

Emotional Reactions of Students to Perceptions of Negative Trends and Small Losses in Short-Term Stock Market Simulation

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Abstract

Decision-making on stock markets is a complex experience characterized by strong emotions (Nofsinger, 2017). Price fluctuations are stimuli that can cause a wide range of psychological reactions in investors (Shiv et al., 2005). In particular, the perception of loss is a central area in behavioral finance: loss aversion (Kahneman & Tversky, 1979) suggests that the psychological impact of a loss is stronger than a gain of the same size. Traditionally, attention has focused on significant financial losses or bear markets, where intense emotions such as fear and panic are commonly found (Shiller, 2014). However, our study suggests addressing a less examined side of the emotional experience: the psychological and behavioral reactions of individuals to the perception of negative trends and small losses. Our goal is to understand if and how perceived unfavorable small stock market movements could induce significant emotional responses, particularly among novice investors. For this purpose, we used a qualitative exploratory study with eight students participating in a short-term (three-day) stock market simulation. During this period, the stock market index on which the students based their investments declined by 0.36%. This fluctuation does not constitute a bear market in the financial sense generally recognized. Nevertheless, our findings show that participants actively perceived a 'general negative trend' and exhibited significant emotional reactions, even facing small financial losses. Based on semi-structured interviews, our article aims at: 1) identifying the range of emotions felt by participants during the simulation; 2) describing the development of these emotions in response to perceived market variations; and 3) conducting a thematic analysis of their influence on participants' decisions, with a particular focus on emotional regret related to small losses and reactions to uncertainty and perceived losses. Our results demonstrate a significant change in emotions over time. From an initial interest and a relative emotional detachment, students show a growing emotional commitment to market fluctuations. Moreover, as the experiment progresses and disappointments increase, the emotional picture is largely defined by negative emotions, notably fear in relation to potential losses, as well as sadness and disappointment related to unfavorable results. Market surprises, particularly sudden falls, lead to intense reactions, which can result in panic and impulsive decisions. Given the inability to improve the financial situation, the experience can also result in abandonment and resignation. By examining these dynamics, we aim at contributing to understanding emotional impact in behavioral finance, beyond major crisis scenarios.

Keywords: emotions, qualitative research, stock markets, behavioral finance, decision-making

1. Introduction

Decision-making on stock markets is basically related to uncertainty, which is particularly pronounced during periods of market decline or perceived as such. In such complex conditions, the psychological dimension and the influence of emotions on the behavior of market participants become crucial (Cantarella et al., 2023). Although behavioral finance has largely demonstrated that emotions could often interfere with rationality implied by classical models, we believe that the emotional dynamics of investors confronted with a negative perceived stock market deserve in-depth investigation. In uncertainty, emotional responses act as decision-making drivers by providing signals that support the evaluation of the relevance of investment choices. However, they can also lead to suboptimal decisions and become obstacles to decision-making (Bourgeois-Gironde, 2009). Damasio (1995) already stressed the role of emotions in decision-making through somatic markers. These markers, which represent emotional states associated with past experiences, serve as guides for evaluating the consequences of choices. They facilitate the identification of advantageous options while helping to avoid potentially harmful ones.

The loss experiences associated with stock markets in decline generate specific emotional charges, such as fear, disappointment or discouragement, which can have a strong influence on decision-making (Lo & Repin, 2002 ; Kross & Ayduk, 2011 ; Frydman & Camerer, 2016). Negative emotions are negatively related to returns in a declining market (Wang et al., 2014). These emotional states very often lead to more impulsive and less patience-driven choices. Loss management could be related to Prospect Theory (Kahneman & Tversky, 1979). Unlike traditional economic models, which assume perfect rationality, Prospect Theory highlights how individuals asymmetrically evaluate gains and losses: the pain of a loss is felt more intensely than the pleasure of a gain of the same magnitude—this is the principle of loss aversion. This psychological dynamic is fundamental to understanding the emotional reactions we address in our simulation, even when facing fluctuations of small magnitude. For example, individual investors tend to favor immediate rewards rather than waiting for their gains to increase (Herman et al., 2018).

The literature reports on the influence of negative emotions on the decision-making process. For example, anxiety alters perceptions of probabilities and results, which then influences preferences regarding investment decisions (Wu, 1999). From this perspective, anxious people tend to choose low-risk options with minimal rewards (Raghunathan & Pham, 1999). These findings have been extensively developed in more recent literature. Many studies show that anxiety results in careful and conservative financial decisions (Gambetti & Giusberti, 2012; Bishop & Gagne, 2018; Gambetti et al., 2022). Furthermore, anxious individuals perform poorly and show anticipatory physiological responses before making advantageous decisions (Miu et al., 2008). Decision-making related to anxiety can be explained by risk avoidance and negative interpretation of ambiguous information (Hartley & Phelps, 2012). Like anxiety, fear leads to pessimistic estimates and promotes cautious choices due to an increased perception of risk (Lerner & Keltner, 2001; Tsai & Young, 2010; Hassan et al., 2013; Habib et al., 2015; She et al., 2017). It also reduces the performance of individual investors by limiting their ability to make effective decisions (Lo et al., 2005). Disgust also acts as a risk avoidance mechanism, reducing exposure to risk but also limiting potential gains.

On the other hand, anger leads to optimistic judgements and risky decisions (Lerner & Keltner, 2001; She et al., 2017). It is also related to optimistic expectations, impulsive decisions (Tsai & Young, 2010), and a lower perception of risk (Lerner & Tiedens, 2006). Furthermore, anger and sadness lead to confrontation (Hutcherson & Gross, 2011), encourage risky choices (Hassan et al., 2013; Habib et al., 2015; Matsumoto & Wilson, 2023) and limit information processing capacity by selectively focusing attention. As a result, the gradual intensification of a negative emotional state can turn into a vicious circle that reduces motivation and leads to decision-making paralysis.

The interaction between positive expectations (hope, optimism) and the reality of losses also causes emotional tension in this environment. Some people might develop avoidance strategies to stay away from these unpleasant emotional experiences (Kross & Ayduk, 2011). Avoidance becomes a reflex response to repeated failures or perceived uncontrollable uncertainty. Rather than actively looking for solutions or making alternative decisions, individual investors prefer to avoid situations that are likely to reactivate negative emotions, thereby reinforcing their feeling of loss of control (Gilbert & Allan, 1998). Consequently, the more negative emotions intensify, the more cognitive resources available to evaluate options and make decisions decrease, making it even more difficult to act. This phenomenon is accentuated by uncertainty and fear of potential losses, even when potentially profitable opportunities arise (Frydman & Camerer, 2016).

By understanding the complexity of the “emotional picture” in a stock market perceived as in decline, this research aims at contributing to a better understanding of trading behavior, highlighting the key role of emotions as active forces that shape strategy, decision-making and, ultimately, the trader's experience of the stock market. While Harmon-Jones et al. (2016) have explored the connections between emotions and decision-making, this study focused on specific emotions or well-defined risk contexts. The existing literature lacks an extensive qualitative exploration of novice investors' emotional experiences facing perceptions of loss.

2. Methodological Perspective

The paper is based on a qualitative and inductive methodology. This approach is underused in the financial field, where researchers are more inclined to use quantitative and deductive approaches (Hoffmann et al., 2015). However, according to us, given the complexity of traders' motivations, a qualitative approach can provide valuable insights. Indeed, quantitative approaches often fail to catch the nuances of decision-making, underlying emotions or intuitive strategies. The qualitative approach can reveal emotional charges that are difficult to access through quantitative tools. This qualitative approach provides a basis for building theories based on lived experience, revealing contextual behavioral mechanisms that are essential for a holistic analysis. In a qualitative study, the primary objective is not to generalize the results statistically to a larger population, but rather to gain an in-depth understanding of a specific

phenomenon within a particular context. The focus is on data collected from a small sample but selected for its relevance to the research question (Firestone, 1993; Maxwell, 1992). A frequent criticism of this perspective is that samples are usually small, not necessarily chosen to be statistically representative of a population. Consequently, the perspective followed can sometimes be exploratory in nature (Yin, 2003).

For our study, we chose an experimental design structured around three days of continuous trading in January 2025 for eight students. After the three days, individual semi-structured interviews were conducted by a single researcher in order to make sure there was no change in how the interviews were organized. This researcher had no academic connection with the participants, which increases the freedom of expression of the interviewees. As the interviews were carried out after three days of experimentation, a degree of familiarity naturally developed, which made the discussions meaningful.

For the analysis, with reference to the five approaches developed by Creswell & Poth (2017), we chose the narrative approach as the other research alternatives (case studies, ethnography, phenomenology, and grounded theory) did not correspond to the objective pursued in this article. Through narrative research, the analysis focuses on the feelings of a single individual: it often involves 'retelling' the story based on the themes to be analyzed and identifying key elements. The process includes reading and writing memos, describing the person's experiences, contextual materials, and interpreting the meaning of personal experiences.

More specifically, our semi-structured interviews are based on a guide that includes series of open-ended questions related to emotions. This guide allows us to change the direction of the interview if necessary. The flexibility of the guide in a semi-structured allows for in-depth exploration of experiences, adapts to the natural flow of conversation with open-ended questions and to unexpected responses (Whiting, 2008). Our guide includes five topics:

- Emotions in general (one question);
- Emotional changes (three questions);
- The impact of emotions on decision-making (four questions);
- Reactions to losses and gains (four questions);
- Emotion management (five questions).

For the analysis of semi-structured interviews, we selected a thematic analysis. This approach facilitates participatory research, highlights similarities and differences within the whole data set and it can generate unexpected ideas (Vaismoradi et al., 2013; Nowell et al., 2017). In terms of methodological limitations, we may cite:

- A social desirability bias: a deliberate effort to tailor responses to create a positive image and/or a more unconscious inclination where people perceive themselves as having some desirable characteristics or acting in particular ways, even if the objective truth indicates something different (Tourangeau & Yan, 2007).
- Reliance on participation: the quality of the data depends on the participants' willingness and ability to give feedback.

For the presentation of the results, Braun and Clarke (2006) procedure was used. They propose a structured six-phase process, starting with familiarization with the data to the production of the final report. This structure aims to take into consideration the criticism of 'anything goes' often associated with qualitative research (Özden, 2024). Each semi-structured interview has been summarized by the main theme, representative codes and illustrative statements. All the interviews were recorded, fully transcribed and thoroughly read by the three authors. We did not consider using artificial intelligence, as it does not yet seem capable of perceiving the nuances associated with emotions (Finet et al., 2025).

3. Experimental Design

Participants individually used the ABC Bourse platform to trade stocks listed on the CAC40 index. Each participant managed a virtual portfolio starting with €100,000, invested in CAC40 companies (French stock market index), as it was considered more familiar than other ones (no other option for diversifying was given). In order to ensure that participants had a homogeneous level of knowledge and to make the simulation accessible to students who were relatively new to finance, transactions were restricted to stocks in the CAC40 index, excluding short sales and derivatives. Moreover, some studies show that the specific knowledge and skills needed to perform well in a specific area of trading seem to be much more than what an individual can learn about all markets (Coates et al., 2009). Although this simplification facilitated participation and understanding of the basic mechanisms, we recognize that it may influence the representativeness of decisions in relation to a real market environment, as discussed in the

limitations section.

There were no restrictions on the number of transactions. The experiment took place over three days, with twelve one-hour sessions (from 01.27 to 01.29). To simulate the pressure and emotional responses found in real markets, participants could track the real-time performance of their peers' portfolios. Significant consideration was given to the initial portfolios. Prior research suggests that starting with a portfolio fully invested in stocks would encourage greater risk-taking, whereas beginning with a fully cash portfolio would promote more cautious decision-making, regardless of the overall market situation (Finet et al., 2021; Finet et al., 2025).

The experiment was conducted in January 2025 at the University of Mons (Belgium) with eight Management Science students. They were required to provide reasons for their involvement beyond monetary gain. The final sample size was limited to eight participants (seven men and one woman) due to financial constraints and the resources needed for extensive data analysis. They were paid for 24 hours of trading. It should be noted that the overrepresentation of men in this kind of experience is widely documented in financial literature and can be explained by a male propensity to take risks, or even simply to gambling (Barber & Odean, 2001; Cueva & Rustichini, 2015; Bashir et al., 2013). It should also be noted that the overrepresentation of males, although commonly found in this type of financial experiment and although we are not responsible for it (the call for applications was sent to all students, regardless of gender, and we could not force women to take part in the experiment), may influence our results, for example, excessive confidence and a high propensity to take risky decisions. The composition of our sample, while facilitating a qualitative exploration of emotional experiences, limits the generalizability of our findings and requires cautious interpretation, particularly with regard to the diversity of gender perspectives. This issue will be considered in the discussion of the results.

Regarding the participants' experience, while some experimental finance critiques highlight the potential differences between student psychology and that of professional traders, research frequently uses student populations. This choice is often justified by the ease of recruitment, lower costs, and time efficiency (Etchart-Vincent, 2006; Kirchler, 2009; Hanke et al., 2010). To mitigate concerns about students' lack of real-world trading experience, several factors were considered. Firstly, their successful completion of finance courses suggests a reasonable level of familiarity with trading. Secondly, research indicates that behavioral patterns between students and professionals can be quite similar (Porter & Smith, 2003; Fréchette, 2011), with students even showing comparable judgment in assessing options (Abbink & Rockenbach, 2006). The use of student samples is a widely accepted practice in experimental fields and specifically in experimental finance and emotions' impact on decision-making (Rossignol et al., 2007; She et al., 2017; Ackert et al., 2005; Biais et al., 2005; Bruguier et al., 2010; Widyarini, 2017), even if some bias may remain, for example, through 'Student-Subject' bias (Henrich et al., 2010). According to this bias, students, familiar with the academic environment, may be inclined to try to predict what the researcher expects of them. They may then modify their behavior to confirm these expectations, in the hope of 'doing well' or not causing the experiment to 'fail'.

To further align student behavior with professional traders, the participant with the highest-performing portfolio at the experiment's conclusion was given a reward of a hotel stay for two, valued at €200. Although "non directly financial", this incentive aims to stimulate commitment, according to studies on the impact of rewards in this type of experience (Etchart-Vincent, 2006; Gabbi & Zanotti, 2019). Moreover, stock market traders usually receive incentives : bonuses based on their individual performance and the profits they generate (Cui et al., 2022). Even if students might deviate from natural decision-making patterns to win the prize, our results show that they did not use riskier strategies to earn the reward but "resigned" themselves to doing nothing.

The experiment took place over three days during which the general stock market configuration showed a negative overall trend, even if the losses were relatively small. Table 1 shows the data relating to the evolution of the CAC40 over the period as well as those relating to the evolution of the American and Japanese stock market indexes in order to have a broader view of the stock market environment. Even if the losses in the CAC40 index were relatively small, participants were very concerned about the decline in the financial value of their portfolios, even if the losses were comparable to the index. In an emotional study, this is not about the reality of a situation, but about how it is perceived. This negative perception can result in specific emotions and behaviors (Xu et al., 2022). It should be noted that, given the duration of the experiment, the emotional reactions reported may, in some cases, be considered as "stress reactions" more than chronic emotional effects.

Although stock market simulations are research tools for studying market dynamics and decisions (Levitt & List, 2007). Financial issues are generally absent or minimal, which can alter the intensity of emotional reactions. Second, the simplification of the market is inherent in any simulation: factors such as liquidity and access to real-time

information are often simplified. Third, short-term simulations may not facilitate participants' development of real experience, limiting the scope of studying behavioral patterns (Shupp & Williams, 2008).

Some information fields negatively influenced market behavior over the three days. For the first day, DeepSeek, the Chinese competitor of American companies active in the field of Artificial Intelligence, was the main topic. The second day was strongly influenced by the information about DeepSeek and the consequences for American companies in the Artificial Intelligence market. The third day saw the announcement of LVMH's annual results (lower than expected). The markets had largely anticipated the FED's announcement on January 29 that it would be keeping interest rates unchanged.

Table 1. Evolution of the CAC 40, DJ30, NASDAQ 100 and TOPIX over the Experiment.

Indicators	01.27.2025	01.28.2025	01.29.2025	Total
CAC 40	-0,0003	-0,00012	-0,0032	-0,0036
DJ 30	0,0065	0,0031	-0,0031	0,0065
NASDAQ 100	-0,0297	0,0159	-0,0024	-0,0162
TOPIX	0,0026	-0,0004	0,0068	0,009

Concerning the emotions taken into consideration, we refer to the classification of Harmon-Jones et al. (2016). In this classification, anticipation and surprise are considered to be emotions with a single scope, whereas both anticipation and surprise can have both a negative and a positive polarity. Positive anticipation is associated with excitement, hope, or pleasure in anticipation of a future outcome that is perceived as favorable, while negative anticipation is an emotion characterized by feelings of anxiety, fear or apprehension about a future event that is perceived as unfavorable. Regarding surprise, we first consider a positive surprise: an emotion that results from a pleasant event, causing feelings of happiness or satisfaction (Vanhamme & Snelders, 2001). When making decisions, it can shift choices by opening up opportunities that have not been considered. Secondly, a negative surprise is an emotion that arises when an undesirable event occurs, resulting in feelings of disappointment (Frydman & Camerer, 2016; Caballero & Díaz, 2021).

We therefore took the following emotions into consideration: fear, optimism, negative anticipation, positive anticipation, sadness, anger, disgust, negative surprise, positive surprise, happiness.

In summary, depending on the characteristics and context of the experience, the experimental situation will include several elements that will be considered in the analysis of the results:

- a three-day trading experience on the French stock markets;
- conducted with a predominantly male student population;
- carried out in a stock market context perceived as very negative;
- a reward was offered to the portfolio with the highest financial return at the end of the experiment. 500373

4. Results

Table 2. Statistical Summary of Semi-Structured Interviews

Student	Duration	Number of Words	Number of Pages
I.1.	42 minutes	4466	10
I.2.	42 minutes	6827	12
I.3.	59 minutes	7922	14
I.4.	36 minutes	5946	11
I.5.	43 minutes	7492	12
I.6.	36 minutes	6124	11

I.7.	42 minutes	5949	12
I.8.	33 minutes	5577	10
Mean	42 minutes	6288	11,5
Maximum	59 minutes	7922	14
Minimum	33 minutes	4466	10
Standard Deviation	8	1102	1,3

4.1 Student I.1

Fear dominates Student I.1's emotional experience, particularly related to the possibility of incurring significant losses. This fear led to a defensive, passive posture after initial diversification.

Representative codes: fear of loss, prudence, conservative strategy, avoidance of risk and losses.

"I feel like this is more likely to result in big losses than big gains."

"At first, I diversified, and then I just let it run more or less all the time."

Fear drove the student away from active engagement, leading him to retreat from ongoing strategy execution and avoid further exposure. Despite prevailing caution, the student expressed some degree of optimism linked to long-term thinking and alignment with market patterns.

Representative codes: long-term optimism, confidence (moderate), trust in trends.

"In this case, it would be a small risk because, in the long term, it is generally a positive trend."

"I was trying to copy the market trend."

Optimism appears measured, more theoretical than emotionally intense, rooted in rational expectation rather than emotional excitement. The student expressed doubts about the reliability of short-term strategies, showing a preference for ignoring volatile movements.

Representative codes: short-term caution, doubt in technical analysis, selective attention.

"In the short term, I think it's a lot of luck. I don't really believe in technical analysis."

"From the beginning, I told myself that I shouldn't focus on the big ups and downs during the day."

This anticipation of negative outcomes reflects a deliberate emotional and cognitive distancing from short-term market stimuli. There were brief expressions of satisfaction, particularly regarding stable performance and the feeling of preparedness.

Representative codes: hope for gains, satisfaction, self-preparation.

"Satisfied because I knew my fluctuations weren't going to be huge."

"I prepared myself, I told myself it was a good level of performance."

This emotional state is low-intensity but meaningful, offering a sense of control in a volatile environment. The student expressed some low-level frustration and sadness, mostly in response to unfulfilled expectations.

Representative codes: disappointment, low emotional intensity, passive frustration.

"You could say it's boring. Let's just say, oh well, I was hoping it would go up and it went down."

"A little disappointed, but not too bad."

This sadness is more about resignation than distress, consistent with the student's emotionally moderate profile. Moments of satisfaction were also observed, particularly when the student evaluated their results as acceptable.

Representative codes: moderate satisfaction, emotional validation, performance approval.

"More than satisfied."

"It's a good level."

Satisfaction reinforces a sense of competence and helps balance out more negative emotions. One memorable emotional event involved a collective surprise, reinforcing the shared affective dimension of the simulation.

Representative codes: negative surprise, collective reaction, market shock.

"Yes, of course, there was a collective reaction from all participants when Schneider dropped out, which was quite significant."

The student recalled this as a key emotional moment, underlining how some emotional responses are socially reinforced.

4.2 Student I.2

Student I.2 demonstrates a high level of awareness regarding the impact of emotions on decision-making, both in amateur and professional trading. The emotional dimension is not denied but cognitively framed as part of the experience.

Representative codes: belief in emotional influence, emotional awareness, intellectual curiosity.

"I find it interesting because I think it has a big influence, and not just at an amateur level, but at a professional level too."

"When you see the big traders handling funds, they perform poorly, so I think emotions, or at least psychological and behavioral factors, must have a big influence."

This reflexivity shapes a form of emotional distancing, allowing the student to frame the simulation as a learning experience. Caution dominates the trading strategy. Diversification was used early on as a means to mitigate risk, followed by a passive approach grounded in self-awareness of their own limitations.

Representative codes: diversification, long-term strategy, conservative posture, mistrust of technical indicators.

"First, I diversified by trying to cover more or less every sector of the CAC 40, and then I let it like this for a while."

"Overall, it was a fairly conservative strategy, because I know that I'm not good at making big moves that lead to big successes."

"I'm not a big fan of using all the indicators... I don't want to use something that I don't understand."

Rather than speculating, the student adopts a low-risk, stable position based on clarity and control. Although the student identifies a tendency toward impulsivity, he actively works to contain it. He acknowledges his affective reactions but prefers to delay decision-making to gain perspective.

Representative codes: self-awareness, delayed reaction, regulation of emotional responses.

"Basically, I'm quite impulsive... I know it won't be the best thing."

"By trying not to react immediately... I wait 30 seconds to see if there's another opportunity."

This self-regulation reinforces their broader strategy of prudence and moderation. Interestingly, the student expresses emotional detachment from financial objectives, framing money as a symbolic rather than a meaningful motivation.

Representative codes: detachment from profit, indifference to monetary goals, symbolic interpretation of money.

"I find it sad to work for money. Personally, that's not my goal."

"For me, it's like fighting for your life just to get a plate of food."

This attitude distances the student from performance-driven emotional reactions, allowing them to experience the simulation from a more reflective standpoint. The student acknowledges gaps in their financial knowledge, which reinforces his conservative behavior. He relies on academic learning but questions its sufficiency for real-time trading.

Representative codes: low self-confidence, perception of limited expertise, academic vs. applied knowledge.

"Because the only knowledge I have is what we learned in school. So, more about the structure of financial markets than trading itself."

This uncertainty leads to a defensive posture, highlighting the emotional role of competence and preparedness.

4.3 Student I.3

Fear is expressed both explicitly and implicitly through the student's difficulty in sticking to pre-established strategies and a cautious attitude toward gains.

Representative codes: fear of loss, prudence, self-doubt, difficulty following plans.

"And I couldn't follow my plan."

"The hardest thing about winning is knowing when to stop."

These statements suggest internal conflict between intended actions and actual behavior, revealing a fear of making mistakes and losing potential gains. Optimism manifests in the student's preference for high-yield outcomes and emotional gratification when trades go well.

Representative codes: expectation of gains, confidence, emotional reward, performance orientation.

"I prefer high returns."

"So, it was quite pleasant in terms of emotions."

This reflects a positive attitude towards success, although it coexists with uncertainty and regret. The student frequently mentions missed opportunities, failure to act, and second-guessing decisions.

Representative codes: hesitation, indecision, fear of mistakes, missed opportunities.

"I can identify strategies, but I don't always follow my plan."

"I should have sold."

These expressions reflect a reactive mindset, where fear of making a wrong decision leads to emotional rumination. The student occasionally expresses motivation and pleasure tied to the potential for success and the correctness of their thinking.

Representative codes: anticipation of gains, intrinsic motivation, intellectual validation.

"You see more advantage in receiving greater gratification after making a decision you consider to be good."

"In theory, I am happy."

These statements show how the anticipation of success can provide satisfaction, even without material confirmation. The student describes feelings of disappointment and nostalgia, particularly when reflecting on missed potential or poor outcomes.

Representative codes: regret, nostalgia, disappointment, sadness.

"So, it was disappointing."

"So, I felt a bit nostalgic."

This emotional state appears closely tied to expectations that were not fulfilled. The student recognizes moments of overconfidence and expresses dissatisfaction or disgust with those decisions.

Representative codes: self-directed frustration, overconfidence, emotional reversal.

"A bit disappointed after being overconfident."

This brief but telling statement points to emotional complexity — confidence turning into regret. Both pleasant and unpleasant surprises are mentioned, related to unexpected price movements.

Representative codes: shock, gratification, reaction to unexpected outcomes.

"The second one was quite gratifying. It was good."

"There was a sharp drop in Kering and LVMH."

Surprise appears to affect emotional engagement, both positively and negatively. The student expresses a paradoxical sense of happiness despite logically knowing they shouldn't.

Representative codes: satisfaction, cognitive-emotional dissonance, pleasure.

"In theory, I'm happy. Well, I shouldn't be happy, but I am anyway."

This statement illustrates the emotional ambiguity experienced in trading situations, where rational analysis and emotional response may diverge.

4.4 Student I.4

Student I.4 exhibits signs of fear particularly in connection with high risk and uncertain outcomes. This emotional response contributes to indecision or excessive caution in moments that may require rapid response.

Representative codes: fear of loss, hesitation, avoidance of risk, emotional inhibition.

"Because I thought maybe it's going to drop again. So, I hesitated."

This hesitation reveals how fear undermines timely action, even when opportunities may be present. Despite the emotional challenges, the student demonstrates confidence in his decisions and expresses positive anticipation toward future performance and learning outcomes.

Representative codes: strategic confidence, optimism, learning orientation.

"I was quite confident."

"I made the choice to hold, and I think I was right."

This shows that optimism supports both perseverance and an openness to experiential learning, reinforcing strategic engagement. The student expresses regret over missed timing and lost opportunities, which reflects internal tension and self-criticism.

Representative codes: regret, frustration, missed opportunity, emotional self-evaluation.

"If I'd sold at the right time, I'd have made a good gain."

This self-blaming reflects a post evaluation of one's performance, often colored by negative emotions. Moments of positive surprise are also part of the student's narrative, associated with unexpected gains or favorable outcomes.

Representative codes: surprise, satisfaction, enjoyment, successful outcome.

"It was a pleasant surprise."

These examples offer emotional relief and motivation, acting as rewards that sustain engagement. The student anticipates potential market downturns and feels compelled to act accordingly, even if the outcomes are not certain.

Representative codes: anticipation of loss, strategic uncertainty, preemptive reaction.

"Because I thought maybe it's going to drop again."

This emotional posture creates a dilemma between precaution and inaction, which can result in decision paralysis. Satisfaction is clearly present when the student perceives his decisions as correct or when expectations are met.

Representative codes: satisfaction, validation, confidence reinforcement.

"I was satisfied with myself."

Such feelings reinforce self-confidence and encourage a more active approach to future decision-making.

4.5 Student I.5

Student I.5 frequently refers to uncertainty and the importance of intuition to cope with emotional tension. Fear emerges when confronted with unfamiliar information or the pressure to act without solid knowledge.

Representative codes: fear of mistakes, fear of the unknown, reliance on instinct.

"When you don't know anything about a company, forget it."

"What I've learned is to always listen to my intuition."

This highlights a coping mechanism where intuition substitutes analytical decision-making in emotionally intense contexts. Despite inexperience, the student shows a willingness to try new approaches, motivated by curiosity rather than financial gains.

Representative codes: confidence in intuition, exploratory mindset, positive expectations.

"Why not give it a try? Just to see how it goes."

"Always listen to his intuition."

This perspective reflects a kind of constructive optimism rooted in personal development rather than performance. The student describes being influenced by others' pessimism and shows signs of emotional fatigue and doubt.

Representative codes: emotional discouragement, peer influence, negative forecasting.

"I listened to the others. I thought to myself: they know what they're talking about, they know the companies."

"We were all discouraged and demotivated because nothing was moving forward."

This illustrates how group sentiment can exacerbate emotional vulnerability. Hope and interest are also directed toward longer-term personal and professional outcomes, indicating intrinsic motivation.

Representative codes: learning drive, anticipation of professional autonomy, exploratory motivation.

"Because these are the subjects I am most familiar with, compared to financial matters."

"Will I need this if I ever decide to do shopping?"

Here, engagement is linked to broader aspirations beyond the simulation. Regret and sadness appear particularly when reflecting on rankings or unexploited advantages.

Representative codes: disappointment, self-blame, demotivation.

"We were all discouraged because nothing was moving forward."

"On the second day, if I had listened to myself, I would have stayed among the top three in the rankings."

These reflections signal inner conflict between what was done and what could have been.

4.6 Student I.6

Student I.6 experiences fear not as panic, but as emotional pressure—particularly when faced with the need to act or with the responsibility of managing loss.

Representative codes: emotional overload, stress, hesitation, mental fatigue.

"I felt a bit of pressure at times."

"In the end, I sold them to get rid of the problem."

Fear leads to decisions motivated by relief rather than rational strategy, revealing how emotional discomfort can override logic. Despite the pressure, the student often demonstrates clear thinking and the ability to remain composed, showing trust in his own ability to manage outcomes.

Representative codes: optimism, emotional control, strategic thinking.

"No particular stress."

"I think I was calm and clear-headed."

This optimism is expressed more as emotional neutrality and rationality than euphoria—an important distinction for understanding their style of engagement. The student carefully monitors the possibility of unfavorable changes, and this vigilance occasionally turns into emotional distancing.

Representative codes: alertness to loss, strategic realism, protective anticipation.

"I thought the other two were going to go down, so I sold them."

This pragmatic anticipation allows the student to make preemptive decisions, though it can also result in emotional fatigue. The student identifies a few moments where inaction or delayed reaction led to regrets, reinforcing internal tensions between planning and execution.

Representative codes: regret, frustration, execution gap.

"I should have reacted earlier."

These emotions arise less from poor planning than from a mismatch between strategy and timing. Student displays signs of emotional detachment, consciously distinguishing between the stakes of the simulation and those of real life.

Representative codes: emotional detachment, rational distancing, learning perspective.

"We're not losing real money."

"There was no stress because we knew it was fake."

This cognitive framing allows for better emotional regulation but may also reduce full engagement. The student reports satisfaction with the performance, especially when he feels his decisions reflect thoughtful, well-managed actions.

Representative codes: satisfaction, self-confidence, emotional balance.

"I was rather satisfied with my choices."

"Overall, I felt comfortable."

This satisfaction stems from perceived alignment between intentions and outcomes.

4.7 Student I.7

Fear for Student I.7 is associated with emotional instability and time-induced stress. The student struggles with

internal regulation and shows anxiety that interferes with the strategy.

Representative codes: fear of volatility, emotional fragility, time pressure.

"I got a bit worked up."

"I just wanted it to stop, because there were things dropping everywhere."

This fear emerges particularly in moments of rapid change, causing a desire to escape rather than engage. The student begins the experience with optimism and shows pride in initial decision-making. He expresses satisfaction when feeling aligned with market trends.

Representative codes: confidence, satisfaction with strategy, goal-oriented engagement.

"I was happy with my initial choices."

"I had set a goal."

Optimism is strongest in the early stages and contributes to clear direction and engagement. As volatility increases, the student becomes more discouraged, expressing fatigue and demotivation.

Representative codes: emotional exhaustion, market aversion, negative projection.

"There was a moment when I thought: this is never going to stop."

"Everything was crashing."

This type of anticipation blurs into resignation, making it harder to recover emotional balance. Regret is strongly expressed when the student reflects on decisions made under pressure or against their initial plan.

Representative codes: regret, impulsivity, frustration with self.

"It's stupid, because if I'd held on, I would have had the biggest gain."

"I got a bit worked up and sold at the worst moment."

These statements capture the emotional aftermath of poor timing and lost opportunities. The student shows signs of detachment, with a loss of motivation and emotional disengagement by the end of the experience.

Representative codes: resignation, emotional fatigue, disengagement.

"By the end, I didn't even want to open the app anymore."

"I was emotionally disconnected."

This defensive reaction protects the student from further stress but also limits potential learning. Market events triggered strong emotional reactions, especially when changes were sudden and drastic.

Representative codes: emotional surprise, shock, disruption of strategy.

"When the entire tech sector collapsed, I became more aware of its potential."

"There were stocks that fell all of a sudden, it was really stressful."

These episodes amplified emotional intensity, challenging the student's ability to remain composed. Before emotional fatigue set in, the student felt satisfaction with his approach and decisions.

Representative codes: satisfaction, pride in action, personal goal-setting.

"I was quite satisfied with what I had done."

"I had set a goal, and I stuck to it."

This reflects a structured mindset, with emotional satisfaction tied to personal standards rather than outcome alone.

4.8 Student I.8

Student I.8 expresses fear primarily through reactions to negative signals or sudden market drops. These emotions lead to quick sell-offs and defensive decision-making.

Representative codes: fear of downturn, reaction to alerts, preemptive selling.

"Because I received an alert saying there was a sharp drop, so I sold everything."

"I saw the price going down, so I sold."

Fear translates into action, even if not always aligned with long-term strategy. The student shows confidence in his capacity to interpret market movements and to act accordingly. Optimism comes from a perceived ability to

understand trends and anticipate outcomes.

Representative codes: strategic confidence, pattern anticipation, market insight.

"I anticipated a drop and I was right."

"It's something that I think I understood."

This emotional response supports engagement and reinforces a sense of competence. The student reports cautious behavior from the outset, driven by a belief that the market was likely to perform poorly.

Representative codes: caution, early warning, risk management.

"I didn't go in with the idea of making gains."

"I told myself: it's going to be hard to make money."

This mindset affects portfolio allocation and reduces risk exposure from the start. Emotions of regret appear when reflecting on decisions that did not align with later market developments.

Representative codes: missed gains, frustration, hindsight regret.

"In the end, I should have bought again when it went down."

"I didn't act fast enough."

These moments reflect frustration with execution timing rather than strategic reasoning. The student reacts strongly to unexpected market drops, including shared reactions with peers.

Representative codes: surprise, collective emotional reaction, volatility awareness.

"We all panicked a bit when Schneider fell."

"When the drop came, we were all talking about it."

Such surprise triggers emotional contagion and may influence group behavior. Satisfaction is felt when the student's anticipation proves correct, particularly in detecting market drops.

Representative codes: emotional reward, pride in accuracy, self-validation.

"I anticipated the drop, so I felt a bit proud of myself."

"It was satisfying to see that I was right."

This emotional reward reinforces confidence and deepens engagement. The student describes being influenced by the emotional state and comments of other participants.

Representative codes: peer influence, emotional contagion, collective emotion.

"Everyone around me was saying: this is bad."

"There was this collective panic when Schneider dropped."

This highlights how shared emotional environments can amplify individual reactions.

5. Discussion

Our results show a strong presence of negative emotions, although positive emotions are also sometimes noticeable. However, the latter seems to correspond to either very specific events (anticipation of a positive market trend to recover losses), external factors to trading itself (the desire to consolidate knowledge) or intuitive elements that were considered part of optimism (or, at least, positive anticipation). In only one case, a student seems completely disconnected from the emotional arena, viewing the experience as a game with no consequences. In some cases, all theoretical emotions were indeed present, while in other cases, emotional meta-categories were identified. It should also be noted that some emotions can have multiple dimensions. For example, in the case of fear, this emotion may be related to a fear of doing wrong or a fear of not being good enough (lack of self-confidence).

Thematic analysis of the emotions which have been reported by the students, particularly in a perceived 'deteriorating' stock market environment, reveals an emotionally complex experience. Our study highlights a significant evolution in emotions throughout the trading experience. Initially, interest and a kind of detachment may be present. However, as they become more and more involved in the market fluctuations, a growing emotional commitment seems to develop (Bossaerts et al., 2024).

A major factor is the predominant role played by negative emotions, often related to losses and market uncertainty. Fear and risk aversion are recurring feelings, resulting in an increased recognition and an aversion to potential losses,

a cautious attitude and sometimes a conservative strategy (Wong, 2015). Negative anticipation/surprise as well as sadness and disappointment in response to missed opportunities are also very prevalent. These emotions result in feelings of discouragement and demotivation. Resignation and emotional detachment could be explained by emotional reasons (accumulated disappointments) or reasons related to the experience itself (lack of opportunities for diversification). The impact of losses can also be so strong that it becomes difficult to fully experience happiness, or any kind of satisfaction related to gains, which are perceived as insufficient in relation to the losses that could be experienced (Kahneman & Tversky, 1979; Walasek et al., 2024). Market uncertainty has a significant influence, generating intense reactions such as negative surprises at sudden falls. These events can result in panic, leading to impulsive decisions such as selling all (Tian, 2024; Taffler et al., 2024).

Optimism and positive anticipation were only found during the first trades. Despite the overrepresentation of males in our sample, none of the participants showed a significant overestimation of their skills or market prospects. The majority of students use defensive strategies, express doubts about their decisions and acknowledge the limits of their knowledge. This conservative posture, far from overconfidence, reflects a nuanced emotional management, without in any case shifting into unrealistic optimism. This finding calls into question the automatic link between gender and overconfidence bias in experimental situations. Moreover, we did not observe an increase in the number of transactions in the final hours of the simulation, even though we might have expected an increase in risk-taking (the students had nothing left to lose) in order to win the reward. Resignation seems to be an emotion uniformly shared among the audience.

To reinforce our argument, the table below shows the change in the number of transactions over the three days of the simulation.

Table 3. General Trading Orientation Over the Three Days of the Experiment

	Total	Buy	Sell	Total	Buy	Sell	Total	Buy	Sell	Total	Buy	Sell
	Day 1			Day 2			Day 3					
1	21	12	9	18	15	3	8	5	3	47	32	15
2	28	17	11	8	4	4	7	3	4	43	24	19
3	17	15	2	4	1	3	2	1	1	23	17	6
4	49	28	21	14	10	4	12	9	3	75	47	28
5	18	12	6	21	10	11	16	7	9	55	29	26
6	15	11	4	2	1	1	0	0	0	17	12	5
7	13	9	4	12	7	3	1	0	1	26	16	10
8	11	10	1	9	3	6	16	8	8	36	21	15
Total	172	114	58	88	51	35	62	33	29	322	198	124
Mean	21,5	14,25	7,25	11	6,37	4,38	7,75	4,12	3,62	40,25	24,75	15,5

The trading experience also appears to be a process of learning and adaptation. This process can be understood through behavioral game theory (Camerer, 2011; Page & Siemroth, 2017). Initial feelings of inadequacy due to lack of experience can serve as an incentive to acquire knowledge.

Thematic analysis reveals that trading, especially in a stock market perceived in decline, is an emotionally intense experience, marked by fear, disappointment and discouragement when losses are involved (Lo & Repin, 2002), sometimes leading to resignation or detachment. For this purpose, Lerner and Keltner (2001) and Bechara and Damasio (2005) highlight the influence of emotions on decision-making, a central aspect of trading environment.

However, it is important to remember that, given the composition of our sample (which was predominantly male), our observations on emotional dynamics and decision-making processes are strongly influenced by this demographic reality. We avoid attributing our discussion to specific gender categories and prefer to present them as phenomena found within a particular study group.

6. Conclusion

Our study used a qualitative research design to explore the emotional experiences of students facing a perceived

declining stock market; a perspective currently underutilized in financial literature. Based on semi-structured interviews with eight participants after three days of continuous trading, the research highlights that investing under conditions of uncertainty and potential loss (even small) is a deeply intense and emotionally complex experience. Emotions prove to be active forces that shape strategies, decisions and, ultimately, the trader's perception of the market.

The results also reveal significant emotional dynamics during the experiment. From an initial interest and a detached attitude, participants develop a growing emotional engagement with early and positive market fluctuations. As the experiment progresses and disappointments accumulate due to a perceived declining market, the emotional picture is largely dominated by negative emotions. Fear, particularly fear of loss, as well as sadness, disappointment and discouragement related to unfavorable results or missed opportunities, are prevalent. Market uncertainty and sudden drops can result in panic and impulsive decision-making, such as massive selling.

Although optimism and hope for a market rebound are also present, the pain of facing losses seems to undermine satisfaction with gains, making it difficult to fully appreciate successes. This tension between hope and disappointment, coupled with the inability to significantly improve the financial situation, can cause some participants to feel resigned, detached or disengaged. In other words, regret arises from unfavorable outcomes or missed opportunities. Regret can be so intensely felt that the satisfaction experienced from gains is perceived as insufficient in comparison to potential losses. Regret can even be connected to initial overconfidence followed by disappointment, or to resignation and abandonment. This dynamic confirms the idea that experiences of loss generate 'specific emotional charges'.

In terms of contributions to financial literature, our results highlight significant emotional reactions such as regret for objectively small losses and are consistent with Prospect Theory (Kahneman & Tversky, 1979). Our results show that this aversion is activated as soon as a negative trend is perceived, even if the losses are small. The state of "perceived loss" generates an emotional response that is disproportionate to the financial amount involved. The psychological value of a loss is amplified relative to its economic value among novice investors. Furthermore, the reactions highlight the importance of emotions in behavioral finance and the need to study their dynamics beyond crisis scenarios. Our results contribute to Lo (2005) on the adaptive markets hypothesis and Nofsinger (2017) on the role of emotions in financial decision-making. The manifestation of regret, anxiety and disappointment, even for minor declines, corroborates the idea that stock market investors are influenced by psychological factors. Furthermore, the mechanisms that participants tried to use to manage their emotional discomfort can be seen as applying to the concept of emotional regulation (Gross, 1998). The behavioral trends identified, while consistent with behavioral finance, should be interpreted with caution. Indeed, the strong male bias in our sample means that these findings mainly reflect the experiences and mechanisms of male individuals and cannot be extrapolated as gender-specific characteristics without more balanced comparative research.

Our findings have implications for both educational and financial practice. For financial education, our results suggest the need to incorporate modules dedicated to market psychology and emotional regulation. Stock market simulators should be designed as laboratories for experimenting with emotional reactions. In terms of financial practice, individual investors should be aware that even small financial losses could result in emotional reactions. The psychological impact is not always proportional to the objective financial magnitude of the loss (decoupling financial value from emotional value). Facing these emotions, investors should develop mechanisms to regulate their reactions, learn not to respond immediately to every fluctuation and diversify their sources of information.

7. Limitations

Firstly, one of the main limitations of our study is the small size of our sample. Although the qualitative perspective aims for depth rather than breadth, we did not achieve complete thematic saturation as suggested by Hennink et al., 2017. Therefore, the emotional patterns and decisions identified should be considered exploratory rather than generalizations. The size of our sample limits the direct transferability of our results. It should be remembered that, as the students were paid, it was financially difficult to hire more people and/or to extend the experiment over a longer period of time. Secondly, the gender imbalance (seven men to one woman) is a limitation with implications for the interpretation of our results. Emotional dynamics and decision-making under risk may differ between men and women in financial contexts (Jianakoplos & Bernasek, 1998). Due to the lack of female data, the 'emotional regret models' and behaviors identified are derived from male perspectives. Thirdly, in order to make the simulation accessible to participants with varying levels of familiarity with financial markets, we restricted investment opportunities to CAC40 stocks and did not allow more complex financial mechanisms. We may have reduced the complexity of the choices available and, by extension, the range and intensity of emotional responses that a real market might have generated. For example, the regret related to a missed opportunity to sell short during a decline

could not be addressed. This simplification, while necessary for practical reasons, should be considered a factor that may have mitigated the validity of our findings regarding emotional reactions to perceptions of small losses.

8. Future Research Directions

Firstly, the dynamics and evolution of emotions over the experience could be considered: it would involve analyzing the emotional sequences experienced by traders over a defined period, identifying the turning points (e.g. an important loss or an unexpected gain). Secondly, future research could look at the influence of specific emotions (fear, disappointment, hope) on types of trading decisions (buy, sell, hold, increase risk). In other words, the idea would be to analyze how investors “navigate” between rational analysis and intuitive impulses. Thirdly, comparisons could be made between the emotional experiences of individuals operating in a declining market and individuals in a rising market. Fourthly, integrating neurophysiological measures, such as fMRI or EEG, could provide objective insights into the brain's emotional processing during market simulations, complementing self-reported qualitative data (Schmid et al., 2018). Fifthly, additional studies could focus on the influence of emotional couples (for example, fear and optimism), rather than on emotions treated in a binary way, although we have recently shown that using emotional couples needs to be put into perspective (Finet et al., 2025). Sixthly, future research should use a larger sample to provide thematic saturation and greater generalizability. In addition, a balanced representation of genders would facilitate comparative analyses of emotional dynamics between men and women in stock market simulation contexts.

Authors' contributions

Conceptualization, A.F.; investigation, A.F., K.K. and J.L.; resources, K.K. and J.L.; data curation, K.K. and J.L.; writing—original draft preparation, A.F., K.K. and J.L.; writing—review and editing, A.F., K.K. and J.L.; supervision, A.F.; project administration, A.F.; funding acquisition, A.F. All authors have read and agreed to the published version of the manuscript.

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Appendices

Appendix 1. Guide for Semi-Structured Interviews

Availability Bias

- Can you tell me about your research on the companies you wanted to invest in?
- What kind of information did you look for?
- What type of information did you prioritize?
- How has information accessibility impacted your operations?

Overconfidence

- How do you rate your trading skills?
- How did you feel after a successful series of moves?
- How has this influenced your trading behavior?
- Do you think you underestimated the risks at times?

Anchoring Bias

- When you decided to sell a stock, how did the price you bought it at influence it?
- How have past price levels influenced your decisions?
- Why did the initial purchase value prevent you from adapting to new information?

Herd Behavior

- What was the main influence on you choosing one action over another?
- How have general trends influenced your decisions?
- How did you react to market movements in situations of high activity ?

Prospect Theory

- What would you do if you had a winning stock or a losing stock in your portfolio?
- What were your motivations for selling winning positions, even though they could still bring you additional profits in the future?
- What were your motivations for maintaining a losing position?

General Emotions

- In your opinion, what role did emotions play in this experiment?

Emotions Changes

- After a session where you made several decisions that were unsuccessful, how did you react emotionally and how did this influence the next session?
- Have you noticed changes in your emotions or behaviors when you have several successive losses?
- Do you feel like your emotions have changed the way you've structured your strategy over time?

Impact of Emotions on Decision-Making

- Before placing an order, what emotions did you usually feel?
- Can you describe a situation where your emotions directly influenced your decision-making, whether in a losing or winning situation?
- Have there been times when, despite feeling stressed or anxious, you were able to make a successful decision?
- Do you feel like your emotions have changed the way you've structured your strategy over time?

Reactions to Gains or Losses

- How did you react to loss?
- Have the losses affected your behavior or decisions?

- How did you react to a gain?
- Did you react more impulsively afterward?

Emotion Management

- How did you handle the pressure of making decisions quickly?
- Did the fact that there were breaks between each session influence your emotions?