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A Multi-Faceted Force: The Systematic Influence of Emotion on Investor Behavior

Introduction

While traditional economic theories are predicated on the assumption of rational, utility-maximizing tools, the genre of behavioral finance suggests that psychological factors are significant determinants of financial behavior. Within this idea, the role of emotion has emerged as an important area of question, portraying that affective states can alter an investor's beliefs, preferences, and ultimately their choices. However, a persistent challenge in the literature has been a lack of conceptual precision based on the nature of these emotional influences.

Addressing this ambiguity, Duxbury et al. (2020) propose an analytical framework that classifies emotion-related phenomena. This framework distinguishes incidental emotions, such as a background mood state unrelated to the task at hand, with integral emotions, which are elicited directly by the financial decision itself. A further distinction is made between anticipatory emotions, defined as generalized feelings of hope or fear about future market conditions, and anticipated emotions, which are the cognitive representations of specific feelings like satisfaction or disappointment expected upon the realization of a gain or loss respectively. Using this conceptual lens, it is important to synthesize findings from recent experimental and neuroeconomic literature to explain how these various emotional states influence investor behavior.

The Direct Modulation of Risk Preference and Confidence by Affective States

A prominent piece of evidence illustrates that an investor's immediate affective state functions as a direct indicator of their risk preferences. The neuroeconomic research of Kuhnen and Knutson (2011) provides a compelling foundation for this phenomenon, demonstrating that external induced emotions activate specific neural circuits responsible for processing rewards and punishments. Their work links positive, high-arousal emotions, such as excitement, to increased activation in the nucleus accumbens, a region that is critical for motivating approach behavior, while negative, high-arousal emotions, like anxiety, are associated with the anterior insula, a structure implicated in the avoidance of aversive cues (Kuhnen and Knutson 2011: 606).

Experimentally, this translates into a tangible impact on behavior: subjects exposed to negative affective cues were significantly less likely to choose a risky asset compared to those exposed to neutral or positive cues (Kuhnen and Knutson 2011: 611, 613). Critically speaking, their analysis reveals that this influence persists even after controlling for the subjects' explicitly stated beliefs about the investment's probabilities; this leads to the inference that affect directly alters risk preferences independent of cognitive assessment (Kuhnen and Knutson 2011: 613). This experimental finding is strongly verified by research on stable personality traits; Verma and Khanna (2024), in a large-scale survey of retail investors, found that "Emotional Instability"—a construct analogous to neuroticism—was a significant negative predictor of Financial Risk Tolerance, with emotionally unstable individuals having 45.5% lower odds of possessing high risk tolerance (Verma and Khanna 2024: 340). Affect's influence, however, extends beyond risk preference to an investor's self-perception. Positive affect has been shown to inflate an individual's confidence in their own analytical abilities, a finding observed by Kuhnen and

Knutson (2011) when externally induced excitement led subjects to report significantly higher confidence in their probability estimates, irrespective of their objective accuracy (Kuhnen and Knutson 2011: 621).

The Biasing of Beliefs and the Corruption of Cognitive Processes

Beyond the direct module of risk preference, a more subtle channel of emotional influence operates at the level of an investor's cognitive structure, compromising the integrity of belief formation and learning. Rational agent models imply that individuals update their beliefs in accordance with Bayes' rule, a type of objective process. However, the work of Kuhnen and Knutson (2011) reveals that cognitive processes are often subjected to vital affectives. They document a powerful idea of strategic belief formation, which is a form of motivated reasoning whereby individuals subconsciously adjust their beliefs to cohere with past actions, thereby avoiding the negative affect associated with cognitive dissonance (Kuhnen and Knutson 2011: 617). In their experiment, after a subject committed to an investment choice for a given trial, their subjective probability estimate of the stock's underlying quality was biased by that choice; investors who had just selected the stock reported a belief that it was the "good stock" that was approximately 10 percentage points higher than those who had chosen the bond, an effect that held even after controlling for the subject's own prior belief from the end of the previous trial (Kuhnen and Knutson 2011: 617). The very act of choosing, therefore, contaminated the subsequent belief.

This affective need for self-validation results in a type of learning process, where the assimilation of new information is not impartial, but is instead based upon its similarities with one's prior commitments. Kuhnen and Knutson (2011) provide a granular analysis of this idea, noting a “novel asymmetry”: "stock holders especially ignore news about low dividends, and bond holders especially ignore news about high dividends" (Kuhnen and Knutson 2011: 619). This is not conservatism, but a strategic filtering of contradicting evidence. Quantitatively, the absolute error in probability updating was found to be 3% higher for stock holders when the dividend was low (contradicting their choice) and, conversely, 3% higher for bond holders when the dividend was high (contradicting their choice to be safe) (Kuhnen and Knutson 2011: 619, Table 5). It is a crucial note to distinguish this mechanism from confirmation bias; whereas the latter describes a favorable search for comparable information, the effect documented here involves the biased processing of information that is already presented, representing a more fundamental corruption of the updating faculty itself (Kuhnen and Knutson 2011: 619). Ultimately, this evidence suggests that emotional regulation, rather than objective analysis, often governs how investors interpret market feedback, hindering Bayesian rationality and cementing initial biases.

The Interaction of Incidental Emotions and Cognitive Framing

The established literature on behavioral finance has documented the power of framing effects, a cognitive bias wherein the presentation of logically equivalent choices elicits predictably different risk preferences. However, the influence of such cognitive frameworks is not absolute; rather, it is significantly moderated by the investor's concurrent emotional state. Recent experimental work by Cantarella, Hillenbrand, and Brooks (2023) investigates this interaction

and reveals that secondary emotions can dramatically alter, and in some cases even reverse, the standard effects of framing. Their findings present a significant challenge to simpler, single-factor models of investor behavior.

Counterintuitively, their study found that an incidental state of fear did not necessarily promote risk aversion. While participants induced with fear were expected to make safer choices, they in fact selected a significantly higher proportion of risky investments in gain-framed scenarios compared to participants in the excitement group. This result can be interpreted through the lens of the mood-repair hypothesis, which states that individuals experiencing a negative affective state may engage in risk-seeking behavior when presented with an opportunity for a positive outcome, in an unconscious attempt to improve their emotional state. These behavioral dynamics can also be interpreted through the framework proposed by Duxbury et al. (2020). Within their taxonomy, mood repair and mood maintenance represent distinct manifestations of anticipatory emotions— affective states oriented toward expected future outcomes. By linking these findings to Duxbury's model, it becomes clear that investors' emotional forecasts about future gains or losses play a critical role in shaping how they respond to framing effects.

This behavioral interplay is supported by physiological evidence. Cantarella, Hillenbrand, and Brooks (2023) found that the framing manipulation itself evoked a tangible, physical response, a finding consistent with the Somatic Marker Hypothesis. Independently of the emotion induction group, participants exhibited a significantly higher Skin Conductance Response (SCR)—a physiological marker of stress and arousal—when presented with scenarios in the "loss" frame compared to the "control" frame. This idea indicates that the cognitive frame of a potential loss

triggers a subconscious "warning" signal in the body. The evidence, therefore, suggests that financial decisions emerge from a connection between cognitive framing and incidental affect, where the latter can fundamentally redirect the behavioral outcomes predicted by the former.

The Foundational Role of Stable Personality Dispositions in Financial Risk Tolerance

Before the influence of any temporary situational factor, an individual's financial risk tolerance is fundamentally anchored by a set of stable, dispositional traits that establish a baseline tendency for risk-taking, anchored by a set of stable, dispositional traits that establish a baseline propensity for risk-taking. The research of Verma and Khanna (2024) provides a model of these foundational traits, conveying that inherent personality structure is a significant determinant of an investor's financial making. Their analysis identifies "Emotional Instability"—a construct synonymous with the neuroticism domain of the Big Five personality model—as a highly significant negative predictor of Financial Risk Tolerance (FRT). This trait is characterized by a tendency to be "moody, anxious, prone to depression, and tense". The theoretical link to risk aversion is clear: individuals high in FRT often experienced heightened anxiety when confronted with situations of uncertainty, leading them to actively avoid such situations. Verma and Khanna's (2024) findings quantify this relationship precisely: emotionally unstable investors possess roughly 45.5% lower odds of exhibiting high risk tolerance compared to their emotionally stable counterparts, a finding that aligns with a broader literature confirming the negative correlation between neuroticism and financial risk-taking.

Significantly, their study contributes a novel and previously underexplored variable to the literature: Social Value Orientation (SVO), which captures an individual's inherent preference for allocating resources between themselves (“pro-self”) and others (“pro-social”). Their findings challenge a simplistic view of self-interest in financial markets, revealing that investors with a "pro-self" orientation ironically exhibit lower risk tolerance than those with a "pro-social" orientation. Pro-self individuals were found to have 39.7% lower odds of possessing a high FRT. The authors theorize that pro-social individuals, who prioritize collective well-being, may come to "view risks as less daunting" and are therefore more inclined to accept greater uncertainty. This suggests that a valuation system extending beyond individual utility may foster a different, potentially more resilient, psychological relationship with financial risk.

These deep-seated psychological characteristics, along with established demographic predictors such as gender and marital status—which Verma and Khanna (2024) also confirmed as significant predictors of FRT—create a foundational layer of an investor's profile. This baseline profile creates an underlying predisposition that informs, but is not solely determinative of, their ultimate financial behavior in dynamic market environments.

Conclusion

The evidence synthesized demonstrates that emotional influence on financial decision-making is a prevalent, multi-faceted phenomenon, extending far beyond mere irrational noise. This analysis supports a model where an affect operates through several distinct, yet interconnected, processes. The process begins with stable personality dispositions, such as Emotional Instability and Social

Value Orientation, which establish a foundational baseline for an individual's financial risk tolerance . Upon this foundation, dynamic, in-the-moment affective states directly portray an investor's risk preferences and confidence levels, often independent of their cognitive assessments.

Emotion systematically corrupts cognitive processes; the affective imperative to maintain a positive self-regard leads to strategic belief formation and asymmetric learning, whereby investors subconsciously filter market feedback to coincide with their prior actions. Finally, the complexity of this psychological landscape is underscored by the finding that incidental emotions can fundamentally alter the expression of well-known cognitive biases like framing, with fear paradoxically inducing risk-seeking behavior and excitement promoting conservatism under specific conditions .

The implications of these findings are substantial. They challenge the acceptability of purely rationalist models of financial markets while underscoring the need to integrate psychologically grounded variables to achieve a more accurate understanding of investor behavior. For practitioners and individual investors, the critical importance of emotional awareness and regulation as core competencies for sound financial stewardship should be noted. While the experimental nature of much of this evidence entails caution when generalizing to real-world markets, the consistency of the findings points toward a clear direction for future research. Further investigation is needed to explore these dynamics among professional traders, across different market conditions, and to continue refining the conceptual frameworks, such as the one proposed by Duxbury et al. (2020), that allow for a more precise analysis of specific emotional

states . Ultimately, the evidence compels a shift in perspective: to understand the market, one must understand not only its numbers, but also the complex and systematic influence of the human heart.

Works Cited

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