

Exploring the Disposition Effect in Trading: A Qualitative Analysis of Emotional Influences

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Our study employs a qualitative and inductive methodology to examine the disposition effect in trading, capturing decision nuances and emotions that are often overlooked by quantitative tools. We ran a three-day simulation with eight management students, each managing a €100,000 virtual CAC 40 portfolio. To strengthen engagement, we introduced a non-monetary incentive in addition to hourly compensation. The experiment unfolded in a mildly declining CAC 40 environment, heightening worries about portfolio losses and fostering behavioral biases. After the simulation, we conducted semi-structured interviews and performed a structured thematic analysis, which was carried out by the three authors. The central theme is investors' emotional reactions to fluctuations, which shape the disposition effect. On losses, participants reported stress, frustration, and resignation; they often held losing positions hoping for a rebound, delayed selling, and sometimes felt "abandonment" as losses deepened. On gains, fear of reversal and general risk aversion produced hesitation and rapid profit-taking, even for small gains. Across cases, emotions repeatedly conflicted with rational plans, steering decisions toward loss aversion and premature realization of gains.

Keywords: disposition effect, qualitative research, loss aversion, trading behavior, emotional influence

INTRODUCTION

Our qualitative study highlights the disposition effect as a major behavioral bias influencing trading decisions. This bias primarily involves holding onto losing assets for too long and selling winning assets too quickly. This behavior is associated with stock market uncertainty (Allain, 2013 ; Moutier, 2015).

When faced with a losing position, investors are often reluctant to "cut the loss", hoping that the situation will improve or that a 'miracle' will happen. This expectation is a direct result of the inability to accurately predict whether the negative trend will continue or reverse. Recognizing the loss would be like admitting a mistake, which generates intense negative emotions. The idea that the price "could go back up" maintains hope despite the uncertain future, even though this could result in even more important losses.

Conversely, the tendency to sell winning shares quickly is often driven by the fear that the gains will disappear due to a market reversal. This fear is a response to uncertainty about future gains. Hesitation due to a winning position leads to ‘choosing safety’, even if the gains are small, because there is no certainty about the ‘right time to sell’. This emotional aversion to risk in response to the unpredictability of future market movements prevails over the rationality of letting profits run.

The specific context of the experiment, with a slight downward trend perceived negatively by participants, may have amplified their concerns about the decline in the value of their portfolios, creating an environment “fertile” for observing these uncertainty-related behavioral biases (Xu et al., 2022).

The study is based on a qualitative and inductive methodology, chosen for its ability to explore the nuances and emotional dimensions of trading decisions, aspects that are difficult to apprehend with traditional quantitative tools in finance (Floyd & List, 2016). The objective is to achieve a deeper understanding of the disposition effect in a specific context, rather than a statistical generalization. The experimental design involved eight management science students virtually managing a €100,000 portfolio of CAC40 shares on the ABC Bourse platform, with the experiment taking place over three consecutive days in January 2025. Following the simulation, semi-structured interviews were conducted to investigate emotional reactions and the disposition effect. Data analysis was carried out using thematic analysis.

STATE OF THE ART: EMOTIONS AND THE DISPOSITION EFFECT

The disposition effect is a significant behavioral bias in trading, characterized by the tendency of investors to sell assets that have increased in value (winning positions) too quickly and hold onto assets that have decreased in value (losing positions) for too long (Shefrin & Statman, 1985). This behavior appears to be deeply ingrained in human psychology (Barberis, 2013).

This phenomenon can be explained mainly by prospect theory (Kahneman & Tversky, 1979; Weber & Camerer, 1998). Individuals feel the pain of a loss more intensely than the pleasure of a gain of the same size. Regarding an asset whose value has fallen, investors could be reluctant to sell it in order to avoid ‘facing’ the loss, hoping that it will return to its previous value: loss aversion (Tom et al., 2007) drives investors to hold on to losing assets in the hope that they will rise again, avoiding the “confession” of a bad decision (Benomar et al., 2023).

Regarding assets that have increased in value, fear of regret is a major driver. To avoid potential regret (Loomes & Sugden, 1982), traders tend to take their profits quickly, even if the asset still has potential (search for immediate satisfaction and the fear of seeing a gain turn into a loss).

Ego and pride also play a key role (Gervais & Odean, 2001). Selling a winning position boosts a trader’s self-esteem. Conversely, selling a losing position is akin to admitting a mistake, which is often psychologically difficult to accept. Confirmation bias reinforces this tendency, as investors will unconsciously seek out information that justifies their initial decisions (Cheng, 2019).

Bouteska and Regaieg (2018) examine disposition effect among Tunisian individual investors between 2009 and 2014. The study analyses how individual characteristics such as gender, age, portfolio management type, trading frequency and volume, as well as market conditions (bullish or bearish), influence the intensity of this bias. The results suggest that Tunisian investors exhibit significant disposition bias, which is more pronounced among young men and during bull markets. The article also concludes that this behavior is a persistent behavioral bias (Feng & Seasholes, 2005).

Ben-David and Hirshleifer (2011) argue that the disposition effect is not mainly due to a direct preference for realizing gains over losses. Instead, they suggest that the V-shaped asymmetry (i.e., a stronger propensity to sell as gains increase than as losses decrease) is the main source of the disposition effect. The study suggests that this V-shape and its asymmetry can be explained by speculative motivations based on investors’ beliefs and limited attention. Large price movements attract investors’ attention, encouraging them to re-evaluate their positions. The asymmetry could arise from self-attribution biases, where investors are slower to accept inaccurate beliefs after losses, making them more reluctant to sell.

Several studies also highlight how different behavioral biases can interact, influence each other or have closely related definitions. This is a key point in behavioral finance, as biases rarely operate independently (Daniel et al., 1998; Baker & Wurgler, 2007; Barberis & Thaler, 2003; Valcanover et al., 2020).

In this article, we specifically analyze the extent to which emotions could induce the disposition effect. For example, Muermann and Volkman (2006) demonstrate that anticipation of regret and pride can explain the disposition effect. If the price of a share falls, investors hold on to it in the hope that it will rise again, thereby avoiding the regret of having made a loss. Conversely, if the share price has risen, investors sell it to feel proud of having made a good investment and to avoid the regret of seeing the price fall later. They also argue that pride is only experienced if all past decisions have been optimal. Regret is experienced as soon as a single decision is sub-optimal. This means that the individual weighs the pain of regret more heavily than the additional utility derived from pride.

Frydman et al. (2011) stress the links between emotions (or more precisely ‘bursts of utility’) and the disposition effect using neural data. The key argument lies in the theory of realization utility, which offers a behavioral explanation for the disposition effect. Here are the main links highlighted: realization utility theory is a behavioral explanation of the disposition effect. Its key assumption is that investors derive utility directly from the realization of gains and losses on the risky assets owned. In practice, an investor would experience a ‘positive burst of utility’ when selling an asset at a gain relative to the purchase price, and a ‘negative burst of disutility’ when selling an asset at a loss. The perception of the selling transaction as a ‘positive or negative investment episode’ generates an emotional impact. Using neurophysiological measurement tools, the study by Breiter et al. (2001) provides insight into how psychological principles, such as prospect theory, loss aversion, and counterfactual comparisons—all of which are strongly related to emotional responses—influence the perception and evaluation of gains and losses.

The disposition effect is widely documented quantitatively (see above); however, qualitative research is rarely employed in this field. However, it is helpful to understand the underlying mechanisms and the experiences of traders (see Lo et al., 2005). Quantitative methods can identify a correlation between emotions (measured, for example, by neurophysiological indicators) and the disposition effect, but they cannot explain why and how traders feel these emotions (Fenton-O’Creevy et al., 2011), how they influence their decisions at a given moment (Lerner et al., 2015), or how they try to manage them (Gross, 2015). A qualitative approach, through interviews (Kallio et al., 2016) or participant observation (Bastien, 2007), can reveal the motivations, fears, hopes and regrets that drive behavior. Indeed, emotions in trading are rarely simple (Barrett et al., 2019). Fear, greed, regret, euphoria, and stress can interact in complex ways. Qualitative research helps capture each trader’s emotional experience. It can also show nuances and specific emotional trajectories (Kuppens & Verduyn, 2017).

GENERAL METHODOLOGICAL PERSPECTIVE

Our article uses a qualitative and inductive methodological perspective, a method relatively uncommon in finance, which has traditionally favored quantitative and deductive techniques (Hoffmann et al., 2015; Della Vedova et al., 2023; Oehler et al., 2018). Given the nature of traders’ emotions, qualitative approach provides valuable insights. Quantitative methodologies often struggle to capture the nuanced details of decision-making and the underlying emotional dimensions. In contrast, qualitative methods involve analyzing unexpected influences that are difficult to access through quantitative tools. The immersive qualitative perspective gives an opportunity for theory development based on lived experiences, assessing the context-specific behavioral mechanisms.

In qualitative research, the aim isn’t to statistically generalize findings from a sample to a larger population, but rather to achieve a deep understanding of a specific phenomenon within a specific context. It involves collecting data from a small, purposively selected sample, chosen for its relevance to the research question (Firestone, 1993; Maxwell, 1992).

For this study, an experimental protocol involving three consecutive days of simulated trading was conducted in January 2025 with a group of eight students. Following this phase, individual semi-structured interviews were carried out by a single researcher to ensure consistency: the researcher had no academic

ties to the participants (meaning they weren't subject to her evaluation), which encouraged open responses. The immediate sequencing of the interviews after the trading sessions also helped establish a degree of familiarity, enriching the conversations.

Data Analysis

In terms of data analysis, the narrative approach (as outlined in Creswell and Poth's (2017) five qualitative tools) was selected, as other approaches (case studies, ethnography, phenomenology, and grounded theory) were not aligned with the article's objectives. Narrative research focuses on affective and experiential dimensions, often involving the reconstruction of participants' stories through the thematic identification of key elements. This analytical process includes memo-writing, contextual description, and interpretive engagement with personal narratives.

The semi-structured interviews were guided by a framework consisting of several sets of open-ended questions, each addressing specific themes related to behavioral patterns and, more specifically, the disposition effect. This interview guide allowed for flexible navigation of topics and facilitated the dynamic adaptation of the interview based on participant responses. Such flexibility is essential in qualitative research for an in-depth exploration, maintaining alignment with the research design, and supporting responsiveness to unexpected insights that may emerge during the interaction. In this context, the guide functioned as a flexible structure rather than a restrictive protocol (Whiting, 2008).

For the analysis of the interview data, a thematic analysis was employed. This method is well-suited for identifying both commonalities and differences across the dataset, while also allowing for the emergence of unexpected insights (Vaismoradi et al., 2013; Nowell et al., 2017). The analysis followed the six-phase procedure proposed by Braun and Clarke (2006), Byrne (2022), and Bingham (2023), which ranged from data familiarization to the production of the final report, thereby addressing common critiques in qualitative research (Özden, 2024). Dominant themes, representative codes, and illustrative statements summarized each interview.

All interviews were audio-recorded with participants' consent, fully transcribed (see Table 2 for interview data), and analyzed by the three authors of this study. The use of artificial intelligence was excluded, as current technologies are not yet capable of fully assessing the complexities involved in emotionally related reasoning (Finet et al., 2025).

Experimental Design

Our initial investigations into how emotions affect decision-making began in 2019 (Finet et al., 2022). The challenges brought by the COVID-19 pandemic and subsequent lockdowns, which made empirical experimentation especially difficult, led us to refine and adapt our experimental protocols (Finet & Laznicka, 2025).

Participants traded equities individually through the ABC Bourse platform, focusing on stocks listed on the CAC40, France's main stock market index. Each participant was given a virtual portfolio of 100,000 euros. We chose the CAC40 assuming its constituent companies would be relatively familiar to the participants. There were no limits on trading volume. The experiment lasted three consecutive days (January 27–29, 2025), divided into twelve one-hour trading sessions. To simulate the pressure found in real-world markets, participants could access real-time data showing their peers' portfolio performance.

We paid attention to the composition of the initial portfolio. Previous studies suggest that an initial portfolio fully invested in equities can amplify risk-taking behaviors, while an initial cash allocation encourages more conservative behaviors, regardless of market conditions (Finet et al., 2021; Finet et al., 2025).

The experiment involved students enrolled in Management Science programs. We focused on recruiting participants based on intrinsic motivations rather than financial incentives, and we imposed no fixed deadline for applications to encourage voluntary participation. The final sample consisted of eight participants (seven men and one woman), a size determined by both budgetary constraints and the labor-intensive nature of qualitative data analysis. Participants were financially compensated for 24 hours of trading activity over the three-day experiment.¹ The predominance of male participants is consistent with

what it is documented in financial literature and is often linked to a greater male propensity for risk-taking or gambling behaviors (Barber & Odean, 2001; Cueva & Rustichini, 2015; Bashir et al., 2013).

Participant Profile and Market Context

Although experimental finance sometimes faces criticism for relying on student samples (who could differ psychologically from professional traders), this choice remains widespread due to advantages in recruitment, cost-effectiveness, and time efficiency (Etchart-Vincent, 2006; Kirchler, 2009; Hanke et al., 2010; Bouattour & Martinez, 2019). To address concerns about limited real-market experience, we integrated several considerations: first, participants completed academic courses in finance, providing them with some basic knowledge. Second, empirical research demonstrates that students can exhibit behavioral patterns similar to those of professionals (Porter & Smith, 2003; Fréchette, 2011), particularly in tasks such as option pricing (Abbink & Rockenbach, 2006). Consequently, the use of student samples is both common and accepted within experimental finance and behavioral economics (Rossignol et al., 2007; She et al., 2017; Ackert et al., 2005; Biais et al., 2005; Bruguier et al., 2010; Widyarini, 2017). To reinforce participant engagement, a *non-monetary* incentive (a 200 euros-value hotel stay awarded to the top-performing portfolio was offered), in line with findings regarding the motivational impact of non-cash rewards in experimental settings (Etchart-Vincent, 2006; Gabbi & Zanotti, 2019). Thus, participant motivation combined direct compensation for time spent and a performance-based prize.

The experiment took place in a market with a slightly negative trend in the CAC40 index, as detailed in Table 1. Comparative data on the Dow Jones Industrial Average (DJ30), NASDAQ 100, and TOPIX are also presented to provide broader contextualization. While the CAC40 faced only marginal losses, participants exhibited notable concern about the decline in their portfolio values, even when their losses were consistent with overall market trends. This negative perception may have fostered the development of specific biases and behaviors (Xu et al., 2022; Sokolowska & Makowiec, 2017).

Significant informational events shaped the market environment during the experiment. On the first day, news coverage was dominated by developments concerning DeepSeek, a Chinese firm emerging as a rival to American companies in the Artificial Intelligence sector. The second day continued to be influenced by news related to DeepSeek and its potential implications for U.S.-based AI firms. On the third day, investor sentiment was affected by LVMH's annual earnings report, which fell short of expectations. Finally, the U.S. Federal Reserve's announcement on January 29th (interest rates will remain unchanged) was widely anticipated.

TABLE 1
EVOLUTION OF CAC40, DJ30, NASDAQ 100, AND TOPIX OVER THE
EXPERIMENTAL PERIOD

Index	01/27/2025	01/28/2025	01/29/2025	Total Change
CAC40	-0.0003	-0.00012	-0.0032	-0.0036
DJ30	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

Interview Structure and Emotions Analyzed

Following the three-day trading sessions, semi-structured interviews were conducted using a three-phase interview guide. The first phase consisted of general, introductory questions about the participants and their interest in trading. However, given the relations already established during the experiment, this phase often proved redundant, allowing the discussion to quickly focus on the study's core focus. The second phase explored the development of decision-making biases during the trading sessions.

The interview guide was structured around the bias selected (disposition effect) and the emotions it evoked. Three main ranges of questions regarding emotional and behavioral responses to gains and losses were addressed, based on Summers & Duxbury (2012). Emotions were identified in the interview

transcripts and categorized according to the classification of Harmon-Jones et al. (2016): anger, fear, sadness, disgust, anticipation (positive versus negative), happiness, surprise (positive versus negative) and optimism.

The final phase of the interview allowed participants to share additional reflections or raise topics that had not been previously addressed.

Summary of Key Experimental Elements

In summary, this experimental study was characterized by the following key elements, which are the basis of our analysis:

- A three-day trading simulation within the French stock market context.
- A sample composed predominantly of male university students.
- A market environment perceived as generally declining.
- A performance-based reward offered to the participant with the highest portfolio return at the end of the experiment.

RESULTS

Procedure Followed for Producing Results

The process involved several key steps that were central to the thematic analysis:

- Becoming familiar with the data: Repeatedly reading the transcripts of each participant's interviews provided an overall understanding of the discourse and an opportunity to begin to note initial ideas about the biases identified in the context of this article.
- Generation of initial codes: The interviews were then coded line by line, assigning codes to specific manifestations of bias. This step was used to break down the discourse into units of meaning relevant to the analysis.
- Research theme(s): The codes were then grouped to create themes representing the biases analyzed. This phase involved aggregating and organizing the codes to identify recurring central themes across the interviews. For each interview, we tried to find the most encompassing theme that allowed for summarizing different manifestations of the disposition effect. It should be noted that having multiple main themes, each addressing a facet of the disposition effect, would have fragmented the analysis and made the coherence of this bias in the interviewee less clear. For example, for the theme "*Emotional and behavioral reactivity to portfolio fluctuations*," the codes "*difficulty in 'cutting losses'*" and "*tendency to 'take profits'*" are direct manifestations of the disposition effect. They were not considered as main themes but components (codes) of the central theme associated with the bias.
- Theme names: Each theme was illustrated using representative statements drawn from each code and theme, linking the analysis to participants' statements.
- Final report produced participant by participant: Finally, the analysis was written, explaining bias as highlighted by the thematic analysis, illustrating key points with statements. A short descriptive analysis is also provided.

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.	43 minutes	7492	12
I.5.	42 minutes	5949	12
I.6.	36 minutes	6124	11
I.7.	36 minutes	5946	11
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

Student I.1.			
Theme	Codes	Statements	Descriptive Analysis
Emotional and behavioral responsiveness to portfolio fluctuations	Code 1: Effect of performance on the mood and decision	<p>‘Basically, our mood depended on the stock market and the shares we had bought. If they went up, we were happy; if they went down, we were a bit more discouraged.</p> <p>But personally, yes, Wednesday, or yesterday actually, was significant in the sense that the shares I had bought had fallen sharply.</p>	<p>The interview reveals a strong emotional component in the investor’s decision-making process. The difficulty in accepting and realizing losses is a direct illustration of the disposition effect. Similarly, the immediate satisfaction associated with gains and the awareness that gains can decline suggest a propensity to sell winning positions too early, although this is less explicitly stated than the tendency to hold on to losing positions.</p>

	Code 2: Difficulty in 'cutting losses'	<p>"I kept it anyway. I told myself there had to be a rebound coming."</p> <p>"Even if it goes down, you say to yourself it can go back up. It's all psychological."</p>	
	Code 3: Trend towards "taking gains"	<p>'If they went up, we were happy.'</p> <p>(Although this does not explicitly refer to sales, the quick satisfaction suggests a predisposition to want to 'lock in' the gain).</p> <p>"When it goes up, we say to ourselves, ah, it's going to go up even more. But it could go down again."</p> <p>(tension between the desire to let the gain run and the fear of seeing it disappear, which can lead to selling prematurely).</p>	
Student I.2.			
Theme	Codes	Statements	Descriptive Analysis
Recognizing the emotional and psychological influence on trading decisions	Code 1: The effect of emotions and psychology on performance	<p>'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. You realize that when you see the big traders or the big names who manage funds, they don't generally perform better. Overall, they perform poorly, so I think emotions, or at least psychological and behavioral factors, definitely have a big influence.'</p>	<p>The disposition effect can be identified through reports of difficulty in "cutting losses", where the hope of a rebound takes over from the rational decision to sell in order to limit losses. Similarly, although less illustrated, the notion of "taking capital gains immediately" and the recognition of market volatility suggest a propensity not to let gains run.</p>

		<p>“Maybe that’s also what determines whether we make capital gains or losses. It’s really psychology, how you see things.”</p>	
	<p>Code 2: The difficulty of managing losses and waiting for a rebound.</p>	<p>“The first was making a mistake and cutting my losses too late. And waiting. Waiting for it to go back up, and it didn’t, and it went down even more.’</p> <p>‘Then even on a personal level, there were a few times when I had cryptocurrencies that fell sharply and I didn’t sell. I said to myself, it’ll go back up, it’ll go back up. And in the end, it did the opposite. It kept going down.’</p> <p>‘But I didn’t sell. I said to myself, it’ll go back up, it’ll go back up.’</p>	
	<p>Code 3: The tendency to take profits and uncertainty regarding further gains</p>	<p>“And so, some people took their gains right away, while others waited a little longer.’</p> <p>‘And then, seeing the market being volatile and going up and down, we don’t know if it’s the right time to sell.’ (Although formulated as hesitation, it implies contemplation of selling when the investment is potentially a winner)</p> <p>‘And I think that’s maybe why it has an influence, because we say to ourselves, ah,</p>	

		it's going to go back up, or ah, it's going to go back down. And so that makes us do things.'	
Student I.3.			
Theme	Codes	Statements	Descriptive Analysis
The challenges of self-discipline and managing emotions during market fluctuations	Code 1: Failure to follow the trading plan and impact on profitability	'My initial motivation was that I had already traded in several assets, including cryptocurrencies and indices. I also traded stocks a little, but it's a bit slow. And I wasn't able to stick to my plan. After that, I wasn't profitable.'	The interviewee admits to having 'lost a lot of money' by not following his plan, a frequent consequence of behavioral biases. He describes the 'difficulty of cutting his losses' and 'admitting he was wrong', leading to increased losses. He mentions the fear that leads to 'selling too early' on winning assets.
	Code 2: The difficulty of 'cutting your losses'	<p>'But sometimes I didn't stick to the plan, which led me to lose a lot of money on that plan. And I stuck to it.'</p> <p>'The main danger is the emotional side. For example, when you lose, you want to make it up. It's the psychological side.'</p> <p>'We didn't want to cut our losses, we didn't want to admit we were wrong. And in the end, it was worse. It kept going down, and in the end, we made big losses.'</p>	
	Code 3: The tendency to take profits and fear of a correction	"When you make a profit, you fear that the market is going to turn, so you sell too early and let the profit escape".	

Student I.4.			
Theme	Codes	Statements	Descriptive Analysis
The rational approach versus the emotional reality of trading	Code 1: The importance of rationality and the impact of psychology	<p>‘It’s not necessarily rational when it comes to the stock market; it’s not logical. So, we can’t really predict stock market movements using rationality alone.’</p> <p>‘We are somewhat forced to rely on psychology to predict or know whether it will go up or down.’</p>	The interviewee explicitly expresses both sides of the disposition effect: the tendency to hold on to losing positions in the hope of recovery, and hesitation in the face of gains, leading to “contemplating” selling too early.
	Code 2: Loss aversion and hope for recovery	<p>“When you’re in the red, you tell yourself, ‘Ah, things will improve. It’s just the little mistakes we’ve made.’</p> <p>‘It’s the second time we’ve done it, and we realized we made the same mistakes. The first time, we were frustrated. The second time, we were even more frustrated.”</p>	
	Code 3: Managing gains and caution in the face of the unknown	<p>“But when you’re in the green, you hesitate between saying to yourself, ‘Should I let it go up even more, or should I cut now, even if it’s not much, and take the gain? That’s mainly the emotional side of it.’ (temptation to “cut” the gain, even if it is ‘small’, in order to secure it).</p>	

Student I.5.			
Theme	Codes	Statements	Descriptive Analysis
The effect of performance and duration on motivation and trading strategy	Code 1: The impact of gains and losses on motivation and emotional state	<p>“When things were moving on the stock market, we motivated each other. It’s the second day, I have to go up at the end of the day, or at the end of the hour, you see, it’s a bit like that.”</p> <p>“I say to myself, there’s nothing you can do now, because it’s the last day, and you’ve seen the stock market, there’s not going to be a miracle. You try to find a strategy, we tried in the morning, I don’t think it’s the only one, we were all discouraged, demotivated, because nothing was happening.”</p>	<p>The clearest expression of the disposition effect is found in the retention of losing positions, with the persistent hope for a “miracle” or a rebound. Regarding gains, the interview is less explicit about the “premature selling” of winning positions.</p>
	Code 2: Staying strong while waiting for things to get better	<p>“We say to ourselves, we’ve lost money, but we don’t know, things could get better, there could be a miracle.”</p> <p>“You have to keep that attitude and not think of it as a loss.”</p>	
	Code 3: The lack of a clearly defined strategy for gains and the temptation to take no action	<p>“I say to myself, there’s nothing you can do now because it’s the last day and you’ve seen the stock market – there won’t be any miracles.”</p> <p>“Nothing was happening. So we realized that there was nothing else we could</p>	

		do. Now it's in the rankings.”	
Student I.6.			
Theme	Codes	Statements	Descriptive Analysis
The influence of fear and hope on investment decisions	Code 1: The influence of emotions on investment decisions	<p>‘We had a liquidity problem, so we put all our money into a stock that we believed in, that we really thought was going to go up, but in the end, it did the opposite. And we were really scared.’</p> <p>‘I think we really felt the risk and the fear.’</p>	The interview reveals the impact of emotions such as fear and hope on trading decisions. The disposition effect is particularly evident in loss management: the interviewee admits to “hoping that things will change” even in the face of losses, illustrating loss aversion and the difficulty of “cutting” negative positions. Regarding gains, the statement “there were only micro-gains, so there was no point in holding on” may indicate a tendency not to hold positions if the gains are not substantial.
	Code 2: Holding on to losing positions and hoping for a turnaround	<p>‘We put all our money into a stock that we believed in, that we really thought was going to go up, but in the end, it did the opposite.’</p> <p>‘At that point, I was actually down 3%, which was impossible. But up until then, you say to yourself, come on, I believe in it, I hope things will change. When there's a small gap, like 1% or 1.5%, I said to myself that with a lot of luck, it could go through.</p>	

	Code 3: Managing gains and being cautious	“At first, I thought I would diversify a lot. I would have bought 7 or 9, I think I would have bought 9, in 3 different pieces. And then, there were only micro-gains, so there was no point in keeping them.’ (The diversification strategy coupled with the frustration of ‘micro-gains’ can result in cautious management of winning positions, where positions are not waiting for higher price movements).	
Student I.7.			
Theme	Codes	Statements	Descriptive Analysis
The balance between risk aversion and risk appetite in trading	Code 1: Understanding the importance of taking risks to increase earnings	‘I feel like I’m contradicting myself a bit here because I don’t necessarily like taking risks, but I know that taking risks will give me something in return that will be beneficial for me in any case.’ ‘In some cases, it’s always beneficial.’	The interview highlights an investor personality that, while recognizing the potential benefits of risk-taking, is strongly influenced by an emotional aversion to loss. The disposition effect is mainly suggested by the emotional charge associated with losses. With regard to gains, general caution and the desire to ‘limit risk-taking’ suggest a tendency to secure profits.
	Code 2: Difficulty managing losses and the emotional impact of declines	“The moment that made the biggest impression on me was that the first three days, it was falling a lot.” (The significant impact of the declines suggests a negative emotional charge	

		<p>associated with the losses).</p> <p>‘Losing a lot stresses me out a bit. I don’t really like losing money.’</p> <p>‘And then, what’s quite disturbing is that it can go in the opposite direction to what you expected.’ (Disturbance in the face of an unexpected negative scenario could encourage inaction).</p>	
	Code 3: Caution regarding gains and risk limitation	<p>“I was determined to take at least a minimum level of risk.” (This statement indicates a preference for a cautious approach, which may translate into securing gains).</p> <p>“When we managed to get back on track a little, we said to ourselves, ‘OK, we’re here.’ And just staying in the race is motivation in itself.”</p>	
Student I.8.			
Theme	Codes	Statements	Descriptive Analysis
Learning from failure and dealing with frustration over market movements	Code 1: Feelings of incompetence and frustration in a bear market	‘Right from the start, I quickly felt, how can I put it, not up to the task. I felt left behind by the others because they had already taken part in stock market competitions or were trading on their own, so they were talking about things, but I thought to myself, we didn’t have the same	The interview reveals an individual who has had a trading experience dominated by feelings of incompetence and deep frustration with a bear market. The disposition effect is strongly suggested by the difficulty in dealing with losses, leading to a period of

		<p>lessons, it's not possible.'</p> <p>'And the frustration was that nothing was happening, or things were going down.'</p>	<p>waiting passively and ultimately to a 'feeling of complete abandonment' when the losses became irrecoverable.</p>
	<p>Code 2: Persistence when facing losses and feelings of abandonment</p>	<p>"And the frustrating thing was that nothing was happening, or things were getting worse." (Inaction due to a decline is a sign that losing positions are holding on, hoping for a turnaround).</p> <p>"A feeling of complete abandonment."</p> <p>"When the US market was about to open, I thought maybe there would be some movement, so I watched, but nothing good ever happened."</p>	
	<p>Code 3: Lack of strategy when faced with gains or profit opportunities</p>	<p>'I found a book written by a psychiatrist and started reading it. I didn't get very far, but it dealt with trading and emotion management.' (This search for information on emotion management may indicate that losses and frustration were the main concerns).</p>	

ANALYSIS OF RESULTS

The primary issue that emerged from the analysis was the investors' emotional and behavioral responses to portfolio financial fluctuations. Participants recognized the significant influence of emotions and psychological factors on investment decisions and on performance. One participant expressed it: *'I think it's definitely a big influence of emotions or at least psychological and behavioral factors.'* This influence is perceived as potentially crucial to performance: *"That may also be what determines whether we make gains or losses; it's really psychology, the way you see things."* Emotion management is explicitly identified as a *"major danger"*.

This emotional influence is clearly evident in the disposition effect. Analysis of the interviews reveals the two sides of this bias:

- Difficulty in managing losses (expression of loss aversion): the interviews reveal a strong reluctance to sell a loss-making investment. Losses generate intense negative emotions: *"It stresses me out a bit. I don't really like losing money"*, *"we were frustrated"*, *"quite upsetting"*. Facing a losing position, investors hold on to it in the hope that it will rebound or even that a 'miracle' will happen. It is the belief that *'it could go back up'* that keeps them going. One participant expressed it very clearly: *"I kept it anyway. I told myself there had to be a rebound coming."* Another said: *"The first mistake was cutting my losses too late. And then waiting. Waiting for it to go back up, and it didn't, and it went down even further."* This expectation is part of the "psychological side" and is reinforced by the difficulty of accepting the loss and *"admitting that you were wrong"*. As one interviewee put it: *"We didn't want to cut our losses, we didn't want to admit that we were wrong. And in the end, it did the opposite. It kept going down, and then in the end, we made big losses."* This behavior often makes people not do anything and, a lot of the time, makes the losses worse or even, when the losses get too big, makes them feel like they have *'given up completely'*. The emotional desire to *"make up"* for losses is a driving force behind not selling. Even with small losses, hope remains: *"I believe in it, I hope it will change. When there's a small difference, like 1%, 1.5%, I told myself that with a lot of luck, it might work out"*.
- The manifestation of the desire to take profits: the other side of the disposition effect is the tendency to sell winning positions quickly in order to *"secure profits"* or *"take gains immediately"*. This behavior is often explained by the fear that the market could turn, and the gains disappear: *"When you're winning, you're afraid that the market will turn, so you sell too early"*. This fear creates hesitation about winning positions: *"Should I let it go up even more, or should I cut now?"*. Influenced by the "emotional side", the hesitation often pushes them to choose safety and cut their gains too early, sometimes even if they are small: *"even if it's not much, I'll take the gain"*, or when faced with *"micro-gains"* that they feel *"there's no point in keeping"*. Emotional aversion to risk can encourage traders to quickly secure profits. The analysis shows that, even if some interviews are less explicit about the sale of highly profitable positions at an early stage, the tendency to quickly secure small gains or the hesitation to pursue further gains suggesting this pattern.

CONCLUSION

Our qualitative study, employing an inductive methodological perspective, which is relatively recent in the finance field (where quantitative perspectives are the most prevalent), aimed to investigate the influence of emotions and behavioral biases on trading decisions, with a focus on the disposition effect. In contrast to quantitative methods, our qualitative perspective provided a detailed understanding based on the participants lived through experience.

The experimental protocol involved eight management science students. These participants managed a virtual portfolio of € 100,000 on the ABC Bourse platform, trading CAC 40 shares for three consecutive days in January 2025. Access to peer performance and a "non-monetary" performance-based incentive were designed to simulate pressure and reinforce commitment, despite the fact that participants were not financial personally involved.

The market context during the experiment was influenced by a slight downward trend in the CAC 40 index. Although the decline was small in terms of index fluctuations, it was perceived negatively by participants, resulting in frustration and demotivation.

Semi-structured individual interviews were conducted immediately after the simulation and analyzed thematically. They revealed important behavioral and emotional patterns. Analysis of the interviews shows that the disposition effect was clearly present among participants. The most obvious aspect was how hard it was to *"cut their losses,"* which is a direct result of loss aversion. Participants expressed reluctance to sell

shares whose value was falling, preferring to hold on to them in the hope of a rebound. The comments illustrate this expectation of a “*miracle*”, refusal to accept the loss (“*You have to have that perspective of not saying to yourself it’s a loss*”) and a feeling of not wanting to “*admit you were wrong*”. This persistent refusal to accept losses, even when the market continues to fall, can lead to a feeling of abandonment when the situation becomes irreversible. The emotional impact of declines and losses is widely highlighted.

Regarding the inclination to quickly ‘*take profits*,’ although described less directly than holding on to losing positions, the quick satisfaction related to gains and the fear of a market reversal encourage traders to sell winning positions quickly to “secure” gains, even if they are small (“*micro-gains*”). This caution towards gains and the desire to limit risk-taking suggest a tendency to favor immediate safety over potentially larger gains in the future.

More broadly, the interviews underscore the substantial impact of emotions and psychology on trading decisions. Several participants recognize that these factors can be behind ‘*poor performance*’. The tension between the desire to take a rational approach and the emotional reality that undermines this rationality is noticeable. Fear and hope are identified as key drivers influencing investment choices.

This study provides qualitative insight into the emotional and cognitive processes that underlie the disposition effect. It shows that even “investors” with financial training and working in a simulated environment can be strongly affected by some classic behavioral biases. The fact that participants recognized these influences underscores the importance of examining finance from both rational and behavioral perspectives.

AVENUES FOR FURTHER RESEARCH

Extending the Study to a Population of Professional Traders

The current study was conducted among management science students. Although the literature suggests that students may behave similarly to professionals in some situations, it would be worth doing the experiment again or interviewing professional traders. They might have developed different strategies for managing their emotions or a different level of self-discipline because of their experience and the real financial risks involved.

Comparison of Various Market Conditions

The experiment took place in a market with a slight downward trend in the CAC40. This bearish environment particularly highlighted the difficulty of managing losses and frustration. Conducting the same simulation or similar studies during bullish market phases or periods of high volatility would show whether the disposition effect is more prevalent in a market that is rising, and how emotions vary in these different contexts.

Use of Physiological or Eye-Tracking Measures

The study was based on interviews and trading data. To go beyond post-decision self-reports and understand the immediate impact of decisions, it would be possible to incorporate physiological measures or eye-tracking techniques. This would help correlate decisions (e.g., holding a loser, selling a winner) with indicators of stress or emotional excitement, or see if participants spend more time looking at their losing or winning positions.

Analysis of Specific Drivers

Interviews show that fear and hope are key emotions: with regard to losses, the hope for a “rebound” or a ‘miracle’ is a major reason for not selling. Research could specifically investigate which signals reinforce or weaken this hope, and at what point the transition to a feeling of « abandonment » occurs. For the gains, fear that the market will decline is a driver to sell. Research could explore whether the magnitude of gains influences this fear, or if specific market signals are responsible for generating it.

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All participants provided written informed consent prior to participating in the study. Consent was obtained using written documents, in accordance with ethical guidelines for research involving human participants. Although the experiment was conducted on a student population (all students were over 18 years of age), no manipulation was carried out: they remained seated in front of a computer for several hours without any physical interaction with the organizers. Finally, no intrusive technology was used, and no neurophysiological measurement tools were used. For all these reasons, how the experiment was designed does not fall within the scope of the Helsinki guidelines. Helsinki guidelines concern medical research involving human participants, but in our case, this is not medical research but simply using written documents.

REFERENCES

- Abbink, K., & Rockenbach, B. (2006). Option pricing by students and professional traders: A behavioural investigation. *Managerial and Decision Economics*, 27(6), 497–510. <https://doi.org/10.1002/mde.1284>
- Ackert, L.F., Church, B.K., Tompkins, J., & Zhang, P. (2005). What's in a name? An experimental examination of investment behavior. *Review of Finance*, 9(2), 281–304. <https://doi.org/10.1007/s10679-005-7594-2>
- Allain, P. (2013). La prise de décision: Aspects théoriques, neuro-anatomie et évaluation. *Revue de Neuropsychologie*, 5(2), 69–81. <https://doi.org/10.1684/nrp.2013.0257>
- Baker, M., & Wurgler, J. (2007). Investor Sentiment in the Stock Market. *Journal of Economic Perspectives*, 21(2), 129–151. <https://doi.org/10.1257/jep.21.2.129>
- Barber, B.M., & Odean, T. (2001). Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment. *The Quarterly Journal of Economics*, 116(1), 261–292. <https://doi.org/10.1162/003355301556400>
- Barberis, N., & Thaler, R. (2003). A survey of behavioral finance. *Handbook of the Economics of Finance*, 1, 1053–1128. [https://doi.org/10.1016/S1574-0102\(03\)01027-6](https://doi.org/10.1016/S1574-0102(03)01027-6)
- Barberis, N.C. (2013). Thirty Years of Prospect Theory in Economics: A Review and Assessment. *Journal of Economic Perspectives*, 27(1), 173–196. <https://doi.org/10.1257/jep.27.1.173>
- Barrett, L.F., Adolphs, R., Marsella, S., & Pollak, S.D. (2019). Emotional Expressions Reconsidered: Challenges to Inferring Emotion From Human Facial Movements. *Psychological Science in the Public Interest*, 20(1), 1–68. <https://doi.org/10.1177/1529100619832930>
- Bashir, T., Rasheed, S., Raftar, S., Fatima, S., & Maqsood, S. (2013). Impact of behavioral biases on investor decision making: Male vs female. *Journal of Business and Management*, 10(3), 60–68.
- Bastien, S. (2007). Observation participante ou participation observante? Usages et justifications de la notion de participation observante en sciences sociales. *Recherches Qualitatives*, 27(1), 127–140. <https://doi.org/10.7202/1085359ar>
- Ben-David, I., & Hirshleifer, D. (2011). Are investors really reluctant to realize their losses? Trading responses to past returns and the disposition effect. *Review of Financial Studies*, 25(8), 2485–2532. <https://doi.org/10.1093/rfs/hhs077>
- Benomar, I., Ben El Haj, F., & Chelh, S. (2023). An exploration of overconfidence and the disposition effect in the stock market. *International Journal of Financial Studies*, 11(2), 78. <https://doi.org/10.3390/ijfs11020078>
- Biais, B., Hilton, D., Mazurier, K., & Pouget, S. (2005). Judgmental overconfidence, self-monitoring, and trading performance in an experimental financial market. *The Review of Economic Studies*, 72(2), 287–312. <https://doi.org/10.1111/j.1467-937X.2005.00333.x>

- Bingham, A.J. (2023). From data management to actionable findings: A five-phase process of qualitative data analysis. *International Journal of Qualitative Methods*, 22. <https://doi.org/10.1177/16094069231183620>
- Bouattour, M., & Martinez, I. (2019). Efficient market hypothesis: an experimental study with uncertainty and asymmetric information. *Finance Contrôle Stratégie*, (22–4). <https://doi.org/10.4000/fcs.3821>
- Bouteska, A., & Regaieg, B. (2018). Investor characteristics and the effect of disposition bias on the Tunisian stock market. *Borsa Istanbul Review*, 18(4), 282–299. <https://doi.org/10.1016/j.bir.2018.05.004>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research In Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Breiter, H.C., Aharon, I., Kahneman, D., Dale, A., & Shizgal, P. (2001). Functional Imaging of Neural Responses to Expectancy and Experience of Monetary Gains and Losses. *Neuron*, 30, 619–639. [https://doi.org/10.1016/S0896-6273\(01\)00303-8](https://doi.org/10.1016/S0896-6273(01)00303-8)
- Bruguier, A.J., Quartz, S.R., & Bossaerts, P. (2010). Exploring the nature of “trader intuition.” *The Journal of Finance*, 65(5), 1703–1723. <https://doi.org/10.1111/j.1540-6261.2010.01591.x>
- Byrne, D. (2022). A worked example of Braun and Clarke’s approach to reflexive thematic analysis. *Quality & Quantity*, 56(3), 1391–1412. <https://doi.org/10.1007/s11135-021-01182-y>
- Cheng, C.X. (2019). Confirmation Bias in Investments. *International Journal of Economics and Finance*, 11(2), 50–55. <https://doi.org/10.5539/ijef.v11n2p50>
- Cueva, C., & Rustichini, A. (2015). Is financial instability male-driven? Gender and cognitive skills in experimental asset markets. *Journal of Economic Behavior & Organization*, 119, 330–344. <https://doi.org/10.1016/j.jebo.2015.08.014>
- Creswell, J.W., & Poth, C.N. (2016). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.
- Daniel, K., Hirshleifer, D., & Subrahmanyam, A. (1998). Investor Psychology and Security Market Under- and Overreactions. *The Journal of Finance*, 53(6), 1839–1885. Retrieved from <https://www.jstor.org/stable/117455>
- Della Vedova, J., Grant, A., & Westerholm, P.J. (2023). Investor behavior at the 52-week high. *Journal of Financial and Quantitative Analysis*, 58(7), 2852–2889. <https://doi.org/10.1017/S002210902200148X>
- Etchart-Vincent, N. (2006). Expériences de laboratoire en économie et incitations monétaires. *Revue d’économie politique*, 116(3), 383–418. <https://doi.org/10.3917/redp.163.0383>
- Feng, L., & Seasholes, M.S. (2005). Do Investor Sophistication and Trading Experience Eliminate Behavioral Biases in Financial Markets? *Review of Finance*, 9(3), 305–351.
- Fenton-O’Creevy, M., Lins, J.T., Vohra, S., Richards, D.W., Davies, G., & Schaaff, K. (2011). Emotion regulation and trader expertise: Heart rate variability on the trading floor. *Journal of Neuroscience, Psychology, and Economics*, 4(4), 183–193. <https://doi.org/10.1037/a0030364>
- Finet, A., Kristoforidis, K., & Viseur, R. (2021). L’émergence de biais comportementaux en situation de trading: Une étude exploratoire. *Recherches en Sciences de Gestion*, 146(5), 147–182. <https://doi.org/10.3917/resg.146.0147>
- Finet, A., Viseur, R., & Kristoforidis, K. (2022). De la composante genre dans les activités de trading: Une étude exploratoire. *La Revue des Sciences de Gestion*, (1), 43–51.
- Finet, A., Viseur, R., & Kristoforidis, K. (2022). Les instruments de prises de décisions en situation de trading: Une étude exploratoire. *Revue du Financier*, 44(248).
- Finet, A., Laznicka, J. (2025). Addressing Emotional Dysregulation in Experimental Design. *Psychology and Behavioral Sciences*, 14(1), 7–18. <https://doi.org/10.11648/j.pbs.20251401.12>
- Finet, A., Kristoforidis, K., & Laznicka, J. (2025). Emotional Drivers of Financial Decision-Making: Unveiling the Link Between Emotions and Stock Market Behavior (Part 3). *Journal of Next-Generation Research 5.0*, 1(3). <https://doi.org/10.70792/jngr5.0.v1i3.116>

- Finet, A., Kristoforidis, K., & Laznicka, J. (2025). Emotional Drivers of Financial Decision-Making: Unveiling the Link between Emotions and Stock Market Behavior (Part 2). *Journal of Next-Generation Research* 5.0, 1(3). <https://doi.org/10.70792/jngr5.0.v1i3.114>
- Finet, A., Laznicka, J., & Palumbo, H. (2025). Qualitative analysis of the influence of biases and emotions on decision-making in stock markets: the case of individual investors. *International Journal of Research in Business and Social Science* (2147- 4478), 14(3), 151–163. <https://doi.org/10.20525/ijrbs.v14i3.3992>
- Firestone, W.A. (1993). Alternative arguments for generalizing from qualitative research. *Educational Researcher*, 22(4), 16–23. <https://doi.org/10.3102/0013189X022004016>
- Floyd, E., & List, J.A. (2016). Using field experiments in accounting and finance. *Journal of Accounting Research*, 54(2), 437–475. <https://doi.org/10.1111/1475-679X.12113>
- Fréchette, G.R. (2011). *Laboratory experiments: Professionals versus students*. Available at SSRN 1939219.
- Frydman, C., Barberis, N., Camerer, C., Bossaerts, P., & Rangel, A. (2011). *Using neural data to test a theory of investor behavior: An application to realization utility*. SSRN Working Paper No. 1892338. University of Southern California; Yale University; California Institute of Technology. Retrieved from <https://www.ssrn.com/abstract=1892338>
- Gabbi, G., & Zanotti, G. (2019). Sex & the City: Are financial decisions driven by emotions? *Journal of Behavioral and Experimental Finance*, 21, 50–57. <https://doi.org/10.1016/j.jbef.2018.10.005>
- Gervais, S., & Odean, T. (2001). Learning to Be Overconfident. *The Review of Financial Studies*, 14(1), 1–27. <https://doi.org/10.1093/rfs/14.1.1>
- Gross, J.J. (2015). Emotion regulation: Current status and future prospects. *Psychological Inquiry*, 26(1), 1–19. <https://doi.org/10.1080/1047840X.2014.940781>
- Hanke, M., Huber, J., Kirchler, M., & Sutter, M. (2010). The economic consequences of a Tobin tax—an experimental analysis. *Journal of Economic Behavior & Organization*, 74(1–2), 58–71. <https://doi.org/10.1016/j.jebo.2010.02.004>
- Harmon-Jones, C., Bastian, B., & Harmon-Jones, E. (2016). The discrete emotions questionnaire: A new tool for measuring state self-reported emotions. *PloS One*, 11(8). <https://doi.org/10.1371/journal.pone.0159915>
- Hoffmann, A.O., Post, T., & Pennings, J.M. (2015). How investor perceptions drive actual trading and risk-taking behavior. *Journal of Behavioral Finance*, 16(1), 94–103. <https://doi.org/10.1080/15427560.2015.1000332>
- Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision Under Risk. *Econometrica*, 47(2), 263–292. https://doi.org/10.1142/9789814417358_0006
- Kallio, H., Pietilä, A.M., Johnson, M., & Kangasniemi, M. (2016). Systematic methodological review: Developing a framework for a qualitative semi-structured interview guide. *Journal of Advanced Nursing*, 72(11), 2954–2968. <https://doi.org/10.1111/jan.13031>
- Kirchler, M. (2009). Underreaction to fundamental information and asymmetry in mispricing between bullish and bearish markets. An experimental study. *Journal of Economic Dynamics and Control*, 33(2), 491–506. <https://doi.org/10.1016/j.jedc.2008.08.002>
- Kuppens, P., & Verduyn, P. (2017). Emotion dynamics. *Current Opinion in Psychology*, 17, 22–26. <https://doi.org/10.1016/j.copsyc.2017.06.004>
- Lerner, J.S., Li, Y., Valdesolo, C.P., & Kassam, L.S. (2015). Emotion and decision making. *Annual Review of Psychology*, 66, 799–823. <https://doi.org/10.1146/annurev-psych-010213-115043>
- Lo, A.W., Repin, D.V., & Steenbarger, B.N. (2005). Fear and greed in financial markets: A clinical study of day-traders. *American Economic Review*, 95(2), 352–359. <https://doi.org/10.1257/000282805774670095>
- Loomes, G., & Sugden, R. (1982). Regret Theory: An Alternative Theory of Rational Choice Under Uncertainty. *The Economic Journal*, 92(368), 805–824. <https://doi.org/10.2307/2232669>
- Maxwell, J.A. (1992). Understanding and validity in qualitative research. *Harvard Educational Review*, 62(3), 279–300. <https://doi.org/10.17763/haer.62.3.8323320856251826>

- Moutier, S (2015). Le rôle des émotions dans les jeux de hasard et d'argent. Développement typique et atypique des capacités de prise de décision. *Psychotropes*, 21(2), 9–21.
<https://doi.org/10.3917/psyt.212.0009>
- Muermann, A., & Volkman, J.M. (2006). *Regret, Pride, and the Disposition Effect*. SSRN Working Paper No. 930675. The Wharton School, University of Pennsylvania. Retrieved from
<https://www.ssrn.com/abstract=930675>
- Nowell, L.S., Norris, J.M., White, D.E., & Moules, N.J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, 16(1), 1–13.
<https://doi.org/10.1177/1609406917733847>
- Oehler, A., Wendt, S., Wedlich, F., & Horn, M. (2018). Investors' personality influences investment decisions: Experimental evidence on extraversion and neuroticism. *Journal of Behavioral Finance*, 19(1), 30–48. <https://doi.org/10.1080/15427560.2017.1366495>
- Özden, M. (2024). Content and thematic analysis techniques in qualitative research: Purpose, process and features. *Qualitative Inquiry in Education: Theory & Practice*, 2(1), 64–81.
<https://doi.org/10.59455/qietp.20>
- Porter, D.P., & Smith, V.L. (2003). Stock market bubbles in the laboratory. *The Journal of Behavioral Finance*, 4(1), 7–20. https://doi.org/10.1207/S15427579JPFM0401_03
- Rossignol, M., Anselme, C., Vermeulen, N., Philippot, P., & Campanella, S. (2007). Categorical perception of anger and disgust facial expression is affected by non-clinical social anxiety: An ERP study. *Brain Research*, 1132, 166–176. <https://doi.org/10.1016/j.brainres.2006.11.036>
- She, S., Eimontaite, I., Zhang, D., & Sun, Y. (2017). Fear, anger, and risk preference reversals: An experimental study on a Chinese sample. *Frontiers in Psychology*, 8, 1371.
<https://doi.org/10.3389/fpsyg.2017.01371>
- Shefrin, H., & Statman, M. (1985). The disposition to sell winners too early and ride losers too long: Theory and evidence. *The Journal of Finance*, 40(3), 777–790. Retrieved from
<https://www.jstor.org/stable/2327802>
- Sokolowska, J., & Makowiec, P. (2017). Risk preferences of individual investors: The role of dispositional tendencies and market trends. *Journal of Behavioral and Experimental Economics*, 71, 67–78. <https://doi.org/10.1016/j.socec.2017.09.003>
- Tom, S.M., Fox, C.R., Trepel, C., & Poldrack, R.A. (2007). The neural basis of loss aversion in decision-making under risk. *Science*, 315(5811), 515–518. DOI: 10.1126/science.1134239
- Vaismoradi, M., Turunen, H., & Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing & Health Sciences*, 15(3), 398–404.
<https://doi.org/10.1111/nhs.12048>
- Valcanover, V.M., Sonza, I.B., & Silva, W.V.da. (2020). Behavioral Finance Experiments: A Recent Systematic Literature Review. *SAGE Open*, 10(4), 1–16.
<https://doi.org/10.1177/2158244020969672>
- Weber, M., & Camerer, C.F. (1998). The disposition effect in securities trading: An experimental analysis. *Journal of Economic Behavior & Organization*, 33, 167–184
- Whiting, L.S. (2008). Semi-structured interviews: Guidance for novice researchers. *Nursing & Health Sciences*, 10(1), 42–49. [https://doi.org/10.1016/S0167-2681\(97\)00089-9](https://doi.org/10.1016/S0167-2681(97)00089-9)
- Widyarini, I. (2017). The role of negative moral emotions (anger and disgust) in ethical decision-making. *8th International Conference of Asian Association of Indigenous and Cultural Psychology (ICAAIP 2017)*, 244–250. Atlantis Press. <https://doi.org/10.2991/icaaip-17.2018.57>
- Xu, R., Liu, Y., Hu, N., & Guo, J.M. (2022). What drives individual investors in the bear market? *The British Accounting Review*, 54(6). <https://doi.org/10.1016/j.bar.2022.101113>