

# When investing feels right: Affect heuristics and green investment

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## Abstract:

Drawing on the affect heuristic, this paper examines the mechanisms through which affect influences green investment decisions. Using survey data from 2,215 individual investors in France and estimating a Generalized Structural Equation Model (GSEM), the results show that affect does not exert a direct effect on green investment decisions. Instead, its influence is fully mediated through perceived financial returns and risks, as well as through non-financial perceptions related to environmental impact and greenwashing concerns. The results further reveal an asymmetry between these channels, with affect exerting a stronger influence on non-financial perceptions, while financial considerations play a slightly more prominent role at the final investment stage. By focusing on integral affect arising from investors' mental representations of green funds, this study provides a more conceptually grounded account of emotional influences in green investing. Overall, the findings contribute to behavioral and sustainable finance by extending the affect heuristic to a multidimensional framework that integrates both financial and non-financial considerations.

**Keywords:** Affect heuristics, green investing, individual investors, investment-decision making

**JEL Classification :** D14, E21, G11, Q51, Q56

## 1. Introduction

In traditional finance, investors are modeled as *homo economicus*, meaning they are assumed to behave rationally, possess perfect information, and base their investment decisions purely on financial considerations. Under this framework, investors are expected to select portfolios that optimally trade off risk and return (Markowitz, 1952). However, behavioral finance challenges this classical utilitarian view by arguing that individual investors do not always behave as predicted by traditional models but rather act as *homo sapiens*, whose decisions are shaped by bounded rationality and incomplete information (Thaler, 2015). In this sense, *homo sapiens* are subject to cognitive biases that can lead to errors in processing financial information and often rely on mental shortcuts, also called heuristics, to make quick investment decisions under uncertainty.

The presence of such biases and heuristics reflects the concept of bounded rationality rather than perfect rationality, underscoring the importance of incorporating psychological factors into the analysis of investor behavior. This perspective allows for the integration of non-financial considerations into investment decision-making, providing a behavioral foundation for sustainable investment behavior (Beal et al., 2005; Nilsson, 2008; Riedl & Smeets, 2017). In the case of green investing, for instance, decisions can be driven by non-financial concerns such as positive attitudes toward sustainable investing (Getzner & Grabner-Kräuter, 2004), financial literacy (Anderson & Robinson, 2021), or emotions (Heeb et al., 2023). The presence of emotions in sustainable investment decision-making exemplifies the affect heuristic (Finucane et al., 2000), a mental shortcut through which individuals make decisions based on how they feel toward an investment option. Thus, following Statman et al. (2008), who argues that “affect is an emotion,” the two terms are used interchangeably throughout this paper.

The central role of affect in decision-making is further highlighted by Slovic et al. (2007) and by Kahneman (2003), who describes the affect heuristic as “the most important development in the study of judgment heuristics in the past few decades.” Some scholars further argue that affect constitutes the initial response to external stimuli, subsequently guiding judgment and choice (Zajonc, 1980). Moreover, neuroeconomic research demonstrates that the same brain parts responsible for generating emotional states are also involved in evaluating financial situations such as risk and reward (Kuhnen & Knutson, 2011). This suggests that affect and reasoning are not separate systems, rather, emotions actively shape how individuals perceive financial risks and opportunities in a systematic and predictable way. In this sense, individual investors can be seen as “*warm-glow optimizers*” rather than strict “*consequentialists*” (Heeb

et al., 2023), suggesting that their investment behavior is driven by the feelings associated with acting sustainably than by a calculated assessment of the impact of such investments. This has been further supported by research showing that emotions, both general and those related to environmental issues, play a major role in sustainable investment decisions (Dreyer et al., 2023; Gutsche et al., 2023, Hartzmark and Sussman, 2019; Heeb et al., 2023; Hervé & Marsat, 2023). However, despite extensive research on the role of affect in sustainable investment decision-making, little is known about the mechanisms through which emotions exert their influence. Most existing studies assume a direct relationship between affect and sustainable investment behavior, largely overlooking the psychological processes through which emotions shape investors' decisions. The affect heuristic provides a useful framework to address this gap, as it suggests that emotions influence decision-making by shaping perceived benefits and perceived risks rather than triggering behavior directly.

Prior work by Hartzmark and Sussman (2019) represents an important step in this direction by examining how affect influences perceived financial benefits and risks associated with sustainable funds. However, their analysis remains limited in two important respects. First, it focuses exclusively on financial dimensions of benefits and risks, thereby neglecting the non-financial benefits and risks that are central to sustainable investments, as emphasized in the behavioral finance literature. Second, their identification strategy relies on *incidental affect*, as defined by Västfjäll et al. (2016), which is generated by external stimuli unrelated to investors' internal mental representations of the fund. As acknowledged by Hartzmark and Sussman (2019) themselves, sustainability labels primarily capture affective reactions to the labels rather than to the underlying characteristics of the funds. In contrast, Västfjäll et al. (2016) show that *integral affect*, which arises from investors' perceptions and mental representations of green funds themselves, constitutes the primary source of affective reactions.

In this paper, we aim to address this gap by studying, for the first time, the mechanisms through which affect influences green investment decisions, explicitly distinguishing between financial and non-financial benefits and risks and focusing on integral affect. Using survey data from 2 215 individual French investors, our results show that affect does not exert a direct influence on green investment decisions. Instead, its effect is fully mediated through both financial and non-financial perceptions. Specifically, affect positively influences perceived financial benefits, reflected in higher expected returns, as well as perceived non-financial benefits related to the environmental impact of green funds, which in turn increase the likelihood of green investment. At the same time, affect reduces perceived financial risk and perceived non-financial risk

associated with greenwashing concerns, further increasing green investment decisions. Overall, these findings indicate that emotions play an indirect, perception-shaping role rather than acting as a direct trigger of investment behavior.

Accordingly, this study makes three main contributions. First, it advances behavioral finance by providing direct empirical support for the affect heuristic in the context of green investment decisions, drawing on data from individual investors engaged in real-world investment behavior. Second, it contributes to the sustainable finance literature by demonstrating that both benefits and risks comprise financial and non-financial components that jointly mediate the influence of affect on green investment decisions. Third, it offers a more direct and conceptually grounded measurement of affect by focusing on integral affect.

The remainder of the paper is organized as follows. Section 2 reviews the related literature. Section 3 describes the data and methodology. Section 4 presents the main empirical findings. Section 5 reports the robustness checks, and Section 6 discusses the results and concludes.

## **2. Literature review**

### **2.1. The role of affect in sustainable financial decisions**

Research has consistently shown that affect is a key driver of general and sustainable investment behavior. More precisely, affect has been found to influence investor decision-making in two main ways (Lucey & Dowling, 2005). First, the authors show that investors often allow their mood at the moment of choice to shape their investment judgments: when in a good mood, they are more likely to form optimistic investment decisions, whereas a bad mood leads to more pessimistic ones. This was further demonstrated by Kuhnen & Knutson (2011), who show that positive emotions increase individual investors' confidence in their ability to evaluate the risky investments, whereas negative emotions decrease it. Second, Lucey and Dowling (2005) note that investors may decide to invest in the equity of a specific company simply because they like the company, or conversely avoid the investment if they dislike it.

Such mechanisms fall within what Västfjäll et al. (2016) refer to as *incidental affect*, namely affect generated by exogenous stimuli or environmental cues. In this context, investors may misattribute these affective responses to the intrinsic characteristics of sustainable funds, while the underlying driver of the investment decision is in fact external to the fund itself. For instance, in the specific context of sustainable finance, Hartzmark and Sussman (2019) find that emotions explain the negative correlation between perceived risk and perceived return observed among participants, an effect that contradicts traditional financial theory. They show that when

funds are presented with high sustainability scores and accompanying globe ratings, investors tend to experience positive feelings toward these funds and consequently perceive them as offering higher returns and lower risks. However, as the authors explain, this affective response reflects a reaction to the sustainability rating and its salient presentation rather than to any new information about the underlying fundamentals of the funds.

Västfjäll et al. (2016) further distinguish *incidental affect* from affect that genuinely originates from the intrinsic characteristics of the object, which is generated by internal mental representations of the target, in this case sustainable funds. This representation reflects a genuine perception of the object and is referred to as *integral affect*. According to the authors, integral affect plays a dominant role in shaping overall affective reactions: when it is strong, it leaves little room for incidental affect to influence judgments, whereas when it is weak, incidental affect may exert a greater influence, although integral affect remains central. In sustainable finance, such integral affect is often expressed through the positive emotions associated with investing in responsible funds. Heeb et al. (2023), for instance, demonstrate that individual investors are motivated less by the actual impact of their sustainable investments than by the positive emotions they experience when choosing such investment options over conventional ones. This sense of “feeling good” is commonly known in economics as the warm glow effect, leading Heeb et al. (2023) to describe sustainable investors as “warm-glow optimizers” rather than consequentialists, meaning that individuals’ willingness to pay for sustainable investments is largely emotion-driven. This finding is further confirmed by Dreyer et al. (2023) in the context of green stocks, while Gutsche et al. (2023) identify warm-glow feelings as the most important determinant of sustainable investment behavior.

Beyond general emotions, research has also highlighted the influence of environmentally specific feelings, such as eco-anxiety and connectedness to nature, which guide investors’ decisions toward green equity funds (Hervé & Marsat, 2023). Collectively, these findings underscore the central role of affect, both general and environment-related, in shaping investment behavior. There is thus strong theoretical and empirical support for the idea that investors tend to invest in ways that are consistent with their emotions, rather than purely rational or financial considerations. Accordingly, the following hypothesis is proposed:

**H1.** *Affect has an influence on the decision to invest in green funds.*

Although a direct relationship between emotions and green investment decisions is hypothesized in H1, this study recognizes that the influence of affect may not be limited to a

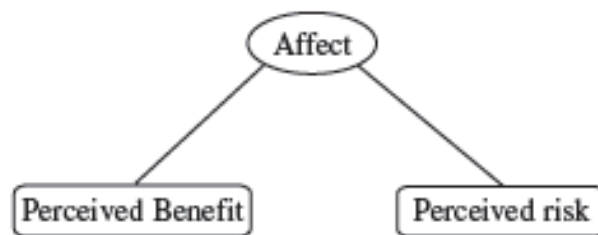
direct effect. In contrast to previous studies, it seeks to uncover potential indirect pathways through which emotions shape investment decisions, providing a deeper understanding of the underlying psychological mechanisms.

## **2.2. A proposed model: Affect heuristic and green individual investors**

In a theoretical framework adapted from Finucane et al. (2000), Lucey & Dowling (2005) applied the affect heuristic to the specific context of investment behavior. According to Finucane et al. (2000), the idea behind affect heuristic is that individuals rely on readily available feelings and emotional impressions as mental shortcuts to simplify judgments and decisions.

According to Lucey and Dowling's framework (Figure 1), investors allow their emotions to shape their perceptions in a systematic way: positive emotions enhance the perceived benefits of investing in a given company, while negative emotions increase the perceived risks associated with it.

Figure 1. A model of affect heuristic (Lucey & Dowling, 2005)



However, the framework does not specify which types of benefits and risks are related to investing, leaving room for several interpretations. In most investment contexts, benefits have traditionally referred to the financial returns generated by the investment. For individual investors, these benefits are often based on perceived rather than actual financial returns (Nilsson, 2008), and this perception has been confirmed as an important driver in the context of sustainable investing (Brodback et al., 2019; Lewis & Mackenzie, 2000). Nevertheless, insights from behavioral finance indicate that investment benefits are not limited to financial gains alone. Non-pecuniary benefits also play a significant role (Nilsson, 2008; Gutsche et al., 2023), particularly those related to the impact these funds can have on society. For instance, Riedl & Smeets (2017) show that investors are more inclined to invest pro-socially when they believe their investments generate positive social outcomes. However, most sustainable investors often conflate sustainable investing with specific pro-environmental investing (Barber

et al., 2021; Hartzmark & Sussman, 2019), largely due to the growing visibility of global environmental issues. As highlighted by Morgan Stanley's 2024 Global Survey<sup>1</sup>, the impact of green investments is easier for individuals to grasp and relate to, whereas the social dimension of sustainability tends to remain more abstract for most investors. In line with this, Siemroth & Hornuf (2023) show that green investors focus solely on the environmental impact of green funds and do not perceive them as delivering larger social benefits.

According to this framework, affect is expected to positively influence the perceived benefits of green investing, both financial and non-financial. The latter refers to the perceived positive impact that such investments can have on the environment. This enhanced perception of financial and non-financial benefits is, in turn, expected to positively influence investors' decisions to invest in green funds. Based on these assumptions, the following hypotheses are proposed:

**H2a.** *The more positive investors' affect toward green investing, the greater the perceived financial benefits and the higher the likelihood of investing in a green fund.*

**H2b.** *The more positive investors' affect toward green investing, the greater the perceived non-financial benefits and the higher the likelihood of investing in a green fund.*

Moreover, the behavioral finance literature suggests that perceived risk in the context of sustainable investing can be divided into financial and non-financial dimensions. The financial risk refers to the uncertainty and variability of an investment's expected financial returns. Previous studies have shown that individual investors generally perceive sustainable funds as being equally risky as traditional funds (Nilsson, 2008; Riedl & Smeets, 2017; Wins & Zwergel, 2016). However, regarding the effect of perceived risk on sustainable investment decisions, the evidence is mixed. Most studies find that perceived risk is not a decisive factor in sustainable investing (Gutsche & Ziegler, 2019; Nilsson, 2008; Riedl & Smeets, 2017). In contrast, other research, such as Gutsche et al. (2019) and Brunen & Laubach (2021), show that when individual investors perceive sustainable funds as riskier than conventional ones, they tend to invest less in them. Similarly, Dorfleitner and Nguyen (2016) show that investors who perceive sustainable investments as less risky than traditional alternatives are more likely to allocate a

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<sup>1</sup> Sustainable Signals Understanding Individual Investors' Interests and Priorities 2024, accessed through <https://www.morganstanley.com/content/dam/msdotcom/en/assets/pdfs/MSInstituteForSustainableInvesting-SustainableSignals-Individuals-2024.pdf>

larger share of their portfolios to them. These findings highlight the potential role of perceived financial risk in shaping individual investors' green investment decisions.

However, financial risk is not the only concern faced by individual investors. In the current context, greenwashing is increasingly prevalent (Dumitrescu et al., 2022) and represents an additional non-financial risk. Investors may fear that their funds are not truly allocated to pro-environmental projects, contrary to their intentions. In a hypothetical experimental setting, Degryse et al. (2024) found that individual investors holding greenwashing beliefs are less likely to choose sustainable investment options. The same authors also demonstrated that such beliefs lead investors to shift their preferences away from the environmental (E) dimension of ESG issues toward the social (S) dimension, thus deterring them from selecting pro-environmental funds. In a more realistic context, Gacem et al. (2025) show that perceived greenwashing constitutes a significant barrier to green investment. Specifically, perceptions of greenwashing trigger negative emotions, which heighten perceived risk and subsequently reduce green investment decisions. This finding highlights the crucial mediating role of emotions in shaping green investment behavior.

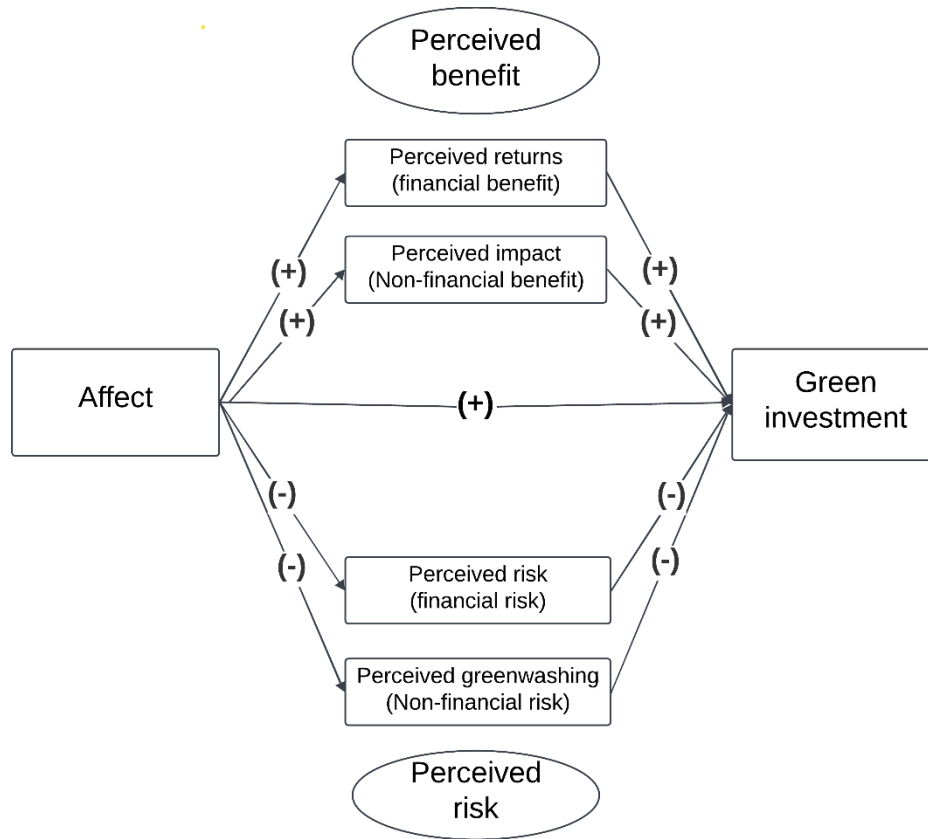
These findings suggest that affect can negatively influence the perceived risk associated with green funds, both financially and non-financially. This increased perception of risk is expected to reduce investors' decisions to invest in green funds. Accordingly, the following hypotheses are proposed:

**H3a.** *The more positive investors' affect toward green investing, the lower the perceived financial risk and the higher the likelihood of investing in a green fund.*

**H3b.** *The more positive investors' affect toward green investing, the lower the perceived non-financial risk and the higher the likelihood of investing in a green fund.*

Building on the affect heuristic framework proposed by Finucane et al. (2000) and its application to investment decisions by Lucey and Dowling (2005), this study extends the model by incorporating key elements of green investing. The resulting theoretical framework is presented as follows:

Figure 2. A model of affect heuristic in green investment context



### 3. Data and variables

#### 3.1. Survey methodology and data

Surveys have been commonly used to understand sustainable individual investors' behavior (Brodback et al., 2019; Nilsson, 2008; Riedl & Smeets, 2017), as they directly gather personal data from individuals themselves (Brodback et al., 2019) and provide a close reflection of how people actually make their financial decisions (Choi & Robertson, 2020). Therefore, data for this article were collected through an original survey conducted among household investors in France, distributed between October 2021 and January 2022. The questionnaire was developed based on the sustainable investment literature and administered by *Panelabs*, a leading provider of research data in France. The platform maintains a large panel consisting of 1.5 million participants who were pre-screened and verified through a three-step process: completion of a registration form, email verification, and final SMS confirmation.

Panelabs uses a dual-step incentivization system combining monetary compensation and continuous monitoring to ensure the coherence of responses. Participants start with a perfect trust score of 10/10, from which points are deducted in cases of unserious or inconsistent

answers, with a potential exclusion from the panel if necessary. To further ensure the reliability of our respondents, a control question was included asking participants to select “tend to disagree”. Responses that failed to select this option were excluded from the dataset. Overall, our final sample includes 2 215 individual French investors.

### 3.2. Variables

#### 3.2.1. Dependent variables

This study aims to explore the two stages of green investing: 1) the decision to invest in green funds and 2) the amount allocated to these funds. Green funds are defined in accordance with the EU Taxonomy (2020/852) and the EU Sustainable Finance Disclosure Regulation (2019/2088). Under these regulations, green funds are those that invest in companies contributing to at least one of the six defined environmental objectives<sup>2</sup> while ensuring that none of the remaining objectives are harmed. Riedl & Smeets (2017) and Rossi et al. (2019) define sustainable investors as those who hold at least one SRI fund. Building on this definition, we consider green investors as those who have invested at least 500 € in green funds, a threshold that captures not only interest in green funds but also a considerable level of engagement to green financial practices. Thus, *Green Investment* is a dummy variable equal to 1 if the individual invests at least 500 € in green funds, and 0 otherwise.

*Green Share* is the proportion of an investor’s portfolio allocated to green funds, calculated as the amount invested in green funds divided by the investor’s total portfolio investment. Green share is an ordinal variable with five categories defined as follows:

- Green share 1: 0% (not a green investor)
- Green Share 2: ]0%- 12,5%[
- Green Share 3: [12,5% - 25%[
- Green Share 4: [25%- 50%[
- Green Share 5: 50% or more

#### 3.2.2. Independent variable

*Affect* is measured as the average of the two variables *Affect1* and *Affect2*. *Affect1* corresponds to the answer to the question “*In your opinion, investing in green funds is...*” measured on a 7-

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<sup>2</sup> The objectives defined by the EU Taxonomy are the following ones : climate change mitigation, climate change adaptation, sustainable use and protection of water and marine resources, transition to a [circular economy](#), [pollution prevention](#) and control, protection and restoration of biodiversity and ecosystems

point semantic differential scale ranging from “Unpleasant” to “Pleasant”. *Affect2* represents the answer to the same question, measured on a 7-point semantic differential scale ranging from “Joyless” to “Joyful”. Both questions were adapted from Hofmann et al. (2008), where they examined the choice to invest in a sustainable company. Thus, our *Affect* variable refers to integral affect, as it reflects investors’ perceptions of green funds and their associated mental representations.

### **3.2.3. Mediating variables**

The objective of this paper is to examine the influence of emotions on green investment behavior, both through direct and indirect effects. Thus, four mediating variables are introduced to explain the relationship between emotions and green investment behavior. According to the affect heuristic framework proposed by Finucane et al. (2000) and further developed by Slovic et al. (2007), there can be two types of mediators, benefit and risk. In the green investment context, benefits and risks can be either financial or non-financial (Degryse et al., 2024; Nilsson, 2008).

For the financial benefit which relates to the expected return of the green funds, we define our variable *Perceived Return* as investor’s answer to the question “*For me, a green fund, compared to a conventional fund, is ...*”, on a 7-point Likert scale ranging from “Much less profitable” to “Much more profitable”. This measure has been widely used in the sustainable investment literature (Brodback et al., 2019; Gutsche et al., 2019; Nilsson, 2008; Riedl & Smeets, 2017). As for the non-financial benefit, it refers to the expected environmental impact of green funds. Thus, we define our variable *Perceived Green Impact* as investor’s answer to the question “*An investment in a green fund has a meaningful impact on the environment*”, measured on a 7-point Likert scale ranging from “Strongly disagree” to “Strongly agree”, adapted from Hofman et al. (2008).

Regarding the risk associated with green funds, the financial risk is measured through the variable *Perceived Risk*, corresponding to the response to the question “*For me, a green fund, compared to a conventional fund, is ...*”, on a 7-point Likert scale ranging from “Much less risky” to “Much riskier”. Similarly, this measure has been employed by Brodback et al. (2019), Gutsche et al. (2019), Nilsson (2008) and Riedl & Smeets (2017). As for the non-financial risk related to green investing, it is captured through the variable *Perceived Greenwashing*, based on the response to the question “*Green funds are a marketing ploy to sell more funds*”, measured

on a 7-point Likert scale ranging from “Strongly disagree” to “Strongly agree”. This measure has been employed by Riedl & Smeets (2017) and Gacem et al. (2025).

### 3.2.4. Control variables

We use several control variables as identified in the sustainable investment literature. A first category of control variables relates to the general environmental preferences of participants. This category includes *Recycling* (the active participation of participants in recycling, measured on a 7-point Likert scale) as inspired from Anderson & Robinson (2021), and *Green Vote* (the participants’ alignment with ecological parties, measured on a 7-point Likert scale) as used by Gutsche et al. (2019). A second category encompasses social image motivations, as participants may invest sustainably to enhance their social image and fit into the group, as highlighted by Gutsche et al. (2023), Riedl & Smeets (2017), and Hofman et al. (2008). Within this category, we include *Social Expectations* (the perceived societal expectations regarding sustainable behavior, measured on a 7-point Likert scale), and *Social Signaling* (the communication of sustainable investment behavior to one’s entourage, measured on a 7-point Likert scale).

A third category of control variables captures the level of knowledge held by the individuals, whether general *Financial Knowledge* (the self-assessed rating of financial literacy on a 7-point Likert scale, as employed by Brodback et al. (2019), and Riedl & Smeets (2017)) or specific *Green Fund Information* measured on a 7-point Likert scale, as inspired by Filippini et al. (2021). The fourth category of control variables relates to financial characteristics such as the *investment horizon* (ranging from 1 to 4 where 1=less than a year, 2= between 2 and 4 years, 3= between 5 and 10 years, and 4= more than 10 years), as well as the *net revenue*, *total amount invested in the equity portfolio*, and *donations* (all three measured in natural logarithms).

Finally, a fifth category of control variables includes sociodemographic characteristics, such as *age* (in years, with a minimum of 25), *gender* (a dummy variable equal to 1 if the participant is a woman, 0 otherwise), *education level* (years of education relative to the high school diploma), and *number of children*. All variables are presented in greater detail in Table 1.

Table 1. Variable definition

| Variable               | Definition                                                                                                                                                                                                                                                                                                                                              |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Green Investment       | A dummy variable equal to 1 if the respondent invests at least 500€ in green funds, 0 otherwise.                                                                                                                                                                                                                                                        |
| Green Share            | An ordinal variable with five categories representing the proportion of an investor's portfolio allocated to green funds (1= 0%, 2= ]0%- 12,5%[, 3= [12,5% - 25%[, 4= [25%- 50%[, and 5= 50% or more.                                                                                                                                                   |
| Perceived Return       | Investor's answer to the question " <i>For me, a green fund, compared to a conventional fund, is ...</i> ", on a 7-point Likert scale ranging from "Much less profitable" to "Much more profitable".                                                                                                                                                    |
| Perceived Green Impact | Investor's answer to the question " <i>An investment in a green fund has a meaningful impact on the environment</i> ", on a 7-point Likert scale ranging from "Strongly disagree" to "Strongly agree".                                                                                                                                                  |
| Perceived Risk         | Investor's answer to the question " <i>For me, a green fund, compared to a conventional fund, is ...</i> ", on a 7-point Likert scale ranging from "Much less risky" to "Much riskier".                                                                                                                                                                 |
| Perceived Greenwashing | Investor's answer to the question " <i>Green funds are a marketing ploy to sell more funds</i> " on a 7-point Likert scale with options ranging from "Strongly disagree" to "Strongly agree".                                                                                                                                                           |
| Affect                 | Average of <i>Affect1</i> (" <i>In your opinion, investing in green funds is...</i> " measured on a 7-point semantic differential scale ranging from "Unpleasant" to "Pleasant".) and <i>Affect2</i> (" <i>In your opinion, investing in green funds is...</i> " measured on a 7-point semantic differential scale ranging from "Joyless" to "Joyful".) |
| Recycling              | Investor's answer to the question " <i>I actively participate in recycling by sorting my waste</i> " on a 7-                                                                                                                                                                                                                                            |

|                        |                                                                                                                                                                                                |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        | point Likert scale ranging from “Strongly disagree” to “Strongly agree”.                                                                                                                       |
| Green Vote             | Investor’s answer to the question “ <i>The ecological lists in elections are in line with my views</i> ” on a 7-point Likert scale ranging from “Strongly disagree” to “Strongly agree”.       |
| Social Expectations    | Investor’s answer to the question “ <i>People important to me think that I should invest in a green fund</i> ” on a 7-point Likert scale ranging from “Strongly disagree” to “Strongly agree”. |
| Social Signaling       | Investor’s answer to the question “ <i>I often talk about my financial decisions with those around me</i> ” on a 7-point Likert scale ranging from “Strongly disagree” to “Strongly agree”.    |
| Financial Knowledge    | Investor’s answer to the question “ <i>I consider myself knowledgeable about financial investments</i> ” on a 7-point Likert scale ranging from “Strongly disagree” to “Strongly agree”.       |
| Green Fund Information | Investor’s answer to the question “ <i>Regarding green funds, I consider myself...</i> ” on a 7-point Likert scale ranging from “Not at all informed” to “Completely informed”.                |
| Investment Horizon     | Takes a value from 1 to 4. 1 = a period inferior to 1 year, 2 = a period between 2 and 4 years, 3 = a period between 5 and 10 years, and 4 = a period superior to 10 years.                    |
| Ln (Net revenue)       | The natural logarithm of the net monthly income.                                                                                                                                               |
| Ln (Equity)            | The natural logarithm of the total amount invested in equities.                                                                                                                                |
| Ln (Donations)         | The natural logarithm of the yearly donations.                                                                                                                                                 |
| Age                    | Age in years.                                                                                                                                                                                  |
| Female                 | A dummy variable equal to 1 if the participant is female, and 0 otherwise.                                                                                                                     |

|           |                                                                   |
|-----------|-------------------------------------------------------------------|
| Education | The years of education relative to the high school diploma level. |
| Children  | The number of children in the household.                          |

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### 3.3. Summary statistics

Table 2 reports the descriptive statistics for all variables used in the analysis. Our sample is representative of French individual investors aged between 25 and 79 years, with an average age of 47 years old. The sample includes slightly more men (52,7%) than women (46,3%). On average, investors have completed two years of higher education, report a mean net monthly household income of €3 344, and have one child. Participants rate their financial knowledge as relatively good, with an average score of 4.237 on a 7-point Likert scale. 20,8% of respondents are green investors, and, on average, they have invested €5 165 in green funds, accounting for 21.35% of their total portfolio. Affect associated with green investing is relatively strong, with a mean score of 5,40 on a 7-point Likert scale.

Table 2. Summary statistics

|                                | N    | Mean  | Median | SD    | Min  | Max   |
|--------------------------------|------|-------|--------|-------|------|-------|
| <b>Green investment</b>        | 2215 | 0.208 | 0      | 0.406 | 0    | 1     |
| <b>Green amount</b>            | 2215 | 1.484 | 1      | 1.095 | 1    | 5     |
| <b>Affect</b>                  | 2215 | 5.40  | 5.50   | 1.29  | 1    | 7     |
| <b>Perceived return</b>        | 2215 | 3.550 | 4      | 1.041 | 1    | 7     |
| <b>Perceived social impact</b> | 2215 | 5.167 | 5      | 1.089 | 1    | 7     |
| <b>Perceived risk</b>          | 2215 | 4.018 | 4      | 0.917 | 1    | 7     |
| <b>Perceived greenwashing</b>  | 2215 | 4.015 | 4      | 1.404 | 1    | 7     |
| <b>Recycling</b>               | 2215 | 6.189 | 7      | 1.106 | 1    | 7     |
| <b>Green vote</b>              | 2215 | 3.394 | 4      | 1.702 | 1    | 7     |
| <b>Social expectations</b>     | 2215 | 4.220 | 4      | 1.268 | 1    | 7     |
| <b>Social signaling</b>        | 2215 | 3.870 | 4      | 1.500 | 1    | 7     |
| <b>Financial knowledge</b>     | 2215 | 4.237 | 4      | 1.408 | 1    | 7     |
| <b>Green fund information</b>  | 2215 | 3.025 | 3      | 1.408 | 1    | 7     |
| <b>Investment horizon</b>      | 2215 | 2.522 | 3      | 0.850 | 1    | 4     |
| <b>Ln (Net Revenue)</b>        | 2215 | 8.115 | 8.16   | 0.455 | 5.70 | 9.21  |
| <b>Ln (Equity)</b>             | 2215 | 9.134 | 9.21   | 1.338 | 6.21 | 11.92 |
| <b>Ln (Donations)</b>          | 2215 | 3.277 | 4.38   | 2.539 | 0.00 | 10.13 |

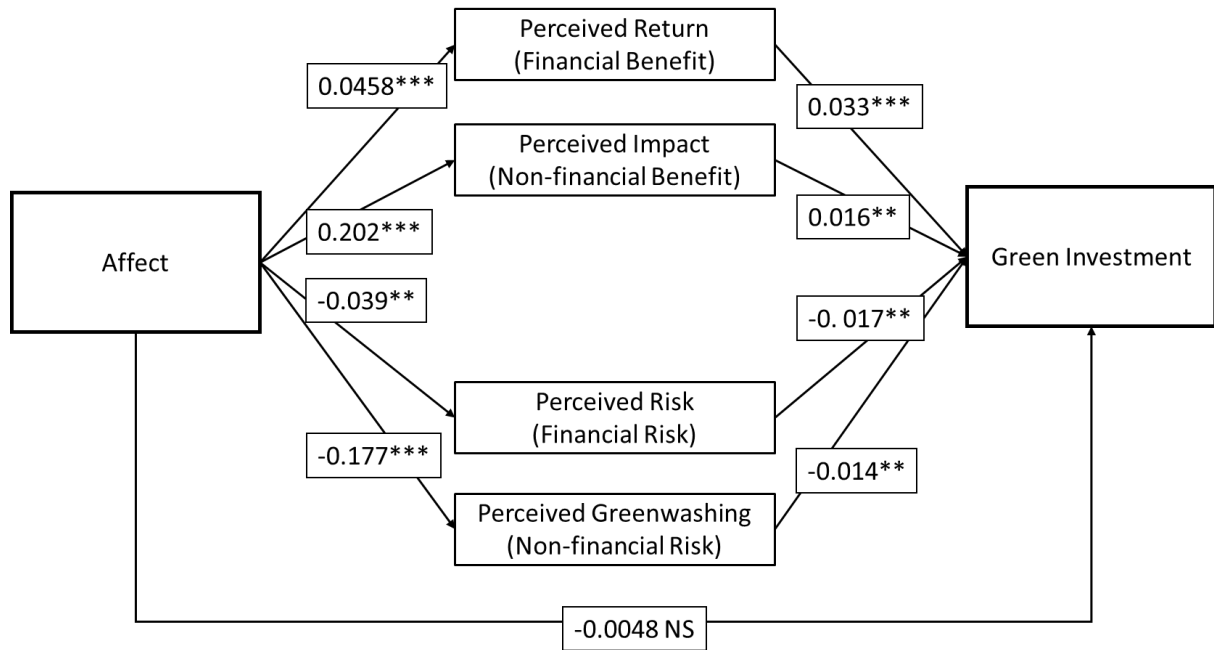
|                  | <b>N</b> | <b>Mean</b> | <b>Median</b> | <b>SD</b> | <b>Min</b> | <b>Max</b> |
|------------------|----------|-------------|---------------|-----------|------------|------------|
| <b>Age</b>       | 2215     | 47.14       | 46            | 12.55     | 25         | 79         |
| <b>Female</b>    | 2215     | 0.463       | 0             | 0.499     | 0          | 1          |
| <b>Education</b> | 2215     | 2.205       | 2             | 2.389     | -3         | 8          |
| <b>Children</b>  | 2215     | 1.238       | 1             | 1.124     | 0          | 6          |

#### 4. Results

Table A1 in the Appendix presents the correlation matrix for the key variables and shows a weak but statistically significant negative correlation between the perceived return of green funds and their perceived financial risk ( $r = -0.114^{***}$ ). This indicates that individual investors who believe that green funds offer higher financial returns also tend to perceive them as less financially risky. This finding runs counter to traditional financial theory, which posits a positive risk–return relationship whereby higher expected returns should be associated with higher perceived risk (Markowitz, 1952). Instead, this negative association is consistent with the affect heuristic (Hartzmark & Sussman, 2019), suggesting that investors’ positive emotions toward sustainable investing lead them to simultaneously overestimate its benefits and underestimate its risks. In other words, when individuals like the idea of pro-environmental investing, their affective evaluations influence their financial judgments in a direction that diverges from rational economic assumptions.

To investigate this question in greater depth, we employ a Generalized Structural Equation Model (GSEM), as our dependent variable is binary. The GSEM framework allows us to simultaneously estimate the direct and indirect effects of affect on green investment decision, using two components of perceived benefits (financial and non-financial) and two components of perceived risk (financial and non-financial) as mediating variables, while controlling for other characteristics. We first report the estimated coefficients from the affect–mediator relationships and the average marginal effects of the mediators on green investment. Results are presented in this manner to facilitate the subsequent calculation of indirect effects and to avoid scale incompatibility arising from the mixed GSEM specification, with OLS for the first equation and a probit model for the binary green investment outcome. Detailed results with control variables are reported in Table A2 in the Appendix, and Figure 3 below summarizes the key relationships.

Figure 3. The pathway from Affect to Green Investment



This figure indicates a fully mediated model, as the direct effect of affect on the decision to invest in green funds is non-significant ( $p=0.460$ ). Therefore, emotions do not directly drive green investment decisions. Instead, their influence operates indirectly through perceptual factors related to the financial and non-financial attributes of green funds. As a result, hypothesis 1, which assumed a direct relationship in line with prior work (Gutsche et al., 2023; Heeb et al., 2023), is rejected. Our findings suggest that affect exerts its influence exclusively through mediating perceptions.

More precisely, affect exerts a stronger influence on non-financial perceptions. On average, a one-point increase in the affect variable increases perceived green impact by 0.202 points ( $p=0.000$ ), compared to only 0.0458 points for perceived financial return ( $p=0.007$ ), approximately a fourfold difference. Similarly, when affect increases by one unit, perceived greenwashing decreases by 0.177 points ( $p=0.000$ ), compared to a 0.039 point-reduction in perceived financial risk ( $p=0.014$ ), roughly 4.5 times stronger. These results show that emotions influence moral beliefs based on pro-environmental and sincerity values, rather than beliefs based on numerical financial characteristics of the funds.

The GSEM results indicate that all four perceptual mediators, in turn, exert significant effects on the decision to invest in green funds. Specifically, a one-unit increase in perceived return is associated with an increase of 3.3 percentage points in affect ( $p=0.000$ ), whereas perceived green impact increases affect by 7.4 percentage points ( $p=0.020$ ). Conversely, perceived

financial risk decreases green investment decision by 1.7 percentage points ( $p=0.046$ ), while perceived greenwashing decreases it by 1.4 percentage points ( $p=0.015$ ). Thus, although affect primarily influences non-financial perceptions, the subsequent investment decision is more driven by financial considerations. This reflects the duality of sustainable investing, where both financial and non-financial preferences matter (Beal et al., 2005; Riedl & Smeets, 2017) and is consistent with the argument that sustainable investing introduces an additional layer of complexity to the financial decision-making process (Borgers & Pownall, 2014). These results further confirm that affect shapes belief formation and perceptual updating in uncertain financial decision-making (Kuhnen & Knutson, 2011), consistent with the affect heuristic, whereby positive affect increases the perceived benefits of an investment while reducing its perceived risk (Lucey & Dowling, 2005). In the context of our study, the more investors experience positive emotions toward green investing, specifically when investing in green funds is perceived as pleasant and joyful, the more they tend to perceive higher pro-environmental benefits and lower greenwashing concerns, as well as, although to a lesser extent, higher expected financial returns and lower perceived financial risk.

Furthermore, Table 3 reports the direct and indirect effects from the mediation analysis, with statistical significance assessed using 1 000 bootstrap replications. Indirect effects are computed by combining the estimated coefficients linking affect to the mediators with the average marginal effects of the mediators on green investment.

Table 3. Direct and indirect effects : Green Investment

| Effect                           | Coef       | Bootstrap<br>Std_Err | z     | P> z  | CI_<br>Lower | CI_Upper  |
|----------------------------------|------------|----------------------|-------|-------|--------------|-----------|
| Indirect: Perceived return       | 0.0015185  | 0,0007081            | 2,14  | 0,032 | 0,0001307    | 0,0029063 |
| Indirect: Perceived green impact | 0.0032058  | 0,0015833            | 2,02  | 0,043 | 0,0001026    | 0,006309  |
| Indirect: Perceived risk         | 0,0006849  | 0,0004781            | 1,43  | 0,152 | -0,0002522   | 0,0016219 |
| Indirect: Perceived greenwashing | 0,0024997  | 0,0011216            | 2,23  | 0,026 | 0,0003014    | 0,0046979 |
| Indirect: all                    | 0,0079088  | 0,0019393            | 4,08  | 0,000 | 0,0041078    | 0,0117098 |
| Direct                           | -0,0047555 | 0,0062964            | -0,76 | 0,450 | -0,0170962   | 0,0075853 |
| Total                            | 0,0031534  | 0,0063422            | 0,50  | 0,610 | -0,0092771   | 0,0155838 |

Table 3 confirms the absence of a direct link between affect and the decision to invest in green funds, while showing that the indirect paths are jointly significant ( $p = 0.000$ ). It also shows that three mediators: perceived return, perceived green impact, and perceived greenwashing, significantly carry the effect of affect, confirming hypotheses 2a, 2b, and 3b. In contrast, the indirect path through perceived risk is not significant, which leads to the rejection of hypothesis

3a. Altogether, these results mean that affect does not directly motivate green investment. Instead, they first shape perceptions, and these perceptions then guide investment choices.

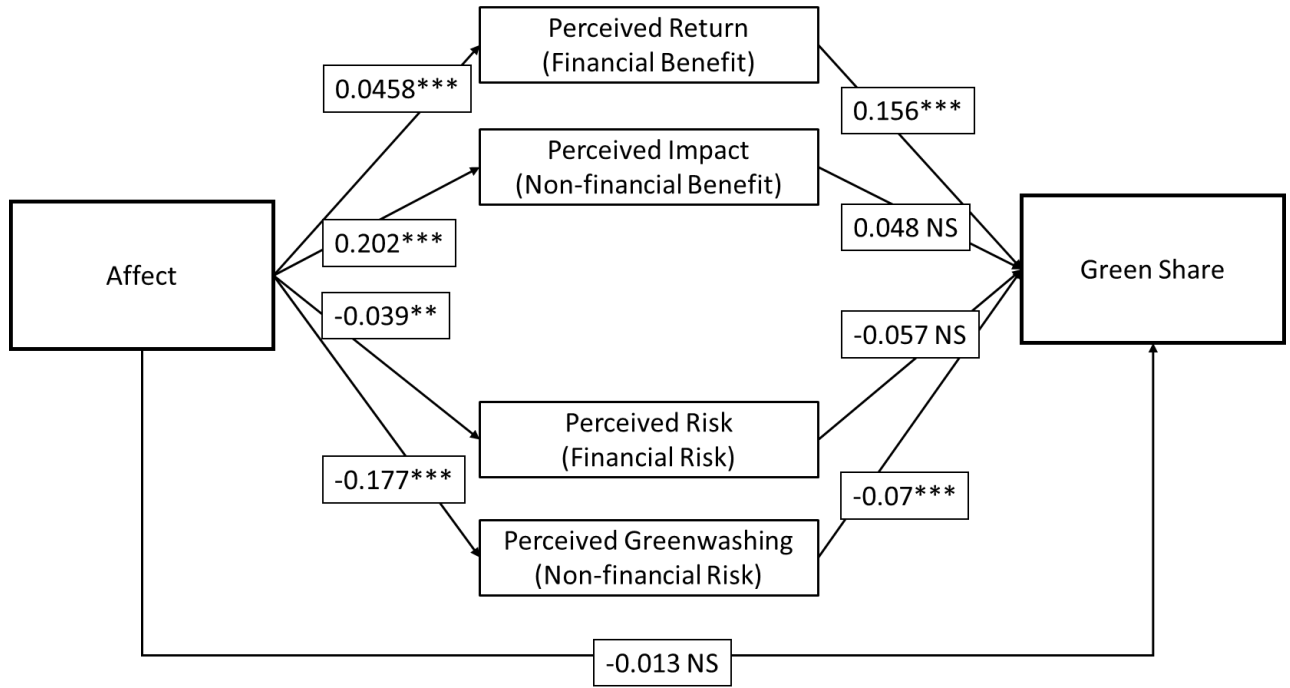
The strongest indirect path is through perceived green impact ( $0.0032058/0.0079088= 40.53\%$ ). This indicates that affect strongly influences how individuals perceive the environmental impact of green funds, which in turn increases their likelihood of choosing a green fund. This is followed by perceived greenwashing ( $0.0024997/0.0079088= 31.6\%$ ), meaning that lower perceptions of greenwashing strengthen the link between affect and the decision to invest in green funds. The last significant mediator is perceived return ( $0.0015185/0.0079088= 19.2\%$ ), a smaller but still meaningful effect showing that affect increases perceived financial returns, which indirectly encourages green investment.

Regarding perceived risk, even though affect significantly reduces perceived risk, and perceived risk itself significantly reduces the likelihood of choosing a green fund, the overall indirect effect is not statistically significant ( $p=0.158$ ). This suggests that perceived risk is related to both variables but does not meaningfully mediate the relationship between affect and green investment once the other mediators are considered.

## **5. Robustness tests**

Five robustness checks are conducted to assess the stability of our results. First, we examine whether affect influences the amount allocated to green investments by individual investors. Following Gutsche et al. (2019), Nilsson (2008), and Wins and Zwergel (2016), we define Green Share as the proportion of total portfolio investments allocated to green funds and estimate a GSEM with an ordered probit specification. Figure 4 below summarizes the main findings.

Figure 4. Robustness Test 1: The pathway from Affect to Green Share



Just like the green investment decision, the mediation analysis reveals that affect has no direct effect on green portfolio allocation ( $p = 0.637$ ). Instead, its influence operates indirectly through two perceptual variables. Perceived financial return is a strong predictor of green allocation ( $p=0.000$ ), showing that emotions enhance the way individuals perceive the financial performance of green funds, and this positive perception in turn increases the amount invested in them. This means that when investors believe these funds offer competitive financial performance compared to conventional counterparts, they tend to allocate more to green funds, which is in line with Nilsson (2008) and Brodback et al. (2019). However, the perceived green impact of these funds does not affect the share allocated to green funds, suggesting that it is not a decisive factor in determining the amount invested. This is consistent with Riedl and Smeets (2017), who also found that although perceived social impact is an important determinant of the decision to invest sustainably, it does not influence the proportion of sustainable funds held by investors.

Perceived greenwashing also exerts a significant negative effect on green allocations. When perceived greenwashing increases by one unit, the green share decreases by 0.07 units on average ( $p = 0.003$ ), suggesting that doubts about the credibility of green fund communication discourage individual investors from allocating money to green funds. On the other hand, perceived risk does not have a significant effect on the share invested in green funds, which is

in line with Nilsson (2008) and Riedl and Smeets (2017), who found that neither higher perceived risk deters investors nor lower perceived risk encourages them in the SRI context.

Second, we test our results across the subgroups of *Green Share*. *GreenShare1* includes investors who allocate 0% of their portfolio to green funds. *GreenShare2* includes those whose green share is between 0 and 12.5%. *GreenShare3* covers shares between 12.5% and 25%. *GreenShare4* includes shares between 25% and 50%. Finally, *GreenShare5* includes investors allocating 50% or more to green funds. Table 4 shows that perceived return and perceived greenwashing remain significant across most subgroups, indicating that the effects are stable and not driven by a single subgroup. More precisely, Perceived greenwashing remains significant in four out of five Green Share categories, and perceived return remains significant in three out of five, suggesting a stronger robustness for perceived greenwashing.

Table 4. Robustness Test 2: Analysis by Green Share subgroups

| Path                                              | Estimate<br>Green<br>Share 1 | Estimate<br>Green<br>Share 2 | Estimate<br>Green<br>Share 3 | Estimate<br>Green<br>Share 4 | Estimate<br>Green<br>Share 5 |
|---------------------------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| Perceived Return → Green Share <sub>i</sub>       | -0.155***                    | 0.04                         | 0.041                        | 0.113**                      | 0.194***                     |
| Perceived green Impact → Green Share <sub>i</sub> | -0.074**                     | 0.081*                       | -0.004                       | 0.051                        | 0.02                         |
| Perceived Risk → Green Share <sub>i</sub>         | 0.08**                       | -0.004                       | -0.093*                      | -0.076                       | 0.034                        |
| Perceived greenwashing → Green Share <sub>i</sub> | 0.066**                      | 0.01                         | -0.079**                     | -0.072**                     | -0.092*                      |
| Affect → Green Share <sub>i</sub>                 | 0.022                        | 0.03                         | -0.048                       | -0.055                       | 0.082                        |
| Control Variables                                 | YES                          | YES                          | YES                          | YES                          | YES                          |

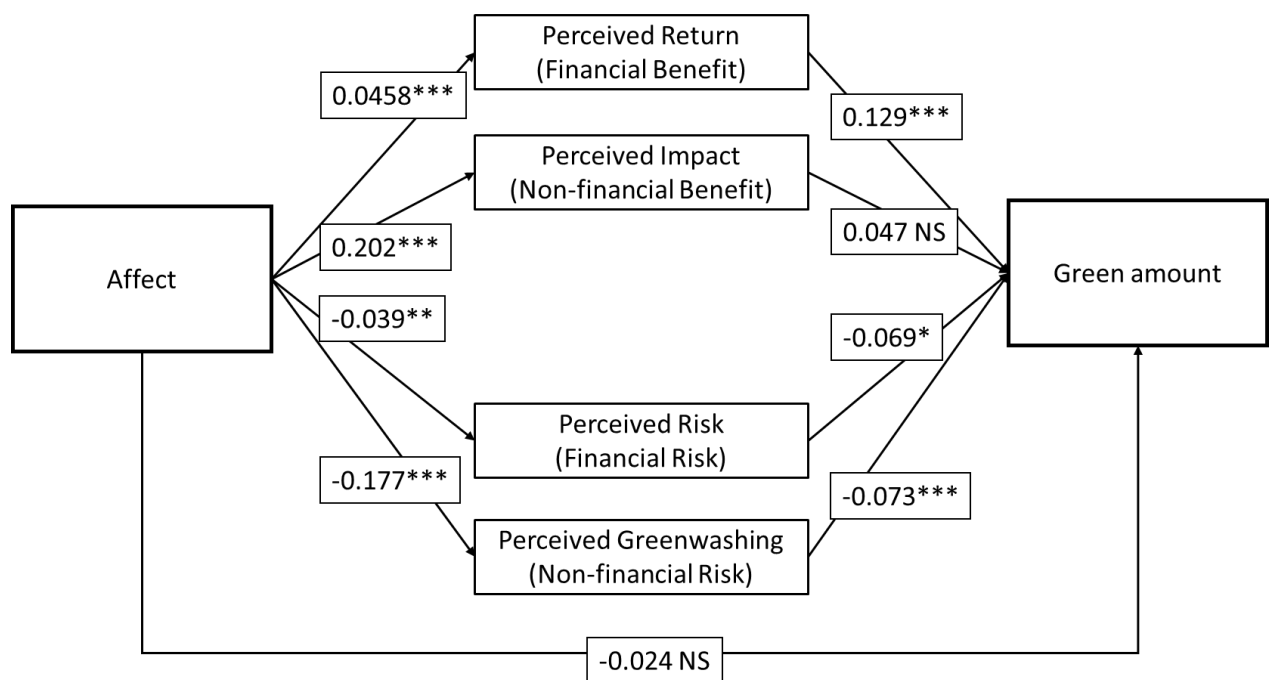
As a third robustness test, we consider the absolute amount invested in green funds to ensure that the results are robust to the measurement of green investment. Thus, we replace *Green Share* by *Green Amount*.. More precisely, *Green Amount* is an ordinal variable with five categories constructed according to the percentiles of the *Green Investment Amount*, and defined as follows:

- Green Amount 1: 0-499€
- Green Amount 2: 500€ - 1 000€
- Green Amount 3: 1 001€ - 2 000€

- Green Amount 4: 2 001€ - 5 000€
- Green Amount 5: 5 001€ and above

Figure 5 shows the results of the GSEM with *Green Amount* as the dependent variable and confirms that perceived return and perceived greenwashing remain the two strongest predictors, with perceived risk also appearing slightly significant ( $p=0.054$ ). The results remain stable when *Green Amount* is used, which demonstrates that our conclusions are not sensitive to whether green investment is measured in relative or absolute terms.

Figure 5. Robustness Test 3: Using Green Amount instead of Green Share



In the fourth robustness test, we modify the definition of green investors, which determines our dependent variable *Green Investment*. Specifically, we raise the threshold from €500 invested in green funds to €1 000. Table 5 presents the results and shows that all findings remain consistent.

Table 5. Robustness Test 4: Redefining Green Investors with a €1,000 Cutoff

| Path                                           | Estimate  | S.E.  | C.R. (z) | P-value |
|------------------------------------------------|-----------|-------|----------|---------|
| Affect → Perceived Return                      | 0.0458*** | 0.017 | 2,694    | 0.007   |
| Affect → Perceived green impact                | 0.202***  | 0.020 | 10,100   | 0.000   |
| Affect → Perceived Risk                        | -0.039**  | 0.016 | -2,438   | 0.014   |
| Affect → Perceived Greenwashing                | -0.177*** | 0.024 | -7,375   | 0.000   |
| Perceived Return → Green Investment_1000       | 0.139***  | 0.038 | 3,658    | 0.000   |
| Perceived green Impact → Green Investment_1000 | 0.069**   | 0.033 | 2,091    | 0.038   |
| Perceived Risk → Green Investment_1000         | -0.071*   | 0.041 | -1,732   | 0.086   |
| Perceived greenwashing → Green Investment_1000 | -0.083*** | 0.028 | -2,964   | 0.003   |
| Affect → Green Investment_1000                 | -0.037    | 0.031 | -1,194   | 0.237   |
| Control Variables                              | YES       |       |          |         |

Finally, since our independent variable *Affect* is composed of two items : *Affect1* (response to the question “*In your opinion, investing in green funds is...*”, measured on a 7-point semantic differential scale ranging from “Unpleasant” to “Pleasant”) and *Affect2* (response to the question “*In your opinion, investing in green funds is...*”, measured on a 7-point semantic differential scale ranging from “Joyless” to “Joyful”), we decompose *Affect* into its two subcomponents and estimate the same GSEM using each of them separately. Table 6 presents the results and shows that, when taken separately, the two subcomponents of affect yield the same pattern of results, further demonstrating the consistency and robustness of our findings.

Table 6. Robustness Test 5: Affect decomposed into its two items

| Path                                         | Estimate<br>Affect 1 | Estimate<br>Affect 2 |
|----------------------------------------------|----------------------|----------------------|
| Affect <sub>i</sub> → Perceived Return       | 0.040**              | 0.039**              |
| Affect <sub>i</sub> → Perceived green impact | 0.155***             | 0.193***             |
| Affect <sub>i</sub> → Perceived Risk         | -0.029*              | -0.039***            |
| Affect <sub>i</sub> → Perceived Greenwashing | -0.128***            | -0.176***            |
| Perceived Return → Green Investment          | 0.154***             | 0.155***             |
| Perceived green Impact → Green Investment    | 0.072**              | 0.076**              |
| Perceived Risk → Green Investment            | -0.079**             | -0.081**             |
| Perceived greenwashing → Green Investment    | -0.064**             | -0.067**             |
| Affect <sub>i</sub> → Green Investment       | -0.011               | -0.027               |
| Control variables                            | YES                  | YES                  |

## 6. Discussion and conclusion

This study contributes to the growing literature on sustainable finance and behavioral finance by providing new evidence on the mechanisms through which affect influences green investment decisions. While prior research has documented the role of emotions in sustainable investing, whether general affect (Dreyer et al., 2023; Gutsche et al., 2023; Hartzmark and Sussman, 2019; Heeb et al., 2023) or affect related to environmental concerns (Hervé and Marsat, 2023), considerably less attention has been paid to how these emotions translate into actual investment behavior. Our findings help fill this gap by showing that affect does not directly drive green investment decisions, as assumed in much of the existing literature, but instead operates through a set of financial and non-financial perceptual channels. By relying on a more comprehensive modeling strategy that explicitly accounts for mediating variables through a GSEM framework, our analysis moves beyond simple direct-effect specifications.

Using survey data from 2 215 individual investors in France, we find that affect positively influences perceived financial returns associated with green funds as well as perceived non-financial benefits related to their environmental impact. Investors who hold more positive affect toward green funds tend to perceive them as both more profitable and more effective in generating environmental benefits, which in turn increases their likelihood of investing in these funds. At the same time, affect reduces perceived financial risk and perceived greenwashing risk. Investors with more positive emotions toward green funds are therefore less likely to view them as risky or to suspect greenwashing practices, which further encourages green investment. These findings provide strong empirical support for the affect heuristic (Finucane et al., 2000) and offer a theoretical contribution by extending its application in sustainable finance to incorporate non-financial benefits and risks alongside traditional financial dimensions, which were the primary focus of earlier work, notably Hartzmark and Sussman (2019)

Beyond the existence of both financial and non-financial motivations, the mediation analysis reveals an important asymmetry between these channels. Although affect shapes both types of perceptions, its influence is stronger for non-financial benefits and risks than for expected returns and financial risk. However, in the second stage of the decision process, financial perceptions exert a slightly stronger direct influence on green investment decisions. This pattern suggests that investors do not process all dimensions of green investments in the same way. Emotions primarily guide beliefs about environmental impact and greenwashing concerns, while financial considerations play a slightly more prominent role at the final investment stage. Additional indirect effect analyses further show that the strongest indirect pathway from affect

to green investment operates through perceived environmental impact, followed by perceived greenwashing risk. These results indicate that non-financial benefits and risks are at least as important as financial considerations in shaping sustainable investment decisions, consistent with behavioral finance research emphasizing the role of non-financial motives in individual investment behavior (Anderson & Robinson, 2021; Nilsson, 2008; Riedl and Smeets, 2017).

Taken together, these findings suggest that investors do not invest in green funds simply because they feel good about them, as suggested by Heeb et al. (2023), but because those feelings shape how they perceive both financial and non-financial benefits and risks. This highlights the importance of explicitly modeling intermediate perceptions, as simple direct-effect models may obscure the true role of emotions in investment decision-making.

Finally, this study makes a distinct contribution by focusing on integral affect rather than incidental affect. Unlike prior research relying on affect generated by external cues such as sustainability labels (Hartmark and Sussman, 2019), we capture affect that arises from investors' own perceptions and mental representations of green funds. This distinction is important because integral affect is more closely linked to how investors genuinely evaluate an investment and, as shown by Västfjäll et al. (2016), plays a dominant role in shaping affective reactions. By focusing on this form of affect, our analysis provides a more conceptually grounded and behaviorally meaningful understanding of emotional responses in green investing.

Overall, our findings indicate that emotions play an indirect but fundamental role in green investment decisions. Affect shapes how investors interpret financial and non-financial attributes of green funds, and these perceptions ultimately drive green behavior. The robustness checks confirm that these results hold across alternative definitions of green investment and model specifications, reinforcing the stability of our conclusions.

From a practical standpoint, a key implication concerns the relative role of integral and incidental affect. While sustainability labels may influence investors' affective reactions, their impact appears to be weaker than that of integral affect, which arises from investors' mental representations of green funds. This suggests that practitioners should go beyond labels and focus on helping investors form positive and accurate mental representations of green funds by clearly communicating their underlying characteristics, and in particular their environmental impact and credibility, as these dimensions are most strongly shaped by affect. In addition,

regulatory efforts that enhance transparency and credibility can help strengthen investor trust and reinforce these positive representations.

Despite its contributions, this study is subject to certain limitations. First, the analysis relies on survey data, which, although widely used in the sustainable finance literature (Anderson and Robinson, 2022; Apostolakis et al., 2018; Bauer et al., 2021; Bauer and Smeets, 2015), may be subject to self-selection and social desirability biases. Second, the study focuses on individual investors in France, which may limit the generalizability of the findings to other institutional or cultural contexts. These limitations open two important avenues for future research. First, framed field experiments could be used to further validate the proposed mechanisms in a more controlled yet realistic setting. Second, extending the analysis to investor samples from other countries would help assess the external validity of the results and explore potential cross-country differences in the role of affect in green investment decisions.

## References

- Anderson, A., & Robinson, D. T. (2021). Financial Literacy in the Age of Green Investment. *Review of Finance*, 26(6), Article 6. <https://doi.org/10.1093/rof/rfab031>
- Apostolakis, G., Van Dijk, G., Blomme, R. J., Kraanen, F., & Papadopoulos, A. P. (2018). Predicting pension beneficiaries' behaviour when offered a socially responsible and impact investment portfolio. *Journal of Sustainable Finance & Investment*, 8(3), 213-241. <https://doi.org/10.1080/20430795.2018.1429148>
- Barber, B. M., Morse, A., & Yasuda, A. (2021). Impact investing. *Journal of Financial Economics*, 139(1), 162-185. <https://doi.org/10.1016/j.jfineco.2020.07.008>
- Bauer, R., Ruof, T., & Smeets, P. (2021). Get Real ! Individuals Prefer More Sustainable Investments. *The Review of Financial Studies*, 34(8), 3976-4043. <https://doi.org/10.1093/rfs/hhab037>
- Bauer, R., & Smeets, P. (2015). Social identification and investment decisions. *Journal of Economic Behavior & Organization*, 117, 121-134. <https://doi.org/10.1016/j.jebo.2015.06.006>
- Beal, D., Goyen, M., & Phillips, P. J. (2005). Why do we invest ethically? *The Journal of Investing*, 14(3), Article 3.
- Borgers, A. C. T., & Pownall, R. A. J. (2014). Attitudes towards socially and environmentally responsible investment. *Journal of Behavioral and Experimental Finance*, 1, 27-44. <https://doi.org/10.1016/j.jbef.2014.01.005>
- Brodback, D., Guenster, N., & Mezger, D. (2019). Altruism and egoism in investment decisions. *Review of Financial Economics*, 37(1), 118-148. <https://doi.org/10.1002/rfe.1053>
- Brunen, A.-C., & Laubach, O. (2021). Do sustainable consumers prefer socially responsible investments? A study among the users of robo advisors. *Journal of Banking &*

- Finance*, 136, 106314. <https://doi.org/10.1016/j.jbankfin.2021.106314>
- Choi, J. J., & Robertson, A. Z. (2020). What Matters to Individual Investors? Evidence from the Horse's Mouth. *The Journal of Finance*, 75(4), 1965-2020.  
<https://doi.org/10.1111/jofi.12895>
- Degryse, H., Di Giuli, A., Sekerci, N., & Stradi, F. (2024). Sustainable Investments : One for the Money, Two for the Show. *SSRN Electronic Journal*.  
<https://doi.org/10.2139/ssrn.4411343>
- Dorfleitner, G., & Nguyen, M. (2016). Which proportion of SR investments is enough? A survey-based approach. *Business Research*, 9(1), 1-25.  
<https://doi.org/10.1007/s40685-016-0030-y>
- Dumitrescu, A., Gil-Bazo, J., & Zhou, F. (2022). Defining Greenwashing. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4098411>
- Finucane, M. L., Alhakami, A., Slovic, P., & Johnson, S. M. (2000). The affect heuristic in judgments of risks and benefits. *Journal of Behavioral Decision Making*, 13(1), 1-17.  
[https://doi.org/10.1002/\(SICI\)1099-0771\(200001/03\)13:1%253C1::AID-BDM333%253E3.0.CO;2-S](https://doi.org/10.1002/(SICI)1099-0771(200001/03)13:1%253C1::AID-BDM333%253E3.0.CO;2-S)
- Gacem, S., Hervé, F., & Marsat, S. (2025). When green turns red : Is the perception of greenwashing a barrier to individual green investment? *Finance Research Letters*, 82, 107605. <https://doi.org/10.1016/j.frl.2025.107605>
- Getzner, M., & Grabner-Kräuter, S. (2004). Consumer preferences and marketing strategies for “green shares” : Specifics of the Austrian market. *International Journal of Bank Marketing*, 22(4), 260-278. <https://doi.org/10.1108/02652320410542545>
- Gutsche, G., Köbrich León, A., & Ziegler, A. (2019). On the relevance of contextual factors for socially responsible investments : An econometric analysis. *Oxford Economic Papers*, 71(3), 756-776. <https://doi.org/10.1093/oep/gpy051>

- Gutsche, G., Wetzel, H., & Ziegler, A. (2023). Determinants of individual sustainable investment behavior—A framed field experiment. *Journal of Economic Behavior & Organization*, 209, 491-508. <https://doi.org/10.1016/j.jebo.2023.03.016>
- Gutsche, G., & Ziegler, A. (2019). Which private investors are willing to pay for sustainable investments? Empirical evidence from stated choice experiments. *Journal of Banking & Finance*, 102, 193-214. <https://doi.org/10.1016/j.jbankfin.2019.03.007>
- Hartzmark, S. M., & Sussman, A. B. (2019). Do Investors Value Sustainability? A Natural Experiment Examining Ranking and Fund Flows. *The Journal of Finance*, 74(6), 2789-2837. <https://doi.org/10.1111/jofi.12841>
- Heeb, F., Kölbel, J. F., Paetzold, F., & Zeisberger, S. (2022). Do Investors Care about Impact? *The Review of Financial Studies*, 36(5), 1737-1787. <https://doi.org/10.1093/rfs/hhac066>
- Hervé, F., & Marsat, S. (2023). Eco-Anxiety, Connectedness to Nature & Green Equity Investments. *Economics Bulletin*. <https://u-bourgogne.hal.science/hal-04150758>
- Hofmann, E., Hoelzl, E., & Kirchler, E. (2008). A Comparison of Models Describing the Impact of Moral Decision Making on Investment Decisions. *Journal of Business Ethics*, 82(1), 171-187. <https://doi.org/10.1007/s10551-007-9570-6>
- Kabderian Dreyer, J., Sharma, V., & Smith, W. (2023). Warm-glow investment and the underperformance of green stocks. *International Review of Economics & Finance*, 83, 546-570. <https://doi.org/10.1016/j.iref.2022.10.006>
- Kahneman, D. (2003). A perspective on judgment and choice : Mapping bounded rationality. *American Psychologist*, 58(9), 697-720. <https://doi.org/10.1037/0003-066X.58.9.697>
- Kuhnen, C. M., & Knutson, B. (2011). The Influence of Affect on Beliefs, Preferences, and Financial Decisions. *The Journal of Financial and Quantitative Analysis*, 46(3), 605-626.

- Lewis, A., & Mackenzie, C. (2000). Morals, money, ethical investing and economic psychology. *Human Relations*, 53(2), 179-191. <https://doi.org/10.1177/a010699>
- Lucey, B. M., & Dowling, M. (2005). The Role of Feelings in Investor Decision-Making. *Journal of Economic Surveys*, 19(2), 211-237. <https://doi.org/10.1111/j.0950-0804.2005.00245.x>
- Markowitz, H. (1952). Portfolio Selection. *The Journal of Finance*, 7(1), 77. <https://doi.org/10.2307/2975974>
- Nilsson, J. (2008). Investment with a Conscience : Examining the Impact of Pro-Social Attitudes and Perceived Financial Performance on Socially Responsible Investment Behavior. *Journal of Business Ethics*, 83(2), 307-325. <https://doi.org/10.1007/s10551-007-9621-z>
- Riedl, A., & Smeets, P. (2017). Why Do Investors Hold Socially Responsible Mutual Funds? : Why Do Investors Hold Socially Responsible Mutual Funds? *The Journal of Finance*, 72(6), 2505-2550. <https://doi.org/10.1111/jofi.12547>
- Rossi, M., Sansone, D., Van Soest, A., & Torricelli, C. (2019). Household preferences for socially responsible investments. *Journal of Banking & Finance*, 105, 107-120. <https://doi.org/10.1016/j.jbankfin.2019.05.018>
- Siemroth, C., & Hornuf, L. (2023). Why Do Retail Investors Pick Green Investments? A Lab-in-the-Field Experiment with Crowdfunders. *Journal of Economic Behavior & Organization*, 209, 74-90. <https://doi.org/10.1016/j.jebo.2023.02.023>
- Slovic, P., Finucane, M. L., Peters, E., & MacGregor, D. G. (2007). The affect heuristic. *European journal of operational research*, 177(3), 1333-1352.
- Statman, M., Fisher, K. L., & Anginer, D. (2008). Affect in a Behavioral Asset-Pricing Model. *Financial Analysts Journal*, 64(2), 20-29.
- Thaler, R. H. (2015). *Misbehaving : The making of behavioral economics* (p. xvi, 415). W. W.

Norton & Company.

Västfjäll, D., Slovic, P., Burns, W. J., Erlandsson, A., Koppel, L., Asutay, E., & Tinghög, G.

(2016). The Arithmetic of Emotion : Integration of Incidental and Integral Affect in Judgments and Decisions. *Frontiers in Psychology*, 7.

<https://doi.org/10.3389/fpsyg.2016.00325>

Wins, A., & Zwergel, B. (2016). Comparing those who do, might and will not invest in sustainable funds : A survey among German retail fund investors. *Business Research*, 9(1), 51-99. <https://doi.org/10.1007/s40685-016-0031-x>

Zajonc, R. B. (1980). Feeling and thinking : Preferences need no inferences. *American Psychologist*, 35(2), 151-175. <https://doi.org/10.1037/0003-066X.35.2.151>

## Appendix

Table A1. Correlation matrix of key study variables

|                               | Affect    | Perceived<br>Return | Perceived Green<br>Impact | Perceived<br>Risk | Perceived<br>Greenwashing | Green<br>Investment |
|-------------------------------|-----------|---------------------|---------------------------|-------------------|---------------------------|---------------------|
| <b>Affect</b>                 | —         |                     |                           |                   |                           |                     |
| <b>Perceived Return</b>       | 0.162***  | —                   |                           |                   |                           |                     |
| <b>Perceived Green Impact</b> | 0.343***  | 0.152***            | —                         |                   |                           |                     |
| <b>Perceived Risk</b>         | -0.074*** | -0.114***           | -0.041                    | —                 |                           |                     |
| <b>Perceived Greenwashing</b> | -0.221*** | -0.142***           | -0.258***                 | 0.180***          | —                         |                     |
| <b>Green Investment</b>       | 0.123***  | 0.244***            | 0.158***                  | -0.077***         | -0.119***                 | —                   |

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Table A2. GSEM Results: Path from affect to green investment decisions

| Path                                      | Estimate  | S.E.  | C.R. (z) | P-value |
|-------------------------------------------|-----------|-------|----------|---------|
| Affect → Perceived Return                 | 0.0458*** | 0.017 | 2,694    | 0.007   |
| Affect → Perceived green impact           | 0.202***  | 0.020 | 10,100   | 0.000   |
| Affect → Perceived Risk                   | -0.039**  | 0.016 | -2,438   | 0.014   |
| Affect → Perceived Greenwashing           | -0.177*** | 0.024 | -7,375   | 0.000   |
| Perceived Return → Green Investment       | 0.033***  | 0.007 | 4,714    | 0.000   |
| Perceived green Impact → Green Investment | 0.016**   | 0.007 | 2,286    | 0.020   |
| Perceived Risk → Green Investment         | -0.017**  | 0.008 | -2,125   | 0.046   |
| Perceived greenwashing → Green Investment | -0.014**  | 0.006 | -2,333   | 0.015   |
| Affect → Green Investment                 | -0.0048   | 0.006 | -0,800   | 0.460   |
| Recycling → Green Investment              | -0.057*   | 0.034 | -1,676   | 0.096   |
| Green Vote → Green Investment             | 0.047**   | 0.022 | 2,136    | 0.033   |
| Social Expectations → Green Investment    | 0.169***  | 0.040 | 4,225    | 0.000   |
| Social Signaling → Green Investment       | -0.013    | 0.026 | -0,500   | 0.614   |
| Financial Knowledge → Green Investment    | 0.045     | 0.030 | 1,500    | 0.132   |
| Green Fund Information → Green Investment | 0.362***  | 0.029 | 12,483   | 0.000   |
| Ln (Donations) → Green Investment         | 0.068***  | 0.015 | 4,533    | 0.000   |
| Ln (Net Revenue)                          | -0.113    | 0.085 | -1,329   | 0.186   |
| Ln (Equity)→ Green Investment             | 0.109***  | 0.029 | 3,759    | 0.000   |
| Investment Horizon → Green Investment     | 0.120***  | 0.041 | 2,927    | 0.004   |
| Age → Green Investment                    | -0.002    | 0.003 | -0,667   | 0.598   |
| Female → Green Investment                 | 0.158**   | 0.072 | 2,194    | 0.028   |
| Education → Green Investment              | 0.017     | 0.016 | 1,063    | 0.287   |
| Children → Green Investment               | 0.056*    | 0.032 | 1,750    | 0.079   |