findings suggest that the

influence of active owners on firm policies is contingent on the quality of the national corporate governance in which firms are embedded (Doidge et al. 2007). Interestingly, there seems to be a minimum national governance threshold for active owners to have an influence through expectation documents. These results speak to whether the country or the firm drives firm corporate governance changes. To address this issue, we include country fixed effects for all our specifications, to capture changes in the firm's governance within a country.

6.3. Changes in the investment strategy of NBIM

We now turn to examine whether NBIM was active and it rebalanced its portfolio according to its new governance preferences stated in the expectation document. For several reasons, it is important to determine whether the announcement of NBIM was met with an effective change in its investment policy. First, it validates our identification strategy by showing that the announcement of the fund was met with actual changes in the investment preferences of the fund. Second, it gives some insight on how the content in expectation documents is reinforced with other governance-related actions of the fund. And third, it analyzes the second element of the quantitative decomposition of the overall governance effect of the portfolio (see equation (2)).

We provide two independent sets of tests. First, we show that the governance level of firms becomes more relevant after the announcement in determining the entry and exit of firms in NBIM's portfolio. Second, we show that a trade-off between returns and governance arises after the announcement. NBIM is willing to sacrifice financial returns to achieve better governance.

6.3.1. Walk the talk? The rebalancing of NBIM's portfolio to align with the Note

We first explore whether NBIM walks the talk and rebalances its portfolio to align with the Note. We do this by analyzing the entry and exit channel—that is, whether after the announcement NBIM invests in firms with higher governance scores, and exits firms with lower governance scores. To avoid the issue that endogenous changes in the governance of firms that are due to the announcement can act as a confounding factor for the changes in the investment strategy of the fund, we keep the governance index fixed at a point in time before the announcement (2011). Intuitively, we are fixing the firms' governance levels before the announcement and keeping them constant throughout the analysis, as in the second term of the decomposition in equation (2).

We report odds ratios of a probit model in Table 7.³¹ Each column compares the predetermined governance score of entrants to the score of a different control group (Non NBIM

³¹ Table A.XVI in the Online Appendix shows the estimates from logistic regressions and average marginal effects that correspond to the odds ratios shown in Table 7.

firms and NBIM firms). We find that the coefficient of $Post * Governance_{2011}$ is positive in both specifications. That is, the fund puts more weight on corporate governance when selecting entrants after the announcement (columns 1 and 2). The effect is large and statistically significant. Being 10% higher in the governance score ranking increases the chances of entering the portfolio by 6% – 7%. The coefficient on $Governance_{2011}$ is significantly below one in all columns. The coefficient is lower in column 2 than in column 1 reflecting that, in general, the firms inside NBIM have higher scores than the firms outside NBIM.³²

In columns 3 and 4 of Table 7 we exclude those entries that coincide with a change in the composition of the FTSE Global Cap index. The entries induced by the recomposition of the FTSE index are mechanical changes driven by the fund's benchmark. By excluding these exogenous changes, we keep only those entries that are more discretionary to the fund. Indeed, when we focus only on the discretionary entries selected by NBIM (non-FTSE), we find stronger results. Being 10% higher in the score ranking increases the chances of entering the portfolio by 8% – 10%.³³ In columns 5 and 6 we show the same analysis for those changes in the NBIM portfolio that occur simultaneously with FTSE reconstitutions. Although NBIM retains some discretion not to follow these reconstitutions, in general, reconstitutions of the index entail rebalancings of the NBIM portfolio that are less discretionary and more exogenous to the fund's preferences. Consistently, results for this subsample do not show a significant effect on the $Post * Governance_{2011}$ coefficient. This indicates that the results in columns 1 and 2 are driven by the non-FTSE transitions analyzed in columns 3 and 4.

Overall, the results in Table 7 show that, on average throughout the whole sample (2009–2015), firms entering the NBIM portfolio tend to have lower governance scores than those inside or outside the portfolio. However, after the announcement of the Note, NBIM starts to put more weight on the inherent governance score of firms (i.e., fixed at 2011 levels) when deciding to include a firm inside the portfolio. This provides support for the thesis that the fund did indeed change its investment strategy after the announcement.³⁴

³² This can also be seen in Table A.XVII in the Online Appendix, where we compare the average governance score, before and after the release of the Note, for firms inside and outside NBIM, and also for firms that enter and exit the NBIM portfolio. More importantly, when comparing the exits (entries) of NBIM before and after the release of the Note, we find that NBIM exits (enters) firms with lower (higher) average governance scores after the announcement.

³³ Table A.XVIII in the Online Appendix reports the yearly number of companies' entries and exits carried out by NBIM during our sample period. We further classify whether these entries and exits are discretionary or driven by the composition of the FTSE Global Cap Index.

³⁴ This improvement occurs despite the large increase in the number of holdings of NBIM from 2011 to 2012 (see Table A.II in the Online Appendix), which would make cherry-picking stocks with high governance scores after the announcement more difficult.

We develop a similar analysis to test for exit effects. The results of odds ratios are shown in Table 8.³⁵ Consistent with the entry analysis, after the announcement, a better governance score reduces the probability of exiting NBIM. The effect is quantitatively important; ten rank positions in the governance score reduce the probability of exit by about 7%. Again, once we focus on the more discretionary exits of the fund (columns 3 and 4), this probability increases to 9%. Conversely, in columns 5 and 6 we focus on exits driven by NBIM's benchmark and show odds ratios that are statistically indistinguishable from one and, in fact, exhibiting point estimates in the opposite direction. The effect of the governance level before the announcement is inconclusive.

Jointly, we show that after the Note NBIM puts more weight on the governance of firms when deciding which firms to include and exclude in its discretionary investments. This effect is driven by the more discretionary decisions of the fund and is not present in the more mechanical investments of NBIM driven by reconstitutions of its benchmark, the FTSE Global Cap Index.

----- Insert Tables 7 and 8 about here -----

6.3.2. *Trade-off between financial returns and governance*

Another way to examine NBIM's change in preferences is to explore whether the choices of NBIM's portfolio reflect a different trade-off between financial returns and governance after the announcement. That is, to test whether, after the announcement, NBIM is willing to forgo some financial returns in exchange of governance characteristics that are more aligned with the preferences stated in the Note. To explore this idea, we construct portfolios that track the financial performance of NBIM's investments before and after the announcement. We decompose the investment portfolio of NBIM into non-discretionary (firms that also belong to the FTSE Global Cap Index) and discretionary (firms that do not belong to the FTSE Global Cap Index). Focusing on discretionary investments, we can compare the returns between high vs. low governance portfolios to understand whether NBIM is willing to trade returns in exchange for better corporate governance. The nondiscretionary portfolio is composed of firms where NBIM is mechanically forced to invest by its benchmark strategy and acts as a control group that captures the general evolution of the governance–returns trade-off in the economy.

We compute rolling monthly abnormal returns for each firm in the portfolio of NBIM following Carhart's (1997) four-factor model. For each year t , we decompose the discretionary and non-discretionary portfolio of NBIM into five equal-sized portfolios by ranking firms according to

³⁵ Table A.XIX in the Online Appendix shows the estimates from logistic regressions and average marginal effects that correspond to the odds ratios shown in Table 8. Table A.XX in the Online Appendix shows that these results are robust to excluding the year 2011.

their governance index. This implies we are decomposing the NBIM portfolio into a total of $5 \times 2 = 10$ portfolios. For all the firms in each of the 10 portfolios, we average the monthly alphas and obtain the equally-weighted monthly alpha of each portfolio. Next, for each portfolio we average the equally-weighted monthly alphas of periods 2009–2011 and report pre-event alphas and average the equally-weighted monthly alphas in the period 2012–2015 and report post-event alphas.³⁶

The alphas of the low governance portfolio are reported in row 1 of Panel A in Table 9. The alphas of the high governance portfolios are reported in row 5. We report the difference between the highest and lowest governance portfolio alphas in the last row. Before the NBIN announcement (columns 1 and 3), we do not appreciate any significant difference between the alphas in the low governance and high governance portfolio. In column 2 we observe this is also the case post announcement for non-discretionary investments (non-significant alpha differential of -0.036%). However, we do observe a trade-off between governance and returns post announcement for discretionary investments. There is a differential return between the high and the low governance portfolio of -0.793%. In fact, the alpha of the low-governance portfolio is positive and statistically significant (0.574%), indicating that NBIM is only willing to include low-governance firms in its discretionary portfolio if their returns are expected to be high. Moreover, the alpha of the high-governance portfolio post announcement is negative (-0.219%). This indicates that NBIM is willing to incorporate “better” governance firms into its portfolio, even if their expected abnormal returns are low. Results are qualitatively similar for the value-weighted portfolios in Panel B of Table 9.

----- Insert Table 9 about here -----

In conclusion, in Section 6.3 we show that NBIM rebalanced its portfolio according to its new governance expectations. After the announcement, entrants in NBIM have better inherent governance and firms exiting NBIM have worse inherent governance. These effects are driven by the discretionary investment changes made by NBIM. Moreover, we provide insight into NBIM’s change in preferences across returns and governance after the announcement. Jointly, these results validate the identification assumption that NBIM did indeed change its preferences following the 2012 event. In the next section, we analyze if the change in firms’ governance is correlated to the change in NBIM’s investment weights.

6.4. Correlation of NBIM investment changes and governance changes

In this section, we explore the third term in equation (2) and analyze whether the changes in firms’ governance are linked to NBIM’s investment changes. Although establishing causality in this

³⁶ We also compute market value weighted results. Each month we calculate the average alpha of each portfolio and then we weight firms’ alphas with the market value weight that each firm has in the portfolio of NBIM.

last part of the analysis is challenging, we explore this last term to complete the decomposition of the effects of the Note.

We estimate pooled OLS regressions to analyze whether there is a correlation between the changes in the governance of firms and the changes in the investments made by NBIM, and whether this correlation changes before and after the announcement. The results shown in Table A.XXI of the Online Appendix indicate that the correlation between the changes in governance and changes in investment weights becomes high and statistically significant only after the announcement, whereas the two seem uncorrelated before the announcement. We also perform Granger causality tests to better understand the relation between innovations in governance and innovations in investment changes. We find that lagged changes in governance predict changes in fund weights after the announcement. The reverse effect is not statistically significant. These results provide evidence that NBIM reacts and increases its investment weights in firms that improve their governance index after the release of the Note. NBIM reweights its portfolio holdings not only according to the levels of governance of the firms but also according to the changes in those levels of governance. On the other hand, we do not find evidence that lagged changes in fund weights predict changes in firm governance. This implies that firms do not react differently to the Note if their weight in NBIM's portfolio changes, which is consistent with a uniform activism provided by a single expectation document. These results are shown in Table A.XXII of the Online Appendix.

----- Insert Table 10 about here -----

7. Discussion and Conclusion

Understanding the scope and channels of influence of active owners—such as pension funds, mutual funds, or SWFs—on firm policies continues to be an important and relevant topic in corporate governance. Institutional investors hold a large fraction of firm ownership globally, but they have been criticized for not being proactive enough regarding firm policies. Given their universal nature and their long-term investment horizons, it may not be cost-effective for universal investors to engage with many of their smaller investee firms. At the same time, active universal owners have the opportunity via expectation documents and portfolio-wide preferences to increase value by setting unique, systemic preferences for their diversified portfolios. In this paper, we use an early example of such expectation documents to estimate its effectiveness. More generally, estimating how active institutional investors' engagement results in effective or ineffective governance remains a key empirical question. Against this backdrop, SWFs can be useful, as they often have investment policies with preferences that depart from the solely standard maximization of short-term profits. We show that unanticipated changes in these preferences can be useful to

extract information about how firms cater to the preferences of their investors.

We use as a quasi-natural experiment NBIM's expectation document in November 2012, which outlined what Norway's sovereign fund expected from its global portfolio companies in terms of corporate governance practices. We introduce an analytical decomposition that serves as a roadmap to explore expectation documents or any portfolio-wide governance tool. This decomposition analyzes the different components of the change in the corporate governance of NBIMs portfolio within a difference-in-differences specification. This decomposition is focused on three elements: the change in governance of the firms that are part of the fund (in an intent-to-treat structure), the change of the fund into the one-off reweighting of its portfolio, and the change in the dynamics of the fund investment that follows the initial rebalancing.

We uncover the following results: i) the overall governance level (index score) of the fund increased following the announcement; ii) firms reacted to the fund's new policy by improving their governance score—these results are heterogeneous across firm characteristics and monotonically increasing in NBIM's stake holdings in the firm; iii) the investment stance of the fund changed, willing to sacrifice financial returns to achieve higher governance, and focusing more on firms with high governance scores and less on firms with low-governance scores; and iv) following the announcement, the fund's marginal changes in investment weights became more reactive to the recent changes in the firms' governance scores. We decompose the overall improvement of the fund's governance quality and uncover that most of the effect comes from the reaction of investee firms.

Our findings shed light on the literature on shareholder activism and contribute to the debate on the monitoring role of universal active owners. In our application, we can estimate this influence in a causal way and show large and significant results, both from an economic and statistical perspective. In particular, our study illustrates how through a cost-effective tool, expectation documents, today's large active owners can exert systemic influence and have an impact on their investee firms' policies.

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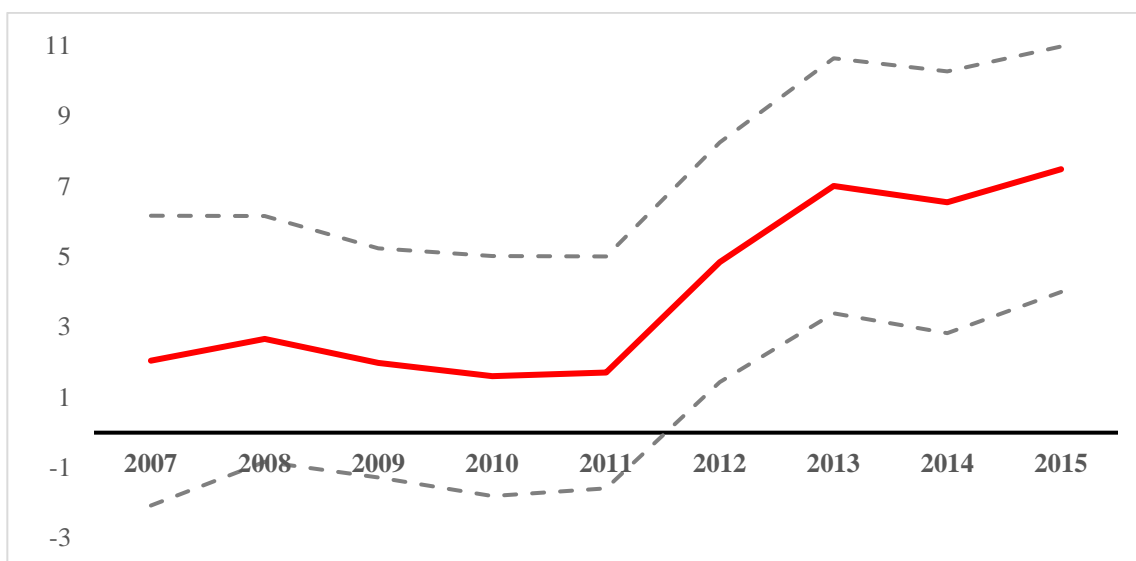
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FIGURES & TABLES

Figure 1. Governance Index differences among NBIM and non-NBIM firms



Notes. This graph plots the estimates from year-by-year cross-sectional regressions and 90% confidence intervals. The dependent variable is the Governance Index. Only one regressor is used, a dummy variable that takes the value of one if the firm belongs to the NBIM portfolio in year t and zero otherwise. The estimates plotted are yearly differences in governance between treated firms (firms that belong to the NBIM portfolio) and control firms (firms that do not belong to the NBIM portfolio).

Table 1. Summary Statistics

	Mean	Standard Deviation	25%	Median	75%	Obs.
Governance Index	52.849	28.68	28.424	53.880	78.125	17388
NBIM Weight (fund)	0.037	0.10	0.003	0.010	0.028	17388
NBIM Weight (firm)	0.842	1.23	0.008	0.513	0.907	17388
Δ governance Index _(t+1,t)	1.117	18.24	-8.351	0.379	10.655	14904
$ \Delta$ governance Index _(t+1,t)	13.195	12.64	3.632	9.386	18.881	14904

Notes. This table reports mean, standard deviation, 25th-percentile, median, 75th-percentile, and number of observations for each variable by firm. The Governance Index is an index ranked from 0 to 100 that measures a company's commitment and effectiveness toward following best practice corporate governance principles. NBIM Weight (fund) is the fraction of the NBIM's portfolio represented by the firm's market value. NBIM Weight (firm) is the fraction of the firm's market value held by NBIM. Δ governance Index_(t+1,t) measures the difference between the firm's score in t+1 and t. $|\Delta$ governance Index_(t+1,t) measures the difference in absolute value between the firm's score in t+1 and t.

Table 2. Governance differences among NBIM and non-NBIM firms

	2007	2008	2009	2010	2011	2012	2013	2014	2015
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
NBIM	2.048 (2.102)	2.667 (1.782)	1.983 (1.663)	1.606 (1.740)	1.714 (1.681)	4.845*** (1.739)	7.016*** (1.851)	6.548*** (1.899)	7.489*** (1.780)
Observations	1,422	2,123	2,484	2,484	2,484	2,484	2,484	2,484	2,484
R-squared	0.001	0.001	0.001	0.000	0.000	0.003	0.006	0.005	0.007

Notes. This table presents estimates of yearly cross-sectional OLS regressions of governance index differences among NBIM and non-NBIM firms. The dependent variable is the Governance Index. For each year t , one explanatory variable is used (NBIM), a dummy variable that takes the value of one if the firm belongs to the NBIM portfolio in that year and zero otherwise. Standard errors are shown in parentheses.

***, ** and * indicate significance at the 1%, 5% and 10% level, respectively.

Table 3. The effect of NBIM on firm governance: instrumental variables

	Reduced form		2SLS		
	(1)	(2)	(3)	(4)	(5)
NBIM ₁₁ *Post	4.798*** (1.255)	4.666*** (1.142)	7.437*** (1.677)	7.283*** (1.769)	
NBIM ₁₁ *year2010					1.372 (1.342)
NBIM ₁₁ *year2011					2.149 (1.379)
NBIM ₁₁ *year2012					6.322*** (1.927)
NBIM ₁₁ *year2013					7.379*** (2.460)
NBIM ₁₁ *year2014					9.985*** (3.117)
NBIM ₁₁ *year2015					14.269*** (3.474)
Year dummies	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	No	Yes	No	Yes	Yes
Post*Country dummies	Yes	Yes	Yes	Yes	Yes
Observations	17,388	17,388	17,388	17,388	17,388
R-squared	0.021	0.731			

Notes. This table reports instrumental variables estimates of the effect of the announcement on the governance of NBIM portfolio firms. The dependent variable is the Governance score measured at the firm level. Column 1 reports estimates of a pooled OLS regression. Columns 2 and 3 include firm fixed effects. NBIM (NBIM₁₁) is a dummy variable equal to one for firms in the portfolio of NBIM (in 2011) and zero otherwise. Post is a dummy variable equal to one for the period 2012–2015 and equal to zero for the period 2009–2011. In columns 3 and 4, Post*NBIM is instrumented with Post*NBIM₁₁. In column 5, year* is a dummy variable for the years 2010, 2011, 2012, 2013, 2014 and 2015, the reference year is 2009. NBIM*year2012, NBIM*year2013, NBIM*year2014 and NBIM*year2015 are instrumented with NBIM₁₁*year2012, NBIM₁₁*year2013, NBIM₁₁*year2014 and NBIM₁₁*year2015. Year dummies and dummies on the interaction of the dummy Post and country dummies are included. Standard errors clustered at the firm level are shown in parentheses.

***, ** and * indicate significance at the 1%, 5% and 10% level, respectively.

Table 4. The effect of NBIM on firm governance – discretionary investments

	(1)	(2)	(3)	(4)
NBIM ₁₁ *Post	4.666*** (1.142)		4.011*** (1.290)	
FTSE ₁₁ *Post		2.836*** (0.980)	1.215 (1.101)	
OnlyNBIM ₁₁ *Post				4.008** (1.736)
NBIMFTSE ₁₁ *Post				4.993*** (1.372)
OnlyFTSE ₁₁ *Post				1.562 (2.545)
Excluded-ethics ₁₁ *Post				-2.386 (3.918)
Firm & Year fixed effects	Yes	Yes	Yes	Yes
Post*Country dummies	Yes	Yes	Yes	Yes
Observations	17,388	17,388	17,388	17,388
R-squared	0.731	0.731	0.731	0.731

Notes. This table reports estimates of the effect of the announcement on the governance of NBIM portfolio firms. The dependent variable is the Governance Index. NBIM₁₁ is a dummy variable equal to one for firms in the portfolio of NBIM in 2011 and zero otherwise. FTSE₁₁ is a dummy variable equal to one for firms in the FTSE in 2011 and zero otherwise. OnlyNBIM₁₁ is a dummy variable equal to one for firms in the portfolio of NBIM in 2011 that do not belong to FTSE in 2011. OnlyFTSE₁₁ is a dummy variable equal to one for firms in the FTSE in 2011 that do not belong to NBIM in 2011 or have not been excluded by the ethics committee of NBIM in 2011. NBIMFTSE₁₁ is a dummy variable equal to one for firms both in the portfolio of NBIM in 2011 and in the FTSE in 2011. Excluded-ethics₁₁ is a dummy variable equal to one for firms that have been excluded from NBIM holdings by the ethics committee of NBIM by 2011. Post is a dummy variable equal to one for the period 2012–2015 and equal to zero for the period 2009–2011. Firm fixed effects, year dummies and dummies on the interaction of the dummy Post and country dummies are included. Standard errors clustered at the firm level are shown in parentheses.

***, ** and * indicate significance at the 1%, 5% and 10% level, respectively.

Table 5. The effect of NBIM on firm governance – Extensive vs. Intensive margin

	Firm (1)	Fund (2)	Firm+Fund (3)	Firm (4)	Fund (5)
Post*NBIM_Weight ₁₁ (firm)	1.11*** (0.41)		1.15*** (0.42)		
Post* NBIM_Weight ₁₁ (fund)		-0.66 (2.84)	-2.03 (2.78)		
Post* I(% quartile1) ₁₁				2.01 (1.75)	4.22*** (1.33)
Post* I(% quartile2) ₁₁				3.40** (1.45)	3.78*** (1.30)
Post* I(% quartile3) ₁₁				4.92*** (1.51)	4.79*** (1.31)
Post* I(% quartile4) ₁₁				7.65*** (1.57)	5.81*** (1.30)
Firm & Year fixed effects	Yes	Yes	Yes	Yes	Yes
Post*Country dummies	Yes	Yes	Yes	Yes	Yes
Observations	17,318	17,388	17,318	17,318	17,388
R-squared	0.731	0.730	0.731	0.732	0.731

Notes. This table reports OLS estimates from panel regressions with firm fixed effects. The dependent variable is the Governance Index. NBIM_Weight₁₁(firm) is the fraction of the firm's market value held by NBIM in 2011. NBIM_Weight₁₁(fund) is the fraction of the NBIM's portfolio represented by the firm's market value in 2011. Post is a dummy variable equal to one for the period 2012–2015 and equal to zero for the period 2009–2011. In column 4, I(% quartileⁱ)₁₁ is a dummy variable equal to one for firms in the *i*th quartile of NBIM_Weight₁₁(firm). In column 5, I(% quartileⁱ)₁₁ is a dummy variable equal to one for firms in the *i*th quartile of NBIM_Weight₁₁(fund). In columns 4 and 5, the reference group is formed by all the firms that are not in the portfolio of NBIM in 2011. Firm fixed effects, year dummies and dummies on the interaction of the dummy Post and country dummies are included. Standard errors clustered at the firm level are shown in parentheses.

***, ** and * indicate significance at the 1%, 5% and 10% level, respectively.

Table 6. The effect of NBIM on firm governance – Heterogeneous effects

	Assets (1)	MV (2)	Performance (3)	Liquidity (4)	Governance (5)	IP (6)
Post*NBIM ₁₁ *Q(% quartile1) ₁₁	7.37*** (2.72)	6.51** (2.56)	8.12*** (2.69)	6.34*** (2.08)	2.78 (1.99)	2.56 (1.91)
Post*NBIM ₁₁ *Q(% quartile2) ₁₁	6.74*** (2.15)	7.45*** (2.22)	6.67*** (2.27)	7.05*** (2.43)	6.79*** (2.16)	1.70 (1.77)
Post*NBIM ₁₁ *Q(% quartile3) ₁₁	4.47** (2.00)	4.07* (2.13)	4.19* (2.44)	4.22* (2.33)	6.22** (2.46)	5.23** (2.57)
Post*NBIM ₁₁ *Q(% quartile4) ₁₁	0.58 (2.12)	0.23 (2.01)	3.12 (2.03)	0.09 (2.04)	4.13** (2.00)	5.37* (2.77)
Firm & Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Post*Country dummies	Yes	Yes	Yes	No	Yes	No
Post*Q(% quartile`i`) ₁₁	Yes	Yes	Yes	Yes	Yes	Yes
Observations	17,367	17,318	15,890	17,073	17,388	17,381
R-squared	0.73	0.73	0.73	0.73	0.73	0.73

Notes. This table reports OLS estimates from panel regressions with firm fixed effects. The dependent variable is the Governance Index. Post is a dummy variable equal to one for the period 2012–2015 and equal to zero for the period 2009–2011. NBIM₁₁ is a dummy variable equal to one for firms in the portfolio of NBIM in 2011 and zero otherwise. For each feature analyzed, we create quartiles, so that Q(% quartile`i`)₁₁ is a dummy variable equal to one for firms in the i-th quartile of each feature in 2011. In column 1 we classify NBIM portfolio firms according to total assets. In column 2 we classify NBIM portfolio firms according to total market value. In column 3 we classify NBIM portfolio firms according to performance (EBITDA over revenues). In column 4 we classify NBIM portfolio firms according to their governance index. In column 5 we classify NBIM portfolio firms according to their country's score in protection of minority investors (World Bank). In column 6 we classify NBIM portfolio firms according to their liquidity (daily volume traded / daily absolute return). The coefficients reported are those of the interaction of Post*NBIM*Q(% quartile`i`)₁₁. Firm fixed effects, year dummies and dummies on the interaction of the dummy Post and country dummies are included. Standard errors clustered at the firm level are shown in parentheses.

***, ** and * indicate significance at the 1%, 5% and 10% level, respectively.

Table 7. Governance differences for firms that enter the portfolio of NBIM

ENTRY	FULL SAMPLE		Non-FTSE		FTSE	
	(1) Vs-NonNBIM	(2) Vs-NBIM	(3) Vs-NonNBIM	(4) Vs-NBIM	(5) Vs-NonNBIM	(6) Vs-NBIM
Post * Governance ₂₀₁₁	1.007** (0.003)	1.006** (0.003)	1.010** (0.005)	1.008** (0.004)	1.003 (0.005)	1.001 (0.005)
Governance ₂₀₁₁	0.995** (0.002)	0.988*** (0.002)	0.994* (0.003)	0.987*** (0.003)	0.996 (0.003)	0.989*** (0.002)
Time & Post*Country dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,687	14,307	2,366	13,471	2,110	13,185
Pseudo R-squared	0.0734	0.108	0.154	0.182	0.0309	0.0479

Notes. This table reports odds ratios from logistic regressions. The dependent variable is NBIM_entry, a dummy equal to one for firms that enter the NBIM portfolio in year t and do not belong to the NBIM portfolio in year $t-1$. This dummy is equal to zero according to the control group selected. In column 1, 3 and 5, NBIM_entry is equal to zero for firms that do not belong to the NBIM portfolio the previous and subsequent 2 years. In column 2, 4 and 6, NBIM_entry is equal to zero for firms that belong to the NBIM portfolio the previous and subsequent 2 years. The variable Governance₂₀₁₁ is the Governance Index fixed in the year 2011. Post is a dummy variable equal to one for the period 2012–2015 and equal to zero for the period 2009–2011. Year dummies, and interactions of the dummy Post and country dummies are included but not reported. In columns 1 and 2 we use the full sample of firms. In columns 3 and 4 we exclude the entries that are driven by entries in the FTSE Global Cap. In columns 5 and 6 we only include the entries that are driven by entries in the FTSE Global Cap. Standard errors clustered at the firm level are shown in parentheses.

***, ** and * indicate statistical significance relative to a coefficient of 1 at the 1%, 5% and 10% level, respectively.

Table 8. Governance differences for firms that exit the portfolio of NBIM

EXIT	FULL SAMPLE		Non-FTSE		FTSE	
	(1) Vs-NonNBIM	(2) Vs-NBIM	(3) Vs-NonNBIM	(4) Vs-NBIM	(5) Vs-NonNBIM	(6) Vs-NBIM
Post * Governance ₂₀₁₁	0.993 (0.004)	0.993* (0.004)	0.991** (0.005)	0.991** (0.004)	1.014 (0.012)	1.012 (0.010)
Governance ₂₀₁₁	1.002 (0.003)	0.996* (0.002)	1.003 (0.003)	0.996 (0.002)	1.000 (0.006)	0.992 (0.006)
Time & Post*Country dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,347	13,491	2,308	13,449	1,697	10,793
Pseudo R-squared	0.149	0.131	0.164	0.142	0.0941	0.0799

Notes. This table reports odds ratios from logistic regressions. The dependent variable is NBIM_exit, a dummy equal to one for firms that belong to the NBIM portfolio in year t-1 and exit the NBIM portfolio in year t. This dummy is equal to zero according to the control group selected. The control group varies in each column. In column 1, 3 and 5, NBIM_exit is equal to zero for firms that do not belong to the NBIM portfolio the previous and subsequent 2 years. In columns 2, 4 and 6, NBIM_exit is equal to zero for firms that belong to the NBIM portfolio the previous and subsequent 2 years. The variable Governance₂₀₁₁ is the Governance Index fixed in the year 2011. Post is a dummy variable equal to one for the period 2012–2015 and equal to zero for the period 2009–2011. Year dummies, and interactions of the dummy Post and country dummies are included but not reported. In columns 1 and 2 we use the full sample of firms. In columns 3 and 4 we exclude the exits that are driven by exits in the FTSE Global Cap. In columns 5 and 6 we only include the exits that are driven by exits in the FTSE Global Cap. Standard errors clustered at the firm level are shown in parentheses.

***, ** and * indicate statistical significance relative to a coefficient of 1 at the 1%, 5% and 10% level, respectively.

Table 9. Governance-returns trade-off in NBIM's portfolio

Panel A: Equally-weighted

Governance portfolios	Non-Discretionary		Discretionary	
	Pre-Event (1)	Post-Event (2)	Pre-Event (3)	Post-Event (4)
1 (Low)	0.299 (0.08)	-0.024 (0.05)	0.198 (0.25)	0.574 (0.20)
2	0.125 (0.09)	0.022 (0.05)	0.221 (0.23)	0.387 (0.23)
3	0.376 (0.08)	0.061 (0.05)	0.460 (0.21)	0.173 (0.18)
4	0.41 (0.07)	0.00 (0.05)	0.26 (0.23)	-0.24 (0.19)
5 (High)	0.230 (0.07)	-0.060 (0.05)	0.166 (0.24)	-0.219 (0.15)
Difference High-Low	-0.069	-0.036	-0.031	-0.793***

Panel B: Value-weighted

Governance portfolios	Non-Discretionary		Discretionary	
	Pre-Event (1)	Post-Event (2)	Pre-Event (3)	Post-Event (4)
1 (Low)	0.421 (0.07)	0.117 (0.04)	0.328 (0.23)	0.590 (0.16)
2	0.289 (0.07)	0.029 (0.04)	0.171 (0.18)	-0.507 (0.14)
3	0.285 (0.06)	0.001 (0.04)	0.678 (0.15)	0.113 (0.11)
4	0.342 (0.06)	0.095 (0.04)	0.672 (0.17)	-0.518 (0.11)
5 (High)	0.190 (0.06)	-0.133 (0.04)	0.651 (0.16)	-0.594 (0.09)
Difference High-Low	-0.231	-0.250	0.323	-1.184***

Notes. This table reports mean alphas (calculated through Carhart's (1997) four factor model) and standard errors in parentheses. The portfolio of NBIM is decomposed into non-discretionary (firms that belong to the FTSE Global Cap Index) and discretionary (firms that do not belong to the FTSE Global Cap Index). Pre-event is for the period 2009–2011. Post-Event is for the period 2012–2015. Panel A shows equally-weighted results. Panel B shows market value-weighted results. The last row reports differences between alphas in the high and low governance portfolios.

***, ** and * indicate statistical significance of these differences at the 1%, 5% and 10% level, respectively.