

# Get Real! Individuals Prefer More Sustainable Investments

**Rob Bauer**

School of Business and Economics, Maastricht University and International Centre for Pension Management

**Tobias Ruof**

School of Business and Economics, Maastricht University

**Paul Smeets**

School of Business and Economics, Maastricht University

The United Nations' Sustainable Development Goals (SDGs) have created societal and political pressure for pension funds to address sustainable investing. We run two field surveys ( $n = 1,669$ ,  $n = 3,186$ ) with a pension fund that grants its members a real vote on its sustainable-investment policy. Two-thirds of participants are willing to expand the fund's engagement with companies based on selected SDGs, even when they expect engagement to hurt financial performance. Support remains strong after the fund implements the choice. A key reason is participants' strong social preferences. (*JEL* G02, G11, G20, G23, G28)

Received February 24, 2020; editorial decision February 1, 2021 by Editor Stijn Van Nieuwerburgh.

---

We are grateful to Pensioenfonds Detailhandel for enabling us to collect the data used in this paper, and we particularly thank Henk Groot, Henk van der Kolk, Andre Snellen, and Rene Upperman. We thank the editor Stijn van Nieuwerburgh and two anonymous referees for valuable suggestions and feedback; participants at the "Yale-RFS Conference on Real and Private-Value Assets," the conference on "Promoting Sustainable Finance" of the European Commission, the ICPM conference in Santiago de Chile in 2018, and the GRASFI 2019 conference in Oxford; and seminar participants at Maastricht University, the Max Planck Institute in Bonn, Netspar, Radboud University, and the University of Zurich. We are also grateful for valuable comments from Jaap Bos, Inka Eberhardt, Piet Eichholtz, Gianfranco Gianfrate, Katrin Gödker, Samuel Hartzmark (discussant), Peiran Jiao, Marten Laudi, Matthijs Korevaar, Joyce Mertens, Luuk Perik, Florian Peter, Thomas Post, Drazen Prelec, Paulo Rodrigues, Peter Schotman, Lidwien Sol, Martin Strobel, Colin Tissen, Matthias Wibrál, and Leonard Wolk. This paper was financially supported by Inquire, Netspar (NL), the EU 2020 LEVEL EEI grant, and Call 2 for Proposals 2020 – EIT KIC Climate. Paul Smeets was supported by a VENI grant from the Netherlands Organisation for Scientific Research (NWO) [grant number 016.Veni.175.019]. Send correspondence to Paul Smeets, pm.smeets@maastrichtuniversity.nl.

*The Review of Financial Studies* 34 (2021) 3976–4043

© The Authors 2021. Published by Oxford University Press.

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited.

For commercial re-use, please contact [journals.permissions@oup.com](mailto:journals.permissions@oup.com)

doi:10.1093/rfs/hhab037

Advance Access publication April 19, 2021

People often claim to behave in a sustainable manner but do not back their talk by action.<sup>1</sup> For example, they say they care for an animal's well-being but buy the cheapest meat in the supermarket (Klink and Langen 2015). The hypothetical gap is the difference between what people say they do and what they actually do (List and Gallet 2001; Carson et al. 2006; Harrison 2006a; Beshears et al. 2008). Therefore, exploring real behavior and not mere hypothetical choices is crucial. We study sustainable investment behavior in a field survey in which a pension fund grants its members a real vote on its sustainable-investment policy.

Sustainable investment has grown in importance over the last several years (McKinsey 2017).<sup>2</sup> Consequently, sustainable investment behavior has attracted increased attention from academics (e.g., Krüger 2015; Riedl and Smeets 2017; Hartzmark and Sussman 2019; Ceccarelli, Ramelli, and Wagner 2019; Anderson and Robinson 2020; Krüger, Sautner, and Starks 2020; Barber, Morse, and Yasuda 2021). Yet, understanding why people invest sustainably is important not only to academics but also to institutional investors, who often invest on behalf of individuals. Pension funds, for example, hold about US\$51 trillion in assets under management, of which slightly less than 50% are saved in defined-benefit schemes, and are therefore managed on behalf of individual pension savers (Willis Towers Watson 2020). If managed pension funds address sustainable investments on a broader scale, they could have a significant impact. But how should pension funds interpret their fiduciary duty regarding sustainable investments? How should they decide on behalf of their clients? To answer these questions, the European Commission installed a High-Level Expert Group on sustainable finance in 2017. On the basis of the experts' proposal, the Commission intends to introduce a formal requirement that "investment firms . . . [should ask retail investors] about their preferences for sustainable investments."<sup>3</sup> In April 2020, the European Commission issued a consultation document on the Renewed Sustainable Finance Strategy in which the Commission asked, "Should the EU further improve the integration of members' and beneficiaries' ESG preferences in the investment strategies and the management and governance of IORPs?"<sup>4</sup> This question clearly signals the

---

<sup>1</sup> See, for example, Cummings and Taylor (1998, 1999), List and Shogren (1998a,b, 2002), List (2001), Ajzen, Brown, and Carvajal (2004), Harrison, Harstad, and Rutström (2004), Harrison (2006b), Vermeir and Verbeke (2006), Beshears et al. (2008), Harrison and Rutström (2008), Gracia, Loureiro, and Nayga, Jr (2011), FeldmanHall et al. (2012), De-Magistris, Gracia, and Nayga, Jr (2013), and Terlau and Hirsch (2015); for an overview, see Harrison (2006b) and Loomis (2014). For a meta-study, see List and Gallet (2001) and Murphy et al. (2005).

<sup>2</sup> McKinsey (2017) reports that investments in accordance with environmental, social, and governance principles are growing by an annual rate of 17%. In the United States, sustainable investments account for over one-third, and in Europe, for half of all assets (JP Morgan 2018).

<sup>3</sup> See [https://ec.europa.eu/info/sites/info/files/180524-sustainable-finance-factsheet\\_en.pdf](https://ec.europa.eu/info/sites/info/files/180524-sustainable-finance-factsheet_en.pdf).

<sup>4</sup> IORP refers to the Institution for Occupational Retirement Provision.

possibility that pension funds in the near future may have to interact with their beneficiaries on ESG preferences as well.<sup>5</sup>

We provide a method to elicit these preferences truthfully and in a way that would require relatively little effort of a (pension) fund. We conducted a field survey (study 1;  $n = 1,669$ ) in cooperation with a Dutch pension fund that had €20.8 billion of assets under management in 2018.<sup>6</sup> This collective pension scheme invests on behalf of its members. Pension benefits and monthly contributions of participants depend on the financial performance of the pension fund. If the financial performance of the fund is poor, pension benefits can be cut and monthly contributions can go up, a situation not new to our fund's participants. They already had to pay higher pension contributions in recent years because of the financial performance not meeting its targets. In addition, if financial performance is too low, no indexation (no correction for inflation) will occur, which has been the case in 8 of the last 10 years at the pension fund of our study and most other pension funds in the Netherlands.

As part of study 1, the board of the pension fund gave its members a real vote on its future sustainable-investment policy. Before our study, the pension fund had focused little on sustainable investments (Simons 2019). Participants faced the choice of whether they wanted to increase the investment focus on the UNs' Sustainable Development Goals (SDGs) through engaging with companies that underperformed on the selected SDGs. Engagement by institutional investors on sustainability criteria has increased in importance (e.g., Barko, Cremers, and Renneboog 2018; Dimson, Karakas, and Li 2015, 2020; Krüger, Sautner, and Starks 2020; Bolton et al. 2020).

Because of the above-described features of this collective pension scheme, the members' benefits are at stake, making the choice highly relevant to their future financial situation. We informed participants that implementing SDGs means financial returns are not the only factor to take into consideration. Making investments with these goals in mind means considering the impact of investing on the environment and wider society is important. We are not aware of any pension fund that gave its members a consequential vote on the investment policy of the whole pension plan.

To elicit truthful preferences for sustainable investments, one must obtain consequential choices, which are critical to ensuring valid results (Vossler et al. 2012). Moreover, four other criteria should be satisfied (Carson and Groves 2007). First, participants have to care about the outcome. Second, the authority can enforce payments by voters. Third, the elicitation involves a yes or no vote on a single project. Fourth, the probability that the proposed project is implemented is weakly monotonically increasing with the proportion

---

<sup>5</sup> See [https://ec.europa.eu/info/sites/info/files/business\\_economy\\_euro/banking\\_and\\_finance/documents/2020-sustainable-finance-strategy-consultation-document\\_en.pdf](https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/2020-sustainable-finance-strategy-consultation-document_en.pdf).

<sup>6</sup> See [https://www.pensioenfondsdetailhandel.nl/content/pdfs/2804205455\\_PFDH\\_verkortJaarverslag\\_v2\\_spreads\\_2608.pdf](https://www.pensioenfondsdetailhandel.nl/content/pdfs/2804205455_PFDH_verkortJaarverslag_v2_spreads_2608.pdf).

of yes votes. Our discrete-choice field survey satisfies all four criteria. Participants' pension savings were at stake, and the board guaranteed it would implement the outcome of the voting, satisfying criteria one and two. Further, we gave the participants a consequential vote with only two choices whereby the probability that more sustainable investments would be implemented was weakly monotonically increasing with the proportion of yes votes, which satisfies the third and fourth.<sup>7</sup>

We find 67.9% of participants favor increasing the pension fund's engagement to increase the sustainability of the companies in which it invests. Only 10.8% are against the increase, whereas 21.2% has no opinion. This majority gave the pension fund a clear mandate to increase its engagement. Next to engagement, screening portfolios based on sustainability criteria (or ESG integration) is another frequently used investment strategy (EUROSIF 2018). Portfolio screening means the pension fund invests more in companies that score high on the four SDGs and less in companies that score low. The results from a nonconsequential question show 74.4% of respondents also favor portfolio screening based on the four SDGs.

What drives this strong support for more sustainable investments? We explore three possibilities. First, participants might have expected sustainable investments to financially outperform conventional investments. Second, participants could have strong social preferences in favor of sustainable investments, in which case they support sustainable investments even when these investments are financially costly. Third, subjects might not have taken their real choice seriously or they could have simply been confused.

We show social preferences rather than financial beliefs or confusion drive the choice for more sustainability. First, a validated measure of social preferences (Falk et al. 2016, 2018) is positively related to the choice for more sustainable investments. Second, even among those who expect lower financial returns, the majority of 58% choose more sustainable investments. Third, we provide external validation that people who vote for a political party with a more sustainability-focused agenda are more likely to support more sustainable investments by the pension fund. Fourth, the choice for sustainable investments is not influenced by different defaults, a sign of strong preferences.<sup>8</sup> And fifth, our analysis shows confusion or a lack of information does not drive our results.

<sup>7</sup> See also Cummings et al. (1997), Cummings, Harrison, and Rutström (1995), and Harrison (2006a). A choice set with more than two choices opens the door for strategic voting. Imagine a person has to choose from three options, A, B, and C, and the option chosen by the majority of people will be implemented. Further imagine the person's preferences are  $A > B > C$ . If she expects only a few people will choose option A, picking option B to at least avoid option C can be optimal for her. This choice, however, would imply she did not pick the option that maximized her utility. Therefore, the choice is not incentive compatible. This lack of incentive compatibility of stated preferences can be of serious concern because it opens the door for any interfering answering motives, such as socially desirable answering (e.g., Lusk and Norwood 2009; Grimm 2010; Norwood and Lusk 2011; Klink and Langen 2015).

<sup>8</sup> Two of the main drivers responsible for the status quo bias are loss aversion and regret avoidance (Samuelson and Zeckhauser 1988; Kahneman 1991; Tversky, and Kahneman 1991; Feldman, Miyamoto, and Loftus 1999; Nicollet et al. 2011), both of which should especially matter for choices with real consequences.

One week after we presented the findings of our study in November 2018, the pension fund's board of trustees took action and decided to increase its engagement effort and intensity, as promised in the commitment. The pension fund moved to a dialogue with a larger number of companies, increased the intensity of interaction with these companies, and voted more often at shareholder meetings to improve the sustainability of the companies it invests in. Numerically speaking, in 2018, the pension fund had a dialogue with 394 companies; in 2019, that number increased to 568 (+44%). In addition, the board decided, backed by a majority of 74.4% of their beneficiaries, to also introduce portfolio screening as part of the investment strategy, even though the board had not *ex ante* committed to the question on portfolio screening (which participants knew). As a consequence, the pension fund applied portfolio screening to the part of its portfolio invested in equity in developed markets, which comprises roughly one-third of the assets under management (about €7.5 billion). To be more precise, in February 2019, the pension fund created a customized FTSE benchmark for the developed market equity investments that overweights companies that score high on the four SDGs and underweights companies that score low. The pension fund passively tracks this SDG benchmark.

In June 2020, we conducted a second study ( $n=3,186$ ) in which we explain to participants how the fund implemented the choice on more sustainable investments, to investigate whether participants support the actual implementation of sustainable investments by the pension fund. Our second study serves three critical purposes to check whether our findings from study 1 are robust. First, it helps us understand whether the support for sustainable investments lasts over time. Second, it allows us to test whether participants also agree with the actual implementation of sustainable investments. And third, it allows us to separately address support for engagement and portfolio screening. The results of study 2 show that time, the actual implementation, or the differentiation between engagement and portfolio screening do not let the strong support for sustainable investing crumble. Moreover, the support for extra sustainable investments has remained strong during the global COVID-19 pandemic.

Numerically speaking, after learning how the fund implemented the choice on sustainable investing, the majority still supports the intensified engagement program (56.5%), and 77.1% supports the introduction of portfolio screening based on the four SDGs. When looking at the 246 participants of study 1 (14.7%) who also participated in study 2, we observe that 98.8% of those who supported more sustainable investments in 2018 still show their support in 2020. Additionally, 76.9% of participants who previously were against more sustainable investing state their agreement with the steps the fund undertook in 2020. This finding highlights that participants still favor more sustainable investments when they see how the pension fund implemented its commitment. Consistent with our first study, social preferences emerge as a key driver of the support for more sustainable investments.

Our paper makes two main contributions. First, we contribute to the discussion on sustainable investing. Previous findings have revealed that investors value sustainability in their investment decisions (Bollen 2007; Hong and Kostovetsky 2012; Hartzmark and Sussman 2019; Ceccarelli, Ramelli, and Wagner 2019; Barber, Morse, and Yasuda 2021). Yet, these aggregate-level studies cannot inform institutional investors on how to invest on behalf of their clients. The data do not show what fraction of individuals have strong social preferences. Riedl and Smeets (2017) use individual-level data to show sustainable investors indeed have strong social preferences. However, in their study, individuals invest on their own behalf, and their investment decisions simply cannot be generalized to a setting with delegated portfolio management. In particular, if people's pensions are at stake, their choices could be very different. We show social preferences play an important role in delegated investment decisions. Pension fund members are even willing to forgo financial returns to increase the focus on sustainable investments.

Second, we contribute to a growing stream of literature on social preferences in the field (e.g., Frey and Meier 2004; Karlan 2005; Gneezy and List 2006; List 2006; Gneezy et al. 2010; Della Vigna, List, and Malmendier 2012; Stoop, Noussair, and Van Soest 2012; Andreoni, Rao, and Trachtman 2017; Kessler, Milkman, and Zhang 2019). Specifically, we study how pension funds should address their clients' social preferences. Acknowledging the influence of time preferences on retirement decisions has become common (O'Donoghue and Rabin 1998; Carroll et al. 2009; Beshears et al. 2014; Goda 2015). Similarly, several studies show how to elicit risk preferences of pension fund participants (Donkers, Lourenço, and Dellaert 2012; van der Lecq et al. 2016). However, investment managers often fear eliciting social preferences is too difficult and too costly,<sup>9</sup> and thus, pension funds ignore the social preferences of their participants (EUROSIF 2016, p. 82).

Our paper also has two limitations. First, our participants in study 1 did not have a choice on whether sustainable investing should be introduced, but solely on whether to increase the focus on sustainable investments. We first tried to find a large enough pension fund without any sustainable investments that would be willing to grant a real vote to its members. We didn't find one, because convincing large pension funds to place sovereignty over its sustainable investment policy into the hands of its members turns out to be tremendously difficult. In addition, the 10 largest Dutch pension funds, with close to US\$1 trillion in assets under management, are already investing sustainably to at least some extent. However, all 10 funds received low scores for their sustainable-investment policies by one of the main sustainability rating agencies in the Netherlands (average score 2.1 of 10, 1 = *very poor*)

---

<sup>9</sup> See, for example, a statement by the BVI, a German investment fund association representing asset managers with over €3 trillion assets under management ([https://www.bvi.de/fileadmin/user\\_upload/Regulierung/Positionen/2018\\_06\\_21\\_BVIs\\_view-MiFID\\_II\\_sustainability\\_requirements.pdf](https://www.bvi.de/fileadmin/user_upload/Regulierung/Positionen/2018_06_21_BVIs_view-MiFID_II_sustainability_requirements.pdf)).

and 10 = *excellent*; Simons 2019). The pension fund of our study ranked sixth among these 10 funds before we conducted our study with an average score of 1.9. These low sustainability scores show increasing the focus on sustainable investments leaves ample room for improvement. Yet, in study 2, participants could indicate whether they agree with the introduction of portfolio screening based on the SDGs, which the pension fund had just started.

Second, our surveys have relatively low response rates of 6.7% and 6.3%. Response rates for similar surveys in the pension industry are typically equally low, because individuals seldomly interact with their pension fund (Debets et al. 2018). Therefore, establishing the representativeness of the answers for the population of pension fund clients is crucial. We also show the political preferences of our sample are close to the outcome of the last national election in the Netherlands. This similarity is important because it allows us to control for possible biases in social preferences within our sample. Overall, we show a simple way to elicit preferences for sustainable investments. If pension funds start to take these preferences seriously, the economic and societal impact could be large.

## 1. Study Design

Our paper is based on two studies. Study 1 investigates members' preferences for more sustainable investments. In study 2, we go back to the same pension fund and measure preferences after participants see how the pension fund implemented the voting outcome of the first survey. A significant fraction of these participants took part in both studies.

### 1.1 Study 1

In June 2018, we invited 24,776 active members of Pensioenfond Detailhandel to participate in our online survey. The survey consists of three parts. Appendix B shows the instructions and questions. Part 1 briefly familiarizes all respondents with the concept of sustainable investments and introduces the United Nations Sustainable Development Goals.<sup>10</sup> In Part 2, we introduce our treatments. We randomly assign respondents to one of two groups. Respondents are unaware of the existence of the other treatment group. The first group confronted three SDGs as the default (3 SDG default), the second faced four SDGs (4 SDG default). We explain these treatments in more detail below. Part 3 elicits social preferences and financial-return expectations regarding sustainable investments. Further, we ask respondents to provide information on their gender, age, and education, on their financial background, and on their voting behavior in the 2017 Dutch national elections. Part 3 is identical across both treatments.

---

<sup>10</sup> For more information, see <https://www.un.org/sustainabledevelopment/sustainable-development-goals>.

In Part 2, respondents learn they will decide on the sustainable-investment strategy of their pension fund. The exact framing of the decision depends on the respective treatment (see below). Importantly, all respondents learn, regardless of their treatment, they have to state whether their pension fund should focus on three or four SDGs. We explain that “implementing Sustainable Development Goals means that financial returns are not the only factor that is taken into consideration. Making investments with this in mind means that it is important to take the impact on the environment and wider society into account.” We further explain that investing according to an SDG means the pension fund will engage with the companies’ board to ensure the company’s policy and actions are aligned with the respective SDG. We tell them that in 2017, Pensioenfonds Detailhandel had spoken with company boards to promote sustainability. In addition, we give several examples of earlier SDG engagements by the pension fund. We also point out that “if Pensioenfonds Detailhandel were to focus on four Sustainable Development Goals, this means that it will contact companies to discuss their sustainable business practices more often. The fund will also enter into discussions with companies about the fourth Sustainable Development Goal, in addition to the discussions it has about the other three Sustainable Development Goals.”

**1.1.1 3 SDG default versus 4 SDG default.** Staying with the default option is a wide phenomenon, also called the status quo bias (e.g., Samuelson and Zeckhauser 1988; Tversky, and Kahneman 1991). Two of its main drivers are loss aversion and regret avoidance (e.g., Samuelson and Zeckhauser 1988; Kahneman 1991; Tversky, and Kahneman 1991; Feldman, Miyamoto, and Loftus 1999; Nicolle et al. 2011). In particular, if people get a real choice, they might anticipate regretting their choice for more sustainable investments if this were to result in financial losses. With the introduction of different defaults, we can account for differences in the status quo effect.

In the *3 SDG default* treatment, we tell participants that the pension fund currently focuses on three SDGs: “Climate action,” “Decent work and economic growth,” and “Peace, justice, and strong institutions.” We then introduced participants to the fourth SDG, “Responsible consumption and production.” They then answered the following question:

Do you want Pensioenfonds Detailhandel to add the fourth sustainable development goal ‘Responsible consumption and production’?

- a. Yes, add
- b. No, do not add
- c. I have no opinion regarding this matter

In the *4 SDG default* treatment, we tell participants the pension fund’s future policy will include four SDGs: “Climate action,” “Decent work and



economic growth,” “Peace, justice, and strong institutions,” and “Responsible consumption and production.” Participants then answer the following question: Do you want Pensioenfond's Detailhandel to leave out the fourth sustainable development goal ‘Responsible consumption and production’?

- a. Yes, leave it out
- b. No, do not leave it out
- c. I have no opinion regarding this matter

Importantly, the question of interest—whether Pensioenfond's Detailhandel should focus on three or on four SDGs—is the same for both default treatments, except for the words “add” or “leave out.” Respondents could choose either to add (3 SDG default) or to leave out (4 SDG default) the fourth SDG. In addition, respondents always have the answer option “I have no opinion regarding this matter.”

**1.1.2 The consequentiality of the choices.** Participants of *either treatment* were then told,

“Your choice counts. If the majority of respondents chooses to add (leave out) the fourth sustainable development goal, it will happen. The board of Pensioenfond's Detailhandel guarantees its implementation.”

We explicitly stress the two key characteristics of their consequential choice: (1) their vote counts and (2) the board guarantees the majority vote will be implemented. The vast majority of our participants (86%) understood the consequentiality of their choice, because they correctly answered the following comprehension question (see question 2 in Appendix B):

If a majority chooses “Yes, add” (“Yes, leave it out”), Pensioenfond's Detailhandel

- a. **guarantees** to add (leave out) “responsible consumption and production” to (of) its socially responsible investment policy as the fourth Sustainable Development Goal. The Board of Pensioenfond's Detailhandel has decided to implement the outcome of this vote.
- b. **cannot guarantee** that it will add (leave out) ‘responsible consumption and production’ to (of) its socially responsible investment policy as the fourth Sustainable Development Goal but may include the results of the survey in its choice.

The correct answer is “a.” If the participants incorrectly answered the question, they are made aware of their misperception.

Everything besides the necessary information within each treatment group is the same. The binary nature of the choice for more or fewer sustainable investments is essential because it assures incentive compatibility (see

Cummings, Harrison, and Rutström 1995; Cummings et al. 1997; Vossler et al. 2012; Harrison 2006a; Carson and Groves 2007). Providing participants with multiple options, such as choosing between adding different SDGs, would have introduced incentives for strategic voting (see Arrow's impossibility theorem, Arrow 2012). For example, if participants expect their first-best choice is unlikely to get a majority vote, they could strategically vote for the second-best option.

**1.1.3 The (nonconsequential) question on portfolio screening.** Next to engagement, screening portfolios based on sustainability criteria (or ESG integration) is another frequently used investment strategy (EUROSIF 2018). We therefore also asked participants the following (nonconsequential) question:

Another approach that Pensioenfonds Detailhandel considers is “best in class”. With this approach Pensioenfonds Detailhandel chooses to invest more in companies that score high on environmental, social and governance criteria and less in companies that score low.

Do you prefer Pensioenfonds Detailhandel to invest more in companies that score high on environmental, social and governance factors and less in companies that score low?

- a. Yes
- b. No
- c. I do not know

## 1.2 Study 2

In June 2020, we invited 50,517 active members of Pensioenfonds Detailhandel to participate in the second study via an online survey. The survey consists of four parts. Part 1 explains to participants that Pensioenfonds Detailhandel conducted a survey among its members in 2018. For the full set of instructions, see Appendix C. We explain that participants in 2018 had a real choice and could vote whether their pension fund should increase its focus on sustainable investments by focusing on four instead of three SDGs. Our participants see the same information about this vote as the original participants saw in 2018. We then tell participants the outcome of the last survey and inform them that 67.9% of members chose four SDGs.

Part 2 shows how Pensioenfonds Detailhandel implemented the choice of its participants for four SDGs. We explain, “In practice this means that Pensioenfonds Detailhandel will talk with *more companies, speak more*

*intensively* about sustainability and *vote more often* at shareholder meetings about sustainability. In 2018 there was a dialogue with 394 companies. In 2019 this number rose to *568 companies (+44 percent)*.”

We additionally show 74% of participants in 2018 also were in favor of portfolio screening based on the four SDGs. The pension fund invests about one-third of the portfolio in listed equities in developed markets. Sustainability was not used as a screening criterion for the selection of stocks before the survey in 2018, with the exception of the exclusion of a handful of companies that produce controversial weapons, appear themselves on the UN sanction registry, and/or are in countries that are on the same sanction registry (criteria that the fund still applies). We told participants,

Pensioenfonds Detailhandel invests approximately one-third of your pension savings in a broadly diversified equity portfolio in developed markets. Until 2018, sustainability was no factor in choosing these investments, except for the exclusion of some companies. [...] After the results of the survey, the fund did the following with the whole equity portfolio in developed countries: it has decided to invest significantly **more** in companies that scored higher on the four sustainable development goals and to invest significantly **less** in companies that scored lower.

For ease of comprehension for the participants, we illustrate the portfolio screening visually (see Appendix C).

In part 3, we ask participants for their opinion on the sustainable-investment strategy introduced by Pensioenfonds Detailhandel, as a response to the outcome of the survey. We make clear to participants that the board will discuss the outcomes of the survey in their scheduled board meeting on September 9, 2020. We ask participants the following question:

To which of the two parts of the sustainable investment strategy of Pensioenfonds Detailhandel do you agree?

- a. More intensive dialogue with companies
- b. Investing more in companies that score well on sustainability
- c. Both
- d. None
- e. I do not know

Participants can click on info boxes that show more details about the two sustainable investment parts. Similar to study 1, we ask members about their return expectations related to the sustainable investment strategy of Pensioenfonds Detailhandel and their social preferences.

In part 4, respondents provide information on their gender, age, and education and on their financial background, and we ask how they would vote if national elections were held that day.

## 2. The Data

### 2.1 The participants

Participants in studies 1 and 2 are members of Pensioenfonds Detailhandel, a large Dutch pension fund. The Dutch state requires employees to save for their pension. Participants are required to contribute to the pension fund through their current employer.

For each study, we considered the share of the fund's population for which an email address was stored in the fund's system at the time of the respective survey (we address the question of representativeness in the next section). For study 1, the addressable number of plan participants in 2018 was 49,552. Of these plan participants, we randomly selected half (24,776) for study 1, and the other half was invited to participate in a separate hypothetical treatment, which is available on request. Of the 24,776 participants, 1,669 (6.7%) voted on whether to add or leave out the fourth SDG, and the survey took, on average, 19.3 minutes. Table 1, panel A, presents summary statistics of the respondents. The sample consists of 60.9% women and 39.1% men, with an average age of 46.6 years. Slightly less than one-third holds a university degree or a degree from a university of applied sciences (29.9%). The average monthly net household income is €2,837.

For study 2, we invited the entire addressable population of 50,517 plan participants in 2020, of which 3,186 (6.3%) participated in the survey, which took, on average, 15.5 minutes. Table 1, panel B, presents summary statistics. The sample consists of 54.5% women and 45.5% men, with an average age of 48.7 years. Slightly less than one-third holds a university degree or a degree from a university of applied sciences (27.8%). The average monthly net household income is €3,204. Compared with study 1, our sample is slightly more male, a bit older, and has a higher net household income.

Of all participants in study 1, 246 (14.7%) also participated in study 2: 53.2% were female, the average age is 51.3 years, and 29.7% holds a degree from a university or a university of applied sciences.

### 2.2 Representativeness of our samples

Surveys face the risk of a biased response sample, especially in a setting like ours, where the topic is sustainable investing and people with stronger social preferences might be more likely to participate in the survey. In Table 1, panel C, we compare the fund population with the samples of studies 1 and 2. Compared with the fund's total population, Study 1's sample contains a similar share of women (population: 65.6% vs. sample 1: 65.2%;  $p$ -value of a two-sided  $t$ -test = .753), is about 8 years older (population: 37.6 vs. sample: 45.6;  $p$ -value < .001), and with a yearly gross income of €24,934 is about €3,000 above the average income of the population ( $p$ -value < .001). Women are slightly underrepresented as participants in study 2, with a share of 57.9%, lower than the fund's population ( $p$ -value < .001). In addition, the average age of 47.2

**Table 1**  
**Summary statistics**

<i>A. Study 1</i>	<b>Mean</b>	<b>Median</b>	<b>SD</b>	<b>Obs.</b>
<b>Preferences</b>				
Social preferences (1–10)	6.1	7	2.5	1,280
Preferences for sustainable policies (0–5)	2.5	4	2.1	772
<b>Financial beliefs</b>				
Return expectation				
Lower with 4 SDGs	14.8%			208
Equal with 3 or 4 SDGs	25.4%			358
Higher with 4 SDGs	17.3%			244
Do not know	42.5%			598
<b>Demographics</b>				
Female (survey answer)	60.9%			1,293
Age (survey answer)	46.6	50	14.5	1,295
Highly educated (survey answer)	29.9%			1,229
<b>Financial background</b>				
Gross individual income (yearly, admin. data)	€24,934	€20,915	€20,189	1,492
Net household income (monthly, survey data)	€2,837	€2,750	€1,690	969
Low income (€0 to €2,500)	36.6%			473
Middle income (€2,500 to €4,000)	28.3%			366
High income (above €4,000)	10.6%			130
Do not report	25.0%			323
<b>Comprehension</b>				
Understood treatment (yes)	86.0%			1,694
More information (yes)	33.5%			1,542
<i>B. Study 2</i>	<b>Mean</b>	<b>Median</b>	<b>SD</b>	<b>Obs.</b>
<b>Preferences</b>				
Social preferences (1–10)	5.5	6	2.4	3,186
Preferences for sustainable policies (0–5)	2.1	1	2.1	2,375
<b>Financial beliefs</b>				
Return expectation (engagement)				
Much lower	6.6%			209
A bit lower	23.3%			742
Equal	24.5%			780
A bit higher	21.0%			669
Much higher	2.3%			73
Do not know	22.4%			713
Return expectation (screening)				
Much lower	6.5%			207
A bit lower	22.8%			726
Equal	19.2%			611
A bit higher	27.7%			883
Much higher	4.1%			129
Do not know	19.8%			630
<b>Demographics</b>				
Female (survey answer)	54.5%			1,736
Age (survey answer)	48.7	52	13.3	3,186
Highly educated (survey answer)	27.8%			886
<b>Financial background</b>				
Gross individual income (yearly, admin. data)	€28,586	€23,258	€23,176	2,483
Net household income (monthly, survey data)	€3,204	€2,750	€1,672	2,702
Low income (€0 to €2,500)	32.8%			1,045
Middle income (€2,500 to €4,000)	33.6%			1,071
High income (above €4,000)	18.4%			586
Do not report	15.2%			484

(Continued)

**Table 1**  
**Continued**

<i>C. Studies 1 and 2</i>	Pension participants (2018, n = 274,277)	Participants, study 1 (2018, n = 1,492)	Participants, study 2 (2020, n = 2,483)	$\Delta$ (1) vs. (2): <i>p</i> -values of a two-sided <i>t</i> -test	$\Delta$ (1) vs. (3): <i>p</i> -values of a two-sided <i>t</i> -test
	(1)	(2)	(3)		
<b>Demographics</b>					
Female	65.6%	65.2%	57.9%	.753	<.001
Age	37.6	45.6	47.2	<.001	<.001
<b>Financial background</b>					
Yearly gross income	21,706	24,934	28,586	<.001	<.001
<b><math>\Delta</math> (3 SDG vs. 4 SDG):</b>					
<i>D. Study 1</i>		<b>3 SDG</b>	<b>4 SDG</b>	<b>All</b>	<i>p</i> -values of a two-sided <i>t</i> -test
<b>Demographics</b>					
Female (n = 1,669)		58.2%	58.4%	58.3%	.9249
Age (n = 1,492)		46.1	45.0	45.6	.1182
<b>Financial background</b>					
Yearly gross income (€; n = 1,492)		24,822	25,050	24,934	.8275

Panel A presents summary statistics for the survey respondents of study 1. Panel B presents summary statistics for the survey respondents of study 2. Panel C presents administrative data on active pension fund participants in 2018 provided by the pension administrator. Differences between panels A and B and panel C can be attributed to two reasons: (1) Administrative data are only available for 1,492 (89.4%) of the 1,669 participants in study 1, and 2,483 (77.9%) of the 3,186 participants in study 2, and (2) data shown in panel C are administrative data as opposed to self-reported data as in panels A and B. Table A1 defines the variables. Differences in the number of observations stem from the fact that not all participants in the experiments answered all survey questions. Panel D shows a randomization check for the allocation of participants to our two treatments. Participants are randomly assigned to the 3 SDG or 4 SDG treatment. Differences for age and yearly gross income between panels A and D can be attributed to two reasons: (1) administrative data are only available for 1,492 (89.4%) of the 1,669 participants in study 1; (2) data shown in panel D are administrative data as opposed to self-reported data as in panel A. The difference between the treatment groups is indicated by the *p*-values of a two-sided *t*-test.

years and the yearly gross income of 28,586 indicate participants of study 2 are older and earns more than the fund population average (*p*-value < .001).

As we will discuss in Section 3.2, men, older people, and those with a higher income are less likely to favor more sustainable investing. Hence, these differences go against our findings, and thus cannot explain our results. Note we use gender, age, and personal yearly gross income from the administrative data provided by the fund to assess the representativeness of our sample. Because of incomplete administrative data, the averages between administrative and self-reported data are not identical. In the subsequent analysis, we use the self-reported monthly net household income, because it provides the monetary basis for decision-making within a household. These household income levels were unavailable for the total population, because the pension fund only observes income saved by the individual and not by the household.

Second, we test whether participants in our study have comparable political preferences to the Dutch population. We therefore ask participants to provide information on whether they voted in the Dutch national elections in 2017 and, if they did, to name the party they voted for. Voting behavior is a good proxy for social preferences, because the relation between social

preferences and voting behavior has been well established. Fisman, Jakiela, and Kariv (2017) show equality-focused subjects were more likely to vote for Barack Obama in 2012 and also more likely to be affiliated with the U.S. Democratic Party. Kerschbamer and Müller (2020) find social preferences predict political attitudes. Almås, Cappelen, and Tungodden (2020) find conservatives systematically accept a higher level of inequality than nonconservatives. Cohn et al. (2019) show distributional preferences predicted voting for Hillary Clinton and Donald Trump in the 2016 presidential election. Hong and Kostovetsky (2012) show U.S. investment managers who donated to the Democratic Party were more likely to invest in companies rated as socially responsible. Hence, by comparing the voting behavior of our sample with the outcome of the 2017 Dutch national elections, we can observe whether we attracted certain voters more than others, resulting in a nonrepresentative distribution of preferences.

Panel A of Table 2 presents the voting behavior of our sample in study 1. Seventy (5.4%) of the 1,294 respondents who answer the question did not want to state whether they voted. The reported voter turnout is 84.5%, which is close to the official turnout of 81.6%.<sup>11</sup> Further, 260 (24.9%) do not want to state the party they voted for. The distribution of votes for the remaining 783 respondents deviates slightly from the official voting outcome. Respondents are more likely to vote for parties known to strongly advocate for sustainability, such as GroenLinks (Green Party, +4.9 percentage points higher than in the official voting outcome;  $p$ -value from two-sided  $t$ -test  $< .001$ ) and Partij voor de Dieren (Party for the Animals, +2.8 percentage points;  $p$ -value =  $.001$ ). However, the reported voting behavior also clearly shows our sample does not mainly consist of people with strong preferences for sustainability. Further, the difference between the reported voting behavior in our sample and the official turnout regarding the votes for Partij voor de Vrijheid (PVV), a Dutch populist party, is noticeable ( $-8.0$  percentage points;  $p$ -value  $< .001$ ). This finding is in line with previous work showing people refrain from admitting their support for extremist groups (Gingerich 2010; Bullock, Imai, and Shapiro 2011).

We show below that these deviations cannot explain our results, because the majority of voters of all but one party (Forum voor Democratie) choose four SDGs (see Table A2, panel A, in Appendix A). Therefore, the reported voting behavior is a strong indicator that we do not have a decisive selection bias toward certain preferences that favor sustainable investing.

In study 2, which we conducted in June 2020, we asked participants for which political party they would vote if parliamentary elections were to be held right now. The answer should have reflected their most recent political preferences. We compare the voting intentions with those from official polls in the Netherlands to test the representativeness of our sample of study 2 in terms

<sup>11</sup> The official 2017 parliamentary election results can be found online at <https://www.verkiezingsuitslagen.nl/verkiezingen/detail/TK20170315>.

**Table 2**  
**Comparison of reported voting behavior within our sample with the official 2017 Dutch parliamentary election results (study 1) and polls from May 2020 (study 2)**

A. Study 1	Reported voting behavior (n = 1,294)		Official 2017 voter turnover (3)	$\Delta$ (2) vs. (3): <i>p</i> -values of a two-sided <i>t</i> -test (4)
	Absolute (1)	Relative (2)		
Prefer not to answer	70	5.4%		
Report voter turnover	1,224	94.6%		
Did not vote in 2017	190	15.5%		
Voted in 2017	1,034	84.5%	81.6%	.0055
Prefer not to report party	251	24.3%		
<b>Reported party</b>	783			
Volkspartij voor Vrijheid en Democratie (VVD)	172	21.9%	21.3%	.6659
GroenLinks	109	14.0%	9.1%	.0001
Christen-Democratisch Appèl (CDA)	102	13.0%	12.4%	.6119
Democraten 66 (D66)	98	12.5%	12.2%	.7997
SP (Socialistische Partij)	64	8.2%	9.1%	.3387
Partij voor de Dieren	47	6.0%	3.2%	.0010
Partij voor de Vrijheid (PVV)	40	5.1%	13.1%	<.0001
ChristenUnie	40	5.1%	3.4%	.0307
Partij van de Arbeid (PvdA)	39	5.0%	5.7%	.3507
50PLUS	21	2.7%	3.1%	.4654
Staatkundig Gereformeerde Partij (SGP)	20	2.6%	2.1%	.4237
Forum voor Democratie	18	2.3%	1.8%	.3545
DENK	1	0.1%	2.1%	n/a
Other	12	1.5%	1.5%	.9444
<b>B. Study 2</b>				
	Reported voting behavior (n = 3,186)		Polls from May 27, 2020 (3)	$\Delta$ (2) vs. (3): <i>p</i> -values of a two-sided <i>t</i> -test (4)
	Absolute (1)	Relative (2)		
Prefer not to answer	504	15.8%		
Report	2,682	84.2%		
Plan to vote	2,503	93.3%		
Do not plan to vote	179	6.7%		
Reported party	2,503			
Volkspartij voor Vrijheid en Democratie (VVD)	801	32.0%	28.5%	.0002
GroenLinks	269	10.7%	9.7%	.0909
Partij van de Arbeid (PvdA)	207	8.3%	8.6%	.5491
Christen-Democratisch Appèl (CDA)	193	7.7%	9.2%	.0053
Democraten 66 (D66)	187	7.5%	6.7%	.1425
Forum voor Democratie	137	5.5%	7.7%	<.0001
SP (Socialistische Partij)	120	4.8%	6.1%	.0023
Partij voor de Dieren (PvdD)	113	4.5%	3.7%	.0498
Partij voor de Vrijheid (PVV)	112	4.5%	9.0%	<.0001
ChristenUnie	106	4.2%	4.0%	.5596
50PLUS	75	3.0%	1.9%	.0013
Staatkundig Gereformeerde Partij (SGP)	49	2.0%	2.0%	.8785
DENK	6	0.2%	1.6%	<.0001
Other	128	5.1%	1.3%	<.0001

Panel A (study 1) presents the distribution of votes in the 2017 Dutch parliamentary elections within our sample and compares it with the official election results. Participants are asked, "Did you vote in the last national parliamentary election?" Answer options are "Yes," "No," and "I do not want to say." As a follow-up question, we ask respondents to name the party they voted for but they were also allowed to keep this information private ("I do not want to say"). The official 2017 parliamentary election results can be found online at <https://www.verkiezingsuitslagen.nl/verkiezingen/detail/TK20170315>. Panel B (study 2) presents the distribution of votes for the upcoming Dutch parliamentary elections within our sample and compares it with the polls from May 27, 2020 (<https://www.ipsos.com/nl-nl/politieke-barometer>). Participants are asked, "If there were elections to the *Tweede Kamer* (Dutch parliament), which party would you vote for?" Answer options are the below listed parties as well as "I prefer not to answer" and "I do not plan to vote." The polls for the upcoming parliamentary election can be found online at <https://www.ipsos.com/nl-nl/politieke-barometer>. We consulted this poll at the time participants completed the survey and compared the polls with the voting preferences of our participants. The difference between the poll and reported voting results is indicated by the *p*-values of a two-sided *t*-test.



of political preferences. Panel B of Table 2 shows slight differences between the voting intentions in our sample and those in the official polls. For example, whereas 32.0% of our sample plans to vote for the Volkspartij voor Vrijheid en Democratie (VVD), only 28.5% would do so according to official polls ( $p$ -value  $< .001$ ).

Yet, overall, we do not see a meaningful bias toward political parties that strongly focus on sustainability. The voting intentions for the two parties with a clear focus on sustainability, GroenLinks and de Partij voor de Dieren (PvdD), are very close to those for the official polls, with 10.7% in our sample compared with 9.7% in the Dutch polls for GroenLinks ( $p$ -value = .091) and 4.5% versus 3.7% for PvdD ( $p$ -value = .050).

Again, the observed deviations cannot explain our findings, because the majority of voters of all parties as well as the majority of those who do not plan to vote or do not want to share their voting preferences support “screening” or “both” (see Table A2, panel B, in Appendix A). For “engagement” or “both,” the support is slightly lower than 50% for participants who report they will vote for the Socialistische Partij (SP; 48.3%) and Forum voor Democratie (48.2%), as well as for those who do not plan to vote (48.0%). Yet, none of these values is significantly different from 50% ( $p$ -value  $> .373$ ). Only those who report voting for the PVV and those who prefer not to report who they would vote for show a support of engagement significantly lower than 50%, with 25.0% and 40.2%, respectively ( $p$ -value  $< .009$ ). Although our samples in studies 1 and 2 have small biases in terms of demographics, financial background, and political preferences, we show below that these deviations cannot explain our results and sometimes even go against them.

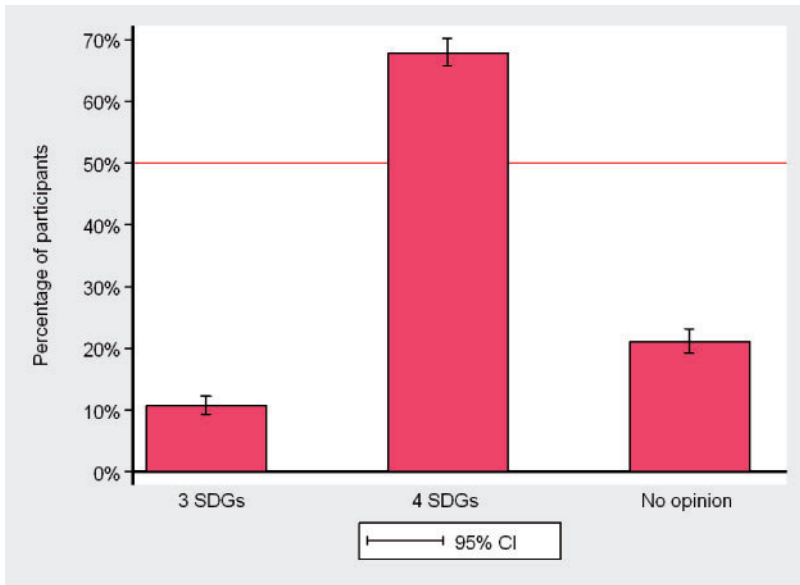
### 3. Results

Study 1 shows two-thirds (67.9%) of participants favor more sustainable investments and chose four SDGs (see Figure 1).<sup>12</sup> Only 10.8% of respondents choose three SDGs, and 21.2% report having no opinion. Put differently, 6.3 times as many respondents are in favor of four SDGs as are against it.

**Result 1:** 67.9% of respondents are in favor of expanding sustainable investments.

What explains the support for sustainable investing? Three explanations are possible. First, people could decide to invest sustainably because they expect these investments to financially outperform conventional investments. If return expectations are sufficiently high, everybody would opt for more sustainable investments. Second, participants could have strong preferences for sustainable investments. Third, respondents could be confused about or unaware of the

<sup>12</sup> For now, we do not differentiate between the 3 SDG default and 4 SDG default treatments. Instead, we look at them jointly. We consider this differentiation in Section 3.3.



**Figure 1**  
**Preferences for sustainable investments (study 1)**

The graph presents the distribution of choices for the following question: “Do you want Pensioenfond Detailhandel to add the fourth sustainable development goal ‘Responsible consumption and production’? Yes, add; No, do not add; I have no opinion regarding this matter,” and takes on the corresponding three values: “3 SDGs,” “4 SDGs,” and “I have no opinion regarding this matter.” 3SDGs refers to the sustainable development goals of “Climate action,” “Decent work and economic growth,” and “Peace, justice, and strong institutions,” which the pension fund had already focused on prior to 2018. 4 SDGs refers to the three SDGs just mentioned plus the fourth SDG, “Responsible consumption and production,” which participants are introduced to during the survey. The above-stated question refers to the default treatment where participants can add the fourth SDG. The default where participants can remove the fourth SDG is treated analogously, for brevity, without providing further explanation here. Choices are guaranteed to be implemented by the pension fund if more than 50% of respondents choose in favor of three (four) SDGs. Error bars represent 95% confidence intervals.

consequences of their choice. In the following sections, we show strong social preferences as a primary driver of the support for more sustainable investments.

### 3.1 Financial return expectations (study 1)

In this section, we explore how expectations about financial performance influence sustainable investment choices. In study 1, we tell participants that “implementing Sustainable Development Goals means that financial returns are not the only factor that is taken into consideration. Making investments with this in mind means that it is important to take the impact on the environment and wider society into account.” We deliberately do not mention absolute costs or benefits of sustainable investments, because they could steer participants’ choices. Moreover, the expected financial performance of sustainable investments is unclear. Some studies show sustainable investments outperform conventional investments (Derwall et al. 2005; Edmans 2011), but other studies find an underperformance (Hong and Kacperczyk 2009;

Riedl and Smeets 2017; Hartzmark and Sussman 2019; Barber, Morse, and Yasuda 2021). In equilibrium, sustainable assets should have negative alphas (Pástor, Stambaugh, and Taylor 2020), but in the short run, mispricing can occur (e.g., Edmans 2011). The return expectations of individual investors reflect these ambiguous findings regarding realized returns on sustainable investments. Some studies find investors expect lower risk-adjusted returns (Renneboog, Ter Horst, and Zhang 2008; Riedl and Smeets 2017). Others find investors expect higher risk-adjusted returns on sustainable investments (Bauer and Smeets 2015; Hartzmark and Sussman 2019).

Rather than assuming a certain financial performance, we ask participants directly about their financial return expectations if the pension fund were to focus on three or four SDGs, respectively. Specifically, we ask the following question:

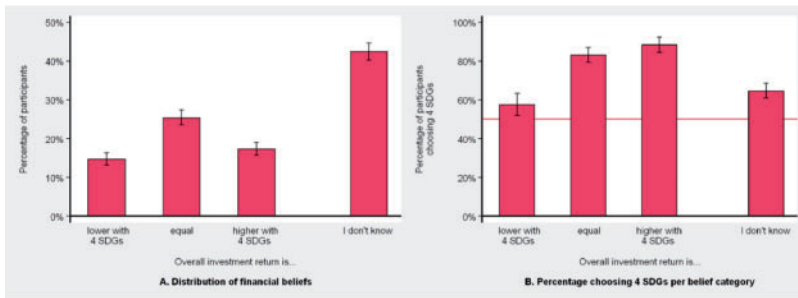
When do you think the investment return is highest?

- a. The investment return is highest with 3 SDGs
- b. The investment return is equally high with three or four SDGs
- c. The investment return is highest with 4 SDGs
- d. I do not know

Figure 2, panel A, plots the distribution of financial beliefs within our sample. The majority of participants (57.5%) provides a return expectation: 14.8% expect a lower return with four SDGs (answer a); 17.3% expect a higher return; and 25.4% think returns would not differ between investing in three or four SDGs. Return expectations are clearly not overly favorable toward sustainable investing and are thus unable to explain that two-thirds of our participants chose to expand sustainable investments at their pension fund.

Figure 2, panel B, supports this claim. Although we find stronger support for four SDGs if return expectations were more positive, the majority of participants favor four SDGs, independent of return expectations. Two findings are especially noteworthy. First, even among those who expected four SDGs to yield lower returns, 57.7% chose four SDGs and only 30.3% chose three SDGs. Thus, even when people expect to be worse off, they favor the more sustainable option. Second, the literature shows people do not like uncertainty, and therefore avoid outcomes that increase uncertainty (e.g., Ellsberg 1961; Mukerji and Tallon 2001; Charness and Gneezy 2010). Of the participants who do not know what returns to expect, 64.7% favor four SDGs. Although this number should be treated with caution because the uncertain option depends on the default treatment, the majority of these subjects choose four SDGs, regardless of their default (see Section 4.1).<sup>13</sup> Thus, the majority are in favor

<sup>13</sup> Participants in the 3 SDG default condition should consider the choice of three SDGs to be less uncertain, because it is the default option, whereas those in the 4 SDG default should consider the choice of four SDGs



**Figure 2**  
**Financial beliefs about sustainable investing (study 1)**

Panel A shows the distribution of financial beliefs elicited by asking participants the following question: “When do you think the investment return is highest?” Answer options are “It is highest with 3 SDGs,” “The return is equally high with 3 or 4 SDGs,” “It is highest with 4 SDGs,” and “I do not know.” 3SDGs refers to the SDGs “Climate action,” “Decent work and economic growth,” and “Peace, justice, and strong institutions,” which the pension fund had already focused on prior to 2018. 4 SDGs refers to the three SDGs just mentioned plus the fourth SDG, “Responsible consumption and production,” which participants are introduced to during the survey. Panel B presents the percentage of participants answering the question, “Do you want Pensioenfonds Detailhandel to add the fourth sustainable development goal ‘Responsible consumption and production’?” with “Yes, add” per financial-belief category. This question refers to the default treatment where participants can add the fourth SDG. The default where participants can remove the fourth SDG is treated analogously, for brevity, without providing a further explanation here. Choices are guaranteed to be implemented by the pension fund if more than 50% of respondents choose in favor of three (four) SDGs. Error bars represent 95% confidence intervals.

of four SDGs, independent of return expectations, even if participants do not know what to expect.

We find no evidence that participants only support more sustainable investments because they see it as a free lunch.

**Result 2:** The majority of respondents choose to expand sustainable investing, even those who have negative return expectations or are uncertain about the return.

In the following subsection, we show the effect of social preferences on the choice for four SDGs is indeed unaffected by controls for return expectations in a multinomial logit regression.

### 3.2 Strong social preferences (study 1)

We measure social preferences using the validated social preferences measure of Falk et al. (2016): “How willing are you to give to good causes without expecting anything in return?” Participants rate their agreement on a 10-point

---

to be less uncertain. For those who do not have a return expectation for sustainable investments, we therefore expect the support for four SDGs to be lower in the 3 SDG default condition than in the 4 SDG default condition. Figure A1 shows the default effect for those participants who did not know what return to expect (43.6% of the entire population; see Figure 2, panel A). As hypothesized, we find a significant difference, whereby 59.4% of participants in the 3 SDG default condition and 65.8% of those in the 4 SDG default condition choose four SDGs (one-sided *t*-test; *p*-value = .011). Yet, even for those who consider choosing four SDGs as the option with higher uncertainty, we find a clear majority opts for the more sustainable option.

Likert scale (1 = *completely unwilling*, 10 = *very willing*). Higher ratings correspond to higher levels of social preferences. The average level of social preferences in our sample is 6.1 (for summary statistics, see Table 1, panel A). We investigate the extent to which social preferences predict the support for more sustainable investments. Table 3 presents relative-risk ratios of a multinomial logit regression that regresses the support for four SDGs on our measure of social preferences. The dependent variable takes on three values for the choices “3 SDGs,” “4 SDGs,” and “no opinion.” As the baseline, we take respondents who chose three SDGs. To interpret the relative-risk ratios, consider the effect of *Gender (female)* on the choice for four SDGs. If the coefficient equals 1, men and women are equally likely to choose four SDGs. A coefficient larger than 1 indicates women are more likely to choose four SDGs. Similarly, a coefficient smaller than 1 indicates women are less likely to choose four SDGs.

The first column of specification (1) presents the effect of social preferences on the likelihood of choosing four SDGs. We standardize the social preferences variable. A one-standard-deviation increase in social preferences increases the likelihood of choosing four SDGs by 53.6%. Given that 67.9% of our sample chose four SDGs, social preferences have a substantial economic impact on sustainable-investment decisions. Social preferences are not related to the choice of no opinion.

In specification (2), we control for financial beliefs, demographics, and information on participants’ financial background. As anticipated, expecting lower returns with four SDGs decreases the likelihood of choosing four SDGs by 79.0%, whereas expecting higher returns more than doubles the likelihood. Importantly, social preferences predict the support for four SDGs when controlling for return expectations and demographics. The effect size of social preferences even increases slightly ( $\beta = 1.5874$ ).

Looking more closely at the effects of demographics on sustainable investments in Table 3, we see women are significantly more likely than men to choose four SDGs. Women in our sample also have stronger social preferences than men (F: 6.3 vs. M: 5.9;  $p$ -value = .012). These results are in line with previous literature findings that women sometimes have stronger social preferences (see, e.g., Bolton and Katok 1995; Eckel and Grossman 1998; Güth, Schmidt, and Sutter 2007; for a meta-analysis, see Croson and Gneezy 2009). Remember our sample had slightly more men than the pension fund’s population. Therefore, the support we find for more sustainable investments is on the conservative side. Note that also among men, the majority opts for more sustainable investments (69.1%). Second, age is related to the respondents’ choice for sustainable investing. Older people are less likely to choose four SDGs. Each 10 years of age decreases the likelihood of choosing four SDGs by 15.5%. Given that our respondents are slightly older than the fund population and older people are less in favor of sustainable investments, the support for sustainable investments is a lower bound. Third, education does not affect

**Table 3**  
**Relation between social preferences and sustainable investing (study 1)**

	(1)		(2)	
	4 SDGs	No opinion	4 SDGs	No opinion
<i>Preferences</i>				
Social preferences (std)	1.5361*** (0.1398)	0.8742 (0.0931)	1.5874*** (0.1571)	0.9559 (0.1119)
<i>Financial beliefs</i>				
Lower returns with 4 SDGs			0.2095*** (0.0571)	0.3897** (0.1476)
Higher returns with 4 SDGs			2.0609* (0.8334)	1.5150 (0.7590)
Do not know			0.8837 (0.2431)	2.8393*** (0.9476)
<i>Demographics</i>				
Female			2.0355*** (0.4208)	1.6918** (0.4229)
Age			0.9845** (0.0074)	0.9688*** (0.0086)
Highly educated			0.9170 (0.2096)	0.5324** (0.1525)
<i>Financial background</i>				
Low monthly income			0.7440 (0.1927)	0.8554 (0.2728)
High monthly income			0.7147 (0.2525)	1.1187 (0.4992)
Do not report			0.5544** (0.1578)	1.0735 (0.3603)
Constant	7.3652*** (0.7084)	1.4712*** (0.1736)	20.6432*** (10.2167)	4.3091** (2.5298)
Observations		1,280		1,212
Pseudo- $R^2$		.0351		.1213

This table presents relative-risk ratios of a multinomial logit regression. The dependent variable is based on the outcome of the question, "Do you want Pensioenfonds Detailhandel to add the fourth sustainable development goal 'Responsible consumption and production'? Yes, add; No, do not add; I have no opinion regarding this matter." The dependent variable takes on the corresponding three values: "3 SDGs," "4 SDGs," and "I have no opinion regarding this matter." 3SDGs refers to the sustainable development goals of "Climate action," "Decent work and economic growth," and "Peace, justice, and strong institutions," which the pension fund had already focused on prior to 2018. 4 SDG' refers to the three SDGs just mentioned plus the fourth SDG, "Responsible consumption and production," which participants are introduced to during the survey. The above-stated question refers to the default treatment where participants can add the fourth SDG. The default where participants can remove the fourth SDG is treated analogously, for brevity, without providing a further explanation here. Respondents who chose three SDGs make up the baseline. For summary statistics, see Table 1, panel A. We elicit *Social preferences* by asking respondents "How willing are you to give to good causes without expecting anything in return?" on a 10-point Likert scale from completely unwilling to completely willing (see Falk et al. (2016)). The variable is standardized. We elicit *Financial beliefs* by asking participants to answer the following question: "When do you think the investment return is highest?" Answer options are "It is highest with 3 SDGs," "The return is equally high with 3 or 4 SDGs," "It is highest with 4 SDGs," and "I do not know." Choices are guaranteed to be implemented by the pension fund if more than 50% of respondents chose in favor of three (four) SDGs. Table A1 defines the variables. \*\*\*  $p < .01$ ; \*\*  $p < .05$ ; \*  $p < .1$ .

whether respondents chose three or four SDGs. Not surprisingly, highly educated respondents are 47.7% less likely to have no opinion. And finally, people with a higher income are slightly less likely to choose four SDGs, which again renders our results to be on the conservative side, because our respondents have a higher income than the fund's population.

**Result 3:** Social preferences predict the choice for more sustainable investments; the relation is robust to including financial beliefs. This result

is consistent with a preference-based explanation for sustainable investments. Our slightly biased sample puts our findings on the conservative side.

### 3.3 Would participants agree with the implementation of sustainable investments by the pension fund? (study 2)

Following the commitment of the board to implement the decision of its participants, the pension fund increased its focus on sustainable investments in November 2018. Specifically, the pension fund further strengthened its engagement, based on the four SDGs. It increased its dialogue with a larger number of companies (+44% in 2019), had a more intense dialogue, and voted more often on shareholder meetings to enhance the sustainability of the companies in which the fund invests. In addition, the pension fund introduced portfolio screening based on the four SDGs on one-third of the participants' pension savings. The fund now invests more in companies that score well on the four SDGs and less in companies that score poorly on the four SDGs.<sup>14</sup>

The implementation of the increased focus on sustainable investments offers the opportunity to further study three key questions: First, would participants agree with the fund's implementation? Second, would sustainable preferences still drive the choice for more sustainable investments? And third, how would participants differentiate between engagement and screening when they could choose between the two? As described in the method section, participants could indicate whether they only support the increased engagement, only screening, both, or none. Participants learned the board would discuss the findings of this study in their meeting on September 9, 2020.

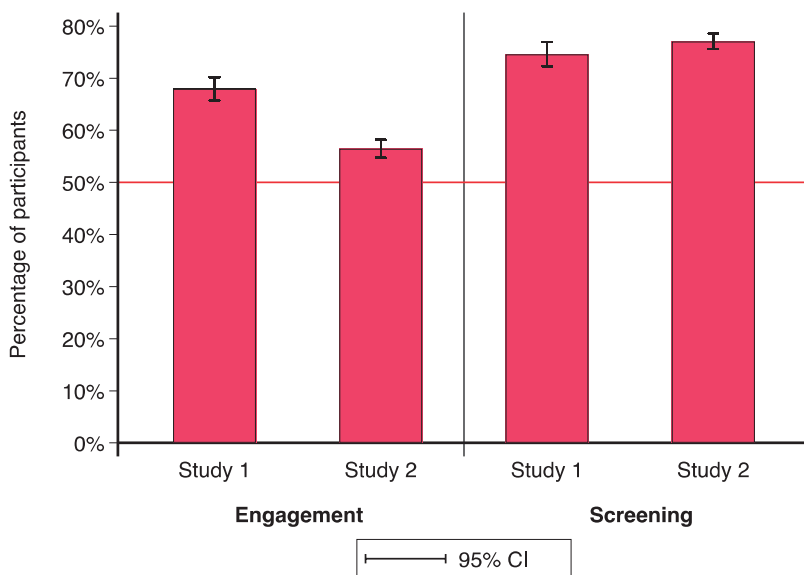
Figure 3 shows that in study 2, a majority of participants support extra engagement (56.5%), as well as the introduction of portfolio screening (77.1%). This result highlights that once we explain more concretely how the increased focus on sustainable investments has been implemented, the support for more sustainable investments remains. Participants thus agree with the fund's implementation, providing an answer to the first question.

Further, Figure 3 shows initial evidence that participants slightly prefer screening to engagement in both studies (third question). Yet, the key finding is that we find strong support for both. We address the second question further below, once we have looked at how expectations about financial performance influence the support for the additional sustainable investments implemented by the pension fund.

**Result 4:** The majority of participants agrees with the implemented extra engagement (56.5%) and with the introduction of portfolio screening (77.1%).

In Table A4, we examine how consistent the choices of participants are who participate in both surveys (246 participants, or 14.7%, of study 1). We only

<sup>14</sup> For more information on the way Pensioenfonds Detailhandel implemented its sustainable investments, see <https://www.pensioenfondsdetailhandel.nl/mvb>.



**Figure 3**  
**Preferences for Engagement and Screening (studies 1 and 2)**

The graph presents the share of participants in favor of engagement and screening, respectively. Results for studies 1 and 2 are shown separately. The question on engagement in study 1 is, “Do you want Pensioenfonds Detailhandel to add the fourth sustainable development goal ‘Responsible consumption and production’?” Answer options are “Yes, add,” “No, do not add,” and “I have no opinion regarding this matter.” The fourth SDG refers to “Responsible consumption and production,” which participants are introduced to during the survey and is in addition to the SDGs “Climate action,” “Decent work and economic growth,” and “Peace, justice, and strong institutions,” which the pension fund had already focused on prior to 2018. For a full distribution of answers, see Figure 1. The question on screening in study 1 is, “Do you prefer Pensioenfonds Detailhandel to invest more in companies that score high on environmental, social and governance factors and less in companies that score low?” Answer options are “Yes,” “No,” and “I do not know.” For a full distribution of responses, see Figure A1, panel A. The question on engagement and screening in study 2 is, “With which of the two parts of the sustainable investment strategy of Pensioenfonds Detailhandel do you agree?” Answer options are (1) “More intensive dialogue with companies,” (2) “Investing more in companies that score well on sustainability,” (3) “Both,” (4) “None,” and (5) “I do not know.” For a full distribution of responses, see Figure A1, panel B. The fraction that supports engagement is the sum of participants who agree only to more engagement and those who agree to both engagement and screening. The fraction that supports screening is the sum of participants who agree only to more screening and those who agree to both screening and engagement. Error bars represent 95% confidence intervals.

consider those who vote for or against four SDGs in study 1 and leave out the ones who are uncertain in study 1. Of the remaining 194 participants, 85.7% vote to increase engagement to four SDGs in study 1, and only 14.3% vote against. Of those in favor, 98.8% still show their support in 2020 and chose to be in favor of engagement, screening, or both. Moreover, 76.9% of those who previously were against more sustainable investing state their agreement with the steps undertaken by the fund in 2020 (again considering all three options: engagement, screening, or both). Despite the low number of participants in both surveys, the results indicate participants have not become less supportive of sustainable investing between studies 1 and 2.



Next, we ask participants how engagement and portfolio screening influence their retirement benefits once they retire. Specifically, we ask participants two questions:

**Engagement:** How do you think that the dialogue that Pensioenfonds Detailhandel enters into with companies to enhance their sustainability will influence your retirement benefits once you retire?

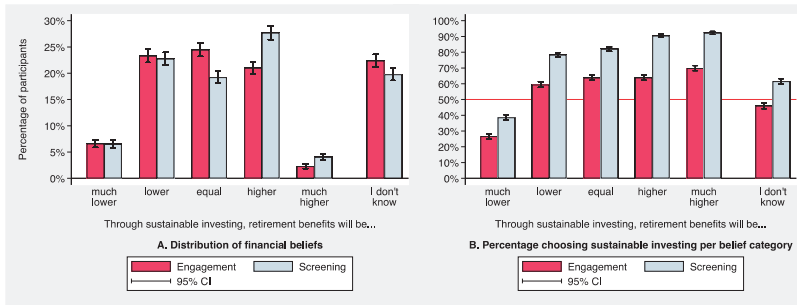
- a. Lowers my retirement benefits a lot
- b. Lowers my retirement benefits a little
- c. Has no influence on my retirement benefits
- d. Increases my retirement benefits a little
- e. Increases my retirement benefits a lot
- f. I do not know

**Portfolio screening:** How do you think that the choice to invest more in companies that score well on sustainability and less in companies that score poorly on sustainability will influence your retirement benefits once you retire?

- a. Lowers my retirement benefits a lot
- b. Lowers my retirement benefits a little
- c. Has no influence on my retirement benefits
- d. Increases my retirement benefits a little
- e. Increases my retirement benefits a lot
- f. I do not know

These financial belief questions differ in three ways from the financial belief question in study 1. First, we ask participants separately for their financial beliefs about the impact of engagement and portfolio screening, which provides insights into the expectations of pension members about different ways of implementing sustainable investments. Second, we ask participants about expectations regarding the influence of sustainable investments for their retirement benefits in study 2 instead of the financial return. The answers thereby show whether individuals think sustainable investments really will tangibly affect the amount of money they will receive on retirement. Third, we provide more granular answer options to get a more comprehensive view of participants' beliefs.

Figure 4, panel A, plots the distribution of financial beliefs within our sample of study 2. The majority of participants provides a return expectation for engagement (77.6%) and for portfolio screening (80.2%), respectively. Compared with study 1, a higher fraction of participants report return expectations, suggesting the extra details on the sustainable investment policy of the pension fund provided in study 2 increased the number of participants who provided their expectations. Similar to study 1, large heterogeneity is



**Figure 4**  
**Financial beliefs about sustainable investing (study 2)**

Panel A shows the distribution of financial beliefs. Return expectations for engagement are elicited by asking participants the following questions: “How do you think that the dialogue that Pensioenfond Detailhandel enters into with companies to enhance their sustainability will influence your retirement benefit once you retire?”; return expectations for screening through the question “How do you think that the choice to invest more in companies that score well on sustainability and less in companies that score poor on sustainability will influence your retirement benefit once you retire?” Answer options in both cases are (1) “lowers my retirement benefits a lot,” (2) “lowers my retirement benefits a little,” (3) “has no influence on my retirement benefits,” (4) “increases my retirement benefits a little,” (5) “increases my retirement benefits a lot,” and (6) “I don’t know.” Panel B presents the percentage of participants who agree to engagement or screening for each return expectation separately. The share of sustainable investing refers to the question, “With which of the two parts of the sustainable investment strategy of Pensioenfond Detailhandel do you agree?” Answer options are (1) “More intensive dialogue with companies,” (2) “Investing more in companies that score well on sustainability,” (3) “Both,” (4) “None,” and (5) “I do not know.” For a full distribution of responses, see Figure A1, panel B. The fraction that supports engagement is the sum of participants who agreed only to more engagement and those who agree to both engagement and screening. The fraction that supports screening is the sum of participants who agree only to more screening and those who agree to both screening and engagement. Error bars represent 95% confidence intervals.

present in the beliefs about the financial consequences of more sustainable investments. Participants are slightly more positive about the influence of portfolio screening than about the influence of engagement for their retirement benefits. We find 4.1% believe portfolio screening will considerably increase their retirement benefits versus 2.3% for engagement, and 27.7% believe screening will minimally increase benefits versus 21.0% (Mann-Whitney test,  $p$ -value < .001). A similar fraction believes engagement and portfolio screening will have a negative influence on their retirement benefits. Additionally, 23.3% and 22.8% think engagement and screening, respectively, will slightly lower their retirement benefit; and 6.6% and 6.5% think engagement and screening will lower their retirement benefits a lot (Mann-Whitney test,  $p$ -value > .612). We find 24.5% and 19.2% (Mann-Whitney test,  $p$ -value < .001) believe engagement and portfolio screening will have no influence on their future retirement benefits. Again, return expectations are clearly not overly favorable toward sustainable investing.

Figure 4, panel B, shows participants are generally in favor of engagement and portfolio screening, regardless of return expectations. And 59.4% and 78.3% of participants who expect slightly lower retirement benefits through engagement and screening, respectively, are still in favor of the sustainable investment actions taken by the fund. For those who expect no influence of

engagement and screening on their retirement benefits, the support is 63.8% and 82.1%, respectively. Exceptions are individuals who expect engagement and screening will result in much lower pension benefits whereby only 26.7% support engagement and 38.7% support screening. Among the group unsure about the effects of sustainable investments for their retirement benefits, 46.0% support engagement and 61.6% support screening.

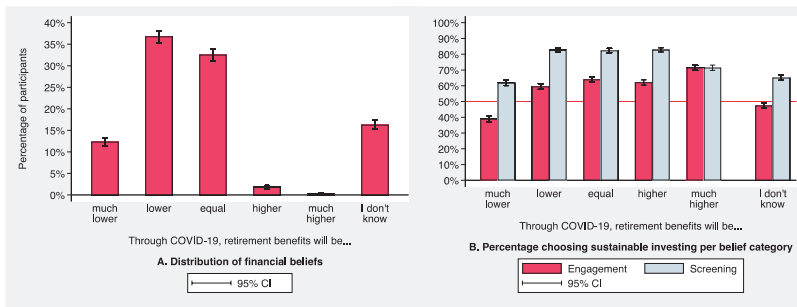
These findings are largely in line with those from study 1 and provide initial evidence that support for sustainable investments over time is strong. Yet, the special circumstances during the time of our second study allow us to go one step further and address another concern commonly expressed: that the support for sustainable investments is pro-cyclical. In other words, people support sustainable investing as long as they are doing well themselves (Güth, Schmidt, and Sutter 2007). In June 2020, when we ran our second study, the COVID-19 pandemic had caused a period of significant economic downturn, putting Dutch pension funds' balance sheets under pressure. This environment allows us to investigate how beliefs about an economic crisis (i.e., about the future economic effect of the coronavirus) affect the support for more sustainable investments. We ask participants the following:

How do you think that the corona crisis will influence your retirement benefits once you retire?

- a. It will lower my retirement benefits a lot
- b. It will lower my retirement benefits a little
- c. It eventually has no influence on my retirement benefits
- d. it will increase my retirement benefits a little
- e. It will increase my retirement benefits a lot
- f. I do not know

Figure 5, panel A, shows 36.8% of individuals expect the corona crisis will slightly lower their retirement benefits, and 12.3% think it will significantly lower their retirement benefits. Additionally, 32.6% think the pandemic will eventually have no influence on their pension benefits, and 16.3% do not know. Only 2.0% think it will eventually have a positive effect. This belief distribution shows participants see the economic impact of the COVID-19 pandemic as more than a minor, temporary economic recession.

Strikingly, the support for portfolio screening is independent of the beliefs about the influence of the corona crisis for pension benefits (Figure 5, panel B). Even among the group that expects the COVID-19 crisis to considerably lower their retirement benefits, 61.8% support portfolio screening. No majority supports extra engagement for those participants who expect the corona crisis to significantly lower their pension benefits, or who are not sure about its impact. But a majority among those who expect the corona crisis to have a mildly negative influence on their pension benefits and those who think COVID-19



**Figure 5**  
**Beliefs about the influence of COVID-19 on retirement benefits (study 2)**

Figure 5, panel A, shows the distribution of financial beliefs about the impact of COVID-19 on retirement benefits. Beliefs about the impact of COVID-19 on retirement benefits are elicited by asking participants the following question: “How do you think that the corona crisis will influence your retirement benefits once you retire?” Answer options are (1) “it will lower my retirement benefits a lot,” (2) “it will lower my retirement benefits a little,” (3) “it eventually has no influence on my retirement benefits,” (4) “it will increase my retirement benefits a little,” (5) “it will increase my retirement benefits a lot,” and (6) “I don’t know.” Figure 5, panel B, presents the percentage of participants agreeing with engagement or screening for each COVID-19 belief category separately. The share of sustainable investing refers to the question, “With which of the two parts of the sustainable investment strategy of Pensioenfonds Detailhandel do you agree?” Answer options are (1) “More intensive dialogue with companies,” (2) “Investing more in companies that score well on sustainability,” (3) “Both,” (4) “None,” and (5) “I do not know.” For a full distribution of responses, see Figure A1, panel B. The fraction that supports engagement is the sum of participants who agree only to more engagement and those who agree to both engagement and screening. The fraction that supports screening is the sum of participants who agree only to more screening and those who agree to both screening and engagement. Error bars represent 95% confidence intervals.

will have no influence do support engagement. This finding shows sustainable investing has significant support even during times of economic hardship.

**Result 5:** The majority of participants support extra engagement and portfolio screening, even if they believe the retirement benefits will be a bit lower. The support is much lower for those participants who expect engagement and screening to significantly lower their pension benefits.

Having shown financial beliefs are not the main driver of the choice for more sustainable investments, either in 2018 or in 2020, we turn to social preferences, which were a key driver of the decision to vote for more sustainable investments in 2018. Next, we investigate whether social preferences also predict the support for engagement and portfolio screening implemented by the pension fund. Table 4 shows the results of a multinomial logit regression in which the dependent variable indicates the support for the implemented sustainable-investment strategy. The dependent variable takes one of five values: (1) only support engagement, (2) only support screening, (3) support both, (4) I do not know, and (5) support none. The latter category forms the base group. The table reports relative-risk ratios.

As in 2018, we find social preferences are an important predictor of the support for more sustainable investments (answering question two from above). A one-standard-deviation increase in social preferences is related to a 91.7%

**Table 4**  
**Relation between social preferences and sustainable investing (study 2)**

	Engagement	Screening	Both	Do not know
<i>Preferences</i>				
Social preferences (std)	1.9174*** (0.2085)	2.1152*** (0.1948)	2.6156*** (0.2360)	1.4036*** (0.1439)
<i>Financial beliefs</i>				
Lower returns with more engagement	0.2733*** (0.0795)	0.2048*** (0.0522)	0.1917*** (0.0477)	0.4704** (0.1463)
Higher returns with more engagement	4.2657** (2.4796)	6.2860*** (3.4861)	6.3181*** (3.4857)	3.8313** (2.3357)
Do not know	0.9288 (0.3745)	1.2266 (0.4331)	1.2190 (0.4245)	7.3687*** (2.8446)
<i>Demographics</i>				
Female	1.5330* (0.3394)	1.9121*** (0.3603)	1.6421*** (0.3025)	3.4575*** (0.7408)
Age	0.9825** (0.0081)	0.9985 (0.0070)	1.0081 (0.0069)	1.0010 (0.0078)
Highly educated	1.1346 (0.2865)	0.8784 (0.1943)	1.2830 (0.2748)	0.5018** (0.1371)
<i>Financial background</i>				
Low monthly income	0.4765*** (0.1346)	0.7661 (0.1835)	0.6433* (0.1509)	0.7865 (0.2079)
High monthly income	0.5421** (0.1641)	0.4554*** (0.1220)	0.4616*** (0.1193)	0.4956** (0.1564)
Do not report	0.3973*** (0.1317)	0.5138** (0.1426)	0.3452*** (0.0943)	0.5770* (0.1740)
Constant	10.2569*** (5.4698)	15.1152*** (7.0799)	18.6711*** (8.5727)	1.4738 (0.7934)
Observations			3,186	
Pseudo- $R^2$			.0973	

This table presents relative-risk ratios of a multinomial logit regression. The dependent variable is based on the outcome of the question, “To which of the two parts of the sustainable investment strategy of Pensioenfonds Detailhandel do you agree? More intensive dialogue with companies; Investing more in companies that score well on sustainability; Both; None; I do not know,” and takes on the corresponding five values: “engagement,” “screening,” “both,” “I don’t know,” and “none.” Respondents who agree with “none” make up the baseline. For summary statistics, see Table 1, panel B. *Social preferences* are elicited by asking respondents “How willing are you to give to good causes without expecting anything in return?” on a 10-point Likert scale from completely unwilling to completely willing (see Falk et al. (2016)). The variable is standardized. *Financial beliefs* are elicited by asking participants to answer the following question: “How do you think that the dialogue that Pensioenfonds Detailhandel enters into with companies to enhance their sustainability will influence your retirement benefits once you retire?” Answer options are (a) lowers my retirement benefits a lot, (b) lowers my retirement benefits a little, (c) has no influence on my retirement benefits, (d) increases my retirement benefits a little, (e) increases my retirement benefits a lot, and (f) I do not know. Answer options (a) and (b) are merged into “Lower returns with more engagement” as well as (d) and (e) into “Higher returns with more engagement.” For the same regression without control variables, as well as with controls for financial beliefs on screening, see Tables A5 and A6 in Appendix A. Table A1 defines the variables. \*\*\*  $p < .01$ ; \*\*  $p < .05$ ; \*  $p < .1$ .

increase in the likelihood that a participant will agree with extra engagement, a 111.5% increase for supporting screening, and a 161.6% increase for supporting both ( $p < .001$ ). Participants with stronger social preferences are also 40.4% more likely to indicate they do not know whether they support engagement or screening ( $p = .001$ ) as opposed to preferring neither of the two.

The table further shows financial return expectations are also significantly related to the support for more sustainable investments. Participants who expect engagement to lower their retirement benefits somewhat or a lot are less likely to support either engagement or screening. On the other hand, those who expect engagement to increase their retirement benefits somewhat or a lot were more

likely to support screening and engagement. Also consistent with the results from 2018, we see women are more likely than men to support sustainable investments. Higher-income individuals are less likely than lower-income individuals to support engagement or screening.

**Result 6:** Social preferences remain an important predictor of the support for extra engagement and the introduction of portfolio screening after showing participants how the fund incorporated the results of the 2018 survey.

### 3.4 External validation: Voting behavior and sustainable investments

To test for external validity of our results, we explore the relation between the support for more sustainable pension investments and the participants' reported voting behavior. We construct respondents' preferences for sustainable policies by evaluating the stance on sustainability of the political party they support. We use the official voting guide for the 2017 Dutch national elections.<sup>15</sup> Five of the 30 questions posed in this voting guide contend with issues related to sustainability. All questions are posed such that they can be answered with "agree," "disagree," or "neither of the two." A party receives one point for each question for which they chose the more sustainable option. If a party chooses "neither of the two," it receives half a point. For example, consider the statement "All coal-fired power stations may remain open for the time being." If a party agrees to this statement, it receives zero points; if a party disagrees, it receives one point; and if it says neither of the two, it receives half a point. Each political party thus receives a score between 0 and 5. Table A3 presents the entire construction of the score.

In study 1, we ask participants which political party they voted for in the 2017 national elections. In study 2, we ask which political party the respondent would vote for if national elections were held that day.

Table A2, panel A, shows that in study 1, voters of political parties with a stronger preference for sustainable policies show more support for four SDGs. In particular, voters for Partij voor de Dieren and GroenLinks favor four SDGs (91.5% and 89.1%, respectively). On the other hand, voters for parties such as the VVD or the PVV with a sustainability score of zero show one of the lowest acceptance rates for four SDGs. Nevertheless, across voters for all political parties, more than 50% choose four SDGs (except for the party "Forum voor Democratie"). Among those who reported not having voted in the last national elections, 67.9% are in favor of four SDGs. And, even among those who do not state the party they voted for, the majority (68.1%) chooses four SDGs.

The first specification in Table 5 shows a respondent of study 1 who voted for a party with a one-standard-deviation stronger preference for sustainable policies is 56.7% more likely to also choose the more sustainable option in our experiment ( $p$ -value < .001). When we include control variables in

<sup>15</sup> See <https://tweedekamer2017.stemwijzer.nl>.

**Table 5**  
**Relation between voting behavior and sustainable investing (study 1)**

	(1)		(2)	
	4 SDGs	No opinion	4 SDGs	No opinion
<i>Preferences</i>				
Social preferences (SD)			1.5058*** (0.2020)	0.8998 (0.1471)
Preferences for sustainable policies (SD)	1.5668*** (0.1961)	1.0712 (0.1685)	1.4620*** (0.2079)	1.0325 (0.1826)
Constant	8.2138*** (1.0484)	1.2735 (0.2047)	20.8139*** (13.7387)	5.0309** (4.0582)
Observations	772		731	
Pseudo- <i>R</i> <sup>2</sup>	.0212		.1394	
Financial beliefs	No		Yes	
Demographics	No		Yes	
Financial background	No		Yes	

This table presents relative-risk ratios of a multinomial logit regression. The dependent variable is based on the outcome of the question, “Do you want Pensioenfonds Detailhandel to add the fourth sustainable development goal ‘Responsible consumption and production’? Yes, add; No, do not add; I have no opinion regarding this matter,” and takes on the corresponding three values: “3 SDGs,” “4 SDGs,” and “I have no opinion regarding this matter.” 3SDGs refers to the sustainable development goals of “Climate action,” “Decent work and economic growth,” and “Peace, justice, and strong institutions,” which the pension fund had already focused on prior to 2018. 4 SDGs refers to the three SDGs just mentioned plus the fourth SDG, “Responsible consumption and production,” which participants are introduced to during the survey. The above-stated question refers to the default treatment where participants can add the fourth SDG. The default where participants can remove the fourth SDG is treated analogously, for brevity, without providing further explanation here. Respondents who chose three SDGs make up the baseline. For summary statistics, see Table 1, panel A. *Social preferences* are elicited by asking respondents “How willing are you to give to good causes without expecting anything in return?” on a 10-point Likert scale from completely unwilling to completely willing (see Falk et al. (2016)). The variable is standardized. *Preferences for sustainable policies* is a standardized score that uses the self-reported voting behavior of participants in the 2017 Dutch national elections is constructed by evaluating Dutch parties on their stance on sustainability using the official voting guide for the 2017 Dutch national elections (<https://tweedekamer2017.stemwijzer.nl>). Five of the 30 questions shown contend with sustainable issues. All questions are posed such that they can be answered with “agree,” “disagree,” or “neither of the two.” A party received one point for each question for which they chose the more sustainable option. If a party chooses “neither of the two,” it receives half a point (see Table A3). Table A1 defines the variables. \*\*\*  $p < .01$ ; \*\*  $p < .05$ ; \*  $p < .1$ .

specification (2), the effect size slightly decreases to 46.2% and stays highly significant ( $p$ -value = .007). These results show the external validity of the support for four SDGs. Participants take their choice seriously as it is in line with the degree of sustainability of the political party they voted for in the last national election. Remarkably, when we control for participants’ preferences for sustainable policies, the effect size of social preferences barely changes from that in Table 3.

Consistent with the results for study 1, preferences for sustainable policies are predictive of the support for more sustainable investments in study 2 (Table 6). A one-standard-deviation stronger preference for sustainable policies predicts a (nonsignificant) 25.5% increase in the likelihood of supporting only engagement ( $p$ -value = .133), a 52.6% increase for only portfolio screening ( $p$ -value = .002), and a 59.3% increase for supporting both ( $p$ -value < .001). Moreover, social preferences remain a main predictor for the support for the sustainable investments implemented by the pension fund, even when we control for preferences for sustainable policies. This finding emphasizes the importance of strong social preferences as an explanation for

**Table 6**  
**Relation between voting behavior and sustainable investing (study 2)**

	Engagement	Screening	Both	Do not know
<i>Preferences</i>				
Social preferences (std)	1.7799*** (0.2333)	2.1360*** (0.2440)	2.4871*** (0.2775)	1.4676*** (0.1910)
Preferences for sustainable policies (std)	1.2545 (0.1893)	1.5264*** (0.2050)	1.5932*** (0.2102)	1.2018 (0.1818)
Constant	16.3999*** (10.7500)	28.8430*** (16.9999)	27.3021*** (15.8060)	2.3193 (1.5844)
Observations			2,375	
Pseudo- $R^2$			.0919	
Financial beliefs			Yes	
Demographics			Yes	
Financial background			Yes	

This table presents relative-risk ratios of a multinomial logit regression. The dependent variable is based on the outcome of the question, "To which of the two parts of the sustainable investment strategy of Pensioenfond Detailhandel do you agree? More intensive dialogue with companies; Investing more in companies that score well on sustainability; Both; None; I do not know" and takes on the corresponding five values: "engagement," "screening," "both," "I don't know," and "none." Respondents who agree with "none" make up the baseline. For summary statistics, see Table 1, panel B. *Social preferences* are elicited by asking respondents "How willing are you to give to good causes without expecting anything in return?" on a 10-point Likert scale from completely unwilling to completely willing (see Falk et al. (2016)). The variable is standardized. *Preferences for sustainable policies* is a standardized score that uses the self-reported voting behavior for the upcoming Dutch national election and is constructed by evaluating Dutch parties on their stance on sustainability using the official voting guide for the 2017 Dutch national elections (<https://tweedekamer2017.stemwijzer.nl>). There is no official voting guide for the upcoming Dutch national elections in 2021 yet. Five of the 30 questions shown contend with sustainable issues. All questions are posed such that they can be answered with "agree," "disagree," or "neither of the two." A party receives one point for each question for which they chose the more sustainable option. If a party chooses "neither of the two," it receives half a point (see Table A3). Table A1 defines the variables. \*\*\*  $p < .01$ ; \*\*  $p < .05$ ; \*  $p < .1$ .

the choice to invest more sustainably. And similar to study 1, the effect size of social preferences barely changes from that in Table 4 when we control for participants' preferences for sustainable policies.

**Result 7:** Respondents who vote for a party that cares about sustainability are more likely to support more sustainable investing. This finding provides external validity consistent with a preference-based explanation for sustainable investments.

## 4. Additional Findings for Study 1

### 4.1 Default effects

The status quo bias could hide people's actual preferences (e.g., Samuelson and Zeckhauser 1988; Tversky, and Kahneman 1991). Consider receiving investment advice, where the default option is to not focus on sustainable investments. Those who prefer to invest sustainably but fear returns will be too low stay with the default and do not reveal their actual preferences. With our different treatments, we are able to control for status quo effects.

Table 7 shows the status quo does not affect the choice for more sustainable investments. We use a multinomial logit regression in which the dependent variable takes on the three values 3 SDGs, 4 SDGs, and No opinion. If a status



**Table 7**  
**Default effects and sustainable investing (study 1)**

	(1)		(2)	
	4 SDGs	No opinion	4 SDGs	No opinion
<i>Preferences</i>				
Social preferences (std)			1.5874*** (0.1575)	0.9490 (0.1114)
<i>Treatment effects</i>				
4 SDG default	0.8013 (0.1286)	0.7646 (0.1401)	1.0133 (0.2061)	0.7811 (0.1907)
Constant	7.0119*** (0.8178)	2.2381*** (0.2937)	20.5008*** (10.3080)	4.8554*** (2.8993)
Observations	1,669	1,669	1,212	1,212
Financial beliefs	No	No	Yes	Yes
Demographics	No	No	Yes	Yes
Financial background	No	No	Yes	Yes

This table presents relative-risk ratios of a multinomial logit regression. The dependent variable is based on the outcome of a question that depends on the treatment group: In the 3 SDG default, participants are told the pension fund currently focuses on three SDGs. Participants are introduced to the fourth SDG, “Responsible consumption and production,” and can choose: “Do you want Pensioenfond Detailhandel to add the fourth sustainable development goal ‘Responsible consumption and production?’” Answer options are “Yes, add,” “No, do not add,” and “I have no opinion regarding this matter.” In the 4 SDG default treatment, we communicated that the pension fund’s future policy would include a fourth SDG, “Responsible consumption and production.” Participants can then choose: “Do you want Pensioenfond Detailhandel to leave out the fourth sustainable development goal ‘Responsible consumption and production?’” Answer options are “Yes, leave it out,” “No, do not leave it out,” and “I have no opinion regarding this matter.” In both default settings, the dependent variable takes on the corresponding three values: “3 SDGs,” “4 SDGs,” and “I have no opinion regarding this matter.” 3SDGs refers to the SDGs “Climate action,” “Decent work and economic growth,” and “Peace, justice, and strong institutions,” which the pension fund had already focused on prior to 2018. 4 SDGs refers to the three SDGs just mentioned plus the fourth SDG, “Responsible consumption and production,” which participants are introduced to during the survey. Respondents who chose three SDGs make up the baseline. For summary statistics, see Table 1, panel A. *Social preferences* are elicited by asking respondents “How willing are you to give to good causes without expecting anything in return?” on a 10-point Likert scale from completely unwilling to completely willing (see Falk et al. (2016)). We standardized this variable. Choices were guaranteed to be implemented by the pension fund if more than 50% of respondents choose in favor of three (four) SDGs. Table A1 defines the variables. \*\*\*  $p < .01$ ; \*\*  $p < .05$ ; \*  $p < .1$ .

quo bias were present, we would expect respondents in the 4 SDG default treatment to be more likely to support four SDGs than respondents in the 3 SDG default. Accordingly, the coefficient for 4 SDG default in the first column of specification (1) should be significantly greater than one. The nonsignificance of the coefficient ( $\beta=0.8013$ ) shows it is not. In specification (2), we include financial beliefs, demographics, and information on the financial background as controls. The coefficient for the 4 SDG default dummy slightly increases to  $\beta=0.8013$  but remains nonsignificant (difference from 1:  $p$ -value = .948). Thus, framing has no effect on the choice between three or four SDGs.

More importantly, controlling for default effects does not influence the effect size and the significance level of social preferences, which indicates strong preferences drive the decision to invest sustainably. An individual with strong preferences for sustainable investing will choose more sustainable investments, regardless of the default option.

## 4.2 Confusion and misunderstanding do not explain our results

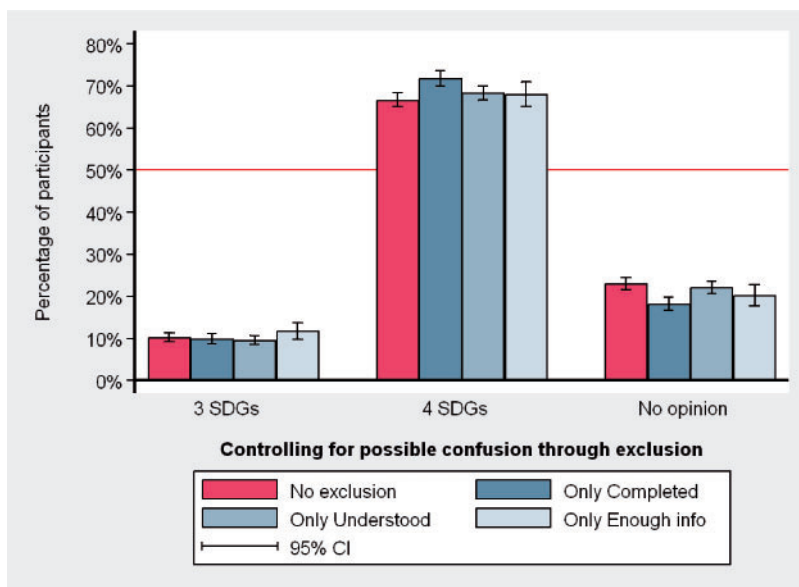
The strong support for sustainable investing in study 1 could be explained by respondents being confused or lacking information. Given the results of our second study, where we lay out the detailed implementation of increased sustainable investing and find very similar results, confusion is unlikely to be driving participants in the first study. Yet, we additionally address a potential concern by reanalyzing our results of study 1, excluding (1) respondents who started to vote but dropped out of the survey before finishing, (2) respondents who did not understand the treatment and failed our comprehension question (see Section 1), and (3) respondents who reported they would have liked to receive more information before deciding whether to choose three or four SDGs.

We successively exclude each of the three types. Figure 6 present the results. The first bar represents the choice distribution of all participants, without exclusion. The second bar shows the choice distribution when we exclude respondents who did not complete the survey. The dropout rate was 26.9%. The third bar shows the choice distribution when we exclude participants who did not understand the treatment they were in (the case for 14.0% of participants). The fourth bar shows the distribution of choices when we exclude participants who wanted more information in order to make their decision (33.5%). Importantly, neither of the exclusion criteria ranging between 67.9% (all included) and 73.9% (only those who completed the survey) affects support for four SDGs.

## 4.3 Social signaling

Social signaling can play a significant role when deciding whether to invest sustainably (Riedl and Smeets 2017). It is the notion that people prefer to be seen as prosocial individuals (Glazer and Konrad 1996; Bénabou, and Tirole 2006; Ellingsen and Johannesson 2008; Ariely, Bracha, and Meier 2009; Tonin and Vlassopoulos 2013; Cappelen et al. 2017). If social signaling is responsible for our findings, it would undermine our claim that strong social preferences are a key driver. To study the effect of social signaling, we use a modified version of the question asked in Riedl and Smeets (2017). Specifically, we ask respondents “How likely is it that you will talk to your friends about this survey?” on a 10-point Likert scale (1 = *very unlikely*, 10 = *very likely*). We expect respondents with a higher desire to signal their pro-sociality to be slightly more likely to choose four SDGs. We therefore split the subjects into a group with an above-median social-signaling desire (ratings of 3 and higher, 58.4% of the sample) and a group with a below-median social signaling desire (41.6%).

Figure A2 presents the results of testing for social signaling. We find a significant difference as 78.3% of those with a high signaling desire and 67.5% of those with a low signaling desire chose four SDGs ( $p$ -value < .001). These results are consistent with Riedl and Smeets (2017), showing that individuals who signal prosocial investments through talking are more likely to favor sustainable investments. Yet, within both groups, the majority chooses



**Figure 6**  
**Controlling for possible confusion (study 1)**

The graph presents the distribution of all respondents (leftmost bar) and of three restricted subsamples separately regarding the following question: “Do you want Pensioenfonds Detailhandel to add the fourth sustainable development goal ‘Responsible consumption and production’? Yes, add; No, do not add; I have no opinion regarding this matter.” 3SDGs refers to the SDGs “Climate action,” “Decent work and economic growth,” and “Peace, justice, and strong institutions,” which the pension fund had already focused on prior to 2018. 4 SDGs refers to the three SDGs just mentioned plus the fourth SDG, “Responsible consumption and production,” which participants are introduced to during the survey. The above-stated question refers to the default treatment where participants can add the fourth SDG. The default where participants can remove the fourth SDG is treated analogously, for brevity, without providing further explanation here. Choices are guaranteed to be implemented by the pension fund if more than 50% of respondents choose in favor of three (four) SDGs. The second bar from the left (dark blue) presents the distribution of choices where we exclude respondents who dropped out of the survey after giving a choice on sustainable investing but before the end of the survey. The second bar from the right (medium blue) presents the distribution of choices where we exclude respondents who wrongly answer the control question, “If a majority chooses ‘yes, add’ (‘no, leave it out’), a. Pensioenfonds Detailhandel guarantees to add (leave out) the fourth SDG; b. Pensioenfonds Detailhandel cannot guarantee that it will add (leave out) the fourth SDG, but may include the results of the survey in its choice.” The rightmost bar (light blue) presents the distribution of choices where we exclude respondents who report that they would have liked to receive more information before deciding whether to choose three or four SDGs. Error bars represent 95% confidence intervals.

to expand sustainable investing, which indicates social signaling matters but cannot explain the large support for more sustainable investments.

**4.4 Pivotal voting**

Subjects in our experiment may not perceive their choice as consequential. They might believe their vote is unlikely to be pivotal. In that case, they may perceive the real choice as a hypothetical one, which could explain the large support for more sustainable investments. Several aspects suggest this potential concern does not drive our results.

First, the paradox of voting predicts rational people do not vote as the expected benefits of casting the pivotal vote are lower than the expected costs (Downs 1957). For example, Mulligan and Hunter (2002) find only 1 of every 89,000 votes cast in U.S. Congressional elections and 1 of 15,000 in state legislator elections were pivotal.<sup>16</sup> Nevertheless, turnout rates in political elections are usually quite high, which makes the assertion that voters do not care about their vote when it is unlikely to be pivotal difficult to justify.

Second, even though theory and field evidence suggest people take voting seriously, our participants may not. Vossler et al. (2012) conclude that “truthful preference revelation is possible, provided that participants view their decisions as having more than a weak chance of influencing policy.” In study 1, we therefore distinguish between participants who expected to be more pivotal and those who expected to be less pivotal. If participants only support more sustainable investments when they perceive their vote as not being pivotal, our finding that a majority prefers more sustainable investments would be spurious. We tackle this concern in two different ways. First, we ask participants to estimate the percentage of participants who would choose three SDGs, four SDGs, or opt for “no opinion.” Subjects who predict the share of those in favor of four SDGs would be close to 50% should perceive their vote as being more pivotal than subjects with a prediction far away from 50%. Following this outlined expectation, we would expect a gap to arise between subjects with predictions close to 50% and subjects with predictions far away from 50%, with the latter showing greater support for more sustainable investments. We define “pivotal” voters as those with predictions between 40% and 60%, and “nonpivotal” voters as those with predictions below 40% or above 60%, leaving us with 458 pivotal subjects (31.6% of the entire sample) and 991 nonpivotal voters (68.4%). We found no difference between pivotal and nonpivotal voters: 73.6% of pivotal and 70.4% of nonpivotal subjects choose four SDGs ( $p$ -value = .218).<sup>17</sup> Second, we asked subjects to estimate how many of the 25,000 invited people would participate in the experiment.<sup>18</sup> The median estimate is 10,000 participants. We define a pivotal voter as someone who estimates that less than 10,000 would participate (meaning the voter has a relatively higher probability of being pivotal), leaving us with 586 pivotal (52.0%) and 635 nonpivotal subjects (48.0%). Again, we did not find a gap: respectively, 72.5% respectively and 75.1% of subjects choose four SDGs ( $p$ -value = .303).<sup>19</sup>

<sup>16</sup> A pivotal vote in this case means the candidate of that specific election tied for first or won by a single vote.

<sup>17</sup> This finding is robust to altering the definition of a pivotal voter. We also did not find a difference when we looked at those who predict the share of respondents choosing four SDGs would be between 45% and 55%, and between 35% and 65%.

<sup>18</sup> We gave 25,000 as reference point, because we invited this many participants to participate in these two treatments.

<sup>19</sup> This finding is robust to altering the definition of a pivotal voter. We also do not find a difference when we look at those who estimate less than 8,000 (bottom 45%) and less than 11,000 (bottom 65%) would participate.

As an additional check, we looked at the two above-mentioned definitions of a pivotal voter jointly. One hundred ninety-two subjects predict the share of respondents choosing four SDGs would be between 40% and 60%, while estimating less than 10,000 would participate in the survey (“double-pivotal”). Four hundred thirty-seven subjects predict the share would be less than 40% or more than 60%, while estimating more than 10,000 would participate (double-nonpivotal). We again find no gap (percentage choosing four SDGs: double-pivotal, 71.9% vs. double-non-pivotal, 74.1%;  $p$ -value = .554).

Taken together, we can rule out that participants support more sustainable investments because they think their vote will not be pivotal.

## 5. Conclusion

The United Nations’ SDGs have created societal and political pressure for companies and investors to promote sustainability. We run two field surveys with a pension fund that granted its members a real vote on its sustainable-investment policy. In the first study, a majority (two-thirds) of the plan participants are willing to support increased engagement with companies based on the selected SDGs. In the second study, a majority again support more sustainable investments when participants see how the pension fund implemented the increased focus on sustainable investments (+44% engagement, +33% portfolio screening). Most participants believe a greater focus on sustainability does not come at the expense of financial returns, or are at least uncertain about whether it does. But even among those who do expect a reduction in financial returns, the majority wants to put their pension money on the table to promote sustainability. A key reason is participants’ strong social preferences.

Social preferences have a significant influence on many economic decisions, because they are key to understanding what incentivizes people (Fehr and Fischbacher 2002; Bandiera, Barankay, and Rasul 2005), can decrease free-riding problems (Fehr and Gächter 2000), and explain why people are willing to sacrifice resources to increase social welfare (Andreoni 1990; Fehr and Schmidt 1999; Bolton and Ockenfels 2000; Charness and Rabin 2002). Yet, whether social preferences matter in financial markets is unclear (Dufwenberg et al. 2011; Falk and Szech 2013; Bartling, Weber, and Yao 2015). As it stands, European investment managers elicit clients’ risk preferences but mostly ignore social preferences (EUROSIF 2016, p. 82).

Why do we observe a reluctance of institutional investors toward measuring social preferences of their clients? Although previous research shows the importance of social preferences for some investors, institutional investors have had difficulty using these findings when deciding on behalf of their clients. For instance, Bollen (2007), Hong and Kostovetsky (2012), Hartzmark and Sussman (2019), and Barber, Morse, and Yasuda (2021) show investors value sustainability. Yet, consider a pension fund manager: with aggregate-level

data, she will have trouble identifying her clients' preferences for sustainable investments. And even with findings at the individual level, the pension fund manager would not know what to do. For example, Riedl and Smeets (2017) show 16% of their sample holds a sustainable mutual fund. The pension fund manager could therefore say the majority does not want to support sustainable investments. Case closed. Yet, Beshears et al. (2008) show inertia often keeps people from acting according to their true preferences. Thus, fund managers have to specifically elicit the social preferences of their clients and act accordingly. We offer a simple method for institutional investors to be able to cater to the social preferences of their clients.

The question that remains is how financial institutions should act on the results of such client surveys. Typically, low response rates to surveys are a challenge. An alternative used by many pension fund boards is to decide on sustainable investments on behalf of their clients without asking them. The question is whether a nonrepresentative handful of board members really know what their beneficiaries want. Insights from studies on financial advisors, who invest on behalf of clients, show advisors add little value to their clients and might even hurt their performance (Bergstresser, Chalmers, and Tufano 2008; Chalmers and Reuter 2012; Hackethal, Haliassos, and Jappelli 2012).

Another important aspect is figuring out the best way to implement sustainable investments. Our paper focuses on measuring preferences for sustainable investments, and future research should establish methods for mapping these preferences to sustainable investment policies. Our paper makes a step in this direction by distinguishing between preferences for engagement and portfolio screening. On the basis of the outcomes, the board of the pension fund increased its engagement program and introduced portfolio screening based on the four chosen SDGs. Once participants saw how the pension board implemented sustainable investments, a majority still supported more sustainable investments. This finding suggests participants see the actions taken by the board as a positive contribution to their welfare. Future research should shed more light on the welfare consequences of increased sustainable investments by pension funds.

Our study opens several other possibilities for future research. First, our experiment took place in the Netherlands, a country known for its relatively large share of assets invested sustainably. According to EUROSIF (2018) and US SIF (2018), the total assets under management in SRI are about €2.8 trillion in the Netherlands and €12 trillion in the United States. Given that the Netherlands has 17 million inhabitants, and the United States has 327 million, sustainable investments are relatively prominent in the Netherlands. Yet, interestingly, Dutch attitudes toward the environment are quite similar to those in the United States. For example, 45.2% of the Dutch agree protecting the environment should be prioritized, even if it means slower economic growth, which is close to the 38.2% for the United States (World Values Survey Association 2016). Moreover, in 2018, households' per capita charitable

donations totaled €308 (US\$363) in the Netherlands (Giving in the Netherlands 2020), which is lower than the US\$2,514 donated by individuals in the United States in 2017 (Giving USA 2018). Overall, prosocial behavior of citizens in the Netherlands does not particularly stand out.

Still, cultural differences can have an important influence on economic decisions (e.g., Guiso, Sapienza, and Zingales 2006). For example, European institutional investors have a stronger influence on the environmental and social performance of countries than do American institutional investors (Dyck et al. 2019). Why? Are American pension fund participants less willing to support sustainable investments, or do fund managers impose their own political preferences on their clients' investments (see Hong and Kostovetsky 2012)? An important avenue for future research is to investigate the preferences for sustainable investments in other countries and different populations.

Second, future studies could investigate settings in which pension funds move from no sustainable investments to some degree of sustainable investments. In the Netherlands, and most other European countries, a majority of pension funds already moderately engage in sustainable investments. The European Commission's proposal to measure clients' preferences for sustainable investments will therefore mostly affect the degree to which pension funds focus on sustainable investments. Yet, finding out the preferences of pension fund members that were not previously exposed to any form of sustainable investments also would be interesting. The United States offers many opportunities to study this question, because many pension funds have not yet focused on sustainable investments but have started to consider doing so. Thus, studying real choices with actual consequences will be crucial.

Third, the question is whether pension fund participants who want more sustainable investments are motivated by the societal impact or by warm glow (Andreoni 1990). For example, Hartzmark and Sussman (2019) and Ceccarelli, Ramelli, and Wagner (2019) show investors respond to sustainability ratings of mutual funds but do not react to underlying sustainability data. This attention effect created by sustainable ratings, such as the Morningstar Sustainability Globes, suggests investors might be more motivated by a warm glow than a real social impact. Future research can investigate this possibility in more depth.

Outside the investment industry, our proposed method can inform decision-makers who decide on behalf of others. For example, politicians could elicit social preferences to address key sustainable-policy questions. If politicians were to rely on real preferences, they could create wider public support for the outcome, even if doing so is costly.

## Appendix A

**Table A1**  
**Variable definition**

Variable	Description
<i>Study 1</i>	
<i>Choice for sustainable investments (engagement)</i>	
3 SDG default (treatment 1)	Participants in the 3 SDG default treatment are told the pension fund currently focused on three SDGs. Participants are introduced to the fourth SDG, “Responsible consumption and production,” and can answer the question, “Do you want Pensioenfond’s Detailhandel to add the fourth sustainable development goal ‘Responsible consumption and production’?” Answer options: a. yes, add b. no, do not add c. I have no opinion regarding this matter
4 SDG default (treatment 2)	Participants in the 4 SDG default treatment are told the pension fund’s future policy would include a fourth SDG, “Responsible consumption and production.” Participants can then answer the following question: “Do you want Pensioenfond’s Detailhandel to leave out the fourth sustainable development goal ‘Responsible consumption and production’?” Answer options: a. yes, leave it out b. no, do not leave it out c. I have no opinion regarding this matter
<i>Preferences</i>	
Social preferences (also study 2)	The participant’s response to the question “How willing are you to give to good causes without expecting anything in return?” (1 completely unwilling, ..., 10 completely willing; Falk et al. (2016))
Preferences for sustainable policies (also study 2)	Preference for sustainable policies is a score that is constructed by evaluating Dutch parties on their stance on sustainability, using the official voting guide for the 2017 Dutch national elections ( <a href="https://tweedekamer2017.stemwijzer.nl">https://tweedekamer2017.stemwijzer.nl</a> ). Five of the 30 questions shown contend with sustainable issues. All questions are posed such that they can be answered with “agree,” “disagree,” or “neither of the two.” A party receives one point for each question for which they choose the more sustainable option. If a party chooses “neither of the two,” it receives half a point
Preferences for portfolio screening (hypothetical)	Do you prefer Pensioenfond’s Detailhandel to invest more in companies that score high on environmental, social and governance factors and less in companies that score low?” a. yes b. no c. I do not know
<i>Social signaling</i>	
Social signaling	The participant’s response to the question “How likely is it that you will talk to your friends about this survey?” (1, very unlikely; ..., 10, very likely; adapted from Riedl and Smeets (2017))

(Continued)



**Table A1**  
**Continued**

Variable	Description
<b>Financial beliefs</b>	
Expected returns with 4 SDGs	The participant's response to the question "When do you think the investment return is highest?" Answer options: <ol style="list-style-type: none"> <li>a. it is highest with 3 SDGs</li> <li>b. the return is equally high with 3 or 4 SDGs</li> <li>c. it is highest with 4 SDGs</li> <li>d. I do not know</li> </ol>
Lower returns with 4 SDGs	Dummy variable equal to one if the participant believes the returns will be highest with three SDGs
Equal returns with 3 or 4 SDGs	Dummy variable equal to one if the participant believes the returns will be equally high with three or four SDGs
Higher returns with 4 SDGs	Dummy variable equal to one if the participant believes the returns will be highest with four SDGs
Do not know	Dummy variable equal to one if the participant reports not knowing when the return would be the highest
<b>Demographics (also study 2)</b>	
Female	Dummy variable equal to one if the participant reports being a woman
Age	The participant's self-reported age
Highly educated	Dummy variable equal to one if the participant reports having a university degree or a degree from a university of applied sciences
<b>Financial background (also study 2)</b>	
Individual income (gross, yearly)	Annual gross salary of the pension participant provided by the pension fund (administrative data)
Household income (net, monthly)	Self-reported monthly net household income (survey data)
Low income	Dummy variable equal to one if the participant's reported monthly net household income is below €2,500
Middle income	Dummy variable equal to one if the participant's reported monthly net household income is between €2,500 and €4,000
High income	Dummy variable equal to one if the participant's reported monthly net household income is above €4,000
Do not report	Dummy variable equal to one if the investor does not disclose his or her monthly net household income
<b>Comprehension</b>	
Understood treatment (Yes)	Dummy variable equal to one if the participant correctly answers the control question (correct answer "a"): "If a majority chooses 'Yes, add' ('Yes, leave it out'), Pensioenfonds Detailhandel <ol style="list-style-type: none"> <li>a. guarantees to add (leave out) 'Responsible consumption and production' to (of) its socially responsible investment policy as the fourth Sustainable Development Goal. The Board of Pensioenfonds Detailhandel has decided to implement the outcome of this vote.</li> <li>b. cannot guarantee that it will add (leave out) 'Responsible consumption and production' to (of) its socially responsible investment policy as the fourth Sustainable Development Goal but may include the results of the survey in its choice."</li> </ol>
More information (Yes)	Dummy variable equal to one if the participant answers the question, "Would you rather have received more information to make your choice on adding (leaving out) the fourth SDG?" with "yes." Answer options: <ol style="list-style-type: none"> <li>a. yes</li> <li>b. no</li> </ol>

(Continued)

**Table A1**  
**Continued**

Variable	Description
<i>Study 2 (only additional variables)</i>	
<i>Choice for sustainable investments</i>	
Engagement and screening	With which of the two parts of the sustainable investment strategy of Pensioenfonds Detailhandel do you agree? <ul style="list-style-type: none"> <li>a. more intensive dialogue with companies b. investing more in companies that score well on sustainability</li> <li>c. both</li> <li>d. none</li> <li>e. I do not know</li> </ul>
<i>Financial beliefs</i>	
Expected returns with engagement	<p>“How do you think that the dialogue that Pensioenfonds Detailhandel enters into with companies to enhance their sustainability will influence your retirement benefits once you retire?”</p> <ul style="list-style-type: none"> <li>a. lowers my retirement benefits a lot</li> <li>b. lowers my retirement benefits a little</li> <li>c. has no influence on my retirement benefits</li> <li>d. increases my retirement benefits a little</li> <li>e. increases my retirement benefits a lot</li> <li>f. I do not know</li> </ul>
Much lower returns with more engagement	Dummy variable equal to one if the participant answers a
Lower returns with more engagement	Dummy variable equal to one if the participant answers b
Equal returns with more engagement	Dummy variable equal to one if the participant answers c
Higher returns with more engagement	Dummy variable equal to one if the participant answers d
Much higher returns with more engagement	Dummy variable equal to one if the participant answers e
Do not know	Dummy variable equal to one if the participant answers f
Expected returns with screening	<p>“How do you think that the choice to invest more in companies that score well on sustainability and less in companies that score poorly on sustainability will influence your retirement benefits once you retire?”</p> <ul style="list-style-type: none"> <li>a. Lowers my retirement benefits a lot</li> <li>b. Lowers my retirement benefits a little</li> <li>c. Has no influence on my retirement benefits</li> <li>d. Increases my retirement benefits a little</li> <li>e. Increases my retirement benefits a lot</li> <li>f. I do not know</li> </ul>
Much lower returns with more screening	Dummy variable equal to one if the participant answers a
Lower returns with more screening	Dummy variable equal to one if the participant answers b
Equal returns with more screening	Dummy variable equal to one if the participant answers c
Higher returns with more screening	Dummy variable equal to one if the participant answers d
Much higher returns with more screening	Dummy variable equal to one if the participant answers e
Do not know	Dummy variable equal to one if the participant answers f
Expected returns due to COVID-19	<p>“How do you think that the corona crisis will influence your retirement benefits once you retire?”</p> <ul style="list-style-type: none"> <li>a. it will lower my retirement benefits a lot</li> <li>b. it will lower my retirement benefits a little</li> <li>c. it eventually has no influence on my retirement benefits</li> <li>d. it will increase my retirement benefits a little</li> <li>e. it will increase my retirement benefits a lot</li> <li>f. I do not know</li> </ul>

**Table A2**  
**Voting behavior, preferences, and sustainable investing (study 1)**

A. Study 1	Preferences for sustainable policies	Percentage of respondents who choose	
		4 SDGs	3 SDGs
		Partij voor de Dieren	5
GroenLinks	5	89.1	5.5
Democraten 66 (D66)	4	83.7	11.2
DENK	4	(too few observations)	
SP (Socialistische Partij)	4	75.0	4.7
Partij van de Arbeid (P.v.d.A.)	4	76.9	10.3
ChristenUnie	4	82.5	5.0
50PLUS	3	76.2	4.8
Staatkundig Gereformeerde Partij (SGP)	2	70.0	5.0
Forum voor Democratie	1	44.4	38.9
Christen-Democratisch Appèl (CDA)	0.5	81.4	7.8
Volkspartij voor Vrijheid en Democratie (VVD)	0	70.3	14.0
Partij voor de Vrijheid (PVV)	0	55.0	20.0
Other	–	75.0	16.7
Do not report	–	68.1	12.3
Did not vote	–	67.9	8.4

B. Study 2	Preferences for sustainable policies	Percentage of respondents who choose	
		Engage-ment or both	Screening or both
		Partij voor de Dieren	5
GroenLinks	5	69.1	92.1
Democraten 66 (D66)	4	69.5	85.6
DENK	4	50.0	50.0
SP (Socialistische Partij)	4	48.3	84.2
Partij van de Arbeid (P.v.d.A.)	4	62.3	85.5
ChristenUnie	4	63.2	81.1
50PLUS	3	53.3	72.0
Staatkundig Gereformeerde Partij (SGP)	2	59.2	71.4
Forum voor Democratie	1	48.2	56.9
Christen-Democratisch Appèl (CDA)	0.5	59.1	81.2
Volkspartij voor Vrijheid en Democratie (VVD)	0	61.4	78.5
Partij voor de Vrijheid (PVV)	0	25.0	58.9
Other	–	64.8	78.1
Do not report	–	40.2	61.5
Do not plan to vote	–	48.0	69.3

Panel A (study 1) presents the distribution of preferences and the choice on sustainable investing of respondents grouped according to their reported voting behavior. We elicit this information by asking, “Did you vote in the last national parliamentary election?” referring to the 2017 Dutch national elections. Respondents can answer “Yes,” “No,” or “I do not want to say.” As a follow-up question, we ask respondents to name the party they voted for. They can also choose to keep this information private. *Preferences for sustainable policies* is a score constructed by evaluating Dutch parties on their stance on sustainability, using the official voting guide for the 2017 Dutch national elections (<https://tweedekamer2017.stemwijzer.nl>). Five of the 30 questions shown address sustainable issues. All questions are posed such that they can be answered with “agree,” “disagree,” or “neither of the two.” A party receives one point for each question for which they choose the more sustainable option. If a party chooses “neither of the two,” it receives half a point (see Table A3). The distribution of choices 4 SDG and 3 SDG refers to the following question: “Do you want Pensioenfonds Detailhandel to add (leave out) the fourth sustainable development goal ‘Responsible consumption and production’?” Answer options are “Yes, add (leave it out),” “No, do not add (leave it out),” and “I have no opinion regarding this matter.” Choices are guaranteed to be implemented by the pension fund if more than 50% of respondents choose in favor of three (four) SDGs. Words in parentheses refer to the different status quo treatments shown jointly here. Panel B (study 2) presents the distribution of preferences and the choice on sustainable investing of respondents grouped according to their reported voting behavior. We elicit this information by asking, “If there were elections to the *Tweede Kamer* (Dutch parliament), which party would you vote for?” Answer options are the below listed parties as well as “I prefer not to answer” and “I do not plan to vote.” We consulted this poll at the time participants completed the survey. *Preferences for sustainable policies* is a score constructed by evaluating Dutch parties on their stance on sustainability, using the official voting guide for the 2017 Dutch national elections (<https://tweedekamer2017.stemwijzer.nl>). Five of the 30 questions shown contend with sustainable issues. All questions are posed such that they can be answered with “agree,” “disagree,” or “neither of the two.” A party receives one point for each question for which they choose the more sustainable option. If a party chooses “neither of the two,” it received half a point (see Table A3). The distribution of choices “Engagement or Both” and “Screening or Both” refers to the following question: “With which of the two parts of the sustainable investment strategy of Pensioenfonds Detailhandel do you agree?” Answer options are “More intensive dialogue with companies,” which we refer to as “Engagement,” “Investing more in companies that score well on sustainability,” which we refer to as “Screening,” “Both,” “None,” or “I do not know.” Participants can only choose one of the answer options.

**Table A3**  
Preference for sustainable policies

	VVD	PVV	CDA	D66	GroenLinks	SP	PvdA
<b>Mileage tax</b>	0	0	0	1	1	1	1
The government must not tax the possession of the car, but the number of kilometers driven (1 = agree)							
<b>Infrastructure</b>	0	0	0	1	1	1	1
More money needs to be spent on the construction of new roads (0 = agree)							
<b>Coal-fired power stations</b>	0	0	0.5	1	1	1	1
All coal-fired power stations may remain open for the time being (0 = agree)							
<b>VAT rate for meat</b>	0	0	0	0	1	0	0
The high VAT rate of 21% must be applied to meat (1 = agree)							
<b>Development aid</b>	0	0	0	1	1	1	1
The Netherlands should spend more money for the development of poor countries (1 = agree)							
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0.5</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>4</b>
	<b>ChristenUnie</b>	<b>Partij voor de Dieren</b>	<b>50PLUS</b>	<b>SGP</b>	<b>DENK</b>	<b>Forum voor Democratie</b>	
<b>Mileage tax</b>	1	1	0	1	1	1	
The government must not tax the possession of the car, but the number of kilometers driven (1 = agree)							
<b>Infrastructure</b>	1	1	1	0	1	0	
More money needs to be spent on the construction of new roads (0 = agree)							
<b>Coal-fired power stations</b>	1	1	1	0	1	0	
All coal-fired power stations may remain open for the time being (0 = agree)							
<b>VAT rate for meat</b>	0	1	0	0	0	0	
The high VAT rate of 21% must be applied to meat (1 = agree)							
<b>Development aid</b>	1	1	1	1	1	0	
The Netherlands should spend more money for the development of poor countries (1 = agree)							
<b>Total</b>	<b>4</b>	<b>5</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>1</b>	

This table presents the preference for sustainable policies, which is a score constructed by evaluating Dutch parties on their stance on sustainability, using the official voting guide for the 2017 Dutch national elections (<https://wedeekamer2017.sternwijzer.nl>). Five of the 30 questions shown contend with sustainable issues. All questions are posed such that they can be answered with “agree,” “disagree,” or “neither of the two.” A party receives one point for each question for which they chose the more sustainable option. If a party chooses “neither of the two,” it receives half a point. The score is calculated for each of the parties shown in Table A2.

**Table A4**  
**Consistency of the choice for more sustainable investing among participants who participated in both studies (studies 1 and 2)**

Study 1		Study 2			
		Engagement	Screening	Both	Neither
Yes	168	9 (5.4%)	43 (25.6%)	114 (67.9%)	2 (1.2%)
No	28	3 (11.5%)	7 (26.9%)	10 (38.5%)	6 (23.1%)

This contingency table presents the choices for more sustainability of studies 1 and 2 for participants who took both surveys. In study 1, participants can answer the question, “Do you want Pensioenfond’s Detailhandel to add the fourth sustainable development goal ‘Responsible consumption and production?’” with “yes,” “no,” and “I have no opinion regarding this matter.” For brevity, we do not mention the differently phrased question in the 4 SDG default separately, but we treat them accordingly. In study 2, participants can answer the question, “To which of the two parts of the sustainable investment strategy of Pensioenfond’s Detailhandel do you agree?” with “engagement,” “screening,” “both,” “none,” and “I don’t know.” We exclude participants who are uncertain in either study or both studies.

**Table A5**  
**Relation between social preferences and sustainable investing (study 2)**

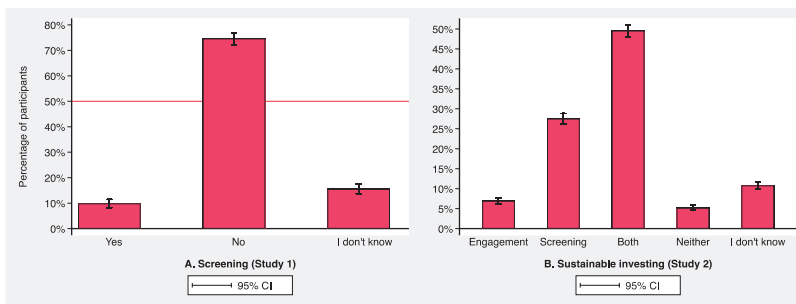
	Engagement	Screening	Both	Don’t know
<i>Preferences</i>				
Social preferences (SD)	2.0472*** (0.2168)	2.1958*** (0.1940)	2.7599*** (0.2390)	1.3793*** (0.1328)
Constant	1.8312*** (0.2219)	7.2880*** (0.7737)	12.8314*** (1.3327)	2.5584*** (0.2990)
Observations			3,186	
Pseudo- <i>R</i> <sup>2</sup>			.0302	

This table presents the relative-risk ratios of the multinomial logit regression. The dependent variable is based on the outcome of the question “To which of the two parts of the sustainable investment strategy of Pensioenfond’s Detailhandel do you agree? More intensive dialogue with companies; Investing more in companies that score well on sustainability; Both; None; I do not know” and takes on the corresponding five values: “engagement,” “screening,” “both,” “I don’t know,” and “none.” Respondents who agree with “none” make up the baseline. For summary statistics, see Table 1, panel B. *Social preferences* are elicited by asking respondents “How willing are you to give to good causes without expecting anything in return?” on a 10-point Likert scale from completely unwilling to completely willing (see Falk et al. (2016)). The variable is standardized. \*\*\*  $p < .01$ ; \*\*  $p < .05$ ; \*  $p < .1$ .

**Table A6**  
**Relation between social preferences and sustainable investing, controlling for beliefs about screening (study 2)**

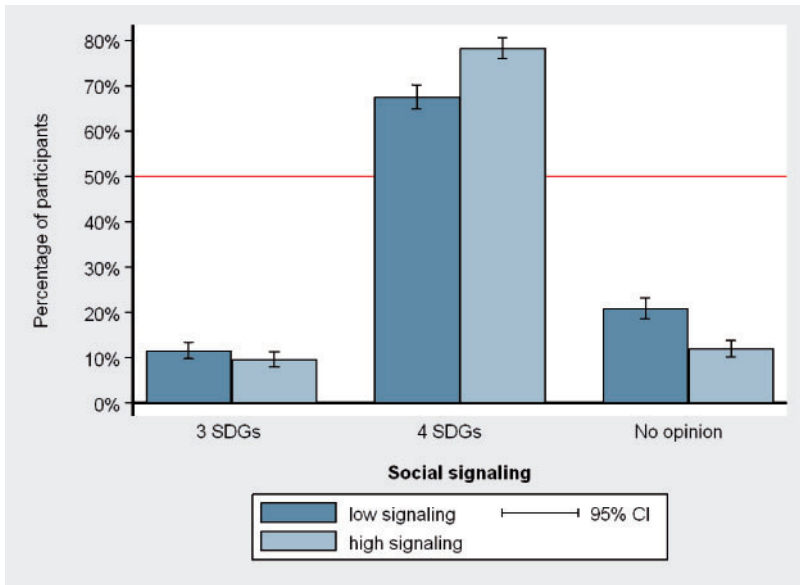
	Engagement	Screening	Both	Do not know
<b>Preferences</b>				
Social preferences (SD)	1.9566*** (0.2112)	2.1680*** (0.1990)	2.6860*** (0.2404)	1.4544*** (0.1485)
<b>Financial beliefs</b>				
Lower returns with more screening	0.3706*** (0.1066)	0.2547*** (0.0644)	0.3153*** (0.0775)	0.5915* (0.1852)
Higher returns with more screening	2.0599* (0.8846)	4.6442*** (1.8188)	4.8212*** (1.8732)	3.0052** (1.3572)
Do not know	0.6250 (0.2416)	0.9496 (0.3080)	1.1103 (0.3534)	6.6428*** (2.3930)
<b>Demographics</b>				
Female	1.4216 (0.3129)	1.7690*** (0.3317)	1.5159** (0.2767)	3.1604*** (0.6726)
Age	0.9815** (0.0081)	0.9990 (0.0070)	1.0082 (0.0069)	1.0025 (0.0079)
Highly educated	1.1257 (0.2823)	0.8942 (0.1970)	1.3044 (0.2771)	0.4951*** (0.1348)
<b>Financial background</b>				
Low monthly income	0.4655*** (0.1307)	0.7342 (0.1751)	0.6224** (0.1449)	0.7488 (0.1973)
High monthly income	0.5291** (0.1594)	0.4320*** (0.1156)	0.4434*** (0.1140)	0.4753** (0.1500)
Do not report	0.4013*** (0.1321)	0.5093** (0.1404)	0.3435*** (0.0929)	0.6000* (0.1792)
Constant	10.1296*** (5.4176)	12.2934*** (5.7793)	13.7102*** (6.3020)	1.2027 (0.6515)
Observations			3,186	
Pseudo- $R^2$			.1000	

This table presents relative-risk ratios of a multinomial logit regression. The dependent variable is based on the outcome of the question, "To which of the two parts of the sustainable investment strategy of Pensioenfond Detailhandel do you agree? More intensive dialogue with companies; Investing more in companies that score well on sustainability; Both; None; I do not know" and takes on the corresponding five values: "engagement," "screening," "both," "I don't know," and "none." Respondents who agree with "none" make up the baseline. For summary statistics, see Table 1, panel B. *Social preferences* were elicited by asking respondents "How willing are you to give to good causes without expecting anything in return?" on a 10-point Likert scale from completely unwilling to completely willing (see Falk et al. (2016)). The variable is standardized. *Financial beliefs* are elicited by asking participants to answer the following question: "How do you think that the choice to invest more in companies that score well on sustainability and less in companies that score poorly on sustainability will influence your retirement benefits once you retire?" Answer options are (a) lowers my retirement benefits a lot, (b) lowers my retirement benefits a little, (c) has no influence on my retirement benefits, (d) increases my retirement benefits a little, (e) increases my retirement benefits a lot, and (f) I do not know. Answer options (a) and (b) are merged into "Lower returns with more screening" as well as (d) and (e) into "Higher returns with more screening." For the same regression using financial beliefs on engagement, see Table 4. Table A1 defines the variables. \*\*\*  $p < .01$ ; \*\*  $p < .05$ ; \*  $p < .1$ .



**Figure A1**  
**Preferences for screening (study 1) and sustainable investing (study 2)**

Panel A presents the distribution of choices regarding the question on screening in study 1: “Do you prefer Pensioenfond Detailhandel to invest more in companies that score high on environmental, social and governance factors and less in companies that score low?” Answer options are “Yes,” “No,” and “I do not know.” Panel B presents the distribution of choices regarding the question on sustainable investing in study 2: “With which of the two parts of the sustainable investment strategy of Pensioenfond Detailhandel do you agree?” Answer options are (1) “More intensive dialogue with companies,” (2) “Investing more in companies that score well on sustainability,” (3) “Both,” (4) “None,” and (5) “I do not know.” Error bars represent 95% confidence intervals.



**Figure A2**  
**Effect of social signaling on sustainable investing**

This graph presents the distribution of choices for respondents with a low respectively high desire for social signaling. *Social signaling* is elicited by asking respondents “How likely is it that you will talk to your friends about this survey?” on a 10-point Likert scale from very unlikely to very likely (see Riedl and Smeets (2017)). Respondents are reported to have a *low desire for social signaling* if they rated this question with two or lower (41.6% of the sample) and a *high desire for social signaling* with a three or higher (58.4%). The categories shown in the graph refer to the following question: “Do you want Pensioenfonds Detailhandel to add the fourth sustainable development goal ‘Responsible consumption and production’? Yes, add; No, do not add; I have no opinion regarding this matter,” and takes on the corresponding three values of “3 SDGs,” “4 SDGs,” and “I have no opinion regarding this matter.” 3SDGs refers to the sustainable development goals of “Climate action,” “Decent work and economic growth,” and “Peace, justice, and strong institutions,” which the pension fund had already focused on prior to 2018. 4 SDGs refers to the three SDGs just mentioned plus the fourth SDG, “Responsible consumption and production,” which participants are introduced to during the survey. The above-stated question refers to the default treatment where participants can add the fourth SDG. The default where participants can remove the fourth SDG is treated analogously, for brevity, without providing further explanation here. Error bars represent 95% confidence intervals.



## Appendix B. Study 1 Survey

### Welcome!

Pensioenfonds Detailhandel invests **your pension savings in a sustainable way**. In doing so, Pensioenfonds Detailhandel strives to achieve continuous improvements.

That is why Pensioenfonds Detailhandel has decided to ask you about our investment policy.

Of the people who participate in this survey, 25 randomly selected individuals will receive a **VVV Gift Voucher worth 25 euros**. Additionally, one randomly selected participant will receive a **VVV Gift Voucher worth 250 euros**.

You will be entered in the prize draw if you **complete the whole survey**. Maastricht University and Pensioenfonds Detailhandel guarantee that all payments will be made.

This survey takes **around fifteen minutes** to complete.

Pensioenfonds Detailhandel will make the results available in Autumn.

Thank you in advance for your participation!

Yours sincerely, Maastricht University and Pensioenfonds Detailhandel.

### [Part 1]

#### What are socially responsible investments?

##### (1) Are you familiar with the United Nation's Sustainable Development Goals?

- a. Yes
- b. No

The United Nation's Sustainable Development Goals focus on seventeen goals relating to the environment, the climate, poverty, and other themes.

The next page explains how Pensioenfonds Detailhandel uses these Sustainable Development Goals.

#### Treatment 3 SDG Default (only shown to participants in this treatment group)

Pensioenfonds Detailhandel currently focuses on three of the United Nations' 17 Sustainable Development Goals. These three Sustainable Development Goals are:



1. **Climate action:** e.g. taking urgent action to combat climate change such as by ensuring that businesses emit less CO<sub>2</sub>



2. **Decent work and economic growth:** e.g. full employment for all women and men



3. **Peace, justice, and strong institutions:** e.g. eradication of corruption and bribery

For more information on the Sustainable Development Goals, please click here: <http://www.sdgnerland.nl/sdgs/>

### **What does it mean to invest according to the United Nations' Sustainable Development Goals?**

Pensioenfonds Detailhandel uses its influence in the companies in which it invests. In 2017, the pension fund spoke **with a total of 246 company boards to promote sustainability.**

#### **Royal Dutch Shell case**

Working in collaboration with other parties, **Pensioenfonds Detailhandel has contacted Shell** on a number of occasions and made it clear that Shell has a lot of work ahead of it to achieve the **objectives of the Paris Climate Agreement** (to become CO<sub>2</sub> neutral by 2015) and that it is urgent to do so.

#### **The example of the diesel scandal in 2015**

**Pensioenfonds Detailhandel contacted managers at Volkswagen (VW)** in the aftermath of the diesel scandal. **Pensioenfonds Detailhandel's involvement helped** VW focus more on its long-term emissions strategy.

#### **You have been selected!**

Pensioenfonds Detailhandel has decided to give you a say in how it determines its socially responsible investment policy.

#### **But how does this work?**

1. You can let Pensioenfonds Detailhandel know **whether you agree with the current policy** that focuses on three Sustainable Development Goals, or whether you would like to add a fourth one.
2. **Your choice counts. If the majority** of respondents chooses to add a fourth sustainable development goal, it will happen. The board of Pensioenfonds Detailhandel guarantees its implementation.

Below, you find the fourth Sustainable Development Goal that you can add to the current policy.



**Responsible consumption and production:** This Sustainable Development Goal ensures that parties, such as Pensioenfonds Detailhandel, are obliged to do the following: e.g. actively work against child labour, guarantee fair wages.

**Please note:** implementing Sustainable Development Goals means that financial returns are not the only factor that is taken into consideration. Making investments with this in mind means that it is important to take the impact on the environment and wider society into account.

#### **The influence of your choice**

If Pensioenfonds Detailhandel focuses on four Sustainable Development Goals, this means that it will contact companies to discuss their sustainable business practices more often. The fund will also enter into discussions with companies about the fourth Sustainable Development Goal, in addition to the discussions it has about the other three Sustainable Development Goals.

As it is important that you understand this explanation, we will ask you a short question to test your understanding on the next page.

On the next page you will be asked the following:

**Do you want Pensioenfonds Detailhandel to add the fourth sustainable development goal 'Responsible consumption and production'?**

- a. Yes, add
- b. No, do not add
- c. I have no opinion regarding the matter

**Which of the following statements is correct?**

**(2) If a majority chooses ‘Yes, add’, Pensioenfonds Detailhandel**

- a. **guarantees** to add ‘Responsible consumption and production’ to its socially responsible investment policy as the fourth Sustainable Development Goal. The Board of Pensioenfonds Detailhandel has decided to implement the outcome of this vote.
- b. **cannot guarantee** that it will add ‘Responsible consumption and production’ to its socially responsible investment policy as the fourth Sustainable Development Goal but may include the results of the survey in its choice.

If a: That is correct. Pensioenfonds Detailhandel **guarantees** that it will add ‘Responsible consumption and production’ to its socially responsible investment policy as the fourth Sustainable Development Goal if the majority of participants chooses ‘Yes, add’. The Board of Pensioenfonds Detailhandel has decided to implement the outcome of this vote.

If b: Your answer is incorrect. Pensioenfonds Detailhandel **guarantees** that it will add ‘Responsible consumption and production’ to its socially responsible investment policy as the fourth Sustainable Development Goal if the majority of participants chooses ‘Yes, add’. The Board of Pensioenfonds Detailhandel has decided to implement the outcome of this vote.

Please note that this is your choice. When considering your decision, please do so carefully.

**(3) Do you want Pensioenfonds Detailhandel to add the fourth sustainable development goal ‘Responsible consumption and production’?**

- a. Yes, add
- b. No, do not add
- c. I have no opinion regarding the matter

**(4) Would you have preferred receiving more information to make a decision regarding the development goals?**

- a. Yes
- b. No

**(5) Please indicate below which percentage of participants of this survey will choose which answer regarding the question of adding the fourth Sustainable Development Goal.**

Please note that the three numbers must add up to 100.

- a. Yes, add: \_\_\_ percent
- b. No, do not add: \_\_\_ percent
- c. I have no opinion regarding the matter: \_\_\_ percent

**Treatment 4 SDG Default (only shown to participants in this treatment group)**

Pensioenfonds Detailhandel currently focuses on three of the United Nations’ 17 Sustainable Development Goals. These three Sustainable Development Goals are:

- 1. **Climate action:** e.g. taking urgent action to combat climate change such as by ensuring that businesses emit less CO<sub>2</sub>



2. **Decent work and economic growth:** e.g. full employment for all women and men



3. **Peace, justice, and strong institutions:** e.g. eradication of corruption and bribery



The future policy also includes this fourth goal

4. **Responsible consumption and production**



For more information on the Sustainable Development Goals, please click here: <http://www.sdgnerland.nl/sdgs/>

### **What does it mean to invest according to the United Nations' Sustainable Development Goals?**

Pensioenfonds Detailhandel uses its influence in the companies in which it invests. In 2017, the pension fund spoke **with a total of 246 company boards to promote sustainability.**

#### **Royal Dutch Shell case**

Working in collaboration with other parties, **Pensioenfonds Detailhandel has contacted Shell** on a number of occasions and made it clear that Shell has a lot of work ahead of it to achieve the **objectives of the Paris Climate Agreement** (to become CO<sub>2</sub> neutral by 2015) and that it is urgent to do so.

#### **The example of the diesel scandal in 2015**

**Pensioenfonds Detailhandel contacted managers at Volkswagen (VW)** in the aftermath of the diesel scandal. **Pensioenfonds Detailhandel's involvement helped VW** focus more on its long-term emissions strategy.

#### **You have been selected!**

Pensioenfonds Detailhandel has decided to give you a say in how it determines its socially responsible investment policy.

#### **But how does this work?**

1. You can let Pensioenfonds Detailhandel know **whether you agree with the future policy** that focuses on four Sustainable Development Goals, or whether you would like to leave out the fourth one.
2. **Your choice counts. If the majority** of survey participants chooses that the fourth Sustainable Development Goal must be left out, it will happen. The board of Pensioenfonds Detailhandel guarantees its implementation.

Below, you find the fourth Sustainable Development Goal that you can leave out from the future policy.

Responsible **consumption and production**: This Sustainable Development Goal ensures that parties, such as Pensioenfonds Detailhandel, are obliged to do the following: e.g. actively work against child labour, guarantee fair wages.



**Please note:** implementing Sustainable Development Goals means that financial returns are not the only factor that is taken into consideration. Making investments with this in mind means that it is important to take the impact on the environment and wider society into account.

#### **The influence of your choice**

If Pensioenfonds Detailhandel focuses on four Sustainable Development Goals, this means that it will contact companies to discuss their sustainable business practices more often. The fund will also enter into discussions with companies about the fourth Sustainable Development Goal, in addition to the discussions it has about the other three Sustainable Development Goals.

As it is important that you understand this explanation, we will ask you a short question to test your understanding on the next page.

On the next page you will be asked the following:

**Do you want Pensioenfonds Detailhandel to leave out the fourth sustainable development goal 'Responsible consumption and production'?**

- a. Yes, leave it out
- b. No, do not leave it out
- c. I have no opinion regarding the matter

**Which of the following statements is correct?**

(2) **If a majority chooses 'Yes, leave it out, Pensioenfonds Detailhandel**

- a. **guarantees** to leave out 'Responsible consumption and production' of its socially responsible investment policy as the fourth Sustainable Development Goal. The Board of Pensioenfonds Detailhandel has decided to implement the outcome of this vote.
- b. **cannot guarantee** that it will leave out 'Responsible consumption and production' of its socially responsible investment policy as the fourth Sustainable Development Goal but may include the results of the survey in its choice.

If a: This is correct. Pensioenfonds Detailhandel **guarantees** that it will leave 'Responsible consumption and production' out of its socially responsible investment policy as the fourth Sustainable Development Goal if the majority of participants chooses 'Yes, leave it out'. The Board of Pensioenfonds Detailhandel has decided to implement this decision.

If b: Your answer is incorrect. Pensioenfonds Detailhandel **guarantees** that it will leave out 'Responsible consumption and production' of its socially responsible investment policy as the fourth Sustainable Development Goal if the majority of participants chooses 'Yes, leave it out'. The Board of Pensioenfonds Detailhandel has decided to implement the outcome of this vote.

Please note that this is your choice. When considering your decision, please do so carefully.

- (3) **Do you want Pensioenfonds Detailhandel to leave out the fourth sustainable development goal 'Responsible consumption and production'?**
- a. Yes, leave it out
  - b. No, do not leave it out
  - c. I have no opinion regarding the matter
- (4) **Would you have preferred receiving more information to make a decision regarding the development goals?**
- a. Yes
  - b. No
- (5) **Please indicate below which percentage of participants of this survey will choose which answer regarding the question of leaving the fourth Sustainable Development Goal out of the policy.**

Please note that the three numbers must add up to 100.

- a. Yes, leave it out: \_\_\_ percent
- b. No, do not leave it out: \_\_\_ percent
- c. I have no opinion regarding the matter: \_\_\_ percent

**[For both treatments]**

- (6) **When do you think that the investment return is the highest?**

[Investment return is the degree to which an investment earns money when taking the level of risk into account. In other words, more money results in a greater return. However, an investment that takes a greater risk to earn a certain amount results in a lower risk-adjusted return.]

- a. The investment return is highest for three sustainable development goals.
  - b. The investment return is highest for four sustainable development goals.
  - c. The investment return remains the same for three or four sustainable development goals.
  - d. I don't know
- (7) **Would you want Pensioenfonds Detailhandel to opt for four Sustainable Development Goals even if this decreased the risk-adjusted return?**
- a. Yes
  - b. No
  - c. I don't know
- (8) **Predict which percentage of Pensioenfonds Detailhandel's participants would also opt for four Sustainable Development Goals even if this decreased the risk-adjusted return.**

- a. \_\_\_ percent

**[Part 2]**

**The following questions** aim to clarify your opinion of investing in a socially responsible way. As opposed to previous questions, your answers in this part may not lead to Pensioenfonds Detailhandel taking direct action but can help us make decisions in the future.

**How does Pensioenfonds Detailhandel currently make decisions regarding socially responsible investments?**

Pensioenfonds Detailhandel now implements its socially responsible investment policy in two ways:

- a. by excluding companies
- b. by entering into discussions with companies.

The next question concerns excluding companies as a method of investing in a socially responsible way.

**(9) Pensioenfonds Detailhandel would like you to list which types of companies you think it should exclude from investments (several answers possible).**

Companies that...

- a. produce tobacco
- b. produce controversial weapons such as cluster bombs and landmines
- c. produce alcohol
- d. produce weapons (other than controversial weapons)
- e. infringe on human rights
- f. use forced labour
- g. have a negative impact on the environment
- h. are involved in corruption, extortion or bribery
- i. allow child labour

Another approach that Pensioenfonds Detailhandel considers is “best in class”. With this approach Pensioenfonds Detailhandel chooses to invest more in companies that score high on environmental, social and governance criteria and less in companies that score low.

**(10) Do you prefer Pensioenfonds Detailhandel to invest more in companies that score high on environmental, social and governance factors and less in companies that score low?”**

- a. Yes
- b. No
- c. I do not know

**[Part 3]**

We would also like to ask you some background questions.

**(11) How willing are you to give to good causes without expecting anything in return?**

Completely unwilling 1 ◊ 10 very willing

**(12) I am...**

- a. Male
- b. Female
- c. Other

**(13) In what year were you born?**

Year of birth: \_\_\_\_

**(14) What is the highest level of education you have completed?**

- Preparatory secondary vocational education (VMBO) or lower general secondary education (MAVO or MULO)
- Higher general secondary education (HAVO)
- Pre-university education (HBS, HAVO, VWO) or pre-university education with Latin and/or Greek (Gymnasium)
- Intermediate vocational education level 1 (MBO)
- Intermediate vocational education level 2 (MBO)
- Intermediate vocational education level 3 (MBO)
- Intermediate vocational education level 4 (MBO)
- Higher professional education (HBO)
- University (WO)
- Other:
- I did not follow any of the above types of education

**(15) Did you vote in the last national parliamentary elections?**

- a. Yes
- b. No
- c. I prefer not to answer

*If 'Yes', continue with*

**(16) Which party did you vote for?**

- a. VVD
- b. CDA
- c. D66
- d. ChristenUnie
- e. PVV
- f. GroenLinks



- g. SP
- h. PvdA
- i. Partij voor de Dieren
- j. 50PLUS
- k. SGP
- l. DENK
- m. Forum voor Democratie
- n. Other, specifically:
- o. I prefer not to answer

We have a few questions regarding your financial situation. We understand that this information is sensitive and you can decide to skip these questions. However, as your answers to these questions are very valuable, we hope you will answer them. We will handle your data with due care.

**(17) What is your household's net monthly income?**

[**Info button:** net = your and your partner's income combined (if applicable) minus taxes and contributions]

- Less than €930
- Between €930 and €1,500
- Between €1,500 and €2,000
- Between €2,000 and €2,500
- Between €2,500 and €3,000
- Between €3,000 and €4,000
- Between €4,000 and €7,000
- Between €7,000 and €10,000
- Over €10,000
- I don't know
- I prefer not to answer

**(18) How likely are you to discuss this survey with friends?**

Very unlikely 1  $\diamond$  10 Very likely

**(19) We asked approximately 25,000 participants to complete this survey. How many people do you think will complete the survey?**

**(20) If you win a VVV Gift Voucher, we will contact you by e-mail. If you want to win the prize, please tick the box.**

I want to win the prize

**(21) If you would like to receive an e-mail with information about the results of this survey, please tick the box.**

I would like to receive information

**(22) Please fill in your e-mail address below.**

My e-mail address: \_\_\_\_\_

**Thank you for participating.**

Yours sincerely, Maastricht University and Pensioenfonds Detailhandel.

## Appendix C. Study 2, Survey of Maastricht University and Pensioenfonds Detailhandel

Welcome to this survey of Maastricht University and Pensioenfonds Detailhandel!

Pensioenfonds Detailhandel manages your pension and tries to take into consideration your preferences to the highest extent possible. That is why the pension fund is interested in your opinion. This survey takes around twenty minutes to complete.

Of the people who participate in this survey, five randomly selected individuals will receive **VVV Gift Vouchers worth 250 euros**.

Thank you in advance!

### [Part 1]

#### Sustainable investment

In 2018 Pensioenfonds Detailhandel has asked its participants for their opinion about the investment activities through a survey.

Participants could let the pension fund know whether they had a preference for the pension fund to keep its focus on three already-existing Sustainable Development Goals or if it would add a fourth, extra, Sustainable Development Goal of the United Nations.

#### The survey from 2018

- We will briefly show you which choices participants could make in the **survey of 2018**.
- Afterwards, we will ask you a couple of questions that are important for the research.

#### The policy in 2018

In 2018 Pensioenfonds Detailhandel focused on three of the United Nations' 17 Sustainable Development Goals. These three Sustainable Development Goals were:

1. **Climate action** e.g. taking urgent action to combat climate change such as by ensuring that businesses emit less CO<sub>2</sub>]



2. **Decent work and economic growth** [Info-box: e.g. full employment for all women and men]



3. **Peace, justice, and strong institutions** [Info-box: e.g. eradication of corruption and bribery]

For more information on the Sustainable Development Goals, please click here: <http://www.sdg nederland.nl/sdgs/>

**What does it mean to invest according to the United Nations' Sustainable Development Goals?**



Pensioenfonds Detailhandel uses its influence in the companies in which it invests. In 2017, the pension fund spoke **with a total of 246 company boards to promote sustainability.**

#### **Royal Dutch Shell case**

Working in collaboration with other parties, **Pensioenfonds Detailhandel has contacted Shell** on a number of occasions and made it clear that Shell has a lot of work ahead of it to achieve the **objectives of the Paris Climate Agreement** (to become CO2 neutral by 2015) and that it is urgent to do so.

#### **The example of the diesel scandal in 2015**

**Pensioenfonds Detailhandel contacted managers at Volkswagen (VW)** in the aftermath of the diesel scandal. **Pensioenfonds Detailhandel's involvement helped VW** focus more on its long-term emissions strategy.

Below, you find the fourth Sustainable Development Goal that you can add to the current policy.

#### **Responsible consumption and production**

This Sustainable Development Goal ensures that parties, such as Pensioenfonds Detailhandel, are obliged to do the following:

e.g. actively work against child labour, guarantee fair wages.



**Please note:** implementing Sustainable Development Goals means that financial returns are not the only factor that is taken into consideration. Making investments with this in mind means that it is important to take the impact on the environment and wider society into account.

#### **The influence of the choice of participants in 2018**

If Pensioenfonds Detailhandel focuses on four Sustainable Development Goals, this means that it will contact companies to discuss their sustainable business practices more often. The fund will also enter into discussions with companies about the fourth Sustainable Development Goal, in addition to the discussions it has about the other three Sustainable Development Goals.

*We asked participants the following question in 2018.*

**Do you want Pensioenfonds Detailhandel to add the fourth sustainable development goal 'Responsible consumption and production'?** [participants could not answer this question]

- Yes, add
- No, do not add
- I have no opinion regarding the matter

#### **[Part 2]**

#### **Result from the survey of 2018**

In 2018 Pensioenfonds Detailhandel focused on three of the United Nations' 17 Sustainable Development Goals.

**67 percent** of the participants chose for "yes, add" in 2018, and thus chose for four Sustainable Development Goals. Pensioenfonds Detailhandel wanted to put this result into practice.

**What did the pension fund do with the result of this survey?**

Next to the 67 percent of the participants who chose to add the fourth Sustainable Development Goal to engagement, 74 percent chose to invest more in sustainable companies and less in less-sustainable companies.

Directly after publishing the results (November 2018) the board of Pensioenfonds Detailhandel has enforced the choice of the participants in its policy. The taken steps by Pensioenfonds Detailhandel will be explained in further detail at the following pages.

### 1. Engagement based on four instead of three sustainable development goals

- In practice this means that Pensioenfonds Detailhandel will talk with **more companies**, **speak more intensively** about sustainability and **vote more often** at shareholder meetings about sustainability.
- In 2018 there was a dialogue with 394 companies. In 2019 this number rose to **568 companies (+44 percent)**. [Info button: Dialogue means that your pension fund starts a conversation with companies or votes at shareholder meetings.]
- Pensioenfonds Detailhandel does not do this on its own. To enter into this dialogue more effectively, the fund established the Dutch Engagement Network, which represents two and a half million Dutch people.

### 2. Investing more in companies that score higher on the four Sustainable Development Goals and less in companies that score lower

- Pensioenfonds Detailhandel invests approximately one-third of your pension savings in a broadly diversified equity portfolio in developed markets.
- Until 2018, sustainability was no factor in choosing these investments, except for the exclusion of some companies. [Info button: Exclusion of companies that produce controversial weapons and companies from countries that are on the sanctions list of the United Nations.]
- The fund still uses the same method for exclusion.
- After the results of the survey, the fund did the following with the whole equity portfolio in developed countries: it has decided to invest significantly **more** in companies that scored higher on the four sustainable development goals and to invest significantly **less** in companies that scored lower.

As an example, you can find two portfolios below.



- *Left (Old situation):* the fund invests an equal amount in all companies, not taking into account the sustainability of the company.

- *Right (New situation)*: the fund invests more in companies that score higher on the four sustainable development goals (companies C and D) and less in companies that score lower (companies A and B).

**[Part 3]**

**Your opinion**

- Because the board of Pensioenfonds Detailhandel changed the policy around sustainable investment in line with the wishes of its participants, it is curious as to what you think of this.
- Your opinion will be taken seriously and the results of the surveys will be discussed in the board meeting on the 9<sup>th</sup> of September 2020.

**What do you think?**

**(1) With which of these two steps of the sustainable investment policy of Pensioenfonds Detailhandel do you agree?**

- Intensified dialogue with more companies [Info-box that shows: Engagement based on four instead of three sustainable development goals... (*information repeated from above*)]
- More investment in companies that score higher on sustainability

[Info-box that shows: More investment in companies that score higher on the four sustainable development goals and less in companies that score lower... (*information repeated from above*)]

- Both
- Neither
- I don't know

The following question is about your opinion, there are no right or wrong answers.

**(2) How do you think the dialogue that Pensioenfonds Detailhandel has with companies in order to make them sustainable influences your retirement benefit when you retire?**

- Decreases my pension a lot
- Decreases my pension a little
- Does not have an influence on my pension
- Increases my pension a little
- Increases my pension a lot
- I don't know

The following question is about your opinion, there are no right or wrong answers.

**(3) How do you think the choice to invest more in companies that score higher on sustainability and to invest less in companies that score lower on sustainability influences your retirement benefit when you retire?**

- Decreases my pension a lot
- Decreases my pension a little
- Does not have an influence on my pension
- Increases my pension a little
- Increases my pension a lot
- I don't know

**[Part 4]**

**Background questions**

We would like to ask you a couple of background questions that we will use for comparing the answers at a group level.

**(4) How willing are you to give to good causes without expecting anything in return?**

Completely unwilling to do so: 1  $\diamond$  10: very willing to do so

**(5) If there were currently an election for the national parliament, which party would you vote for?**

- VVD
- CDA
- D66
- ChristenUnie
- PVV
- GroenLinks
- SP
- PvdA
- Partij voor de Dieren
- 50PLUS
- SGP
- DENK
- Forum voor Democratie
- Other: \_\_\_\_\_
- I am not planning to vote
- I prefer not to answer

**(6) I am....**

- Male
- Female
- Other

**1. (7) What is your year of birth?**

\_\_\_\_\_

**(8) What is the highest level of education you have completed?**

- Preparatory secondary vocational education (VMBO) or lower general secondary education (MAVO or MULO)
- Higher general secondary education (HAVO)
- Pre-university education (HBS, HAVO, VWO) or pre-university education with Latin and/or Greek (Gymnasium)
- Intermediate vocational education level 1 (MBO)
- Intermediate vocational education level 2 (MBO)
- Intermediate vocational education level 3 (MBO)
- Intermediate vocational education level 4 (MBO)
- Higher professional education (HBO)
- University (WO)
- Other:
- I did not follow any of the above types of education

**(9) What is your household's net monthly income?**

**[Info button at returns on investment:** net = your and your partner's income combined (if applicable) minus taxes and contributions]

- Less than €930
- Between €930 and €1,500
- Between €1,500 and €2,000
- Between €2,000 and €2,500
- Between €2,500 and €3,000
- Between €3,000 and €4,000
- Between €4,000 and €7,000
- Between €7,000 and €10,000
- Over €10,000
- I don't know
- I prefer not to answer

(10) **How do you think the corona crisis will influence your retirement benefit when you retire?**

- Decreases my pension a lot
- Decreases my pension a little
- Does not have an influence on my pension
- Increases my pension a little
- Increases my pension a lot
- I don't know

**Would you like to win a VVV Gift Voucher?**

With your participation you will have a chance of winning one of the five VVV Gift Vouchers, worth 250 euros each. If you want to win the prize, please fill in your e-mail address below:

\_\_\_\_\_

**In case you have any comments about this survey, you can use the space below:**

\_\_\_\_\_

**Thank you for participating! Click Next to send your answers.**

**References**

- Ajzen, I., T. C. Brown, and F. Carvajal. 2004. Explaining the discrepancy between intentions and actions: The case of hypothetical gap in contingent valuation. *Personality and Social Psychology Bulletin* 30:1108–21.
- Almås, I., A. W. Cappelen, and B. Tungodden. 2020. Cutthroat capitalism versus cuddly socialism: Are Americans more meritocratic and efficiency-seeking than Scandinavians? *Journal of Political Economy* 128:1753–88.
- Anderson, A., and D. T. Robinson. 2020. Climate fears and the demand for green investment. Working Paper, Swedish House of Finance.
- Andreoni, J. 1990. Impure altruism and donations to public goods: A theory of warm-glow giving. *Economic Journal* 100:464–77.
- Andreoni, J., J. M. Rao, and H. Trachtman. 2017. Avoiding the ask: A field experiment on altruism, empathy, and charitable giving. *Journal of Political Economy* 125:625–53.
- Ariely, D., A. Bracha, and S. Meier. 2009. Doing good or doing well? Image motivation and monetary incentives in behaving prosocially. *American Economic Review* 99:544–55.

- Arrow, K. J. 2012. *Social choice and individual values*, vol. 12. New Haven, CT: Yale University Press.
- Bandiera, O., I. Barankay, and I. Rasul. 2005. Social preferences and the response to incentives: Evidence from personnel data. *Quarterly Journal of Economics* 120:917–62.
- Barber, B. M., A. Morse, and A. Yasuda. 2021. Impact investing. *Journal of Financial Economics*, 139:162–85.
- Barko, T., M. Cremers, and L. Renneboog. 2018. Shareholder engagement on environmental, social, and governance performance. Working Paper, Prime Capital.
- Bartling, B., R. A. Weber, and L. Yao. 2015. Do markets erode social responsibility? *The Quarterly Journal of Economics* 130:219–66.
- Bauer, R., and P. Smeets. 2015. Social identification and investment decisions. *Journal of Economic Behavior and Organization* 117:121–34.
- Bénabou, R., and J. Tirole. 2006. Incentives and prosocial behavior. *American Economic Review* 96:1652–78.
- Bergstresser, D., J. Chalmers, and P. Tufano. 2008. Assessing the costs and benefits of brokers in the mutual fund industry. *Review of Financial Studies* 22:4129–56.
- Beshears, J., J. J. Choi, D. Laibson, and B. C. Madrian. 2008. How are preferences revealed? *Journal of Public Economics* 92:1787–94.
- Beshears, J., J. Choi, C. Clayton, C. Harris, D. Laibson, and B. Madrian. 2014. Optimal illiquidity. Working Paper, Harvard University.
- Bollen, N. P. 2007. Mutual fund attributes and investor behavior. *Journal of Financial and Quantitative Analysis* 42:683–708.
- Bolton, G. E., and E. Katok. 1995. An experimental test for gender differences in beneficent behavior. *Economics Letters* 48:287–92.
- Bolton, G. E., and A. Ockenfels. 2000. ERC: A theory of equity, reciprocity, and competition. *American Economic Review* 90:166–93.
- Bolton, P., T. Li, E. Ravina, and H. Rosenthal. 2020. Investor ideology. *Journal of Financial Economics* 137:320–52.
- Brodback, D., N. Günster, and S. Pouget. 2020. The valuation of corporate social responsibility: A willingness-to-pay experiment. Working Paper, University of Muenster.
- Bullock, W., K. Imai, and J. N. Shapiro. 2011. Statistical analysis of endorsement experiments: Measuring support for militant groups in Pakistan. *Political Analysis* 19:363–84.
- Cappelen, A. W., T. Halvorsen, E. Sørensen, and B. Tungodden. 2017. Facesaving or fair-minded: What motivates moral behavior? *Journal of the European Economic Association* 15:540–57.
- Carroll, G. D., J. J. Choi, D. Laibson, B. C. Madrian, and A. Metrick. 2009. Optimal defaults and active decisions. *Quarterly Journal of Economics* 124:1639–74.
- Carson, R. T., and T. Groves. 2007. Incentive and informational properties of preference questions. *Environmental and Resource Economics* 37:181–210.
- Carson, R. T., T. Groves, J. List, and M. Machina. 2006. Probabilistic influence and supplemental benefits: A field test of the two key assumptions behind using stated preferences. Working Paper, University of California, San Diego.
- Charness, G., and U. Gneezy. 2010. Portfolio choice and risk attitudes: An experiment. *Economic Inquiry* 48:133–46.
- Charness, G., and M. Rabin. 2002. Understanding social preferences with simple tests. *Quarterly Journal of Economics* 117:817–69.
- Ceccarelli, M., S. Ramelli, and A. F. Wagner. 2019. When investors call for climate responsibility, how do mutual funds respond? Working Paper, University of Zurich.



- Chalmers, J., and J. Reuter. 2012. What is the impact of financial advisors on retirement portfolio choices and outcomes? Working Paper, University of Oregon.
- Cohn, A., L. Jessen, M. Klasjna, and P. Smeets. 2019. Why do the rich oppose redistribution? An experiment with America's top 5%. Working Paper, University of Chicago.
- Crosnon, R., and U. Gneezy. 2009. Gender differences in preferences. *Journal of Economic Literature* 47:448–74.
- Cummings, R. G., S. Elliott, G. W. Harrison, and J. Murphy. 1997. Are hypothetical referenda incentive compatible? *Journal of Political Economy* 105:609–21.
- Cummings, R. G., G. W. Harrison, and E. E. Rutström. 1995. Homegrown values and hypothetical surveys: Is the dichotomous choice approach incentive-compatible? *American Economic Review* 85:260–66.
- Cummings, R. G., and L. O. Taylor. 1998. Does realism matter in contingent valuation surveys? *Land Economics* 74:203–15.
- . 1999. Unbiased value estimates for environmental goods: A cheap talk design for the contingent valuation method. *American Economic Review* 89:649–65.
- Debets, S., H. Prast, M. Rossi, and A. Van Soest. 2018. Pension communication in the Netherlands and other countries. Working Paper, Tilburg University.
- De-Magistris, T., A. Gracia, and R. M. Nayga, Jr. 2013. On the use of honesty priming tasks to mitigate hypothetical gap in choice experiments. *American Journal of Agricultural Economics* 95:1136–54.
- DellaVigna, S., J. A. List, and U. Malmendier. 2012. Testing for altruism and social pressure in charitable giving. *Quarterly Journal of Economics* 127:1–56.
- Derwall, J., N. Günster, R. Bauer, and K. Koedijk. 2005. The eco-efficiency premium puzzle. *Financial Analysts Journal* 61:51–63.
- Dimson, E., O. Karakas, and X. Li. 2015. Active ownership. *Review of Financial Studies* 28:3225–68.
- . 2020. Coordinated engagements. Working Paper, University of Cambridge.
- Donkers, B., C. Lourenço, and B. G. Dellaert. 2012. Measuring and debiasing consumer pension risk attitudes. Working Paper, Erasmus University Rotterdam.
- Downs, A. 1957. An economic theory of political action in a democracy. *Journal of Political Economy* 65:135–50.
- Dufwenberg, M., P. Heidhues, G. Kirchsteiger, F. Riedel, and J. Sobel. 2011. Other-regarding preferences in general equilibrium. *Review of Economic Studies* 78:613–39.
- Dyck, A., K. V. Lins, L. Roth, and H. F. Wagner. 2019. Do institutional investors drive corporate social responsibility? International evidence. *Journal of Financial Economics* 131:693–714.
- Eckel, C. C., and P. J. Grossman. 1998. Are women less selfish than men? Evidence from dictator experiments. *Economic Journal* 108:726–35.
- Edmans, A. 2011. Does the stock market fully value intangibles? Employee satisfaction and equity prices. *Journal of Financial Economics* 101:621–40.
- Ellingsen, T., and M. Johannesson. 2008. Pride and prejudice: The human side of incentive theory. *American Economic Review* 98:990–1008.
- Ellsberg, D. 1961. Risk, ambiguity, and the savage axioms. *Quarterly Journal of Economics* 75:643–69.
- EUROSIF. 2016. European SRI Study 2016. <https://www.ussif.org/files/Infographics/Overview%20Infographic.pdf>.
- . 2018. European SRI Study 2018. <http://www.eurosif.org/wp-content/uploads/2018/11/European-SRI-2018-Study-LR.pdf>
- Falk, A., A. Becker, T. Dohmen, B. Enke, D. Huffman, and U. Sunde. 2018. Global evidence on economic preferences. *Quarterly Journal of Economics* 133:1645–92.

- Falk, A., A. Becker, T. Dohmen, D. Huffman, and U. Sunde. 2016. The preference survey module: A validated instrument for measuring risk, time, and social preferences. Working Paper, University of Bonn.
- Falk, A., and N. Szech. 2013. Morals and markets. *Science* 340:707–11.
- Fehr, E., and U. Fischbacher. 2002. Why social preferences matter—the impact of non-selfish motives on competition, cooperation and incentives. *Economic Journal* 112:C1–C33.
- Fehr, E., and S. Gächter. 2000. Fairness and retaliation: The economics of reciprocity. *Journal of Economic Perspectives* 14:159–81.
- Fehr, E., and K. M. Schmidt. 1999. A theory of fairness, competition, and cooperation. *Quarterly Journal of Economics* 114:817–68.
- Feldman, J., J. Miyamoto, and E. F. Loftus. 1999. Are actions regretted more than inactions? *Organizational Behavior and Human Decision Processes* 78:232–55.
- FeldmanHall, O., D. Mobbs, D. Evans, L. Hiscox, L. Navrady, and T. Dalgleish. 2012. What we say and what we do: The relationship between real and hypothetical moral choices. *Cognition* 123:434–41.
- Fisman, R., P. Jakiela, and S. Kariv. 2017. Distributional preferences and political behavior. *Journal of Public Economics* 155:1–10.
- Frey, B. S., and S. Meier. 2004. Social comparisons and pro-social behavior: Testing "conditional cooperation" in a field experiment. *American Economic Review* 94:1717–22.
- Gingerich, D. W. 2010. Understanding off-the-books politics: Conducting inference on the determinants of sensitive behavior with randomized response surveys. *Political Analysis* 18:349–80.
- Giving in the Netherlands. 2020. Philanthropy Report. <https://www.geveninederland.nl/publicatie-geven-in-nederland-2020/>
- Giving USA. 2018. Philanthropy Report. <https://scholarworks.iupui.edu/bitstream/handle/1805/17666/high-net-worth2018-summary.pdf>
- Glazer, A., and K. A. Konrad. 1996. A signaling explanation for charity. *American Economic Review* 86:1019–28.
- Gneezy, U., and J. A. List. 2006. Putting behavioral economics to work: Testing for gift exchange in labor markets using field experiments. *Econometrica* 74:1365–84.
- Gneezy, A., U. Gneezy, L. D. Nelson, and A. Brown. 2010. Shared social responsibility: A field experiment in pay-what-you-want pricing and charitable giving. *Science* 329:325–27.
- Goda, G. S., M. R. Levy, C. F. Manchester, A. Sojourner, and J. Tasoff. 2015. The role of time preferences and exponential-growth bias in retirement savings. Working Paper, Stanford University.
- Gracia, A., M. L. Loureiro, and R. M. Nayga, Jr. 2011. Are valuations from nonhypothetical choice experiments different from those of experimental auctions? *American Journal of Agricultural Economics* 93:1358–73.
- Grimm, P. 2010. Social desirability bias. *Wiley International Encyclopedia of Marketing*. Published online December 15, 2010, 10.1002/9781444316568.wiem02057.
- Guiso, L., P. Sapienza, and L. Zingales. 2006. Does culture affect economic outcomes? *Journal of Economic Perspectives* 20:23–48.
- Güth, W., C. Schmidt, and M. Sutter. 2007. Bargaining outside the lab—a newspaper experiment of a three-person ultimatum game. *Economic Journal* 117:449–69.
- Hackethal, A., M. Haliassos, and T. Jappelli. 2012. Financial advisors: A case of babysitters? *Journal of Banking and Finance* 36:509–24.
- Harrison, G. W. 2006a. Experimental evidence on alternative environmental valuation methods. *Environmental and Resource Economics* 34:125–62.
- . 2006b. Making choice studies incentive compatible. In *Valuing environmental amenities using stated choice studies*, 67–110. Dordrecht, the Netherlands: Springer.

- Harrison, G. W., and E. E. Rutström. 2008. Experimental evidence on the existence of hypothetical gap in value elicitation methods. *Handbook of Experimental Economics Results*, vol. 1, 752–67. Amsterdam, the Netherlands: Elsevier.
- Harrison, G. W., R. M. Harstad, and E. E. Rutström. 2004. Experimental methods and elicitation of values. *Experimental Economics* 7:123–40.
- Hartzmark, S. M., and A. B. Sussman. 2019. Do investors value sustainability? A natural experiment examining ranking and fund flows. *Journal of Finance* 74:2789–837.
- Hong, H., and M. Kacperczyk. 2009. The price of sin: The effects of social norms on markets. *Journal of Financial Economics* 93:15–36.
- Hong, H., and L. Kostovetsky. 2012. Red and blue investing: Values and finance. *Journal of Financial Economics* 103:1–19.
- JP Morgan. 2018. Sustainable investing is moving mainstream. <https://www.jpmorgan.com/global/research/esp>.
- Kahneman, D., J. L. Knetsch, and R. H. Thaler. 1991. Anomalies: The endowment effect, loss aversion, and status quo bias. *Journal of Economic Perspectives* 5:193–206.
- Karlan, D. S. 2005. Using experimental economics to measure social capital and predict financial decisions. *American Economic Review* 95:1688–99.
- Kerschbamer, R., and D. Müller. 2020. Social preferences and political attitudes: An online experiment on a large heterogeneous sample. *Journal of Public Economics* 182:10.1016/j.jpubeco.2019.104076.
- Kessler, J. B., K. L. Milkman, and C. Y. Zhang. 2019. Getting the rich and powerful to give. *Management Science* 65:4049–62.
- Klink, J., and N. Langen. 2015. Are animal welfare aspects of relevance in consumers' purchase decision? *Proceedings in Food System Dynamics* 2015:328–46.
- Krüger, P. 2015. Corporate goodness and shareholder wealth. *Journal of Financial Economics* 115:304–29.
- Krüger, P., Z. Sautner, and L. T. Starks. 2020. The importance of climate risks for institutional investors. *Review of Financial Studies* 33:1067–111.
- List, J. A. 2001. Do explicit warnings eliminate the hypothetical bias in elicitation procedures? Evidence from field auctions for sportscards. *American Economic Review* 91:1498–507.
- . 2006. The behavioralist meets the market: Measuring social preferences and reputation effects in actual transactions. *Journal of Political Economy* 114:1–37.
- List, J. A., and C. A. Gallet. 2001. What experimental protocol influence disparities between actual and hypothetical stated values? *Environmental and Resource Economics* 20:241–54.
- List, J. A., and J. F. Shogren. 1998a. Calibration of the difference between actual and hypothetical valuations in a field experiment. *Journal of Economic Behavior & Organization* 37:193–205.
- . 1998b. The deadweight loss of Christmas: comment. *American Economic Review* 88:1350–55.
- . 2002. Calibration of willingness-to-accept. *Journal of Environmental Economics and Management* 43:219–33.
- Loomis, J. B. 2014. 2013 WAEA keynote address: Strategies for overcoming hypothetical gap in stated preference surveys. *Journal of Agricultural and Resource Economics* 39:34–46.
- Lusk, J. L., and F. B. Norwood. 2009. Bridging the gap between laboratory experiments and naturally occurring markets: An inferred valuation method. *Journal of Environmental Economics and Management* 58:236–50.
- McKinsey. 2017. From 'why' to 'why not': Sustainable investing as the new normal. Available at <https://www.mckinsey.com/industries/private-equity-and-principal-investors/our-insights/from-why-to-why-not-sustainable-investing-as-the-new-normal>

- Mukerji, S., and J. M. Tallon. 2001. Ambiguity aversion and incompleteness of financial markets. *Review of Economic Studies* 68:883–904.
- Mulligan, C. B., and C. G. Hunter. 2003. The empirical frequency of a pivotal vote. *Public Choice* 116:31–54.
- Murphy, J. J., P. G. Allen, T. H. Stevens, and D. Weatherhead. 2005. A meta-analysis of hypothetical gap in stated preference valuation. *Environmental and Resource Economics* 30:313–25.
- Nicolle, A., S. M. Fleming, D. R. Bach, J. Driver, and R. J. Dolan. 2011. A regret-induced status quo bias. *Journal of Neuroscience* 31:3320–27.
- Norwood, F. B., and J. L. Lusk. 2011. Social desirability bias in real, hypothetical, and inferred valuation experiments. *American Journal of Agricultural Economics* 93:528–34.
- O'Donoghue, T., and M. Rabin. 1998. Procrastination in preparing for retirement. Working Paper, University of California-Berkeley.
- Pástor, L., R. F. Stambaugh, and L. Taylor. 2020. Sustainable investing in equilibrium. *Journal of Financial Economics*. Advance Access published December 31, 2020, 10.1016/j.jfineco.2020.12.011.
- Renneboog, L., J. Ter Horst., and C. Zhang. 2008. Socially responsible investments: Institutional aspects, performance, and investor behavior. *Journal of Banking & Finance* 32:1723–42.
- Riedl, A., and P. Smeets. 2017. Why do investors hold socially responsible mutual funds? *Journal of Finance* 72:2505–50.
- Samuelson, W., and R. Zeckhauser. 1988. Status quo bias in decision making. *Journal of Risk and Uncertainty* 1:7–59.
- Simons, M. 2019. *Eerlijk Pensioenlabel. Beoordeling van het duurzaamheidsbeleid van tien Nederlandse pensioenfondsen – pilotstudie*. Amsterdam, the Netherlands: Profundo.
- Stoop, J., C. Noussair, and D. Van Soest. 2012. From the lab to the field: Cooperation among fishermen. *Journal of Political Economy* 120:1027–56.
- Terlau, W., and D. Hirsch. 2015. Sustainable consumption and the attitude-behaviour-gap phenomenon-causes and measurements towards a sustainable development. *International Journal on Food System Dynamics* 6: 159–74.
- Tonin, M., and M. Vlassopoulos. 2013. Experimental evidence of self-image concerns as motivation for giving. *Journal of Economic Behavior & Organization* 90:19–27.
- Tversky, A., and D. Kahneman. 1991. Loss aversion in riskless choice: A reference-dependent model. *Quarterly Journal of Economics* 106:1039–61.
- US SIF. 2018. Report on sustainable, responsible and impact investing trends.
- van der Lecq, S. G., B. Dellaert, L. Swinkels, and G. A. G. Alserda. 2016. Pension risk preferences: A personalized elicitation method and its impact on asset allocation. Working Paper, Vrije Universiteit Amsterdam.
- Vermeir, I., and W. Verbeke. 2006. Sustainable food consumption: Exploring the consumer “attitude-behavioral intention” gap. *Journal of Agricultural and Environmental Ethics*, 19(2), 169–194.
- Vossler, C. A., M. Doyon., and D. Rondeau. 2012. Truth in consequentiality: Theory and field evidence on discrete choice experiments. *American Economic Journal: Microeconomics* 4:145–71.
- Willis Towers Watson. 2020. Global Pension Assets Study 2020. Available at <https://www.thinkingaheadinstitute.org/en/Library/Public/Research-and-Ideas/2020/01/Global-Pension-Asset-Study-2020>.
- World Values Survey Association (WVSA). 2016. World Values Survey Wave 6 2010–2014. Retrieved from <http://www.worldvaluessurvey.org/WVSDocumentationWV6.jsp>