



Investment Professionals Increase ESG Investment in Response to Optimistic Framing

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Overview



Experiment:

We aimed to test the effect of different framing (**Norms, Messenger, Optimism, Loss frame**) on ESG investment choices of professional investors during an industry conference.

Main Result:

The **Optimism** frame was the **only** frame that significantly increased investment allocations.

Conclusion:

More optimistic communications around environmental sustainability, in contrast to a **doomsday** message, has the potential to raise ESG investment.

Carbon divestment is urgently needed to ward off the impending climate emergency

- Limiting global warming to 1.5 °C, as per the Paris Climate Agreement, requires a complete net decarbonization of the world's energy by the middle of this century (Otto et al., 2020)
- Only a “massive reallocation of capital” away from fossil fuels will prevent global warming (Carney 2019)
- Carbon divestment reduces the direct funding support for fossil fuel companies (Delis et al., 2019)

More divestment in carbon is needed

IF WE ARE TO CHANGE OUR CURRENT CLIMATE TRAJECTORY

Despite urgency of climate change, the proportion of responsible investment assets under management in Australia was **only 40 percent** in 2020*



* 20th Responsible Investment Benchmark Report, KPMG

Doomsday messaging is not shifting carbon divestment enough

WE NEED A DIFFERENT APPROACH



- 2021 100 seconds to midnight
- 2018 2 minutes to midnight
- 2017 2:30 minutes to midnight
- 2015 3 minutes to midnight
- 2012 5 minutes to midnight....

Taking a different approach is paramount. But what works?

Why is it important to target Portfolio Managers?

- **Because they have the most influence over the proportion of Environmental, social, and governance (ESG) oriented investments**
- For example, in Europe, the Investment market is dominated by institutional investors who as of 2020, account for **72%** of all assets under management.
- Only **28%** of assets was related to retail investment*

*EFAMA. (2021). *Asset management in Europe. Facts and figures*. Brussels: EFAMA.

Framing Can Influence Decision Making

- See for example, the famous 'Asian Disease' problem in Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science*, 211, 453–458.
- **Framing is particularly influential in choices involving the evaluation of risk**

Kühberger, A., Schulte-Mecklenbeck, M., & Perner, J. (1999). The effects of framing, reflection, probability, and payoff on risk preference in choice tasks. *Organizational Behavior and Human Decision Processes*, 78, 204–231.

Pinon, A., & Gambarara, H. (2005). A meta-analytic review of framing effect: risky, attribute, and goal framing. *Psicothema*, 17, 325–331.

Why did we choose to test these four frames?

We hypothesise that a message encouraging ESG investment is more persuasive when it:

1. Is delivered by a messenger, ie the ‘Messenger Effect’.

- The effectiveness of the Messenger does not hinge on the messenger being a famous person whom everyone knows. Instead, it is the identifiability of an actual person that seems to influence behavior.
- See for example, Dolan et al. (2010), Chaiken (1980); Pornpitakpan (2004); Chaiken (1979); Kassin (1983).

2. Makes the Social Norm more explicit

- Because it reduces the ambiguity around what the “correct” choice is
- See for example, Allcott (2011), (Ayal et al, 2019).

Why did we choose to test these four frames?

3. Makes the losses from *not* investing in ESG more salient, because humans are loss averse

- Institutional investors are observed to display loss aversion in investment decisions
- (Kahneman, & Tversky 1979; Waweru, et al. 2008).

4. Is Optimistic, because humans are biased towards optimism

- See for example, Sharot, (2011) The optimism bias. *Current biology*, 21(23);
- This could be particularly relevant for investment professionals (Camerer & Lovallo 1999).

Six Dimensions of Optimistic Explanatory Style

|  |  |  |  |  |  |
|---|--|---|--|--|---|
| Permanent <ul style="list-style-type: none">Optimists see good events as permanent | Temporary <ul style="list-style-type: none">Optimists see bad events as temporary | Specific <ul style="list-style-type: none">Optimists give specific explanations for bad events.Eg. “my bank balance is low because it is the end of the financial year” | Universal <ul style="list-style-type: none">Optimists give universal explanations for good events “Eg. “I’m financially independent” | Internal <ul style="list-style-type: none">Optimists attribute success to personal attributes | External <ul style="list-style-type: none">Optimists attribute failure to external circumstances |

The Experiment

- Conducted online using Limesurvey and Zoom, 30 September 2020.
- On Day 1 of a two-day Portfolio Construction Conference
- We received the registration list 3 days prior and randomized individuals into one of 5 treatment groups
- The conference organisers were told to email the randomized groups the corresponding survey link.
- Participants were debriefed the results in a conference session on day 2.



The Experiment

Participants were given the instructions:

“You will be asked to read information about investment strategies and then allocate \$100 between four investment options to create your most preferred portfolio.

In total, there will be six investment scenarios with different parameters, and you will create a portfolio for each of them. After you have made your choices, a short questionnaire will follow.”

The Experiment

How the returns are calculated

To determine the payment for the drawn portfolio, we will calculate the return on an investment from your \$100 portfolio for **two years** using the corresponding attributes. (You can think of each day of the conference representing one year.)

After you have made your decisions, there will not be any further opportunities to change your portfolios, that is your portfolios will remain identical for 2 years. Note that there is no inflation in this experiment and the risk-free rate is 0%.

Options B and D with an ESG orientation will incur an initial sustainability charge that will be applied to the **first year only**, and not the second year. If you select one or both of these options, the charge will be forwarded on your behalf to the Natural Resources Defence Council who are a charity working to safeguard the Earth - its people, its plants and animals, and the natural systems. (You can think of the ESG charge as your donation to this charity generated by your portfolio.) We will forward you the joint contribution receipt as part of the follow up survey after the conference.

The Experiment

Payments

- Average payment was **\$107.76**
- **50** participants randomly chosen for payment
- We randomly selected **1 scenario** out of the six for payment (Scenario #1)
- Earnings were calculated based on the allocation **choices** and attributes described in Scenario #1.

Neutral Frame (Control)

Please read the following **IMPORTANT** information regarding the experiment

International financial monitoring bodies warn global warming is now a major financial risk. There would be impact on global portfolio holdings if appropriate incentives to reduce greenhouse gas emissions were instituted worldwide.

High carbon emission assets would become less valuable and the valuations of companies holding those assets would fall. As expectations of such policies being implemented grow, there is a greater risk of fossil fuel assets becoming stranded assets.

While the absolute size of those stranded assets in some investment portfolios may be small, there are tiny holdings of stranded assets in many portfolios, making it difficult and expensive to arrange to sell all those assets.

The investor's decision therefore needs to consider the management of portfolio risk in the face of our understanding of the reality of the externalities created by burning fossil fuels, the likelihood that stranded assets would underperform, and the desire to position aligned portfolios with the investor's mission.

Norms Frame

Please read the following **IMPORTANT** information regarding the experiment

International financial monitoring bodies warn global warming is now a major financial risk. There would be impact on global portfolio holdings if appropriate incentives to reduce greenhouse gas emissions were instituted worldwide.

Most investors are now realising that high carbon emission assets would become less valuable and the valuations of companies holding those assets would fall. As expectations of such policies being implemented grow, there is a greater risk of fossil fuel assets becoming stranded assets.

While the absolute size of those stranded assets in some investment portfolios may be small, there are tiny holdings of stranded assets in many portfolios, making it difficult and expensive to arrange to sell all those assets at the same time as everyone else.

The investor's decision therefore needs to consider the management of portfolio risk in the face of our understanding of the reality of the externalities created by burning fossil fuels, the likelihood that stranded assets would underperform, and the desire to position aligned portfolios with the investor's mission.

Optimism Frame

Please read the following **IMPORTANT** information regarding the experiment

International financial monitoring bodies warn global warming is now a major financial risk. There would be impact on global portfolio holdings if appropriate incentives to reduce greenhouse gas emissions were instituted worldwide.

Reducing portfolio holdings away from high carbon emission assets can be temporarily challenging. Because while the absolute size of those stranded assets in some portfolios may be small, there are tiny holdings of stranded assets in many of the portfolios, making it difficult and expensive to arrange to sell all those assets.

In exchange for the temporary pain is a permanent gain in returns going forward. Low carbon emission assets will become more valuable over time and the valuations of companies holding those assets will continue to rise. Because, as expectations of greenhouse gas regulatory disruptions continue to grow, there will be ongoing and growing likelihood of fossil fuel assets becoming stranded assets.

The investor's decision therefore needs to consider the management of portfolio risk in the face of our understanding of the reality of the externalities created by burning fossil fuels, the likelihood that stranded assets would underperform, and the desire to position aligned portfolios with the investor's mission.

Messenger Frame

Please read the following **IMPORTANT** information regarding the experiment

International financial monitoring bodies warn global warming is now a major financial risk. There would be impact on global portfolio holdings if appropriate incentives to reduce greenhouse gas emissions were instituted worldwide.

Two years ago Bob Litterman, Chairman of the Board of Trustees at Commonfund, asked himself what the impact on their portfolio holdings would be if appropriate incentives to reduce greenhouse gas emissions were instituted globally. The answer was obvious – high carbon emission assets would become less valuable and there would be a greater risk of fossil fuel assets becoming stranded assets.

He and his astute portfolio managers anticipated that as expectations of such policies being implemented grew, it would negatively impact the valuations of stranded assets. And while the absolute size of those stranded assets in his portfolio was small, there were tiny holdings of stranded assets in many of the portfolios that they invested in, making it difficult and expensive to arrange to sell all those assets.

In order to reduce the expense and complexity of selling those assets Bob Litterman decided to create the equivalent economic exposure by entering into an innovative financial instrument, a “stranded asset total return swap.” The swap was a very simple contract between two counterparties, in this case with Deutsche Bank. Every three months one party pays the other depending on whether stranded assets have outperformed or underperformed the market.

Bob Litterman therefore protected Commonfund portfolio against the risk created by these “stranded assets.” It was a decision based on managing portfolio risk in the face of Bob and his portfolio managers’ understanding of the reality of the externalities created by burning fossil fuels, the likelihood that stranded assets would underperform, and the desire to position the portfolio to be aligned with his company’s mission.

Loss Frame (accidentally not distributed by conference staff)

Please read the following **IMPORTANT** information regarding the experiment

International financial monitoring bodies warn global warming is now a major financial risk. There would be impact on global portfolio holdings if appropriate incentives to reduce greenhouse gas emissions were instituted worldwide.

High carbon emission assets can expose investors to losses. Under regulatory disruption they would become less valuable and the valuations of companies holding those assets would fall. As expectations of such policies being implemented grow, there is a greater risk of fossil fuel assets becoming stranded assets, creating widespread losses.

Losses would be further exacerbated by the expense of selling stranded assets. Because while the absolute size of those stranded assets in some portfolios may be small, there are tiny holdings of stranded assets in many of the portfolios, making it difficult and expensive to arrange to sell all those assets.

The investor's decision therefore needs to consider the management of portfolio risk in the face of our understanding of the reality of the externalities created by burning fossil fuels, the likelihood that stranded assets would underperform, and the desire to position aligned portfolios with the investor's mission.

How We Chose Parameters for Scenarios

| Attributes | Options | Conservative | | Balanced | |
|--|--|--------------|-----|----------|-----|
| | | A | B | C | D |
| Environmental, social and government (ESG) | ESG orientation | No | Yes | No | Yes |
| | Sustainability Charge to You in the 1 st year | | | | |
| Performance | Average annual return for the past 3 years | | | | |
| | Expected annual return for the next 10 years | | | | |
| Volatility | Standard deviation | | | | |

- The return and risk options were designed to be **consistent with** what the participants encounter in their **work environment**.
- The Sharpe ratios **reflect** the situation observed in **financial markets** at the time of the experiment (e.g., in Australia per Vanguard (2020) and internationally per Dimson et al. (2021)).
- The portfolio return expectations were modelled using a risk-free rate of 0%. Official **cash rates** at the time the experiment were **close to zero 0.10%**

Six Scenarios in Random Order

| Attributes | Options | Conservative | | Balanced | |
|--|--|--------------|------------|----------|---------------------|
| | | A | B | C | D |
| Environmental, social and government (ESG) | ESG orientation | No | Yes | No | Yes |
| | Sustainability Charge to You in the 1 st year | 0% | 1.5% 3% | 0% | 2.25% 4.5% |
| Performance | Average annual return for the past 3 years | 3% | 2% | 4% | 3% |
| | Expected annual return for the next 10 years | 4% | 4.5% | 6% | 6.75% |
| Volatility | Standard deviation | 4% | 3% 4.5% | 6% | 4.5% 6% 6.75% |

Portfolios
1,4,5,6

Portfolios 2,3

Portfolios
1,2,4,5,6

Portfolio 3

Portfolios 1,2,3

Portfolio 6

Portfolios 4,5

Allocations
entered here

ensure the total is 100

| | A | B | C | D |
|------------|----------------------|----------------------|----------------------|----------------------|
| Allocation | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

Please choose 0 for options you do not want to invest in.

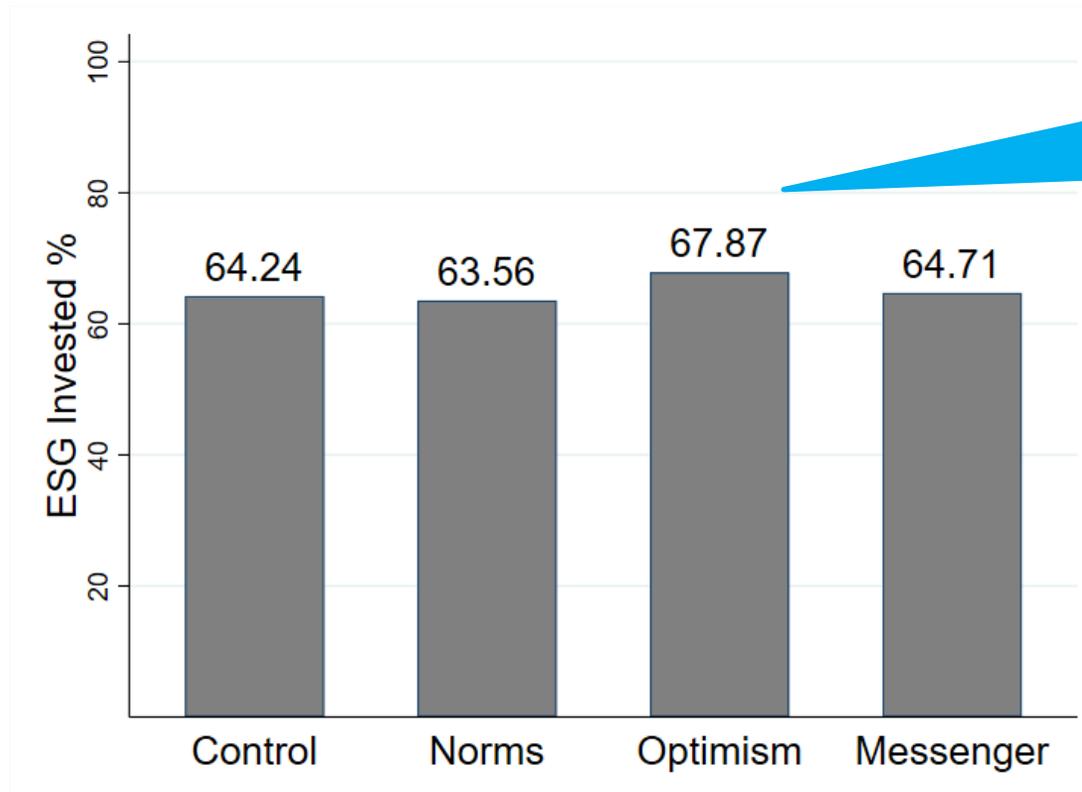
Sample

- 278 Incomplete Responses were excluded
- We excluded **105** individuals who responded that they had no intention to invest in ESG within the next 10 years. Because we are interested in closing the intention-behaviour gap.
- We also excluded **40** individuals identifying as support-service providers because they do not oversee investment decisions.
- **Final sample: 335 individuals** who made **2010** portfolio allocations.

Males = 254 (76%) Females = 75 (22%) Other = 6 (2%)

Average age = 44 years old

The Optimism frame produces the highest ESG allocations on average



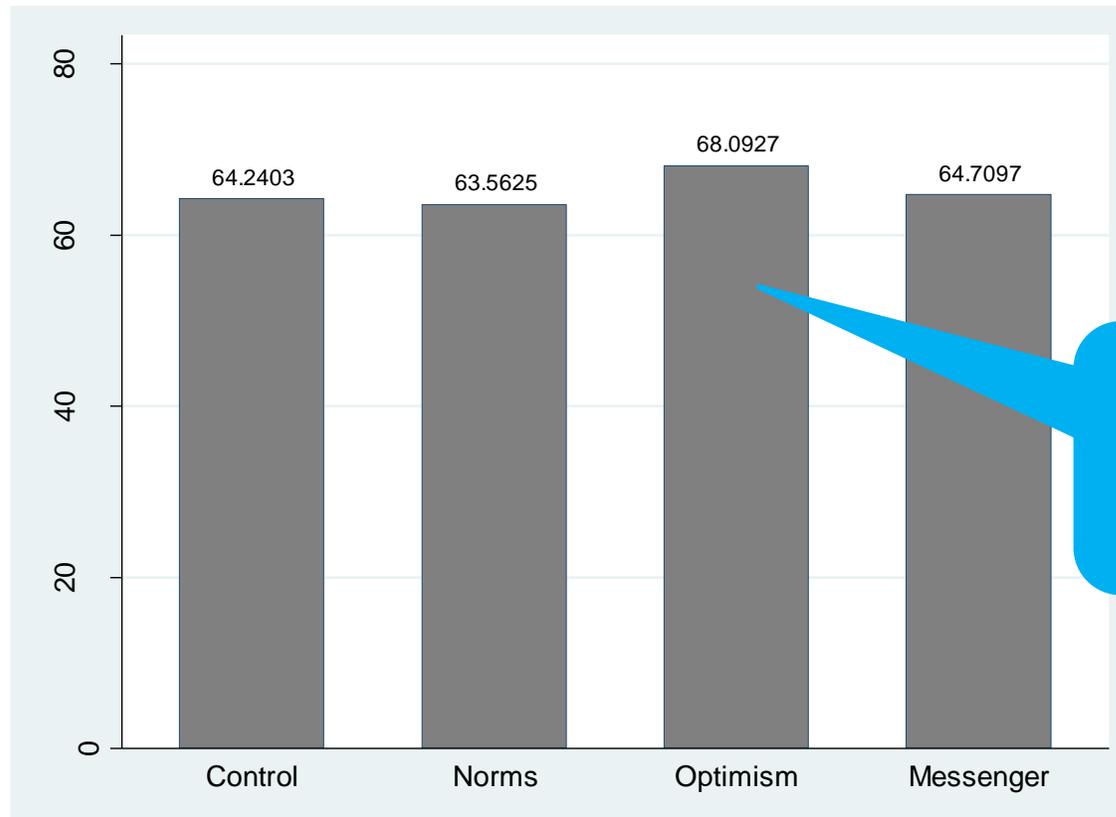
Average % ESG Invested across all treatments was **65.6%**

Statistically significant using a one-sided *t*-test ($p=0.026$)

ESG (%) allocation of finance professionals who intended to increase their investments in ESG in the future (responding either in a month, year or in 10 years) in each condition. $N=335$.

Robustness check with truncated sample

We randomly reduced the Optimism treatment sample by 50%.

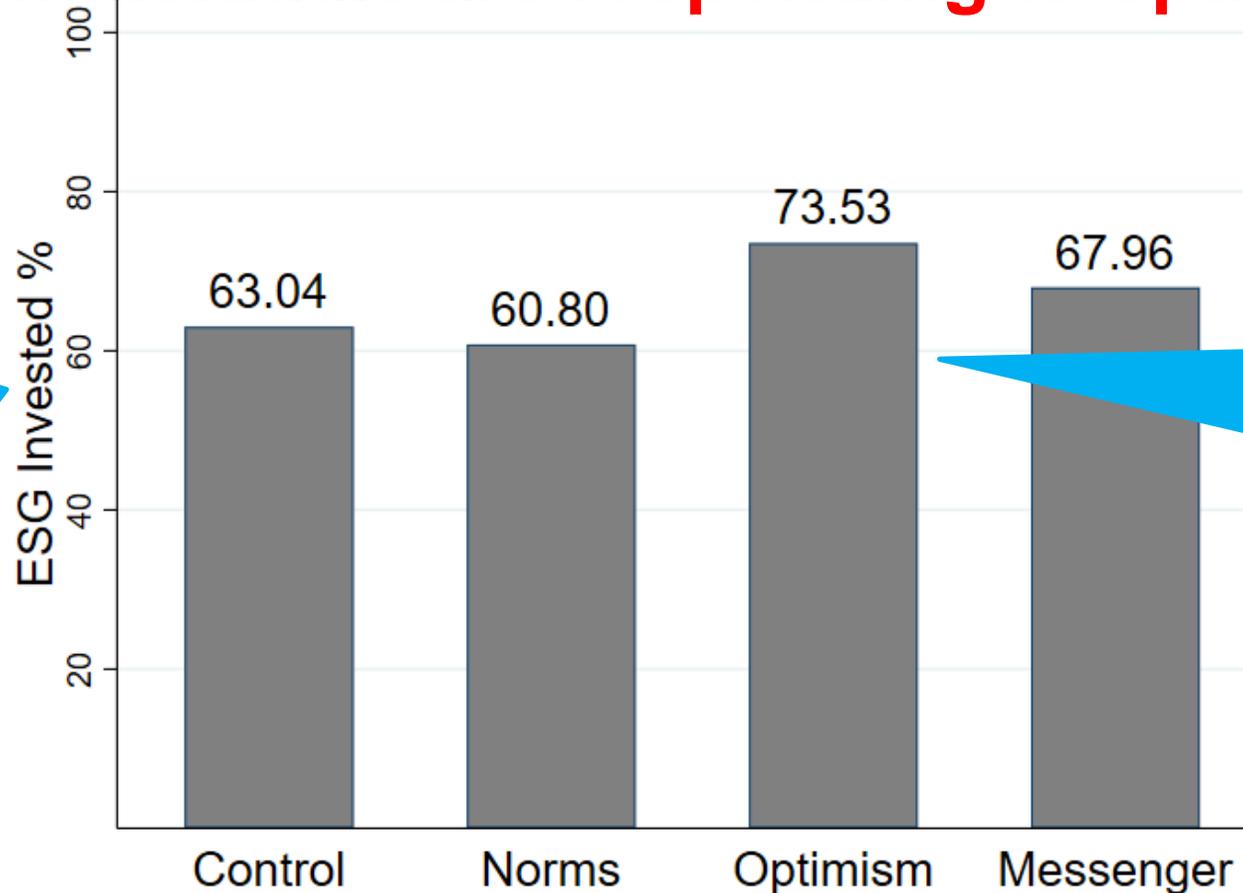


Still statistically significant using a one-sided *t*-test, ($p=0.041$)

ESG (%) allocation of finance professionals who intended to increase their investments in ESG in the future (responding either in a month, year or in 10 years) in each condition. $N=242$.

Optimistic individuals are responding to optimistic framing

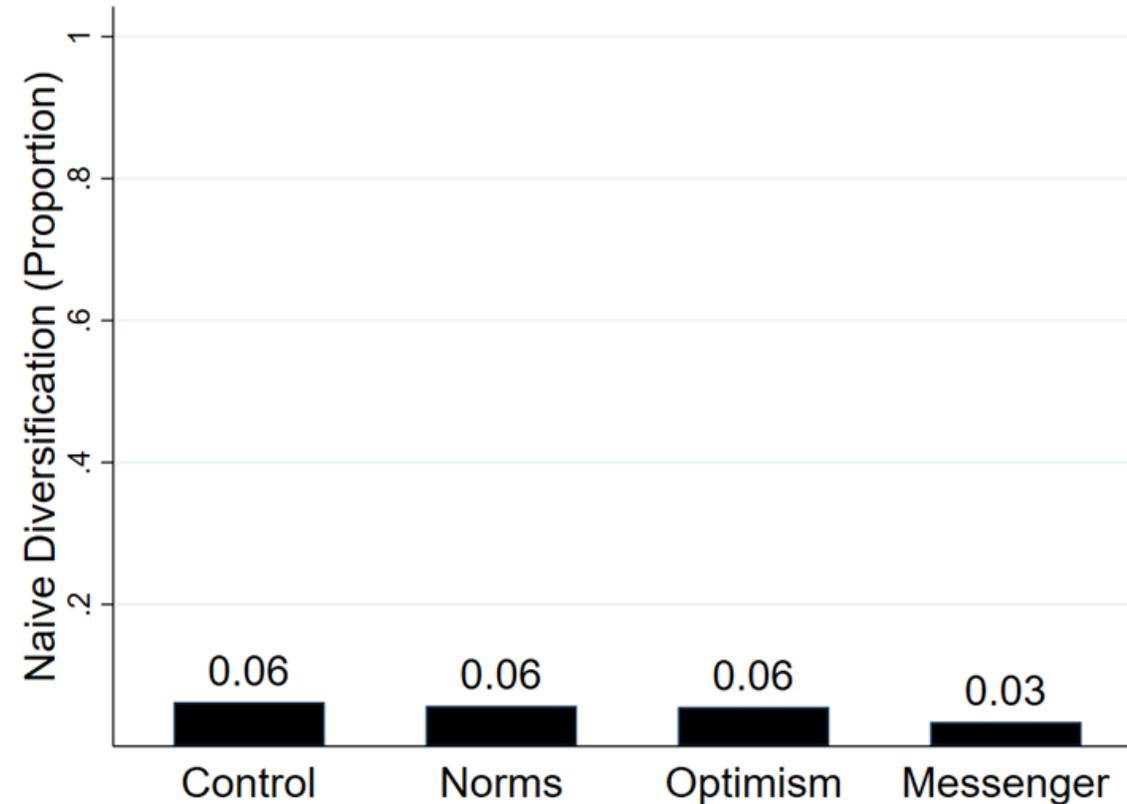
The difference between Control and Optimism treatment is statistically significant ($p < 0.001$)



Optimists contributed 15% more on average than Pessimists in the Optimism treatment

ESG (%) allocated by investment professionals who had a more optimistic life orientation. Notes: N=226 subjects, Control=58; Norms=40; Optimism=81; Messenger =47.

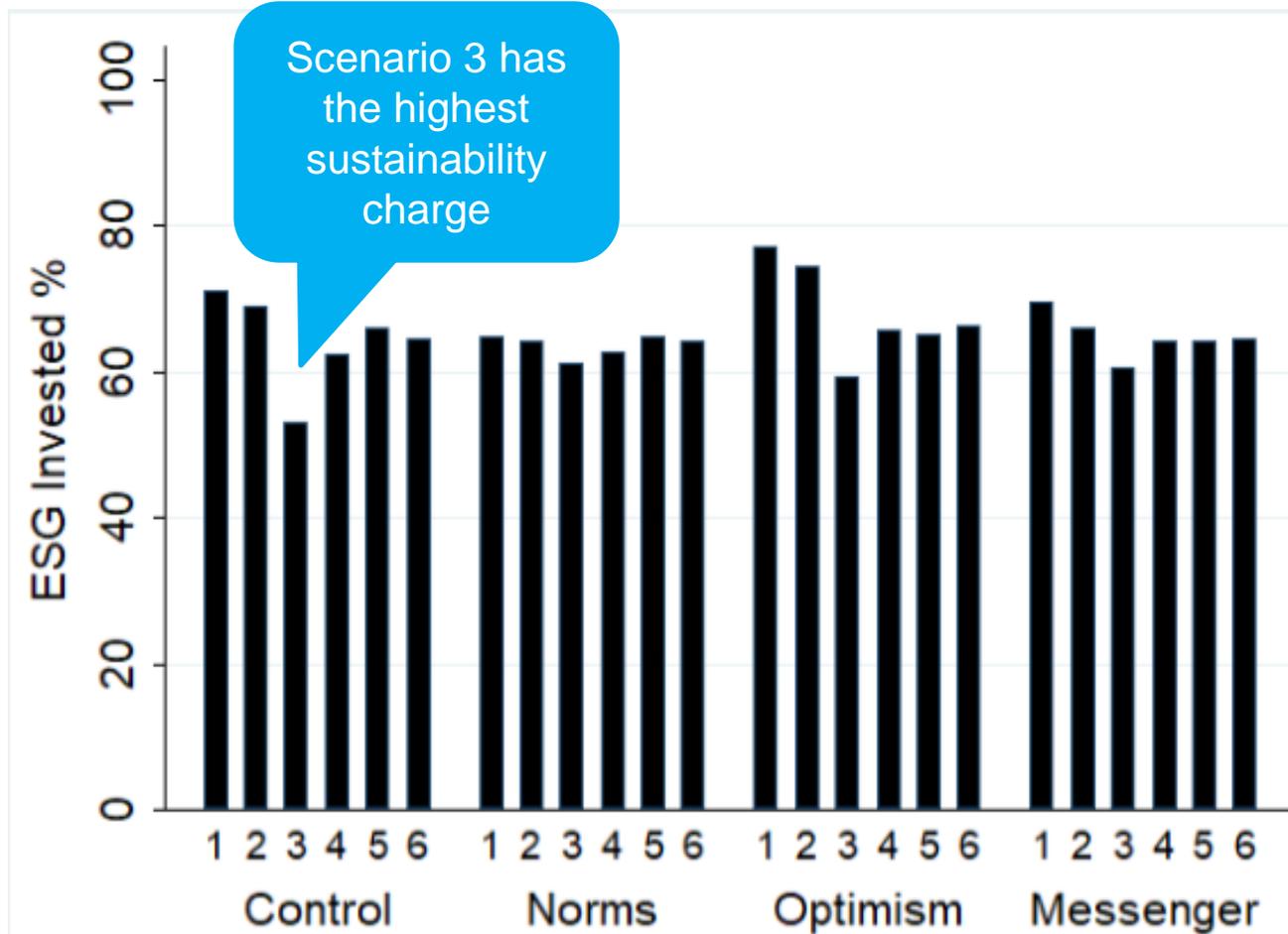
Subjects are sophisticated in their decision making



$N=2,808$ portfolio allocations

Low levels of naïve diversification

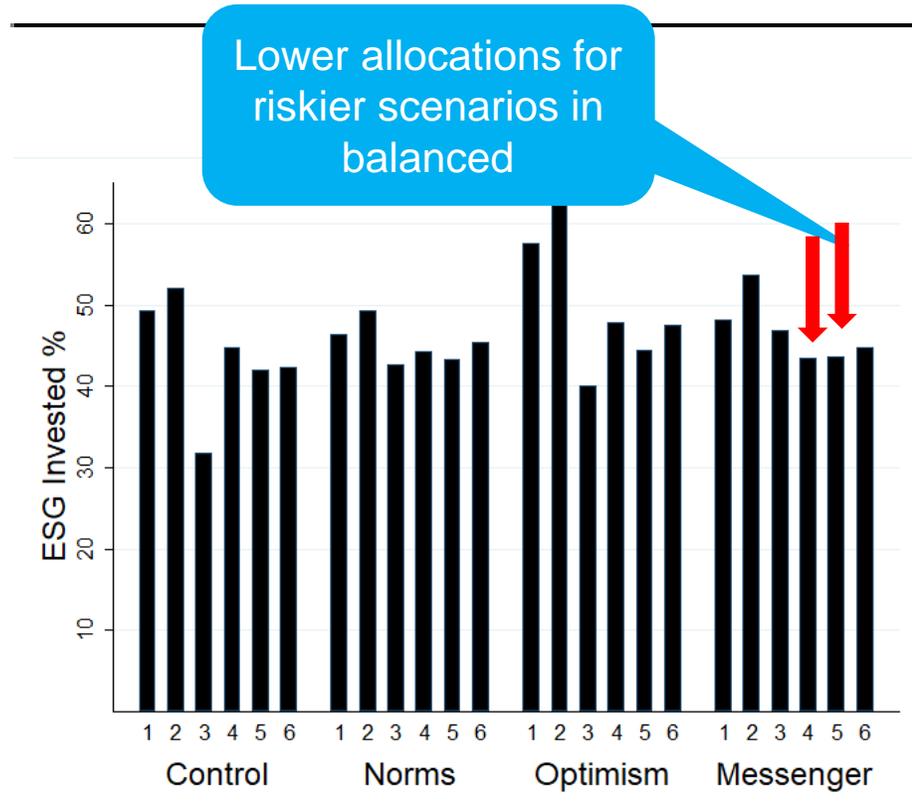
One-off sustainability charges negatively impact ESG allocations



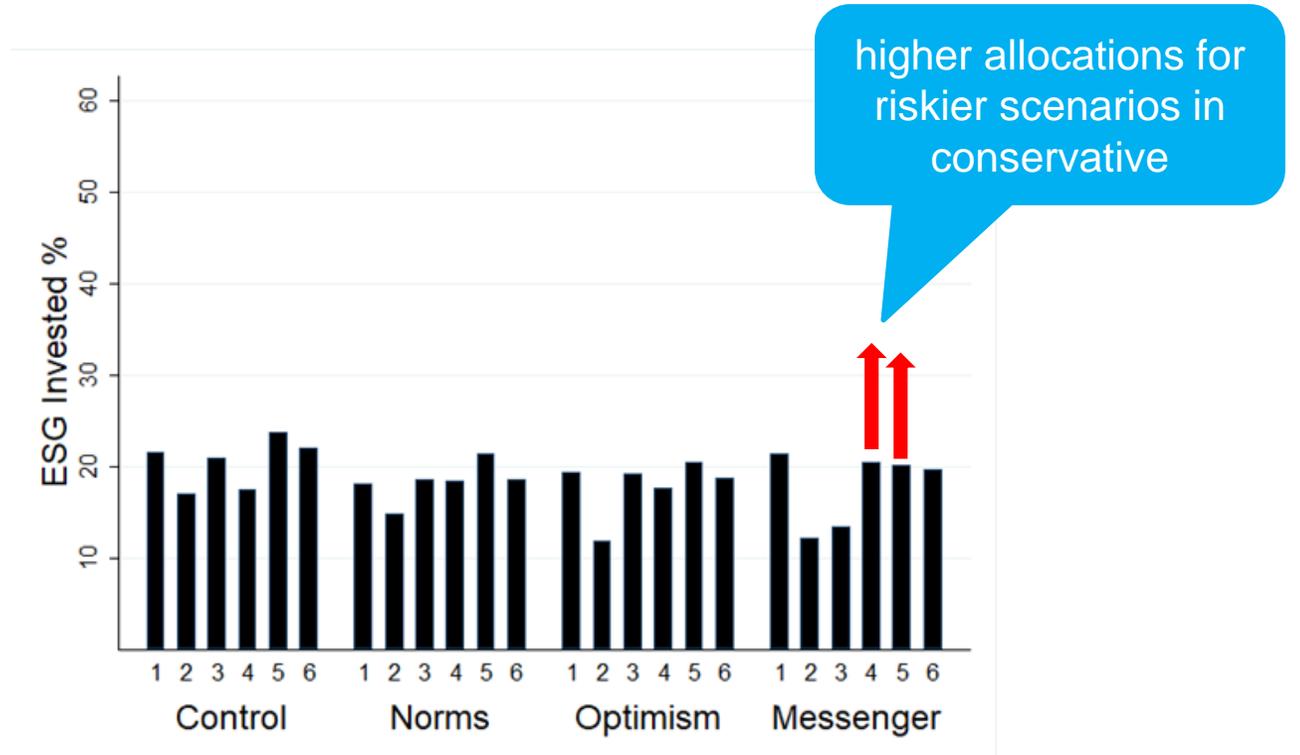
N=335 subjects

ESG (%) allocation for scenarios (1-6) by condition

Higher risk does not negatively affect ESG allocations



Balanced ESG (%) allocation for Scenarios (1-6) by condition.



Conservative ESG (%) allocation for Scenarios (1-6) by condition.

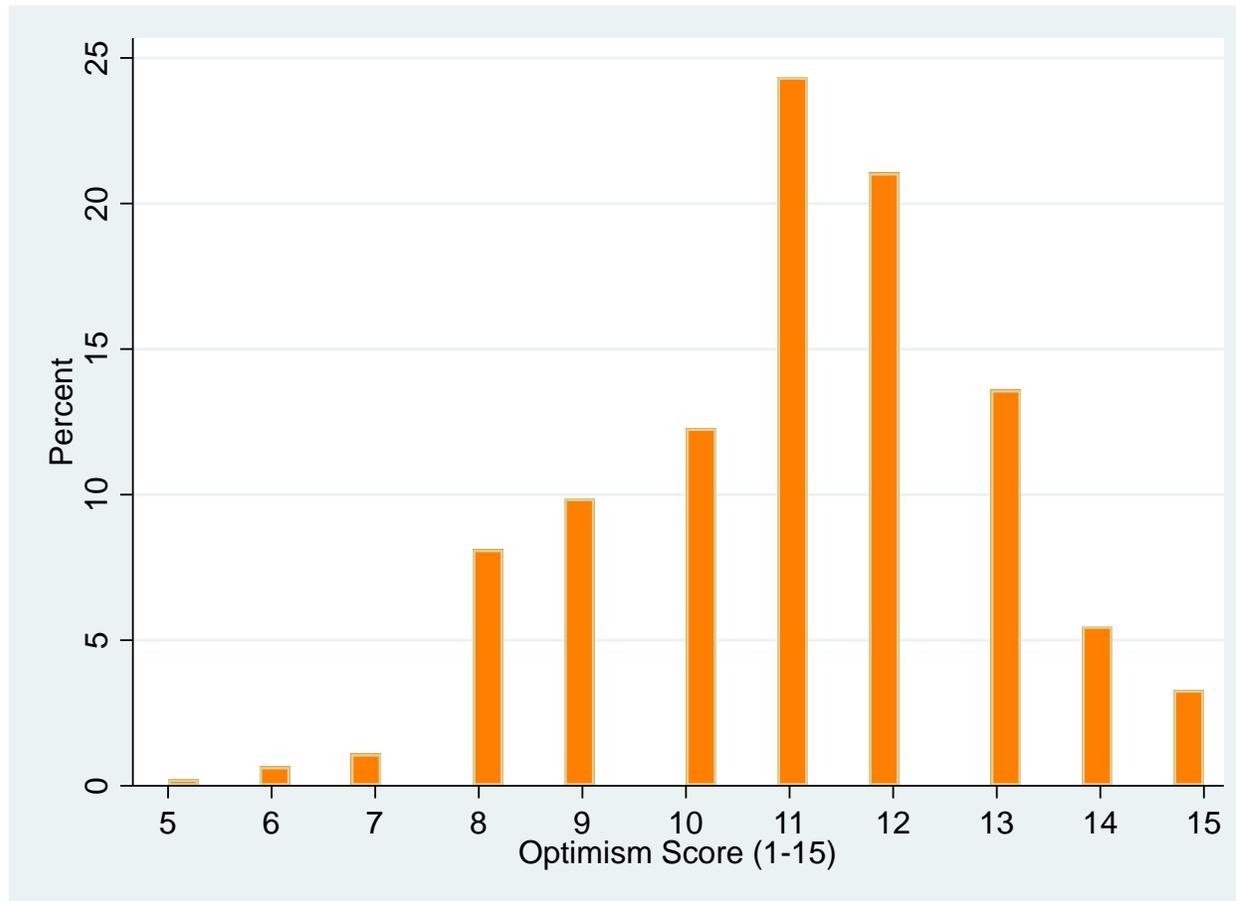
Conclusions

1. We demonstrate that optimistic framing can nudge experienced professional investors.
2. The ecological environment is important to investment Portfolio Managers in Australia
3. More **optimistic** communications around environmental sustainability, in contrast to pessimistic messaging, has the potential to raise ESG investment.

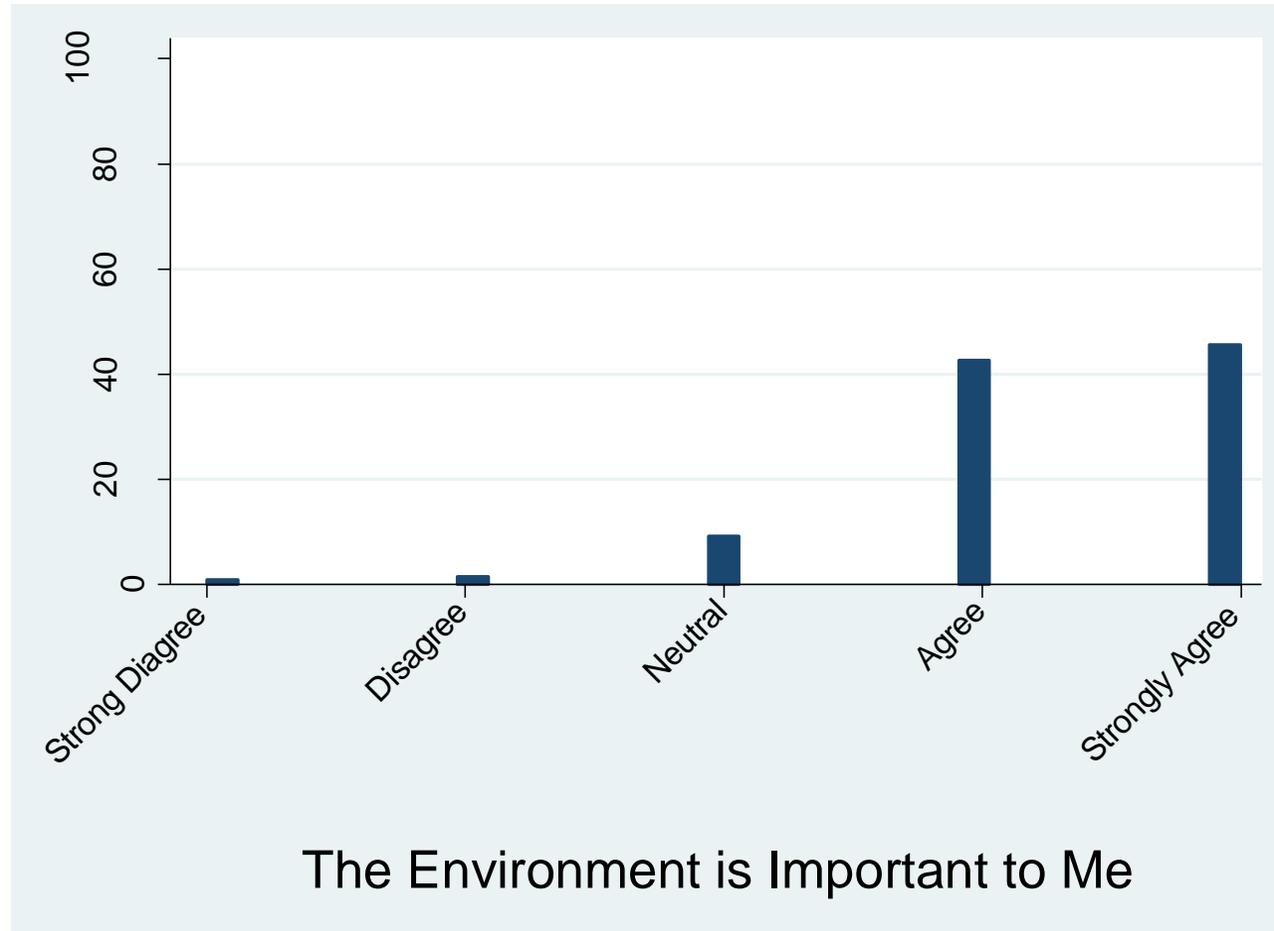
Pessimists Verses Optimists

Most Respondents were at the optimistic end of the scale

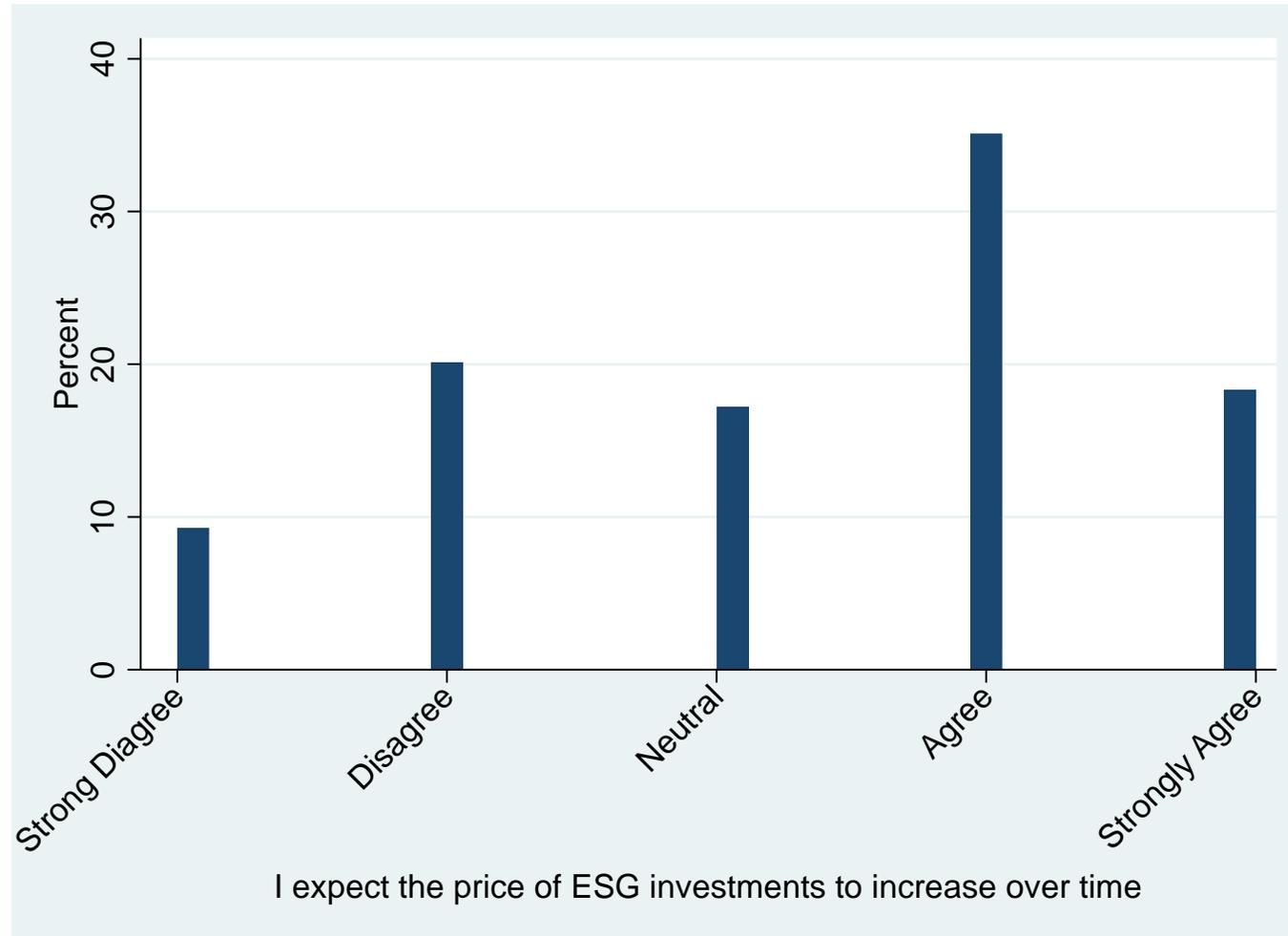
Optimistic Respondents – Mode score is 11 out of 15.



The environment is important to respondents



Respondents mostly expect ESG investments to increase over time



Respondents see regulatory risk as high for carbon assets

