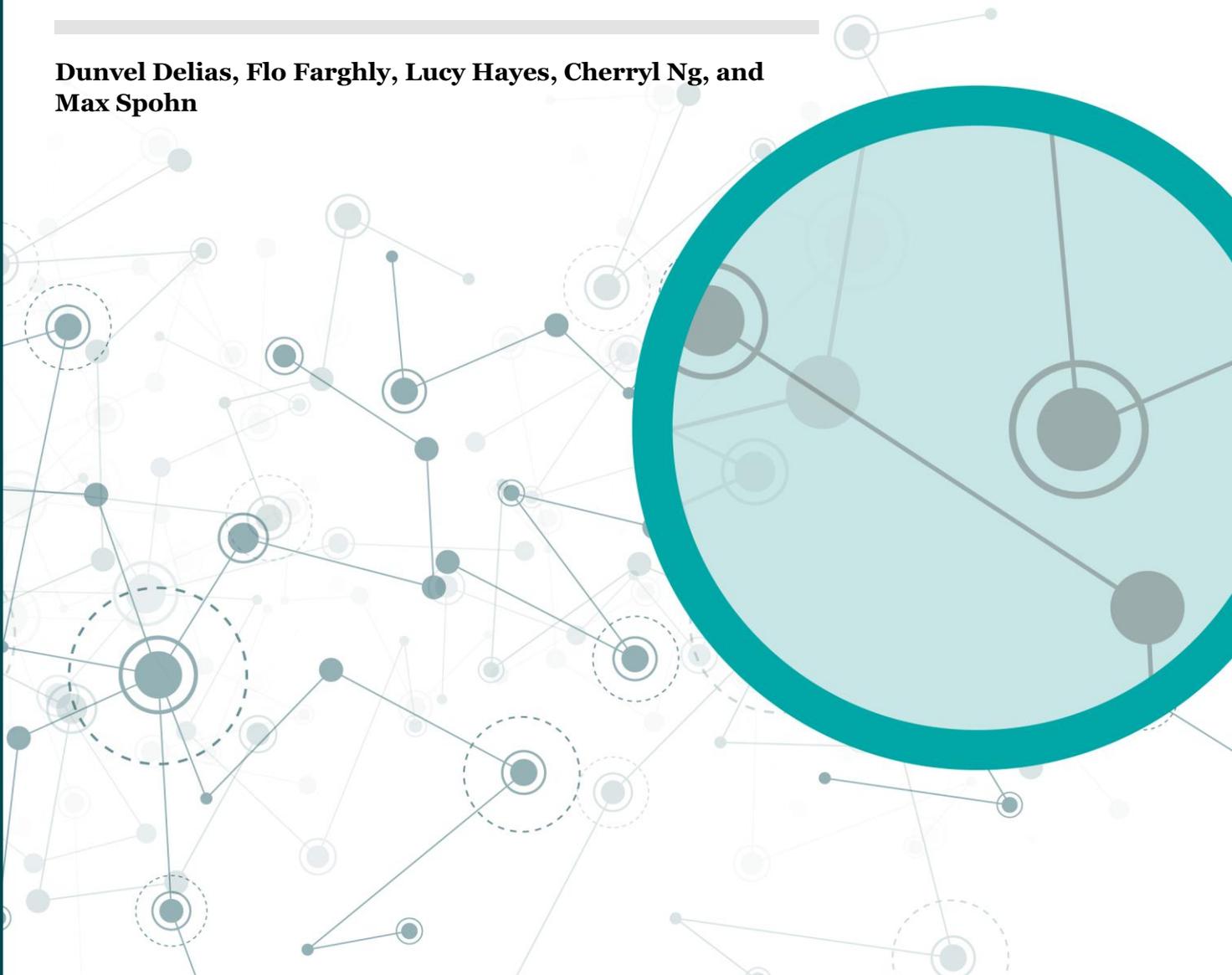


# Research Note

January 2022

Going beyond ‘capital at risk’: Behaviourally informed risk warnings for high-risk investment products

Dunvel Delias, Flo Farghly, Lucy Hayes, Cherryl Ng, and Max Spohn



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## **Acknowledgements**

We would like to thank Dan Gibbons, Patrick Sholl and Jayson Probin for their advice and input.

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# Summary

We conducted an online experiment simulating the experience of retail investors when browsing for investments. The aim of the experiment was to evaluate the impact of the salience and content of risk warnings on consumers' comprehension and perception of key risks for high-risk investments. The results informed the Financial Conduct Authority's (FCA's) consultation paper (Financial Conduct Authority 2022).

Overall, we find that risk warnings that are more salient and informative for consumers, and informed by behavioural science, significantly increase consumers' comprehension and perception of the risks involved in high-risk investments. They also reduce consumers' propensity to recommend the investment to a friend and, if they do recommend it, they recommend a lower amount. However, these product-specific risk warnings can lead to unintended consequences on how consumers perceive other investments: in our experiment, participants' risk perception of stocks decreased when the new risk warnings linked to high-risk investments were shown.

## Equality and diversity considerations

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We have considered the equality and diversity issues that may arise from the research in this Research Note.

Overall, we do not consider that the research in this Research Note adversely impacts any of the groups with protected characteristics i.e. age, disability, sex, marriage or civil partnership, pregnancy and maternity, race, religion and belief, sexual orientation and gender reassignment.

# 1 Introduction and policy context

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A well-functioning consumer investment market can not only help millions of consumers invest with confidence and save for planned and unexpected life events, but also provide essential funding to businesses in the real economy (FCA, 2021). However, social and economic developments, technological advances in the investment sector and the COVID-19 pandemic have pushed more consumers towards high-risk investments, with many new investors in high-risk products predominantly researching and investing online. This raises consumer protection concerns given evidence that some of these investors may not understand the risks involved or be able to absorb losses (BritainThinks 2021).

To help retail investors make more appropriate investment decisions about high-risk investments<sup>1</sup>, the FCA identified three areas where consumer harm can be addressed:

- (i) the classification of high-risk investments that determines which (if any) marketing restrictions an investment is subject to
- (ii) the consumer journey into high-risk investments which, if strengthened, would further distinguish the high-risk investment market from the mainstream one and help consumers understand the risks involved
- (iii) the responsibilities of firms that approve financial promotions to ensure firms have the relevant expertise in the promotions they approve and the overall quality of financial promotions in the market is high.

Our research focuses on the second area identified, which deals with the process consumers must go through to access high-risk investments. By improving consumers' understanding of the risks of high-risk investments compared to the mainstream market, and facilitating more mindful investment decisions, consumers could be less likely to 'click through' and end up investing in inappropriate, high-risk products that do not meet their needs (FCA, 2021). Three separate online experiments were conducted to test different tools that could further help consumers distinguish between high-risk and mainstream products:

1. Improved risk warnings (this Research Note)
2. Decision points within the customer journey (Farghly et al., 2022)
3. Updated investor categories in self-certification process (Gilchrist et.al 2022)

<sup>1</sup> Any investment subject to marketing restrictions under FCA's rules can be considered high-risk. This includes non-readily realisable securities (NRRSs), peer-to-peer (P2P) agreements, non-mainstream pooled investments (NMPIs) and speculative illiquid securities (SISs).

This Research Note presents the findings of the experiment on risk warnings.

Research commissioned by the FCA and conducted by BritainThinks (2021) finds that non-advised investors are disengaged with current risk warnings. The usual disclaimers, such as 'Your capital is at risk', also do not manage to convey the genuine possibility of an investment loss. These issues could be particularly problematic with higher risk investments, and for newer investors with less investing experience.

Previous work the FCA conducted found that a behaviourally designed risk warning on financial promotions improved participants' comprehension of investment risks across a range of investment products (Feddersen et al., 2020). Building on these findings, this new experiment focuses on testing a wider range of risk warnings informed by behavioural science. These warnings have a stronger focus on consumers' own comprehension of the investment risks and lack of protection (such as FSCS cover), and as part of this include an interactive link that lets consumers 'take 2 minutes to learn more'.

The risk warnings in this experiment focus on crowdfunding and cryptoassets, two investments selected due to their growing popularity amongst newer, non-advised investors (FCA, 2021). Crowdfunding is one of the main ways in which high-risk investments are promoted to the mass market, but any resulting investment by retail consumers is subject to some restrictions<sup>2</sup>. The FCA is consulting on strengthening these restrictions, and broadly applying them to cryptoassets following the Treasury's consultation on bringing the financial promotions of cryptoassets under its the FCA's regulatory remit.

<sup>2</sup> The FCA categorises shares or bonds bought through a crowdfunding platform as Non-Readily Realisable Securities (NRRS). Their mass marketing is not banned, but retail investors are generally limited to investing 10% of their net assets in them.

## 2 Behavioural context and treatment design

The risk warnings tested in this experiment are based on the behavioural concepts we consider most promising when it comes to consumers' risk comprehension and perception. Table 1 gives an overview of the warnings we tested. Throughout the rest of the document, we refer to treatments 2-7 as 'behaviourally informed risk warnings' and Treatment 1 is the 'Salient Control'.

**Table 1: List of the different risk warnings across treatment arms and branches**

<b>Treatment arm</b>	<b>Content</b> [Italic text in grey only relevant for the cryptoasset branch]
<b>Control</b>	<i>(Limited consumer protection)</i> . Your capital is at risk.
<b>Treatment 1 - Salient Control</b>	<i>(Limited consumer protection)</i> . Your capital is at risk (larger text, red background for salience).
<b>Treatment 2 - Basic Information</b>	This is a high-risk investment. You could lose all your money and are unlikely to be protected if something goes wrong. <u>Take 2min to learn more.</u> <sup>3</sup>
<b>Treatment 3 - Loss Aversion</b>	Don't invest unless you're prepared to lose all your money. This is a high-risk investment. You could lose all your money and are unlikely to be protected if something goes wrong. <u>Take 2min to learn more.</u>
<b>Treatment 4 - Gain Frame</b>	Invest smart and diversify with lower-risk investments. This is a high-risk investment. You could lose all your money and are unlikely to be protected if something goes wrong. <u>Take 2min to learn more.</u>
<b>Treatment 5 - Inducing uncertainty/Fear</b>	It's ok to be scared, you have no control over what happens to your money. This is a high-risk investment. You could lose all your money and are unlikely to be protected if something goes wrong. <u>Take 2min to learn more.</u>

<sup>3</sup> 'Take 2min to learn more' linked to a pop-up box containing more information. See Annex 1 for contents

<b>Treatment 6 -Social Information</b>	This investment is not as popular as you think, only X% of UK adults have it. This is a high-risk investment. You could lose all your money and are unlikely to be protected if something goes wrong. <a href="#">Take 2min to learn more.</a>
<i>Treatment 7 – Lack of Supervision [Cryptoasset branch only]</i>	<i>Crypto investment activities are usually not regulated by the Financial Conduct Authority (FCA). Cryptoassets are high-risk investments. You could lose all your money and are unlikely to be protected if something goes wrong. <a href="#">Take 2min to learn more.</a></i>

Our thinking was influenced by the behavioural science literature, set out below.

## **Salience and simplification of information**

At any given moment, we must process such a significant number of stimuli that our visual attention has to be selective (Wolfe & Horowitz, 2017). What we eventually pay attention to depends highly on context (Mullett, T., Smart, L., Stewart, N., 2017): a large red font may not appear as highly salient to us if it is surrounded by similar large red text. However, making a design element larger – especially when initially small – and having it on a contrasting background can help draw visual attention to it (Lohse, 1997; Yarbush, 1967). In practice, some prominent and comprehensive warnings have proved effective at changing consumers’ perception and behaviour: the well-known warnings found on cigarette packages not only increase health knowledge and perception of risks, but can also promote smoking cessation (Hammond, 2011).

Financial risk warnings are often presented in small print (Ennew, Waite, & Waite, 2013), which is reflected in our baseline treatment (control). All the other risk warnings tested in this experiment are made more salient by using a larger font and presenting them on a red background, where the *Salient Control* treatment still shows the usual ‘*Your capital is at risk*’ warning.

All other risk warnings tested contain simplified language that can help consumers understand the direct financial implications of investing in a high-risk investment. For example, the risk warning shown in Treatment 2 - *Basic Information* relies not only on the saliency but also on the conciseness and simplicity of its content, while Treatment 7 - *Lack of Supervision* builds on these ideas to provide clear, simple regulatory information. Simplifying information is a powerful tool which has proved effective across a range of sectors. For instance, summarising the long information pack sent to soon-to-be retired into a one-sided handout with a clear call to action to visit an advice website led to a 10-fold increase in visits to this website (The Behavioural Insights Team, 2017).

## **Loss aversion and gain framing**

Loss aversion is the tendency for people to prefer avoiding losses over receiving equivalent gains (Tversky & Kahneman, 1992). This concept is one of the potential

explanations for the so-called 'disposition effect', where investors tend to sell assets that have increased in value but keep the ones that have dropped in value (Odean, 1998). Since consumers could lose their entire investment when selecting high-risk investments, Treatment 3 - *Loss Aversion* focuses consumers attention on this potential loss.

People can also be influenced by the way the same information is presented to them. For example, gain-framed health messages (e.g. 'Exercising regularly can help you lose weight') are generally more effective in encouraging illness prevention behaviours compared to loss-framed ones (e.g. 'Not exercising regularly can make you gain weight') (Gallagher & Updegraff, 2012). Treatment 4 - *Gain Frame*, tests the effectiveness of a positive frame by highlighting the advantage of investing in lower risk investments.

## **Uncertainty and fear**

Not all negative emotions have the same impact on an individual's behaviour. While angry people have optimistic risk estimates and display risk-taking behaviours, fearful people usually have pessimistic risk estimates that amplify their risk aversion (Lerner & Keltner, 2001). Similarly, priming financial professionals with a bust scenario (a stock market rapidly declining in price) makes them significantly more risk averse than those primed with a boom scenario (a stock market rapidly increasing in price), and their higher levels of fear lead to lower investments in a risky asset (Cohn, Engelmann, Fehr, & Maréchal, 2015). In our experiment, Treatment 5 - *Inducing Uncertainty/Fear* tries to appeal to these emotions to steer people away from inappropriate high-risk investments.

## **Social information**

Social norms, shaped by what is considered acceptable by our peers, can significantly change our behaviour depending on how we compare to them (Cialdini & Goldstein, 2004). In a large-scale pilot programme, households presented with information on their neighbours' electricity consumption significantly reduced their own energy consumption (Allcott, 2011). Similarly, the 'bandwagon effect' describes the tendency for people to copy a certain behaviour simply because others do it (Leibenstein, 1950). This effect can also be seen in the investment space, where newer investors are significantly influenced by social factors such as peer learning (BritainThinks, 2021).

In our experiment, Treatment 6 - *Social Information*, highlights how uncommon it actually is for people to invest in high-risk investments. Providing this information could help prevent investors from overestimating the social desirability of putting money in these investment products.

## **Engagement**

Risk warnings can decrease consumers' inclination to search for more information as they can disengage with the details (Cox & de Goeij, 2020; Mullett, T., Smart, L., Stewart, N. 2018). All our behaviourally informed risk warnings are therefore made interactive by including a link that, when clicked on, shows a short pop-up '2 minute' summary of the key risks associated with high-risk investments (Annex 1). The salience

of this part of the risk warnings is also further increased by underlining the text. This builds on research on terms and privacy policies, which found that telling customers how long it will take them to read a message and providing short pieces of information at the right time improves consumers' understanding (The Behavioural Insights Team, 2019).

## 3 Methodology and sample

### Experimental design

We conducted an online experiment to measure the impact of our behaviourally informed risk warnings on three consumer outcomes:

1. **Comprehension of risk**, including consumers' awareness regarding the maximum investment loss possible and the degree of protection they can expect if things go wrong (our primary outcome);
2. **Perception of risk**, the ability for investors to understand when an investment is highly risky;
3. **Propensity to recommend the investment**, how likely people are to advise a hypothetical friend to invest some of their savings in a high-risk investment. We use investment recommendations as a proxy for how participants feel about investing in real life, where a recommendation to a friend would be associated with significant stakes (Berger, 2014).

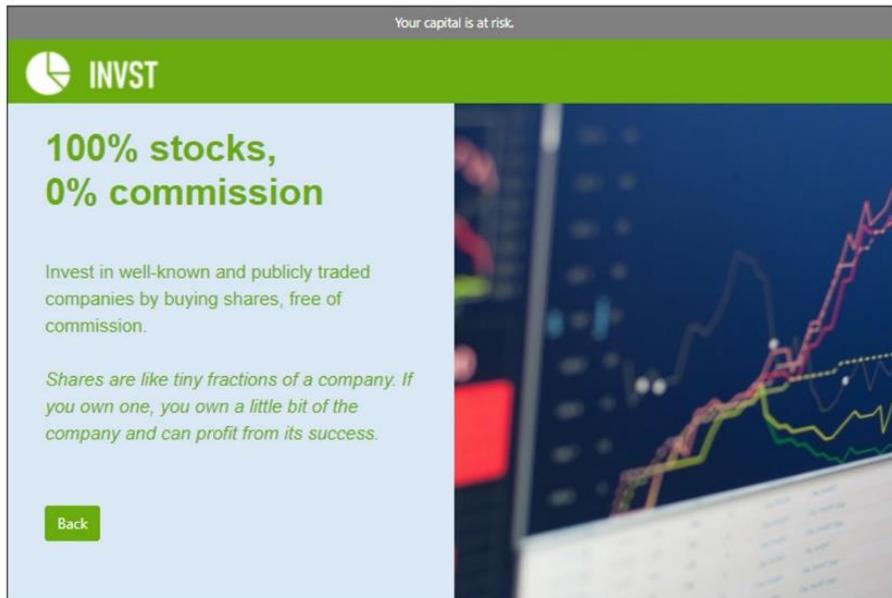
These new risk warnings were compared to the baseline risk warning 'Your capital is at risk'.

Participants were recruited through an online panel provider (Prolific.co) and were asked to go through a fictitious investment browsing experience. They were presented with two mock-ups of financial promotions, each displaying a different investment product, and had to view both to be able to continue with the experiment.

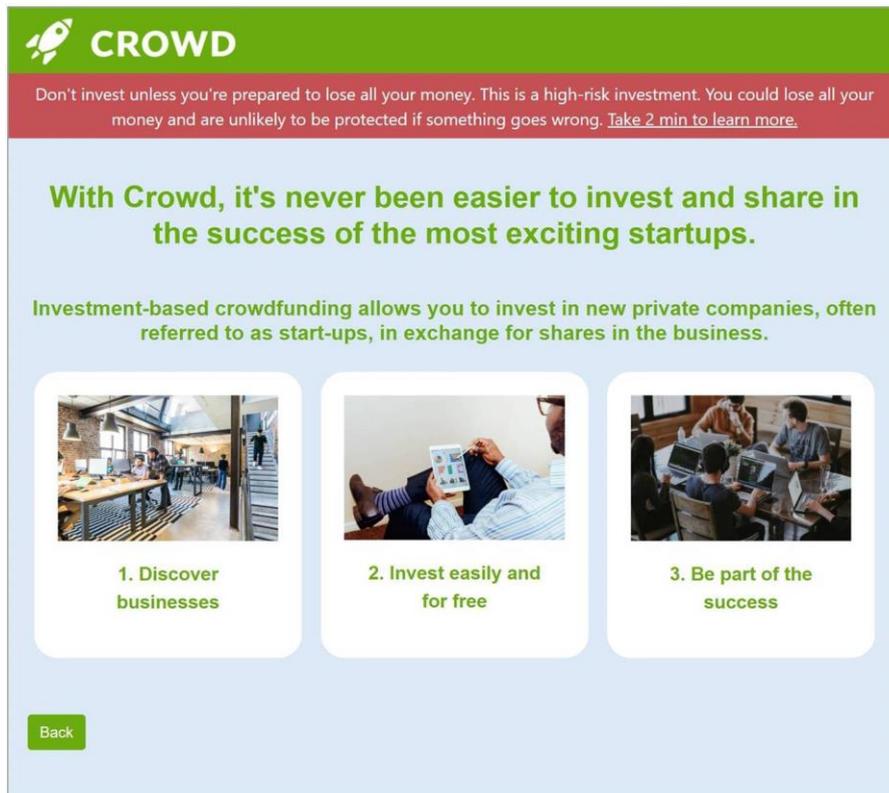
The first product was always stocks and included our baseline (control) risk warning 'Your capital is at risk'. The second product was a high-risk investment that was either crowdfunding or cryptoassets, depending on the branch the participant was assigned to. It came with either the control risk warning, or one of our behaviourally informed treatments outlined in Table 1. Figure 1 and Figure 2 show examples of the website mock-ups used in our experiment.

Once participants had browsed through both investment options, they were asked several questions on their risk comprehension and beliefs, with a focus on the high-risk option, and the extent to which they would recommend the investment to a hypothetical friend. Table 3 in Annex 2 presents the precise structure of our online experiment, and how each part helped us answer our research questions. Table 4 shows the list of comprehension questions participants had to answer during the experiment.

**Figure 1: Website mock-up - Stocks (control risk warning)**



**Figure 2: Website mock-up - Crowdfunding (Treatment 3- Loss Aversion')**



## Empirical strategy

Table 2 gives an overview of the outcome variables used to answer our research questions. To estimate the impact of our different treatments on the outcome variables, we used regression models with and without covariates. These covariates included dummy variables for participants with above-median savings or discretionary income, as well as variables capturing the participants' age, gender, region, income, and past investment experience.

**Table 2: Research questions, empirical strategy and dependent variables**

Research question	Outcome variable
<p><b><u>Primary analysis</u></b></p> <p><b>Did updated risk warnings improve consumers' risk comprehension?</b></p>	<p>Binomial regression models:</p> <ul style="list-style-type: none"> <li>• Successes defined as the total number of comprehension questions (out of 6) answered correctly</li> <li>• Failures defined as the total number of comprehension questions answered incorrectly</li> </ul>
<p><b><u>Secondary analysis</u></b></p> <p><b>Did updated risk warnings change consumers' risk perception of investments they saw?</b></p>	<p><u>For crowdfunding and cryptoassets:</u></p> <p>Logistic regression models:</p> <ul style="list-style-type: none"> <li>• 1 if participant gives a risk score (out of 10, with 10 being the riskiest) of 8 or above, and</li> <li>• 0 otherwise</li> </ul> <p><u>For stocks:</u></p> <p>Logistic regression models:</p> <ul style="list-style-type: none"> <li>• 1 if participant gives a risk score (out of 10, with 10 being the riskiest) of 6 or above, and</li> <li>• 0 otherwise</li> </ul>
<p><b><u>Exploratory analysis I</u></b></p> <p><b>Did updated risk warnings impact participants' propensity to recommend a hypothetical friend to invest part of their savings in a high-risk investment, and if so to what extent?</b></p>	<ul style="list-style-type: none"> <li>• <u>Logistic regression models:</u> 1 if the participant would recommend their friend to invest any positive amount of their savings in crowdfunding, and</li> <li>• 0 otherwise</li> </ul> <p><u>OLS models:</u></p> <p>Continuous variable equal to the amount (between £0 and £16,000) the participant stated</p>

	they would recommend their hypothetical friend to invest
<b><u>Exploratory analysis II</u></b> <b>Did any of the updated risk warnings impact participants' likelihood to click to see the full risk warning?</b>	Logistic regression models: <ul style="list-style-type: none"> <li>• 1 if the participant clicked at least once on the link to "take 2min to learn more", and</li> <li>• 0 otherwise</li> </ul>

## Sample description and attrition

We collected 15,172 responses in total, eventually working with a total of 14,250 after excluding incomplete responses, invalid participant labels and duplicate participants. A-priori power analyses revealed that with 750 participants per condition we would be sufficiently powered to detect effects of 6.5 percentage points (pp), 7.2pp, and 6pp for a control group baseline of 25%, 50%, and 75%, respectively. The participants were randomly allocated to one of seven (for crowd funding) or eight conditions (for cryptoassets). We find that attrition is balanced across treatments in both branches. The sample in the crowdfunding branch of the experiment is balanced on gender and savings, while the cryptoasset branch is balanced on gender, savings balance and discretionary income. We detected instances of imbalance on some covariates, but they are not systematic or large in magnitude. For robustness, we included specifications which control for these covariates in all analyses.

## 4 Results

### Comprehension of key investment risks

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**Participants who saw a salient and behaviourally informed risk warning were more likely to correctly answer any of the six comprehension questions asked during the experiment, compared to the control.**

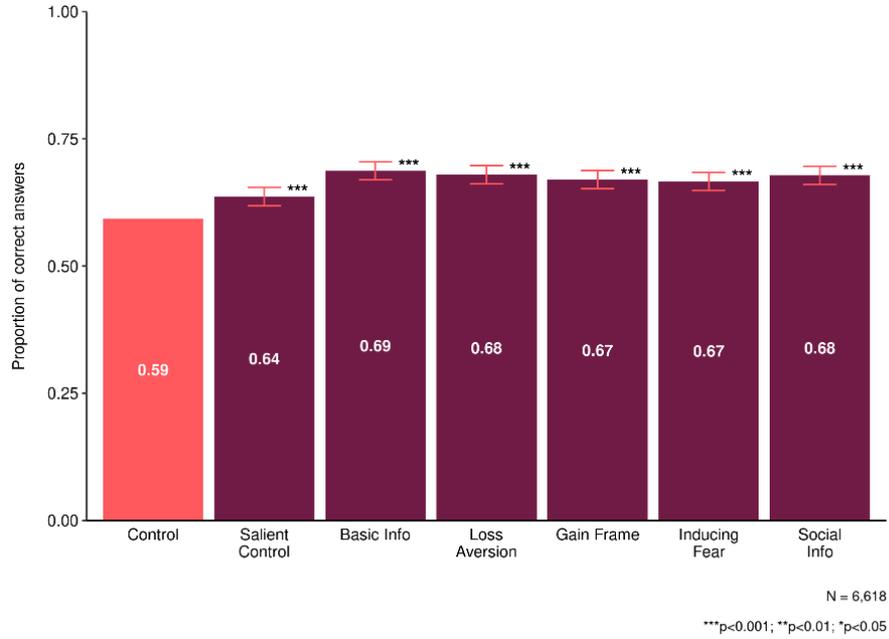
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Across both the crowdfunding and cryptoasset branches of our experiments, updating the wording of risk warnings using insights from behavioural science at the same time as increasing the salience of the warning significantly increases participants' likelihood of answering any comprehension question correctly compared to the control group, and this result is robust to the inclusion of our covariates (for the crowdfunding branch see Figure 2 below and Table 5 in Annex 4. For the cryptoasset branch see Figure 1 below and Table 6 in Annex 4). The effects vary between 6-10 percentage points (pp) i.e. a 9-17% increase.

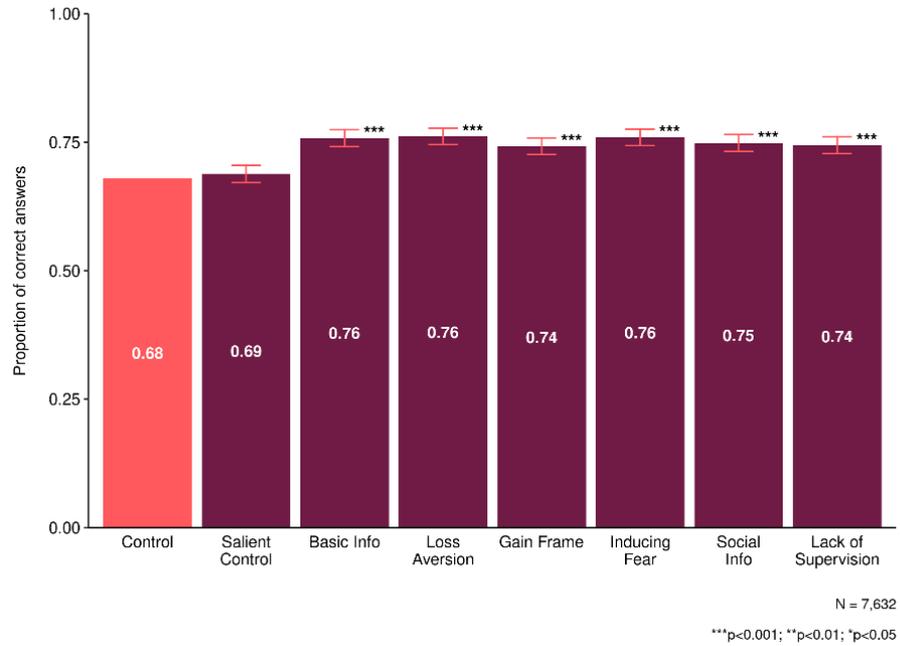
The salient version of our control risk warning (*Salient Control*) shows mixed results across the two products, however. It has a significant positive effect on risk comprehension for the crowdfunding branch, but this effect is smaller than the impact of the other treatments. This demonstrates that improved comprehension can be driven by the salience of risk warnings, but it is most effective in combination with behaviourally informed content. For the crowdfunding branch, the analysis with covariates reveals that older, male and high-savings individuals are more likely to answer a comprehension question correctly. Intuitively, individuals without investing experience are less likely to do so.

In the cryptoasset branch, the *Salient Control* treatment does not improve the average likelihood of correctly answering a comprehension question compared to the control group. Pairwise comparisons reveal that for the cryptoasset branch, the other treatments significantly outperform the *Salient Control* treatment, demonstrating that changes in the content of the risk warnings are a key driver of improved comprehension in this case. We discuss some potential reasons for observed differences between the two products later. The effects do not change substantially for the cryptoasset branch when covariates are added, but we find that those with higher-than-median savings have a higher level of comprehension, while those who do not have investment experience have a lower one.

**Figure 2: Crowdfunding - Average likelihood of correctly answering a comprehension question**



**Figure 1: Cryptoassets - Average likelihood of correctly answering a comprehension question**



## Perceived riskiness

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**We find that our salient and behaviourally informed risk warnings increased participants' risk perception of high-risk investments. Interestingly, they also decreased participants' risk perception of stock investing.**

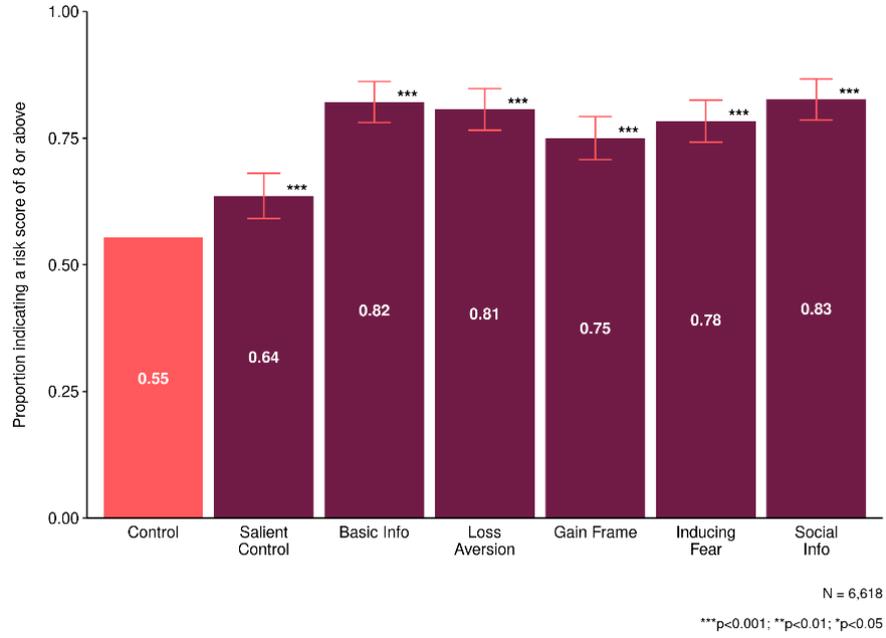
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In the crowdfunding branch, participants in all treatment arms are significantly more likely to give crowdfunding a risk score of 8 or above on a 10-point risk scale, with 10 being the riskiest (see Figure 3 below and Table 7 in Annex 5). The effects vary between 9-28 percentage points (pp) i.e. a 16-51% increase. Here, the score of 8 is chosen as cut-off point to reflect what we consider the appropriate minimum risk perception participants should have of high-risk investments.

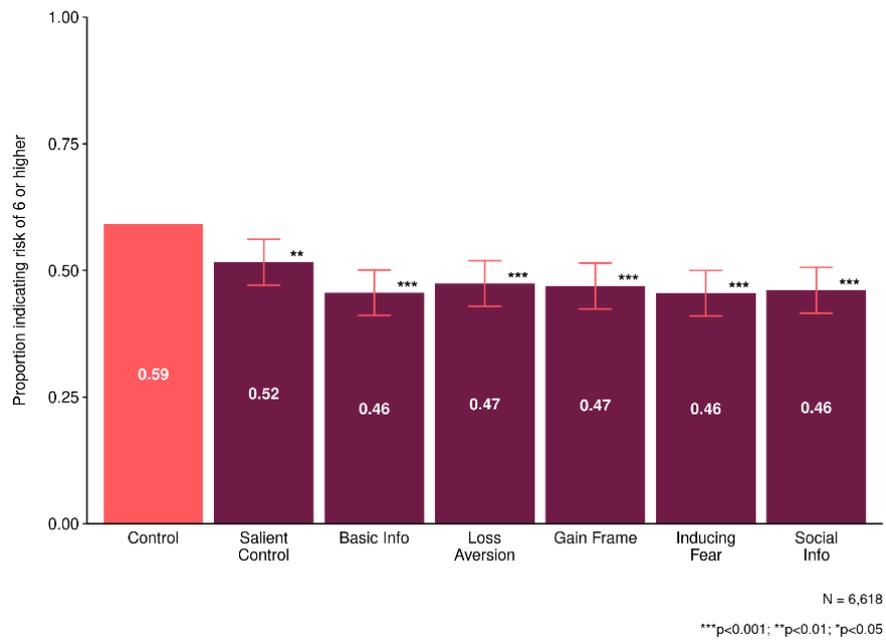
Interestingly, the increase in likelihood seen across the treatments is significantly lower in Treatment 1 - *Salient Control* than for the other treatments (although the risk perception for the *Salient Control* is still significantly higher than for the *Control*). These results are robust to the inclusion of covariates, and the covariate analysis also shows that high-savings and older individuals are more likely to consider crowdfunding as highly risky.

To understand any unintended consequences, we also look at participants' risk perception of stocks when they are exposed to the new behaviourally informed risk warnings. Here, a lower cut-off score is used to capture not only changes in extreme risk perceptions (e.g. a participant initially considering stocks as a high-risk investment but no longer doing so after seeing a specific risk warning) but also more proportionate ones (e.g. a participant considering stocks as a risk score of 6 but now scoring it below average at a 3). As shown in Figure 4 below and Table 8 in Annex 5, all our treatments decrease participants' risk perception of stocks, relative to the control group, and these results are robust to the inclusion of covariates. While participants in the control group have a 59% likelihood of scoring stocks at least a 6 out of 10 on the risk scale, this likelihood decreases to as low as 46% in some treatment arms.

**Figure 3: Crowdfunding - Likelihood of perceiving crowdfunding as a risk of 8 or above**



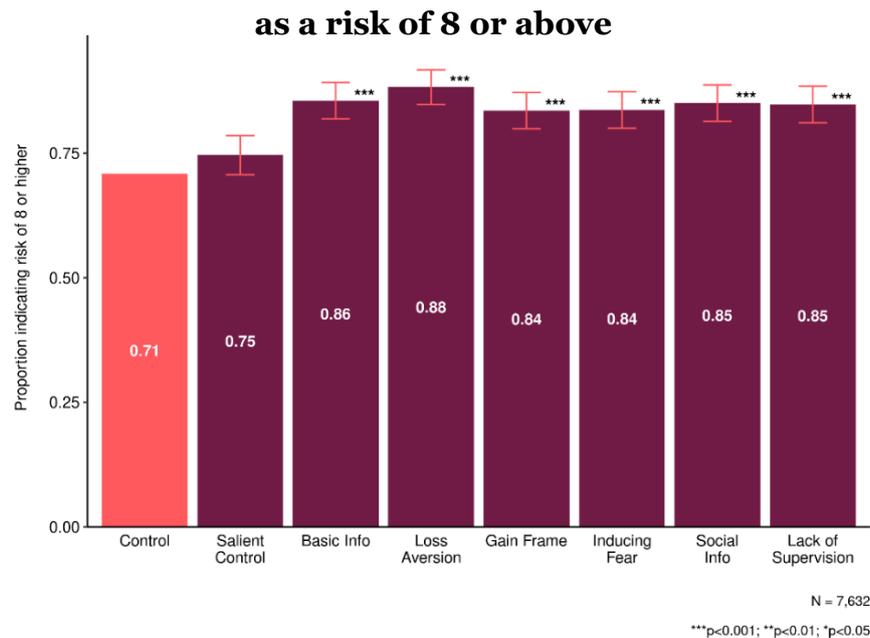
**Figure 4: Crowdfunding - Likelihood of perceiving stocks as a risk of 6 or above**



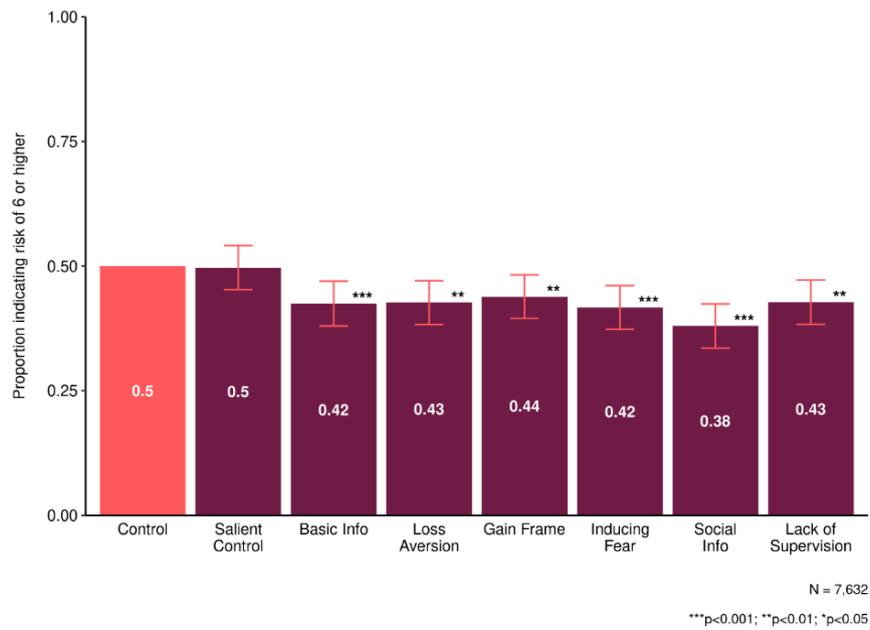
Results were broadly similar for the cryptoasset branch, although (in a similar vein to our risk comprehension measure) Treatment 1-*Salient Control* had no measurable effect on the average risk score given. All other treatments increase participants' risk perception of cryptoassets relative to the control group (see Figure 5 below and Table 9 in Annex 5) The effects vary between 13-17 percentage points (pp) i.e. an 18-24% increase. 71% of participants in the control group view this type of investment as an 8 or more on the 10-point risk scale. *Treatment 1 - Salient Control* is also significantly outperformed by the other treatment arms. The addition of covariates does not change the results substantially, but we find that those with higher-than-median savings are more likely to view cryptoassets as risky.

Apart from *Treatment 1 - Salient Control*, all our treatments result in a significant decline in the proportion of participants indicating stocks as a risk of 6 or above, of about 6-12 pp (12-14% decline), as shown in Figure 6 below and Table 10 in Annex 5.

**Figure 5: Cryptoassets - Likelihood of perceiving cryptoassets**



**Figure 6: Cryptoassets - Likelihood of perceiving stocks as a risk of 6 or above**



Annex 5 also includes density plots for the risk scores given by participants for each of the investment products, showing all treatment groups pooled together and compared to the control group. These plots show that the distribution of scores is higher in the treatment groups compared to the control for crowdfunding and cryptoassets and lower than the treatment groups compared to the control for stocks.

## Recommending to a friend

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**Our salient and behaviourally informed risk warnings decreased participants' likelihood of recommending a friend to invest in a high-risk investment and, if they did, their recommended investment amount. However, even in our treatment arms, the proportion of people recommending a friend to invest in a high-risk investment was still very high.**

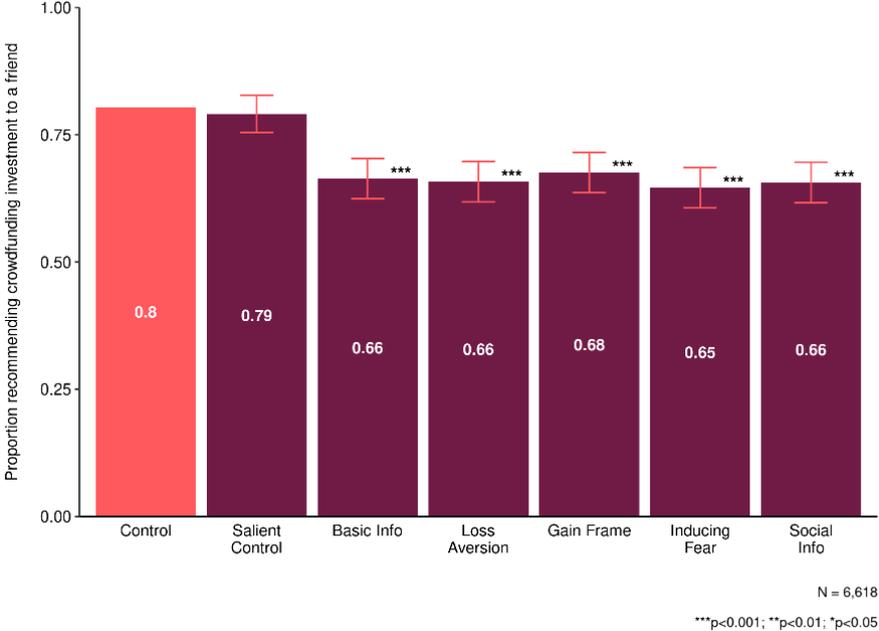
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During the experiment, participants were asked to give advice to a hypothetical friend who is planning to buy a house in the next couple of years. Their friend saved £16,000 towards the £20,000 they need for a deposit and now want to boost their savings by investing. Through the use of sliders, participants can recommend any amount between £0 and £16,000 to be invested in stocks/or a high-risk investment, with any remainder left in a savings account.

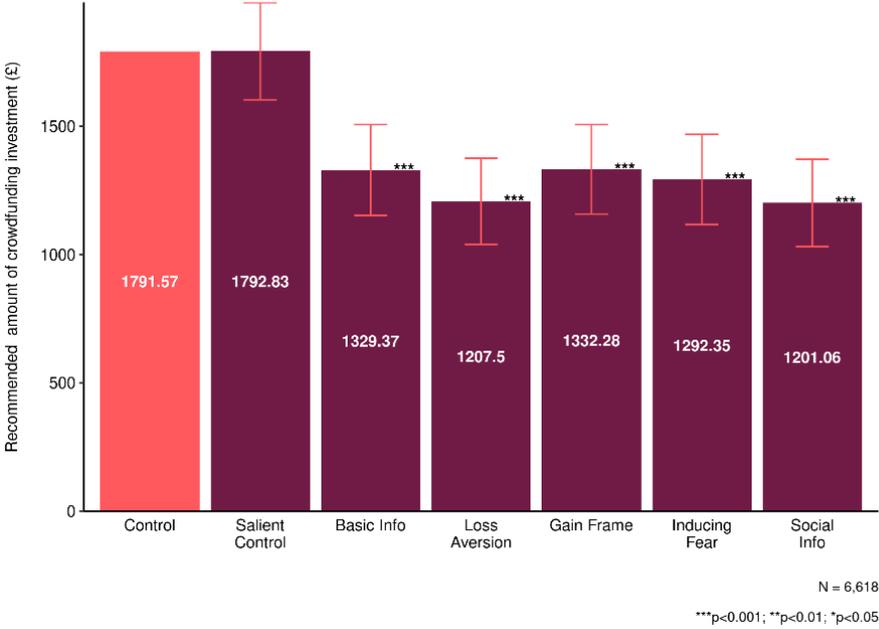
As seen in Figure 8 and Figure 7 (and Table 12 in Annex 7), making the control risk warning more salient changes neither the proportion of participants recommending their hypothetical friend to invest in crowdfunding nor the total investment amount they recommend. However, all our behaviourally informed risk warnings significantly decrease both. For example, participants seeing *Treatment 5 - Inducing Fear* are 16 pp (~20%) less likely to recommend that their friend invests in crowdfunding and, if they did, they recommend on average £499 less than participants in the control group do. It is still important to note that even participants in the control group recommend a relatively small percentage (~11%) of the £16,000 to be invested in crowdfunding.

Through the covariate analysis, we also find that older and high-savings individuals are less likely to recommend crowdfunding and the amount they suggest investing is significantly smaller. Men tend to recommend a higher investment amount.

**Figure 8: Crowdfunding - Proportion recommending crowdfunding to a friend**



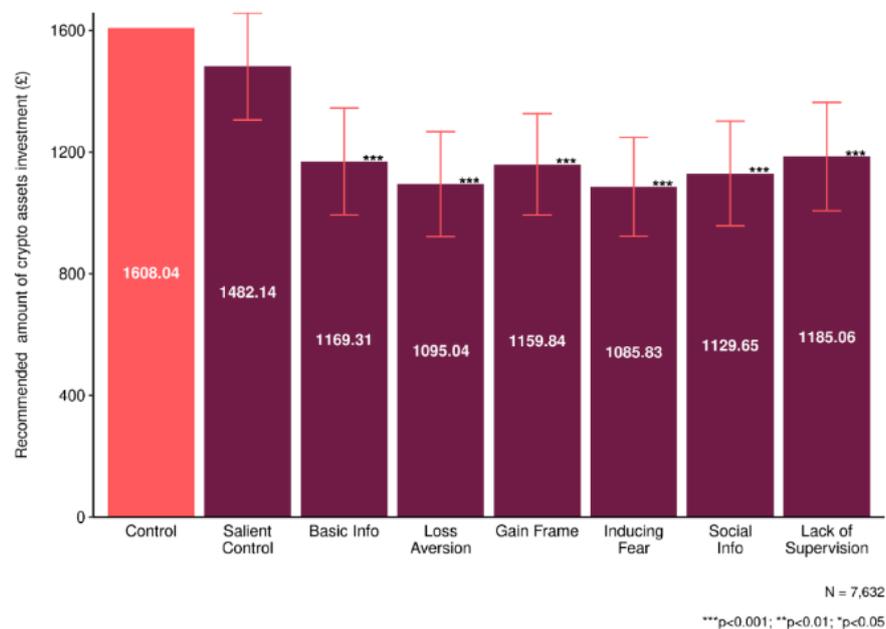
**Figure 7: Crowdfunding - Recommended amount to invest in crowdfunding**



Similar results are found regarding cryptoassets, as Figure 10 and Figure 9 show (

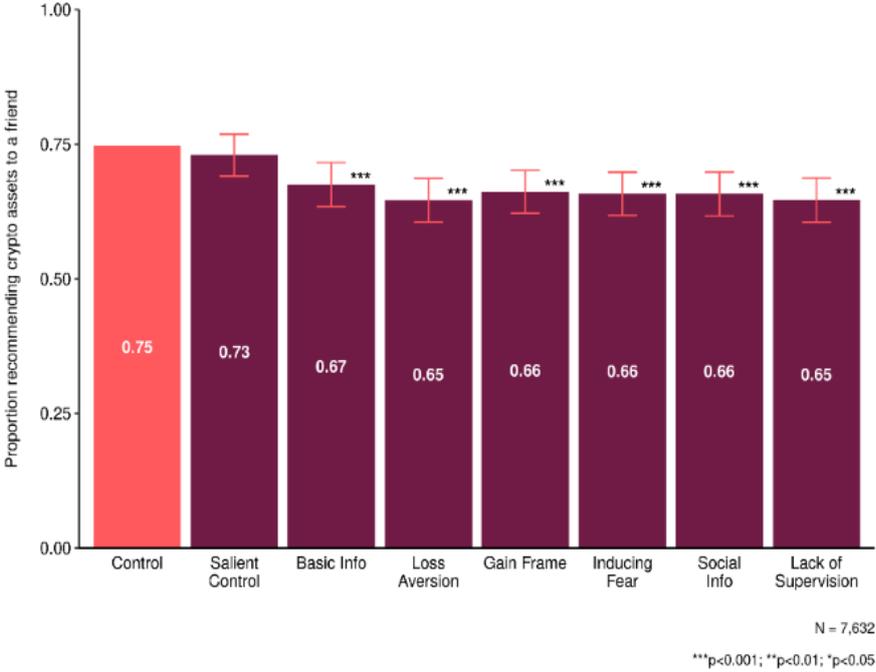
Table 14 in Annex 7 contains the full regression results). The proportion of respondents recommending that their hypothetical friend invests in cryptoassets decreases by 7-10 pp (~10-14%). On average, those allocated to the control group recommend 10% of the savings to be invested in cryptoassets (£1608), while the behaviourally informed risk warnings reduce this amount by between £423-£522 (~26-33%). As in the crowdfunding

**Figure 9: Cryptoassets - Recommended amount to invest in cryptoassets**



branch, participants still recommend a relatively small part of their friend’s savings to be invested in the high-risk investment option.

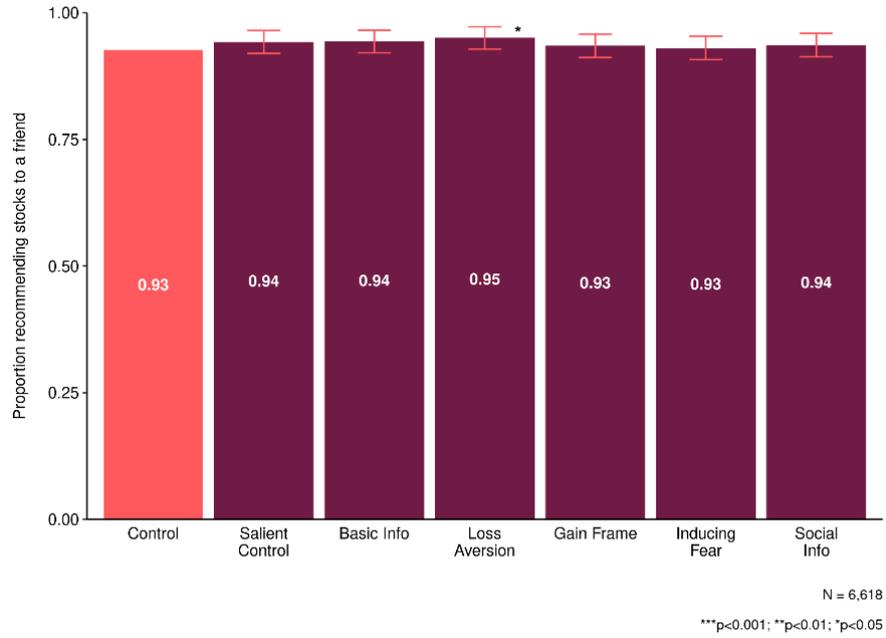
**Figure 10: Cryptoassets - Proportion recommending cryptoassets to a friend**



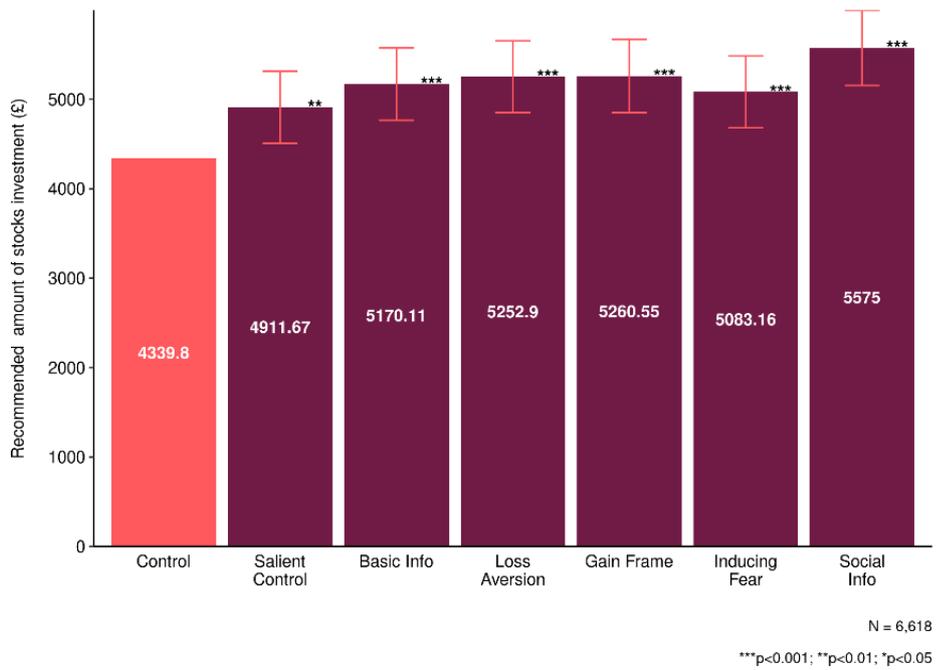
We also find that our behaviourally informed risk warnings increase the amount of money participants recommend their friend invests in the lower risk investment i.e. stocks, as shown in Figure 11 and Figure 14 (Table 13 and Table 15 in Annex 7 respectively). However, we find most of our risk warnings do not increase the likelihood of people recommending stocks as an investment (Figure 13 and Figure 13), unsurprisingly since 93% already do so in the control group.<sup>4</sup>

<sup>4</sup> Only the *Loss Aversion* treatment in the crowdfunding branch and the *Social Info* one in the cryptoassets branch increase participants' likelihood to recommend stock investing, and these differences remain economically small.

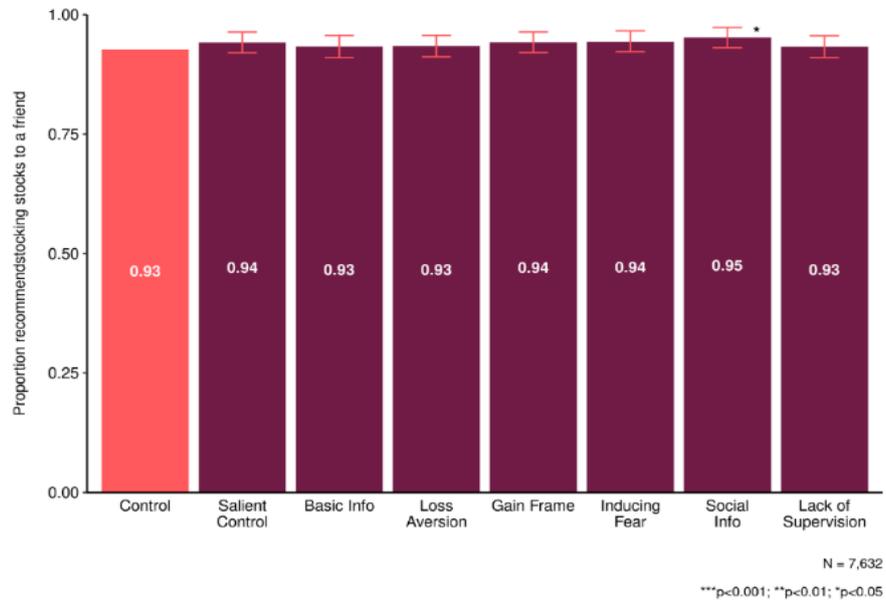
**Figure 12: Crowdfunding - Proportion recommending stock investment to a friend**



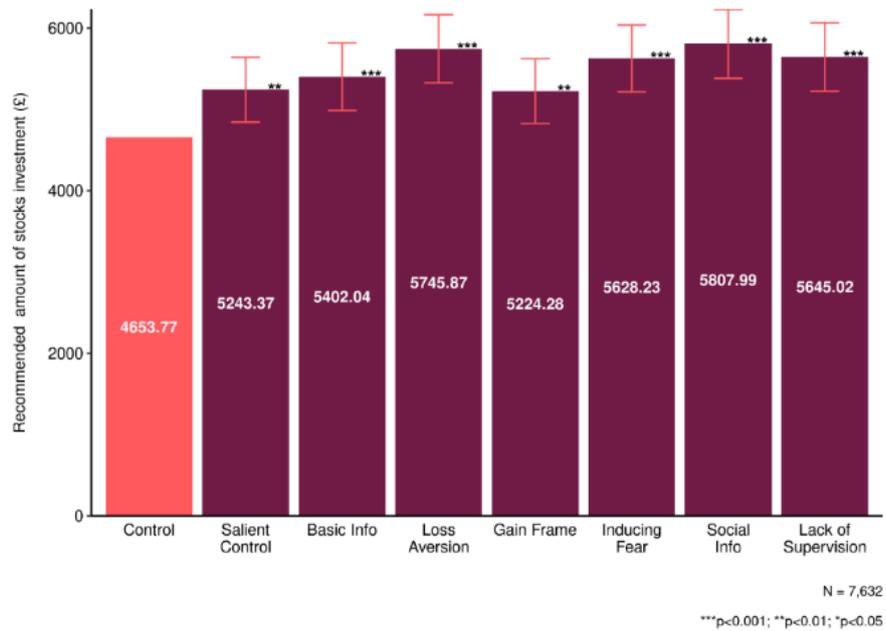
**Figure 11: Crowdfunding - Recommended amount to invest in stocks**



**Figure 13: Cryptoassets - Proportion recommending stock investment to a friend**



**Figure 14: Cryptoassets - Recommended amount to invest in stocks**



## Accessing additional risk information

All of our behaviourally informed risk warnings include a link to more information about the high-risk investment shown. Overall, 48% of participants in our experiment engaged with the link to see the full risk warning. However, we find no one risk warning is more effective than others in making participants more likely to click on the link (see Table 16 and Table 17 in Annex 8).<sup>5</sup>

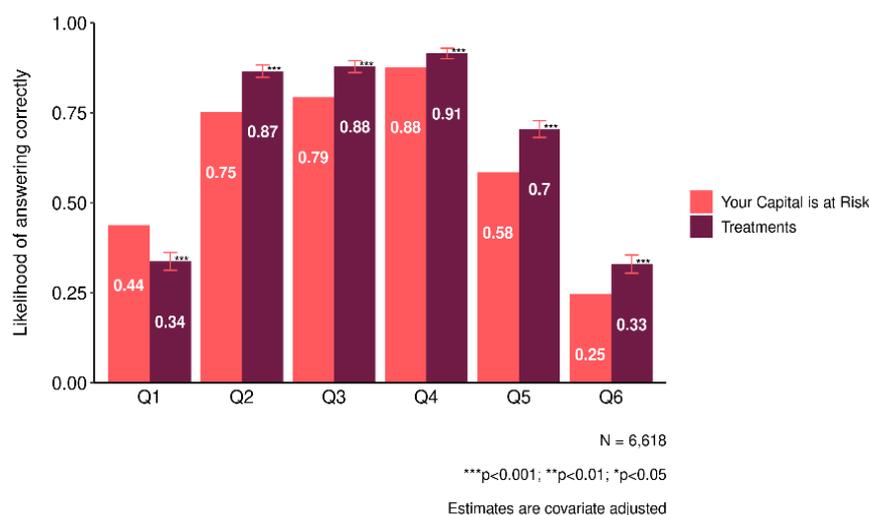
For both crowdfunding and cryptoassets, we also find that those with high savings are more likely to click on the link than participants with lower levels of savings. Specific to cryptoassets, men are less likely to engage with the link than women.

## Exploratory analyses

### Comprehension across questions (all participants)

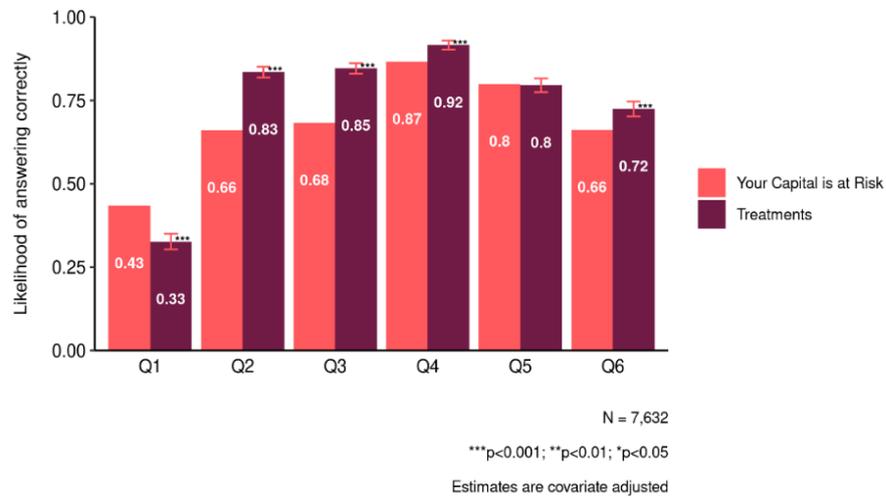
During the experiment, participants were asked six different comprehension questions: some of them dealt with general investment knowledge and some directly related to specific information that is included in the “Take 2 min to learn more” pop-up. Figure 15 and Figure 16 show how likely participants are to answer each comprehension question correctly for the crowdfunding and cryptoasset branch respectively, showing the average likelihood across all treatment groups, compared to the control. The complete regression tables found in Annex 9.

**Figure 15: Crowdfunding - Average likelihood of correctly answering each comprehension question**



<sup>5</sup> Our analysis uses the *Basic Info* treatment as baseline – but any other of the treatment arms could have been chosen since we are just carrying out pairwise comparisons.

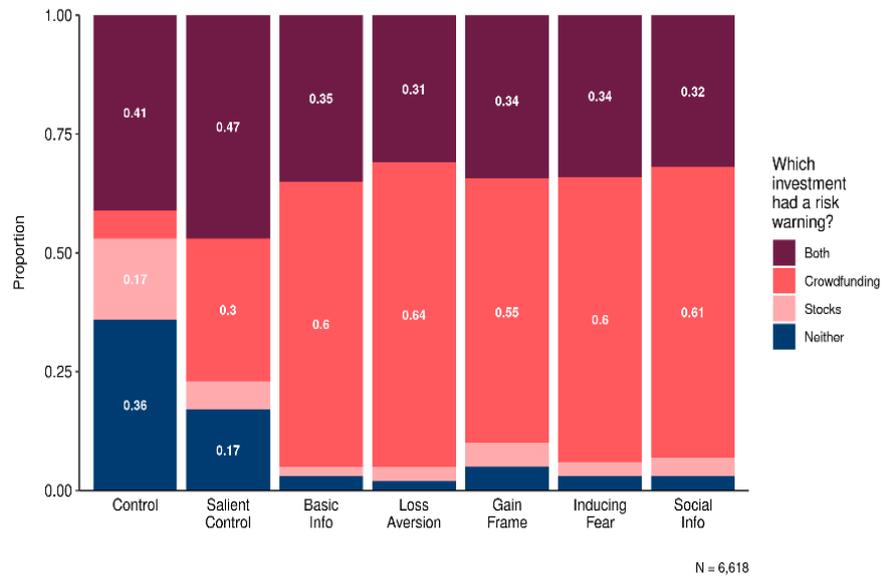
**Figure 16: Cryptoassets - Average likelihood of correctly answering each comprehension question**



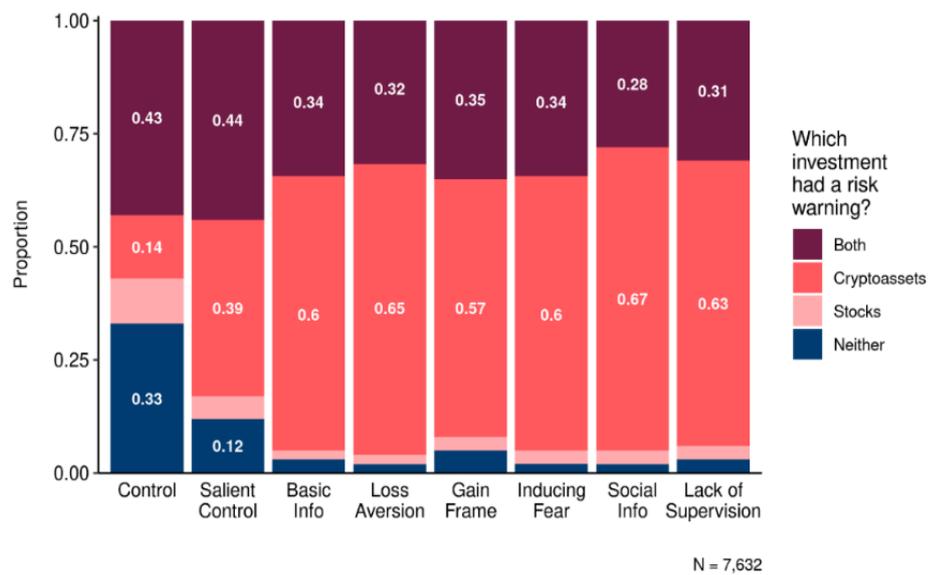
For both crowdfunding and cryptoassets, the behaviourally informed risk warnings significantly improve comprehension across all but question 1 (which investment contained a risk warning?) (and question 5 for cryptoassets).

Interestingly, we find that participants are more likely to answer that only the high-risk investment option had a risk warning when shown behaviourally informed risk warnings. That is, they appear to miss the 'Your capital is at risk' warning on the stocks page. This can be seen in Figure 18 and Figure 17. This suggests that differentiating risk warnings across investment products might cause consumers to miss less prominent warnings. 33-36% of participants in our control groups do not see any risk warnings at all, and increasing the salience of the control warning still does not prevent up to 17% of participants from missing all warnings.

**Figure 18: Crowdfunding - Answers to question 1 per treatment arm**



**Figure 17: Cryptoassets - Answers to question 1 per treatment arm**



## Low-engagement participants

We also looked at comprehension among participants who see a behaviourally informed risk warning but do not take the time to click on its link to learn more. These results should be interpreted carefully and cannot be considered causal, because the participants who do click on the link are likely to be different to the ones who do not in ways that we do not observe in this experiment (see Annex 9 – tables 22 and 23 for details).

In the crowdfunding branch, participants across all treatment groups with low engagement (those not clicking on the link) are more likely to answer questions 2 and 3 correctly compared to the control group, but the differences for questions 4, 5 and 6 are inconsistent (that is, there doesn't seem to be a difference between most treatments and the control). These results are largely consistent with the fact that questions 4, 5 and 6 were designed according to the information presented in the pop-up warning, so people not clicking on the link do not learn this information. Questions 2 and 3 however can be answered by taking information directly from the risk warning itself. The results for the cryptoasset branch are very similar, the only difference being that those seeing the *Salient Control* treatment are not any more likely to answer questions 2 and 3 correctly than the control group.

Low engagement participants are significantly less likely to recommend cryptoassets to a friend when shown the Treatment 7 - *Lack of Supervision*, and the amount they recommend is significantly lower when shown any of our behaviourally informed warnings, compared to the control group.

## 5. Discussion

The results of our online experiment show that behaviourally informed risk warnings improved consumers' understanding of high-risk investments, compared to the '*Your capital is at risk*' baseline warning that is typically used on financial promotions for these products. The behaviourally informed risk warnings tested in our experiment improve participants' comprehension of the key risks related to high-risk investments, while increasing their perception of the investments' riskiness.

A high proportion of participants in the control groups did not notice the risk warning for any of the investment products; increasing the salience of the risk warnings mitigates this and appears to draw attention to the baseline warning.

We also find that simply increasing the salience of the baseline risk warning improves consumers' comprehension and perception of risk for crowdfunding, but not however for cryptoassets. One potential explanation for this difference is that people already tend to perceive cryptoassets as high risk. This is borne out in our results, which showed that 55% of people rate crowdfunding as high risk (a score of 8 or above), whereas 71% rate cryptocurrencies as high risk, in the control groups. Therefore, it may take more than increasing the salience of risk warnings to change people's already high risk perception for cryptoassets. However, the experimental design also makes it difficult to make a full comparison between the two products (the comprehension questions differ between them, for example). The impact of risk warnings in settings like this is a promising area for future research.

The product-specific risk warnings appear to lead to an unintended consequence on how consumers perceive other investments: in our experiment, participants' risk perception of stocks decreased when the behaviourally informed risk warnings were shown on the high-risk investments. This does not align with other research findings where participants do not perceive products with the old risk warning as safer than they really are despite being shown next to products with the new risk warning (Financial Conduct Authority, 2018). However, this finding could be a consequence of our experimental design where participants were only comparing two products, which may have increased the salience of the riskier product. In a real-life setting it is possible that people may search further and compare more products.

This experiment adds to the empirical studies showing that explicit and behaviourally informed risk warnings can be an effective way to improve consumers' understanding of certain investment products. Consumer understanding can be further improved by including an interactive link to complementary information about key investment risks, as around 48% of participants in our experiment engaged with the option to take 2 minutes to learn more. It is important to note, however, that behaviourally informed risk

warnings still have their limitations, as participants in the experiment were still very likely to recommend that their friend invests in a high-risk investment, with over 60% still making this recommendation even with the presence of the most effective risk warnings. Given this, such risk warnings are best used as part of a portfolio of interventions to address consumer harm.

# Annexes

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## Annex 1: Pop-up text

Crowdfunding	<p><b>Estimated reading time: 1min</b></p> <p>Due to the potential for losses, the FCA regards investment-based crowdfunding as a <u>high-risk investment</u>.</p> <ul style="list-style-type: none"> <li>• Most investments are in shares or debt securities in start-up companies and will often result in a 100% loss of capital as most start-up businesses fail.</li> <li>• You will not be repaid and/or dividends will not be paid if the company you invest in fails or there is a fraud.</li> <li>• If you hold shares in a business or project, it is unlikely that income in the form of dividends will be paid. The value of your investment may be diluted if more shares are issued, and this is likely as many start-up businesses undergo multiple rounds of funding.</li> <li>• You should be prepared to wait for a return on your investment, as even successful start-up businesses tend to take time to generate income.</li> <li>• If firms do handle clients' money without the FCA's permission or authorisation, there will be no protection for investors in place. This is a particular risk if a platform fails and becomes insolvent.</li> <li>• Most platforms do not have a way you can cash in your investment early (such as selling your investment before the start-up goes public) which makes these investments highly illiquid.</li> </ul> <p>What protection can Financial Services Compensation Scheme (FSCS) offer?</p> <ul style="list-style-type: none"> <li>• FSCS protection in this area is very limited. FSCS can't cover poor investment performance, for example, if the company you invest in isn't as successful as you expected. FSCS may be able to pay compensation if you received unsuitable advice to invest, depending on your circumstances.</li> </ul> <p><b>If you are interested, you can find further information about crowdfunding on the FCA's website.</b></p>
Cryptoassets	<p><b>Estimated reading time: 1min</b></p> <p>Due to the potential for losses, the FCA regards cryptoassets as a <u>very high-risk, speculative investment</u>.</p> <ul style="list-style-type: none"> <li>• The performance of cryptoassets is volatile, with the value of an investment dropping as quickly as it can rise. You should be prepared to lose all your money invested in cryptoassets.</li> <li>• If you buy cryptoassets and something goes wrong, you are unlikely to have access to the Financial Ombudsman Service (FOS) or the Financial Services Compensation Scheme (FSCS).</li> <li>• There is no guarantee that cryptoassets can be easily converted back into cash. Converting a cryptoasset back to cash depends on the demand and supply in the market.</li> <li>• The cryptoasset marketplace is a target for fraud and scams, so you should be extremely cautious before investing. If a business offers guaranteed or high returns; if an opportunity sounds too good to be true; or if you are pressured to act quickly, please be aware you may lose your money.</li> <li>• Make sure to carefully check the cryptoasset business you are dealing with. For example, you may want to check whether the business is based in the UK, and if it is registered with the FCA.</li> <li>• You may wish to get financial advice before making a decision to invest.</li> </ul> <p><b>If you are interested, you can find further information about cryptoassets on the FCA's website.</b></p>

## Annex 2: Experimental design

**Table 2: Structure of the online experiment**

Task/questions	Summary	Research question/ Rationale
<b>Exclusion question</b>	Participants younger than 18 and older than 75 are excluded from the experiment.	
<b>Browsing</b>	<p>Participants are presented with two website mock-ups, each showing a different investment option. They can 'browse' through the options to find out more information about each. To complete the experiment, they must click at least once on each investment option.</p> <p>The first investment option is stocks and is the same across both experiment branches. The second one is either crowdfunding or cryptoasset (both high-risk investments).</p> <p>The stocks' website mock-up always shows a non-salient, standardised risk warning: 'Your capital is at risk'.</p>	<p>Showing participants two investment opportunities, one that is more mainstream (stocks) and one that is considered high risk (crypto/crowdfunding) allows us to assess whether participants can appreciate the differences between the two, and whether any potential impact of stronger risk warnings on high-risk investments could spill over to more mainstream investments.</p>

<p><b>Risk comprehension questions</b></p>	<p>Participants are asked six questions about the specific risks of the high-risk investment option they just saw (i.e. crowdfunding or cryptoasset). Of the 6 questions:</p> <ul style="list-style-type: none"> <li>- 1 question asks whether participants saw a risk warning and, if so, for which investment (stock and/or HRI)</li> <li>- 2 questions directly test respondents on information solely presented on the 'Take 2min to learn more' pop-up.</li> </ul>	<p>This task directly answers the 1<sup>st</sup> research question, as it allows us to determine whether different wordings and an enhanced salience of the risk warning have an influence on respondents' risk comprehension regarding high-risk investments.</p> <p>Some specific questions allow us to check whether:</p> <ul style="list-style-type: none"> <li>- participants remember risk warnings,</li> <li>- participants are interested to 'learn more'.</li> </ul>
<p><b>Risk beliefs</b></p>	<p>Participants are asked to express their view on the relative riskiness of the two investment options they saw.</p>	<p>This task directly answers the 2<sup>nd</sup> research question and allows us to assess whether participants' risk perception differs across treatment arms.</p>
<p><b>Investment intentions</b></p>	<p>Participants are given the opportunity to state whether they would like to invest in any of the two investment options and, if so, to which extent. They are also prompted to think about which, if any, of the options they would recommend to a friend. <sup>6</sup></p>	<p>This task directly answers the 3<sup>rd</sup> research question as it allows us to test respondents' likelihood of recommending an investment to a friend depending on the risk warning respondents are presented with.</p>

<sup>6</sup> As treatment allocation significantly impacts the proportion of participants stating that they are already investing in a high-risk investment, we focus on participants' recommendations to a friend. As Berger (2014) suggests, recommendations are often driven by self-focused motives. We therefore deem investment recommendations to a friend a good proxy of how people would invest themselves.

<b>Demographic questions</b>	Gender Income (discretionary and annual) Savings Geographical region Investment experience	
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**Table 3: List of the comprehension questions across branches**

Question [Italic text in grey only relevant for the cryptoasset branch]	Answer options (correct answer underlined) [Italic text in grey only relevant for the cryptoasset branch]
<b>Q1. Based on what you recall, which of the investments you were presented with had a risk warning?</b>	A. Stocks B. Crowdfunding ( <i>// Cryptoassets</i> ) C. <u>Both</u> D. Neither
<b>Q2. Which of these best describes the risk associated with investing in start-ups through crowdfunding?</b>  <i>Q2. Which of these best describes the risk associated with cryptoassets?</i>	A. You are unlikely to lose any money you invested B. You may lose some of the money you invested C. <u>You may lose all of the money you invested</u> D. You may lose all of the money you invested, and then still owe more on top of that
<b>Q3. What will happen to your money if a start-up you invested in fails?</b>  <i>Q3. What will happen to your money if the value of your cryptoasset investment falls close to £0?</i>	A. I will likely be able to apply for compensation such as the Financial Services Compensation Scheme (FSCS) B. The start-up will return my investment ( <i>// The crypto trading platform will return my investment if it is regulated by the Financial Conduct Authority (FCA)</i> ) C. <u>I am unlikely to get my money back</u> D. I will be able to sell my shares and minimise my losses ( <i>// I will be able to sell my cryptoasset as soon as its value declines to minimise my losses</i> )
<b>Q4. Which of these is the best method to use when investing in start-ups?</b>	A. Invest a large proportion of your investable capital into multiple start-ups ( <i>// cryptoassets</i> ) to spread your risk

<p><b>Q4. Which of these is the most sensible approach to use if you decide to invest in cryptoassets?</b></p>	<p>B. Invest a large proportion of your investable capital into a single start-up (<i>/cryptoasset</i>) to maximise potential gains</p> <p>C. Only invest if you are new to investing, there are more stable and profitable investments out there for experienced investors</p> <p>D. <u>Invest a relatively small portion of your investable capital in start-ups (<i>/cryptoassets</i>), and the majority of your investable capital should be invested in lower risk investment</u></p>
<p><b>Q5. Which of the below statements about crowdfunding investments is correct?</b></p> <p><i>Q5. When considering investing in cryptoassets, which due-diligence steps should you follow?</i></p>	<p>A. If there is a fraud, your investment will be repaid</p> <p>B. If you hold shares in a business through a crowdfunding platform, you are likely to receive income in the form of dividends</p> <p>C. <u>The value of your investment may be diluted if more shares are issued, and this is likely as many start-up businesses undergo multiple rounds of funding</u></p> <p>D. Most platforms have a way you can cash in your investment.</p> <p>A. <i>Check whether the cryptoasset business is based in the UK</i></p> <p>B. <i>Get financial advice before making a final decision</i></p> <p>C. <i>Check whether the business is on the FCA register</i></p> <p>D. <u><i>All of the above</i></u></p>
<p><b>Q6. What are the key risks associated with investing in start-ups through crowdfunding?</b></p> <p><i>Q6. What are the key risks associated with investing in cryptoassets?</i></p>	<p>A. <u>Loss of capital and illiquidity</u></p> <p>B. Loss of capital and volatility of share prices</p> <p>C. Loss of capital, illiquidity, and volatility of share prices</p> <p>D. Investing in start-ups is relatively low risk</p> <p>A. <i>Loss of capital and illiquidity</i></p> <p>B. <i>Loss of capital and volatility of prices</i></p> <p>C. <u><i>Loss of capital, illiquidity, and volatility of prices</i></u></p> <p>D. <i>Investing in cryptoassets is relatively low risk</i></p>

## Annex 3: Results - Sample description and attrition

**Table 4: Attrition across treatment arms**

	Completion Dummy	
	Crowdfunding	Cryptoassets
Treatment (base: Control):		
Salient Control	-0.0001 (0.008)	0.002 (0.007)
Basic Info	-0.002 (0.008)	-0.001 (0.007)
Loss Aversion	0.001 (0.007)	-0.004 (0.007)
Gain Frame	0.001 (0.007)	-0.005 (0.007)
Inducing Fear	0.007 (0.007)	0.003 (0.006)
Social Info	0.003 (0.007)	0.004 (0.006)
Supervision		0.010 <sup>+</sup> (0.006)
Observations	6,798	7,798
Log Likelihood	-830.240	-803.450
Akaike Inf. Crit.	1,674.480	1,622.900

*Note:*

+ p<0.1; \* p<0.05; \*\* p<0.01;

Log odds were transformed into average marginal effects (AMEs) for ease of interpretation. Constants are not displayed for logistic regressions as there are no AMEs associated with them.

Overall, 14,596 participants were exposed to a treatment and 14,250 (97.6%) of them completed the experiment.

## Annex 4: Results - Risk comprehension

**Table 5: Drivers of risk comprehension (crowdfunding)**

	Comprehension	
	Average likelihood of answering a question correctly	
	(1)	(2)
Treatment (base: Control):		
Salient Control	0.043*** (0.009)	0.044*** (0.009)
Basic Info	0.094*** (0.009)	0.092*** (0.009)
Loss Aversion	0.086*** (0.009)	0.087*** (0.009)
Gain Frame	0.077*** (0.009)	0.077*** (0.009)
Inducing Fear	0.073*** (0.009)	0.075*** (0.009)
Social Info	0.085*** (0.009)	0.086*** (0.009)
Age		0.002*** (0.0002)
Gender (base: Female):		
Male		0.027*** (0.005)
Non-binary		0.027 (0.026)
Prefer not to say		0.005 (0.040)
Non-investor		-0.022*** (0.005)
Savings above median (£3,000)		0.035*** (0.005)
Discretionary income above median (£391.5)		-0.010 (0.006)
Region	No	Yes
Income	No	Yes
Observations	6,618	6,618
Log Likelihood	-10,335.290	-10,151.580
Akaike Inf. Crit.	20,684.580	20,367.160

*Note:* \*p<0.05; \*\*p<0.01; \*\*\*p<0.001

Log odds were transformed into average marginal effects (AMEs) for ease of interpretation. Constants are not displayed as there are no AMEs associated with them.

**Table 6: Drivers of risk comprehension (cryptoassets)**

		<b>Comprehension</b>	
		Average likelihood of answering a question correctly	
		(1)	(2)
Treatment (base: Control):			
	Salient Control	0.008 (0.009)	0.006 (0.009)
	Basic Info	0.078*** (0.008)	0.076*** (0.008)
	Loss Aversion	0.081*** (0.008)	0.079*** (0.008)
	Gain Frame	0.062*** (0.008)	0.061*** (0.008)
	Inducing Fear	0.079*** (0.008)	0.078*** (0.008)
	Social Info	0.068*** (0.008)	0.067*** (0.008)
	Supervision	0.064*** (0.008)	0.064*** (0.008)
Age			0.001*** (0.0002)
Gender (base: Female):			
	Male		0.004 (0.004)
	Non-binary		0.033 (0.021)
	Prefer not to say		0.029 (0.040)
Savings above median (£3,000)			0.026*** (0.005)
Discretionary income above median (£350)			0.004 (0.005)
Non-investor			-0.019*** (0.004)
Region	No		Yes
Income	No		Yes
Observations	7,632		7,632
Log Likelihood	-11,735.710		-11,620.020
Akaike Inf. Crit.	23,487.420		23,306.040

*Note:* \*p<0.05; \*\*p<0.01; \*\*\*p<0.001

Log odds were transformed into average marginal effects (AMEs) for ease of interpretation.

Constants are not displayed as there are no AMEs associated with them.

## Annex 5: Results - Risk perception

**Table 7: Drivers of risk perception (crowdfunding)**

<b>Risk perception of crowdfunding</b>		
Logistic: Risk score equal or greater than 8		
	(1)	(2)
Treatment (base: Control):		
Salient Control	0.083*** (0.023)	0.085*** (0.023)
Basic Info	0.268*** (0.021)	0.267*** (0.020)
Loss Aversion	0.254*** (0.021)	0.255*** (0.021)
Gain Frame	0.197*** (0.022)	0.198*** (0.021)
Inducing Fear	0.230*** (0.021)	0.232*** (0.021)
Social Info	0.273*** (0.021)	0.274*** (0.020)
Age		0.003*** (0.0004)
Gender (base: Female):		
Male		-0.006 (0.011)
Non-binary		0.049 (0.051)
Prefer not to say		0.044 (0.082)
Non-investor		-0.016 (0.011)
Savings above median (£3,000)		0.053*** (0.011)
Discretionary income above median (£391.5)		-0.002 (0.012)
Region	No	Yes
Income	No	Yes
Observations	6,618	6,618
Log Likelihood	-3,630.059	-3,561.452
Akaike Inf. Crit.	7,274.119	7,186.904

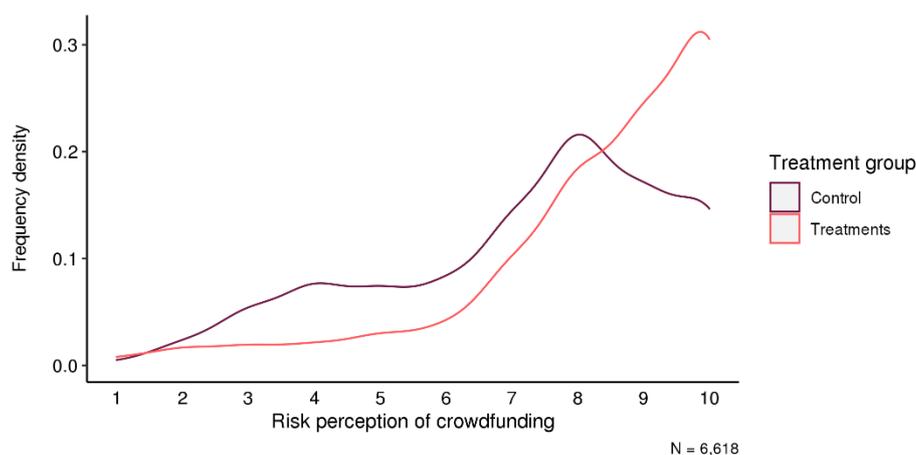
Note:

\*p<0.05; \*\*p<0.01; \*\*\*p<0.001

Log odds were transformed into average marginal effects (AMEs) for ease of interpretation.

Constants are not displayed as there are no AMEs associated with them.

### Frequency density plot for risk perception (crowdfunding) all treatments pooled



**Table 8: Drivers of risk perception of stocks (crowdfunding)**

		Risk perception of stocks (crowdfunding)	
		Logistic: Risk score equal or greater than 6	
		(1)	(2)
Treatment (base: Control):			
	Salient Control	-0.076** (0.023)	-0.077*** (0.023)
	Basic Info	-0.136*** (0.023)	-0.135*** (0.023)
	Loss Aversion	-0.118*** (0.023)	-0.119*** (0.023)
	Gain Frame	-0.123*** (0.023)	-0.121*** (0.023)
	Inducing Fear	-0.137*** (0.023)	-0.138*** (0.023)
	Social Info	-0.131*** (0.023)	-0.131*** (0.023)
Age			
Gender (base: Female):			
	Male		-0.004 (0.013)
	Non-binary		0.015 (0.068)
	Prefer not to say		0.137 (0.098)
Non-investor			
Savings above median (£3,000)			
Discretionary income above median (£391.5)			
Region		No	Yes
Income		No	Yes
Observations		6,618	6,618
Log Likelihood		-4,557.747	-4,525.822
Akaike Inf. Crit.		9,129.495	9,115.644

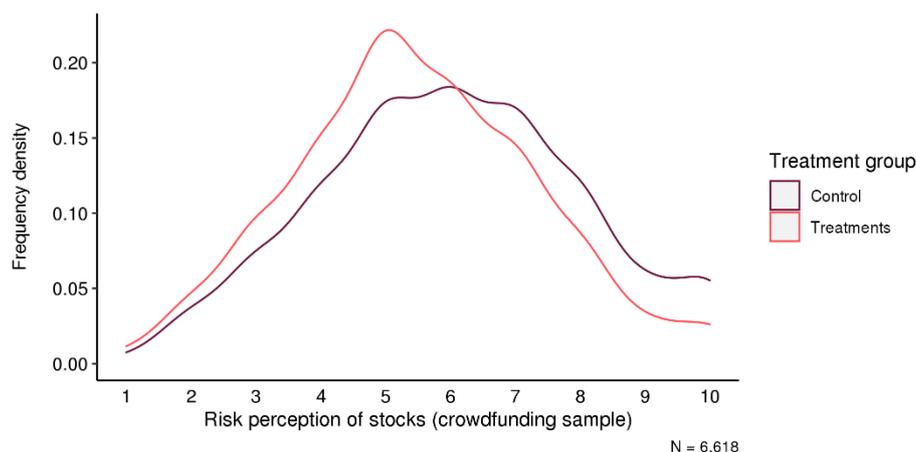
Note:

\*p<0.05; \*\*p<0.01; \*\*\*p<0.001

Log odds were transformed into average marginal effects (AMEs) for ease of interpretation.

Constants are not displayed as there are no AMEs associated with them.

**Frequency density plot for risk perception (stocks - crowdfunding) all treatments pooled**

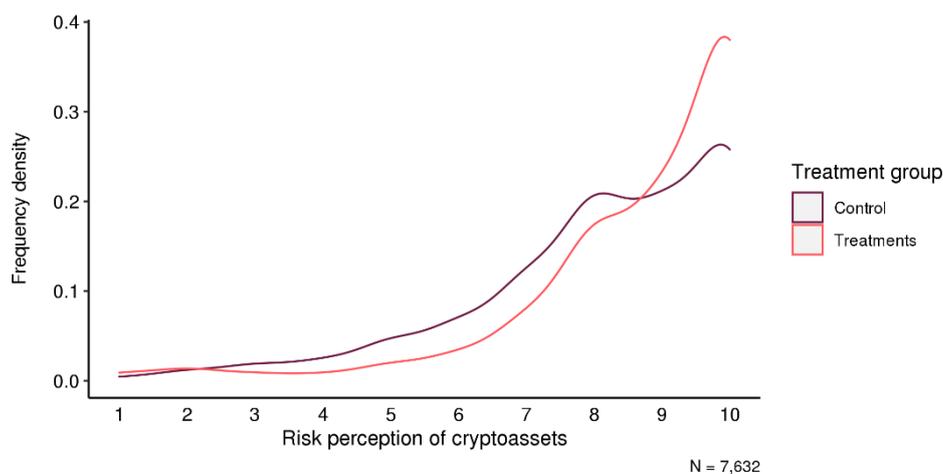


**Table 9: Drivers of risk perception (cryptoassets)**

		Risk perception of cryptoassets	
		Logistic: Risk score equal or greater than 8	
		(1)	(2)
Treatment (base: Control):			
	Salient Control	0.037 (0.020)	0.037 (0.020)
	Basic Info	0.146*** (0.019)	0.145*** (0.018)
	Loss Aversion	0.174*** (0.018)	0.171*** (0.017)
	Gain Frame	0.127*** (0.019)	0.124*** (0.018)
	Inducing Fear	0.128*** (0.019)	0.125*** (0.018)
	Social Info	0.142*** (0.019)	0.139*** (0.018)
	Supervision	0.139*** (0.019)	0.138*** (0.018)
Age			0.003*** (0.0004)
Gender (base: Female):			
	Male		-0.015 (0.009)
	Non-binary		0.054 (0.038)
	Prefer not to say		-0.034 (0.091)
Savings above median (£3,000)			0.064*** (0.010)
Discretionary income above median (£350)			-0.004 (0.010)
Non-investor			0.005 (0.009)
Region	No		Yes
Income	No		Yes
Observations	7,632		7,632
Log Likelihood	-3,531.687		-3,428.029
Akaike Inf. Crit.	7,079.374		6,922.057

Note: \*p<0.05; \*\*p<0.01; \*\*\*p<0.001  
 Log odds were transformed into average marginal effects (AMEs) for ease of interpretation.  
 Constants are not displayed as there are no AMEs associated with them.

**Frequency density plot for risk perception (cryptoassets) all treatments pooled**

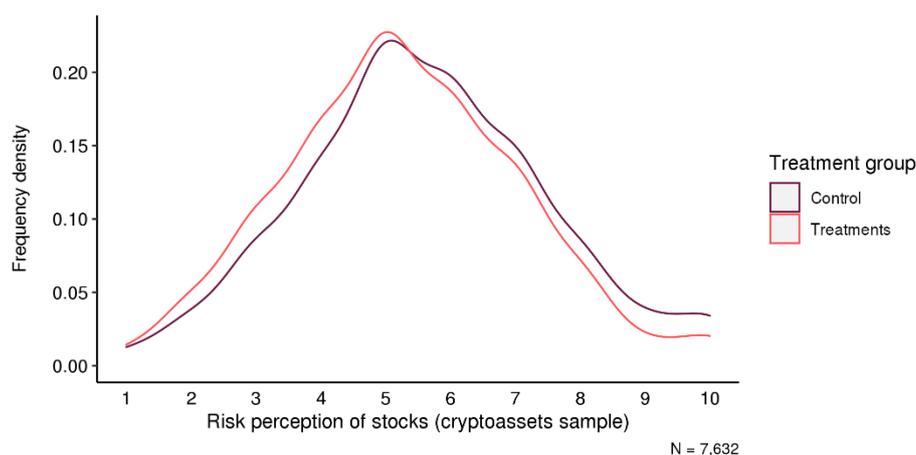


**Table 10: Drivers of risk perception of stocks (cryptoassets)**

		Risk perception of stocks (cryptoassets)	
		Logistic: Risk score equal or greater than 6	
		(1)	(2)
Treatment (base: Control):			
	Salient Control	-0.004 (0.023)	-0.005 (0.022)
	Basic Info	-0.076*** (0.023)	-0.077*** (0.023)
	Loss Aversion	-0.074** (0.022)	-0.076*** (0.022)
	Gain Frame	-0.062** (0.022)	-0.063** (0.022)
	Inducing Fear	-0.084*** (0.022)	-0.085*** (0.022)
	Social Info	-0.121*** (0.023)	-0.121*** (0.023)
	Supervision	-0.073** (0.023)	-0.072** (0.023)
Age			0.002*** (0.0004)
Gender (base: Female)			
	Male		0.007 (0.012)
	Non-binary		0.142* (0.061)
	Prefer not to say		-0.076 (0.109)
Savings above median (£3,000)			0.022 (0.013)
Discretionary income above median (£350)			-0.008 (0.013)
Non-investor			0.015 (0.012)
Region		No	Yes
Income		No	Yes
Observations		7,632	7,632
Log Likelihood		-5,212.042	-5,190.293
Akaike Inf. Crit.		10,440.080	10,446.590

Note: \*p<0.05; \*\*p<0.01; \*\*\*p<0.001  
 Log odds were transformed into average marginal effects (AMEs) for ease of interpretation.  
 Constants are not displayed for as there are no AMEs associated with them.

**Frequency density plot for risk perception (stocks - cryptoassets) all treatments pooled**



## Annex 6: Results – Risk perception: Brant tests for parallel

### regression assumption

Brant tests were conducted to assess whether an ordered logistic regression could be used as the model for our secondary analysis relating to risk perception. This type of model relies on the proportional odds assumption, meaning the relationship between each pair of outcome groups is the same (Brant, 1990). However, this assumption does not hold for both crowdfunding and cryptoassets, so a regular logistic model is therefore used, with a threshold taken (of more 8 or more)

**Table 11: Brant test for crowdfunding**

	<b>X2</b>	<b>df</b>	<b>Probability</b>
Omnibus	105.076	48	0.00000
Salient Control	23.605	8	0.003
Basic Info	27.690	8	0.001
Loss Aversion	27.125	8	0.001
Gain Frame	29.061	8	0.0003
Inducing Fear	21.157	8	0.007
Social Info	38.225	8	0.00001

**Table 13: Brant test for risk perception of cryptoassets**

	<b>X2</b>	<b>df</b>	<b>Probability</b>
Omnibus	122.732	56	0.00000
Salient Control	6.366	8	0.606
Basic Info	22.746	8	0.004
Loss Aversion	31.556	8	0.0001
Gain Frame	13.249	8	0.104
Inducing Fear	17.750	8	0.023
Social Info	42.446	8	0.00000
Lack of Supervision	36.729	8	0.00001

## Annex 7: Results - Recommending to a friend

**Table 12: Drivers of recommendation (crowdfunding)**

	Recommend crowdfunding to a friend			
	Logistic: Binary indicator of recommendation	OLS: Amount recommended	Logistic: Binary indicator of recommendation	OLS: Amount recommended
	(1)	(2)	(3)	(4)
Treatment (base: Control):				
Salient Control	-0.013 (0.019)	1.252 (96.591)	-0.016 (0.019)	-9.765 (96.174)
Basic Info	-0.140*** (0.020)	-462.205*** (90.362)	-0.141*** (0.020)	-472.403*** (90.174)
Loss Aversion	-0.146*** (0.020)	-584.077*** (85.594)	-0.148*** (0.020)	-589.422*** (84.961)
Gain Frame	-0.128*** (0.020)	-459.296*** (88.858)	-0.130*** (0.020)	-471.228*** (88.547)
Inducing Fear	-0.158*** (0.020)	-499.227*** (89.730)	-0.159*** (0.020)	-501.234*** (89.570)
Social Info	-0.147*** (0.020)	-590.510*** (86.732)	-0.149*** (0.020)	-594.975*** (86.070)
Age			-0.003*** (0.0004)	-7.104*** (1.736)
Gender (base: Female):				
Male			-0.006 (0.011)	135.756** (47.080)
Non-binary			-0.029 (0.067)	-265.048 (215.746)
Prefer not to say			-0.140 (0.098)	-93.686 (349.438)
Non-investor			0.014 (0.012)	27.666 (48.290)
Savings above median (£3,000)			-0.087*** (0.012)	-331.948*** (48.932)
Discretionary income above median (£391.5)			-0.029* (0.013)	5.812 (52.614)
Constant		1,791.574*** (67.807)		1,988.967*** (128.088)
Region	No	No	Yes	Yes
Income	No	No	Yes	Yes
Observations	6,618	6,618	6,618	6,618
R <sup>2</sup>		0.016		0.032
Adjusted R <sup>2</sup>		0.015		0.028
Log Likelihood	-3,989.585		-3,869.258	
Akaike Inf. Crit.	7,993.171		7,802.517	
Residual Std. Error		1,844.554 (df = 6611)		1,832.969 (df = 6586)
F Statistic		18.288*** (df = 6; 6611)		7.095*** (df = 31; 6586)

Note:

\*p<0.05; \*\*p<0.01; \*\*\*p<0.001

OLS: Robust standard errors in parentheses

Logistic: Log odds were transformed into average marginal effects (AMEs) for ease of interpretation.

Logistic: Constants are not displayed as there are no AMEs associated with them.

**Table 13: Drivers of stock investing recommendation (crowdfunding)**

	<b>Recommend stocks to a friend (crowdfunding)</b>			
	Logistic: Binary indicator of recommendation	OLS: Amount recommended	Logistic: Binary indicator of recommendation	OLS: Amount recommended
	(1)	(2)	(3)	(4)
Treatment (base: Control):				
Salient Control	0.015 (0.012)	571.870** (205.773)	0.015 (0.011)	630.517** (199.910)
Basic Info	0.016 (0.011)	830.313*** (206.975)	0.016 (0.011)	801.563*** (200.721)
Loss Aversion	0.024* (0.011)	913.103*** (204.339)	0.023* (0.011)	996.201*** (199.704)
Gain Frame	0.008 (0.012)	920.748*** (209.361)	0.006 (0.012)	900.088*** (205.214)
Inducing Fear	0.004 (0.012)	743.363*** (205.084)	0.003 (0.012)	803.334*** (200.096)
Social Info	0.009 (0.012)	1,235.200*** (214.430)	0.007 (0.012)	1,236.242*** (210.184)
Age			-0.001*** (0.0002)	2.694 (4.558)
Gender (base: Female):				
Male			-0.011 (0.006)	904.977*** (115.213)
Non-binary			-0.013 (0.038)	-329.219 (449.088)
Prefer not to say			-0.022 (0.053)	1,444.464 (1,018.256)
Non-investor			-0.022*** (0.006)	-1,432.048*** (119.355)
Savings above median (£3,000)			-0.019** (0.007)	150.108 (120.926)
Discretionary income above median (£391.5)			-0.004 (0.007)	157.254 (130.679)
Constant		4,339.800*** (141.041)		4,313.365*** (317.438)
Region	No	No	Yes	Yes
Income	No	No	Yes	Yes
Observations	6,618	6,618	6,618	6,618
R <sup>2</sup>		0.006		0.056
Adjusted R <sup>2</sup>		0.005		0.051
Log Likelihood	-1,539.652		-1,489.051	
Akaike Inf. Crit.	3,093.304		3,042.102	
Residual Std. Error		4,643.298 (df = 6611)		4,533.590 (df = 6586)
F Statistic		6.319*** (df = 6; 6611)		12.536*** (df = 31; 6586)

Note:

\*p<0.05; \*\*p<0.01; \*\*\*p<0.001

OLS: Robust standard errors in parentheses

Logistic: Log odds were transformed into average marginal effects (AMEs) for ease of interpretation.

Logistic: Constants are not displayed as there are no AMEs associated with them.

**Table 14: Drivers of recommendation (cryptoassets)**

	Recommend cryptoassets to a friend			
	Logistic: Binary indicator of recommendation (1)	OLS: Amount recommended (2)	Logistic: Binary indicator of recommendation (3)	OLS: Amount recommended (4)
Treatment (base: Control):				
Salient Control	-0.018 (0.020)	-125.897 (89.733)	-0.020 (0.019)	-143.643 (88.928)
Basic Info	-0.073*** (0.021)	-438.731*** (89.684)	-0.071*** (0.021)	-457.389*** (88.700)
Loss Aversion	-0.102*** (0.021)	-512.999*** (88.149)	-0.095*** (0.020)	-504.277*** (86.286)
Gain Frame	-0.086*** (0.020)	-448.200*** (85.124)	-0.086*** (0.020)	-446.357*** (83.660)
Inducing Fear	-0.090*** (0.021)	-522.208*** (82.827)	-0.084*** (0.020)	-516.162*** (81.565)
Social Info	-0.090*** (0.021)	-478.390*** (87.756)	-0.090*** (0.020)	-485.764*** (86.685)
Supervision	-0.102*** (0.021)	-422.975*** (90.806)	-0.103*** (0.020)	-436.315*** (89.063)
Age			-0.005*** (0.0004)	-11.184*** (1.508)
Gender (base: Female):				
Male			0.058*** (0.011)	240.080*** (42.145)
Non-binary			-0.164** (0.060)	-165.399 (259.875)
Prefer not to say			-0.083 (0.112)	-256.095 (279.967)
Savings above median (£3,000)			-0.080*** (0.011)	-400.768*** (44.410)
Discretionary income above median (£350)			-0.006 (0.012)	14.557 (48.298)
Non-investor			-0.054*** (0.011)	-287.688*** (44.300)
Constant		1,608.040*** (66.778)		2,260.573*** (127.993)
Region	No	No	Yes	Yes
Income	No	No	Yes	Yes
Observations	7,632	7,632	7,632	7,632
R <sup>2</sup>		0.010		0.044
Adjusted R <sup>2</sup>		0.010		0.040
Log Likelihood	-4,770.027		-4,587.252	
Akaike Inf. Crit.	9,556.054		9,240.504	
Residual Std. Error		1,800.475 (df = 7624)		1,772.174 (df = 7599)
F Statistic		11.470*** (df = 7; 7624)		11.041*** (df = 32; 7599)

Note:

\*p<0.05; \*\*p<0.01; \*\*\*p<0.001

OLS: Robust standard errors in parentheses

Logistic: Log odds were transformed into average marginal effects (AMEs) for ease of interpretation.

Logistic: Constants are not displayed as there are no AMEs associated with them.

**Table 15: Drivers of stock investing recommendation (cryptoassets)**

<b>Recommend stocks to a friend (cryptoassets)</b>				
	Logistic: Binary indicator of recommendation	OLS: Amount recommended	Logistic: Binary indicator of recommendation	OLS: Amount recommended
	(1)	(2)	(3)	(4)
<b>Treatment (base: Control)</b>				
Salient Control	0.015 (0.011)	589.599** (203.823)	0.015 (0.011)	451.985* (198.683)
Basic Info	0.007 (0.012)	748.270*** (212.082)	0.006 (0.012)	638.428** (205.035)
Loss Aversion	0.007 (0.011)	1,092.099*** (213.532)	0.009 (0.011)	1,032.141*** (207.146)
Gain Frame	0.015 (0.011)	570.507** (203.409)	0.016 (0.011)	479.153* (194.923)
Inducing Fear	0.018 (0.011)	974.463*** (209.806)	0.018 (0.011)	947.963*** (203.170)
Social Info	0.025* (0.011)	1,154.218*** (217.235)	0.026* (0.011)	1,074.615*** (210.358)
Supervision	0.006 (0.012)	991.253*** (214.841)	0.006 (0.012)	947.184*** (210.245)
Age			-0.001*** (0.0002)	24.132*** (4.382)
<b>Gender (base: Female):</b>				
Male			-0.007 (0.006)	1,167.525*** (111.270)
Non-binary			-0.102* (0.048)	-339.377 (531.066)
Prefer not to say			-0.043 (0.067)	2,203.355 (1,367.984)
Savings above median (£3,000)			-0.021*** (0.006)	267.027* (118.153)
Discretionary income above median (£350)			0.004 (0.006)	286.484* (125.174)
Non-investor			-0.015* (0.006)	1,326.593*** (115.260)
Constant		4,653.769*** (139.332)		3,913.464*** (303.933)
Region	No	No	Yes	Yes
Income	No	No	Yes	Yes
Observations	7,632	7,632	7,632	7,632
R <sup>2</sup>		0.006		0.068
Adjusted R <sup>2</sup>		0.005		0.064
Log Likelihood	-1,764.230		-1,732.033	
Akaike Inf. Crit.	3,544.461		3,530.066	
Residual Std. Error		4,802.071 (df = 7624)		4,656.036 (df = 7599)
F Statistic		6.083*** (df = 7; 7624)		17.376*** (df = 32; 7599)

Note:

\*p<0.05; \*\*p<0.01; \*\*\*p<0.001

OLS: Robust standard errors in parentheses

Logistic: Log odds were transformed into average marginal effects (AMEs) for ease of interpretation.

Logistic: Constants are not displayed for as there are no AMEs associated with them.

## Annex 8: Results - Engagement

**Table 16: Drivers of engagement (crowdfunding)**

	Engagement	
	Likelihood of clicking through to the full risk warning	
	(1)	(2)
Treatment (base: Basic Info):		
Loss Aversion	-0.018 (0.023)	-0.016 (0.023)
Gain Frame	-0.004 (0.023)	-0.004 (0.023)
Inducing Fear	-0.016 (0.023)	-0.014 (0.023)
Social Info	0.022 (0.023)	0.022 (0.023)
Age		-0.002** (0.001)
Gender (base: Female):		
Male		0.008 (0.015)
Non-binary		0.094 (0.083)
Prefer not to say		0.004 (0.117)
Non-investor		-0.002 (0.015)
Savings above median (£3,000)		0.062*** (0.016)
Discretionary income above median (£391.5)		-0.018 (0.017)
Region	No	Yes
Income	No	Yes
Observations	4,782	4,782
Log Likelihood	-3,301.690	-3,272.452
Akaike Inf. Crit.	6,613.379	6,604.903

Note: \*p<0.05; \*\*p<0.01; \*\*\*p<0.001

Log odds were transformed into average marginal effects (AMEs) for ease of interpretation.

Constants are not displayed as there are no AMEs associated with them.

**Table 17: Drivers of engagement (cryptoassets)**

	<b>Engagement</b>	
	Likelihood of clicking through to the full risk warning	
	(1)	(2)
Treatment (base: Basic Info):		
Loss Aversion	-0.030 (0.023)	-0.033 (0.023)
Gain Frame	-0.034 (0.023)	-0.037 (0.023)
Inducing Fear	-0.022 (0.023)	-0.023 (0.023)
Social Info	-0.021 (0.023)	-0.023 (0.023)
Supervision	-0.045 (0.023)	-0.046* (0.023)
Age		-0.001 (0.001)
Gender (base: Female):		
Male		-0.034* (0.014)
Non-binary		0.055 (0.070)
Prefer not to say		-0.052 (0.130)
Savings above median (£3,000)		0.058*** (0.015)
Discretionary income above median (£350)		0.009 (0.015)
Non-investor		0.015 (0.014)
Region	No	Yes
Income	No	Yes
Observations	5,657	5,657
Log Likelihood	-3,874.682	-3,847.061
Akaike Inf. Crit.	7,761.365	7,756.122

*Note:* \*p<0.05; \*\*p<0.01; \*\*\*p<0.001

Log odds were transformed into average marginal effects (AMEs) for ease of interpretation.

Constants are not displayed for as there are no AMEs associated with them.

## Annex 9: Results - Additional analyses

**Table 18: Comprehension analysis - Risk comprehension per question and across treatments (crowdfunding)**

	Comprehension questions					
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (base: Control):						
Salient Control	0.065** (0.023)	0.057** (0.020)	0.069*** (0.018)	0.022 (0.015)	0.049* (0.023)	0.006 (0.020)
Basic Info	-0.052* (0.022)	0.162*** (0.018)	0.122*** (0.017)	0.058*** (0.014)	0.163*** (0.022)	0.102*** (0.021)
Loss Aversion	-0.092*** (0.022)	0.168*** (0.018)	0.139*** (0.017)	0.060*** (0.014)	0.162*** (0.022)	0.089*** (0.021)
Gain Frame	-0.060** (0.022)	0.146*** (0.018)	0.137*** (0.017)	0.032* (0.015)	0.134*** (0.022)	0.073*** (0.021)
Inducing Fear	-0.065** (0.022)	0.142*** (0.018)	0.121*** (0.017)	0.051*** (0.014)	0.131*** (0.022)	0.070*** (0.020)
Social Info	-0.089*** (0.022)	0.173*** (0.018)	0.126*** (0.017)	0.058*** (0.014)	0.166*** (0.022)	0.082*** (0.021)
Age	0.002*** (0.0005)	0.001*** (0.0004)	0.003*** (0.0004)	0.001** (0.0003)	0.001 (0.0004)	0.004*** (0.0004)
Gender (base: Female):						
Male	0.007 (0.012)	0.031*** (0.009)	0.020* (0.009)	0.003 (0.007)	0.044*** (0.012)	0.061*** (0.012)
Non-binary	-0.015 (0.065)	0.092** (0.032)	0.033 (0.037)	0.035 (0.030)	-0.026 (0.065)	0.023 (0.065)
Prefer not to say	0.006 (0.098)	0.083 (0.059)	0.107** (0.041)	-0.127 (0.086)	-0.019 (0.099)	-0.026 (0.088)
Non-investor	-0.012 (0.013)	-0.029** (0.009)	-0.029** (0.009)	-0.011 (0.008)	-0.031** (0.012)	-0.023 (0.012)
Savings above median (£3,000)	0.036** (0.013)	0.048*** (0.010)	0.046*** (0.009)	0.021** (0.008)	0.039** (0.012)	0.023 (0.012)
Discretionary income above median (£391.5)	-0.015 (0.014)	-0.006 (0.010)	-0.021* (0.010)	0.007 (0.008)	-0.006 (0.013)	-0.017 (0.013)
Control group average	0.41	0.73	0.76	0.87	0.56	0.24
Observations	6,618	6,618	6,618	6,618	6,618	6,618
Log Likelihood	-4,271.500	-2,689.438	-2,491.270	-2,006.295	-4,063.849	-3,972.938
Akaike Inf. Crit.	8,607.000	5,442.877	5,046.539	4,076.590	8,191.697	8,009.876

Note:

\*p<0.05; \*\*p<0.01; \*\*\*p<0.001

Log odds were transformed into average marginal effects (AMEs) for ease of interpretation.

Constants are not displayed as there are no AMEs associated with them.

**Table 19: Comprehension analysis - Risk comprehension per question and across treatments (cryptoassets)**

**Comprehension questions**

	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (base: Control):						
Salient Control	0.015 (0.022)	0.012 (0.021)	0.038 (0.020)	-0.016 (0.015)	-0.018 (0.018)	-0.005 (0.021)
Basic Info	-0.086*** (0.022)	0.217*** (0.019)	0.212*** (0.018)	0.056*** (0 .014)	-0.012 (0.018)	0.068** (0. 021)
Loss Aversion	-0.111*** (0.022)	0.242*** (0.018)	0.221*** (0.018)	0.049*** (0 .013)	0.007 (0.018)	0.063** (0. 021)
Gain Frame	-0.079*** (0.022)	0.193*** (0.019)	0.190*** (0.018)	0.025 (0.014)	-0.029 (0.018)	0.061** (0. 020)
Inducing Fear	-0.085*** (0.022)	0.217*** (0.018)	0.201*** (0.018)	0.056*** (0 .013)	0.026 (0.017)	0.050* (0. 021)
Social Info	-0.144*** (0.022)	0.207*** (0.019)	0.223*** (0.018)	0.053*** (0 .014)	-0.005 (0.018)	0.063** (0. 021)
Supervision	-0.114*** (0.022)	0.210*** (0.019)	0.234*** (0.018)	0.046*** (0 .014)	-0.068*** (0.019)	0.068** (0. 021)
Age	0.002*** (0.0004)	0.001 (0.0003)	0.004*** (0.0004)	0.001** (0. 0003)	0.0001 (0.0004)	0.001* (0. 0004)
Gender (base: Female):						
Male	-0.013 (0.011)	0.034*** (0.009)	0.047*** (0.009)	0.015* (0.007)	-0.033*** (0.009)	-0.026* (0.011)
Non-binary	-0.027 (0.060)	0.084* (0.039)	0.061 (0.039)	0.042 (0.029)	-0.003 (0.048)	0.034 (0.052)
Prefer not to say	0.105 (0.114)	-0.050 (0.096)	0.038 (0.081)	-0.008 (0.072)	0.075 (0.075)	0.020 (0.100)
Savings above median (£3,000)	0.006 (0.012)	0.039*** (0.010)	0.046*** (0.009)	0.017* (0.007)	0.027** (0.010)	0.022 (0.011)
Discretionary income above median (£350)	-0.0005 (0.013)	0.003 (0.010)	-0.006 (0.010)	0.006 (0.008)	0.006 (0.011)	0.013 (0.012)
Non-investor	-0.005 (0.012)	-0.030** (0.009)	-0.009 (0.009)	-0.025*** (0.007)	0.003 (0.010)	-0.043*** (0.011)
Control group average	0.43	0.65	0.66	0.87	0.81	0.66
Observations	7,632	7,632	7,632	7,632	7,632	7,632
Log Likelihood	-4,883.372	-3,402.107	-3,207.978	-2,306.540	-3,808.852	-4,551.245
Akaike Inf. Crit.	9,832.744	6,870.214	6,481.957	4,679.080	7,683.703	9,168.491

Note:

\*p<0.05; \*\*p<0.01; \*\*\*p<0.001

Log odds were transformed into average marginal effects (AMEs) for ease of interpretation.

Constants are not displayed as there are no AMEs associated with them.

**Table 20: Low engagement analysis - Comprehension per question for participants not reading the full risk warning (crowdfunding)**

	Comprehension question (low-engagement participants)					
Treatment (base: Control):						
Salient Control	0.065** (0.023)	0.057** (0.020)	0.069*** (0.018)	0.023 (0.015)	0.049* (0.023)	0.004 (0.020)
Basic Info	-0.120*** (0.026)	0.106*** (0.022)	0.092*** (0.021)	0.025 (0.018)	0.077** (0.027)	0.048* (0.024)
Loss Aversion	-0.143*** (0.025)	0.130*** (0.021)	0.113*** (0.020)	0.020 (0.018)	0.046 (0.027)	0.058* (0.025)
Gain Frame	-0.100*** (0.026)	0.102*** (0.022)	0.103*** (0.021)	-0.006 (0.019)	0.013 (0.027)	0.033 (0.024)
Inducing Fear	-0.099*** (0.026)	0.076*** (0.023)	0.082*** (0.021)	0.018 (0.018)	-0.004 (0.027)	0.022 (0.024)
Social Info	-0.136*** (0.026)	0.129*** (0.022)	0.106*** (0.021)	0.028 (0.018)	0.058* (0.028)	0.022 (0.025)
Age	0.002*** (0.001)	0.002*** (0.0005)	0.004*** (0.0005)	0.001** (0.0004)	0.0003 (0.001)	0.003*** (0.0005)
Gender (base: Female):						
Male	0.018 (0.015)	0.043*** (0.012)	0.027* (0.011)	0.003 (0.010)	0.056*** (0.015)	0.047*** (0.014)
Non-binary	-0.126 (0.072)	0.099* (0.050)	0.061 (0.048)	0.050 (0.041)	-0.105 (0.087)	0.005 (0.080)
Prefer not to say	-0.074 (0.114)	0.082 (0.093)	0.115 (0.066)	-0.226 (0.124)	-0.071 (0.130)	-0.039 (0.106)
Non-investor	-0.007 (0.015)	-0.033** (0.013)	-0.035** (0.012)	-0.015 (0.010)	-0.048** (0.016)	-0.017 (0.014)
Savings above median (£3,000)	0.026 (0.016)	0.059*** (0.013)	0.050*** (0.012)	0.021* (0.011)	0.036* (0.016)	0.014 (0.015)
Discretionary income above median (£391.5)						
Control group average						
Observations	4,389	4,389	4,389	4,389	4,389	4,389
Log Likelihood	-2,762.263	-2,116.375	-1,878.205	-1,576.878	-2,916.365	-2,500.952
Akaike Inf. Crit.						

Note:

\*p<0.05; \*\*p<0.01; \*\*\*p<0.001

Log odds were transformed into average marginal effects (AMEs) for ease of interpretation.

Constants are not displayed as there are no AMEs associated with them.

**Table 21: Low engagement analysis - Comprehension per question for participants not reading the full risk warning (cryptoassets)**

Comprehension questions (low-engagement participants)						
Treatment (base: Control):						
Salient Control	0.014 (0.022)	0.012 (0.021)	0.038 (0.020)	-0.016 (0.015)	-0.020 (0.018)	-0.007 (0.021)
Basic Info	-0.133*** (0.026)	0.160*** (0.023)	0.142*** (0.023)	0.022 (0.017)	-0.028 (0.023)	0.010 (0.026)
Loss Aversion	-0.167*** (0.024)	0.216*** (0.021)	0.182*** (0.021)	0.017 (0.017)	-0.029 (0.022)	0.031 (0.025)
Gain Frame	-0.116*** (0.025)	0.140*** (0.022)	0.111*** (0.022)	-0.022 (0.018)	-0.056* (0.022)	0.016 (0.024)
Inducing Fear	-0.116*** (0.025)	0.168*** (0.022)	0.132*** (0.022)	0.020 (0.017)	-0.005 (0.021)	0.011 (0.025)
Social Info	-0.161*** (0.025)	0.133*** (0.023)	0.166*** (0.022)	0.010 (0.018)	-0.030 (0.022)	0.021 (0.025)
Supervision	-0.142*** (0.025)	0.163*** (0.022)	0.192*** (0.021)	0.009 (0.017)	-0.112*** (0.023)	0.031 (0.025)
Age	0.002** (0.001)	0.0004 (0.0005)	0.005*** (0.0005)	0.001* (0.0004)	0.0003 (0.0005)	0.002*** (0.001)
Gender (base: Female):						
Male	-0.004 (0.013)	0.051*** (0.012)	0.070*** (0.012)	0.026** (0.009)	-0.025* (0.012)	-0.032* (0.013)
Non-binary	-0.116 (0.071)	0.100 (0.058)	0.067 (0.060)	0.064 (0.041)	0.064 (0.056)	0.042 (0.070)
Prefer not to say	0.029 (0.133)	-0.025 (0.124)	0.114 (0.098)	-0.029 (0.106)	0.050 (0.103)	0.091 (0.112)
Savings above median (£3,000)	0.003 (0.014)	0.052*** (0.013)	0.054*** (0.013)	0.020 (0.010)	0.015 (0.013)	0.018 (0.014)
Discretionary income above median (£350)	-0.009 (0.015)	-0.0004 (0.014)	-0.007 (0.013)	0.007 (0.011)	0.011 (0.013)	0.013 (0.015)
Non-investor						
Control group average						
Observations	5,157	5,157	5,157	5,157	5,157	5,157
Log Likelihood	-3,244.476	-2,708.791	-2,606.823	-1,890.327	-2,693.395	-3,214.081
Akaike Inf. Crit.						

Note:

\*p<0.05; \*\*p<0.01; \*\*\*p<0.001

Log odds were transformed into average marginal effects (AMEs) for ease of interpretation.

Constants are not displayed as there are no AMEs associated with them.

**Table 22: Low engagement analysis - Recommending crowdfunding as an investment (crowdfunding)**

Recommend crowdfunding to a friend (low-engagement participants)				
Treatment (base: Control):				
Salient Control	-0.013 (0.019)	1.252 (96.617)	-0.017 (0.018)	-13.188 (96.382)
Basic Info	-0.047* (0.023)	-109.313 (111.898)	-0.054* (0.023)	-129.643 (112.595)
Loss Aversion	-0.052* (0.023)	-244.368* (104.748)	-0.057* (0.023)	-253.140* (104.462)
Gain Frame	-0.048* (0.023)	-166.328 (106.674)	-0.050* (0.023)	-177.980 (107.097)
Inducing Fear	-0.059** (0.023)	-172.171 (111.255)	-0.060** (0.022)	-171.300 (111.552)
Social Info	-0.034 (0.023)	-147.223 (110.441)	-0.039 (0.023)	-181.553 (109.301)
Age			-0.003*** (0.0005)	-8.209*** (2.255)
Gender (base: Female):				
Male			-0.022 (0.013)	134.833* (62.881)
Non-binary			0.084 (0.069)	-33.396 (328.799)
Prefer not to say			-0.067 (0.110)	134.152 (488.860)
Non-investor			0.038** (0.013)	85.272 (64.071)
Savings above median (£3,000)			-0.065*** (0.014)	-306.001*** (65.393)
Discretionary income above median (£391.5)			-0.041** (0.014)	-34.896 (70.251)
Constant				
Region	No	No	Yes	Yes
Income				
Observations	4,389	4,389	4,389	4,389
R <sup>2</sup>		0.002		0.018
Adjusted R <sup>2</sup>		0.001		0.011
Log Likelihood	-2,345.560		-2,264.702	
Akaike Inf. Crit.	4,705.120		4,593.404	
Residual Std. Error		1,990.333 (df = 4382)		1,979.648 (df = 4357)
F Statistic				

Note:

\*p\*\*p\*\*\*p<0.001

OLS: Robust standard errors in parentheses

Logistic: Log odds were transformed into average marginal effects (AMEs) for ease of interpretation.

Logistic: Constants are not displayed as there are no AMEs associated with them.

**Table 23: Low engagement analysis - Recommending cryptoassets as an investment (cryptoassets)**

<b>Recommend cryptoassets to a friend (low-engagement participants)</b>				
	Logistic: Binary indicator of recommendation	OLS: Amount recommended	Logistic: Binary indicator of recommendation	OLS: Amount recommended
	(1)	(2)	(3)	(4)
Treatment (base: Control):				
Salient Control	-0.018 (0.020)	-125.897 (89.756)	-0.019 (0.019)	-143.364 (89.043)
Basic Info	-0.045 (0.025)	-220.909 (117.090)	-0.034 (0.024)	-239.130* (116.261)
Loss Aversion	-0.048* (0.024)	-278.350* (111.062)	-0.043 (0.023)	-277.345* (109.176)
Gain Frame	-0.021 (0.023)	-154.450 (103.547)	-0.026 (0.023)	-175.025 (102.258)
Inducing Fear	-0.024 (0.024)	-321.003*** (94.043)	-0.017 (0.023)	-327.884*** (92.790)
Social Info	-0.034 (0.024)	-258.040* (107.988)	-0.032 (0.024)	-266.983* (106.979)
Supervision	-0.062* (0.024)	-201.906 (112.080)	-0.066** (0.024)	-242.750* (109.289)
Age			-0.005*** (0.0005)	-11.783*** (2.038)
Gender (base: Female):				
Male			0.032* (0.013)	202.854*** (55.741)
Non-binary			-0.132 (0.080)	-129.203 (398.966)
Prefer not to say			-0.260 (0.136)	-439.166 (377.239)
Savings above median (£3,000)			-0.075*** (0.013)	-451.226*** (59.778)
Discretionary income above median (£350)			-0.006 (0.014)	-15.060 (64.013)
Non-investor			-0.041** (0.013)	-300.772*** (59.444)
Constant		1,608.040*** (66.794)		2,374.930*** (160.227)
Region	No	No	Yes	Yes
Income	No	No	Yes	Yes
Observations	5,157	5,157	5,157	5,157
R <sup>2</sup>		0.003		0.038
Adjusted R <sup>2</sup>		0.001		0.032
Log Likelihood	-3,051.268		-2,943.426	
Akaike Inf. Crit.	6,118.535		5,952.853	
Residual Std. Error		1,962.254 (df = 5149)		1,932.180 (df = 5124)
F Statistic		2.051* (df = 7; 5149)		6.292*** (df = 32; 5124)

Note:

\*p<0.05; \*\*p<0.01; \*\*\*p<0.001

OLS: Robust standard errors in parentheses

Logistic: Log odds were transformed into average marginal effects (AMEs) for ease of interpretation.

Logistic: Constants are not displayed as there are no AMEs associated with them.



