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The Psychological Finance of the Bitcoin Explosion — A Study of Anchoring Effect and Loss Aversion

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Abstract: Since Trump took office, cryptocurrencies have received widespread attention. The Bitcoin market has witnessed a brief bull market, fluctuating within the range of $95,000 to $110,000, with investors' enthusiasm for investment remaining high. On February 22, 2025, the Bitcoin market witnessed a sharp decline, triggering a large number of margin calls. It was later revealed that this plunge was initially triggered by panic selling due to a wave of Bitcoin thefts. However, the theft of Bitcoin cannot be regarded as the main reason for this sharp drop. Traders are also a factor, especially their psychological fluctuations and irrational behaviors before and after margin calls. By studying the original articles in psychological finance, behavioral finance and neuroscience, combined with the specific manifestations of the anchoring effect and loss aversion psychology of Bitcoin market traders, this paper explores how traders' excessive reliance on anchor points and loss aversion lead to irrational behaviors and adverse trading outcomes, with the aim of reducing cognitive biases and improving decision-making for market traders under uncertainty. This study reveals that anchoring effect and loss aversion significantly affect the decision-making process of Bitcoin traders. Understanding these psychological factors can help traders manage risks more effectively and make more rational investment choices.

Keywords: Bitcoin market, psychological finance, behavioral finance, anchoring effect, loss aversion

1. Introduction

The contract trading in the Bitcoin market is characterized by sharp fluctuations, high risks and high returns, 24-hour unlimited-time trading, and is targeted at global investors [1]. Therefore, short-term trading is the main form. Since Trump was elected president of the United States, the popularity of virtual currencies has been on the rise [2]. Although traders are well aware of the potential risks of their transactions, the short-term high returns still attract many traders to participate. On February 22, 2025, the Bitcoin market crashed due to a Bitcoin theft case, dropping by 2.42%, with a total of 170,000 people worldwide closing their positions.

On the eve of the sharp decline, the positive news about Bitcoin emerged as an anchor point in the latent psychology of traders, affecting their rational judgment and causing them to lose their risk management ability. After the sharp decline, panic selling was caused by loss aversion, leading to a further drop in the price of Bitcoin. Meanwhile, some firm bull forces were reluctant to cut their losses and exit the market, which further promoted the decline in the price of Bitcoin. The final result was that it caused huge losses to the traders.

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This article focuses on the anchoring effect and loss aversion as the research points, analyzing and pointing out the influence of traders' psychological factors on crashes and personal losses. Through the analysis conclusion of this article, traders can clearly understand the influence of psychological factors on trading, always maintain the ability to control risks, make rational decisions as much as possible and reduce losses, so that the market can have a more scientific trend as much as possible and ensure fair trading.

2. Anchoring effect

2.1. Theoretical background

Different starting points yield different estimates, which are biased toward the initial values. This phenomenon can be called the anchoring effect. In other words, when people make an estimate or decision, they will be affected by the initial information (anchor point) and then bias the subsequent judgment. The process of analyzing the psychological changes of traders is relatively clear. First, the anchor point is clearly defined, and then the specific role of the anchor point is analyzed. The anchoring effect is heuristically driven. People rely extensively on cognitive pathways, and when they encounter complex problems, they will over-rely on the initial information, that is, the anchor point, while ignoring other equally important reference factors and failing to carry out a relatively comprehensive reference.

The research shows that whether the anchoring effect works is closely related to whether traders pay attention to the anchor point [3]. The experimental data further shows that when participants pay attention to the anchor point for only 15 milliseconds, the anchor point does not work When the attention time reaches 75 ms, the anchor point effect will play a large probability [4]. It seems that the attention time of the anchor point is very short, and it is not meaningful, and most people must be more than 15 milliseconds when thinking about the relevant information, but the degree of preference of each trader for the relevant information is also an important reference factor for the effectiveness of the anchoring effect [5]. Therefore, whether it is in the Bitcoin market or in the stock, futures, foreign exchange and other trading markets other than Bitcoin, traders regard information as the anchor criteria are different, and the search for anchor points is also full of uncertainty, so it is necessary to choose universal news as the anchor point. The research shows that the generation of anchoring effect requires the same synergistic effect of digital information and text information, and the probability of anchoring effect is very small when one of the two appears alone. However, when both occur at the same time, traders are very susceptible to the interference of the anchoring effect. In the trading market, technical and fundamental news are undoubtedly the most common news that traders come into contact with, and traders generally make trading choices according to the information provided by them. At the same time, the technical surface can provide digital information, and the fundamentals provide text information, which is highly likely to stimulate the anchoring effect after traders get the information.

Finally, a conclusion is drawn on how the anchoring effect contributed to the occurrence by combining the traders' psychological shifts.

2.2. Case analysis

Before the crash, Bitcoin's price had been hovering at a high level, ranging from 92,000 to 120,000 US dollars, for about three months. During this period, the trading volume and the Moving Average Convergence Divergence (MACD) indicator both suggested that Bitcoin was still on a strong upward trajectory. Due to the existence of this anchor point, traders have the illusion that the price will continue to rise, thus trapping them in the trap of overconfidence

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Another anchor point, this time related to fundamentals, was the emergence of numerous positive news stories in the Bitcoin market. For instance, positive information such as the Trump administration's support for Bitcoin as a strategic asset and interest rate cuts has been constantly emerging. These positive developments reinforced the bullish sentiment among traders, creating a favorable illusion that further contributed to their overconfidence.

2.3. Discussion

According to the specific situation of the above two anchor points, how the anchor point effect plays a role in this event is further analyzed. In the lead-up to February 22, Bitcoin experienced significant fluctuations, trading between $92,000 and $120,000. Key positive developments, such as support from the Trump administration and interest rate cuts, served as anchor points for traders. Alongside these events, technical indicators provided crucial data, while favorable news offered contextual insights, both reinforcing the anchoring effect in traders' minds. When the price of bitcoin suddenly dropped, traders struggled to access timely information to understand the reasons behind the decline. In this moment, the anchoring effect came into play, causing traders to make the wrong judgment that the price would rebound. As a result, traders overestimated the future value of Bitcoin and continued to chase higher prices, while underestimating the potential risks. This overconfidence and underestimation of risk ultimately led to the Bitcoin explosion.

3. Loss aversion

3.1. Theoretical background

Loss aversion is a prevalent phenomenon that almost everyone has in mind, even non-traders. Essentially, it reflects a preference for securing gains over avoiding losses, even at the cost of forgoing potentially greater profits. As for loss aversion, there have been no specific studies on the Bitcoin trading market before. This can be concluded from the conclusions of stock market research papers that investors typically exhibit a strong aversion to potential losses, which often leads to irrational trading behaviors.

From the perspective of neuroscience, loss aversion mainly consists of two parts: evaluation bias and response bias [6]. The evaluation bias is mainly related to the reward center of the brain. Research indicates that the P3 brain waves, which are important neural markers for studying loss aversion, exhibit heightened activity when processing losses. This suggests that the brain is more sensitive to losses than to gains.

The response bias is mainly related to the motor cortex of the brain, which affects the decision-making process of traders. When faced with loss, the motor cortex to which the reaction bias belongs will make the brain react more cautiously, leading to hesitation and increased deliberation before making decisions [7].

3.2. Case analysis

The impact of loss aversion on traders is mainly reflected in two time periods: first, during the rapid decline of Bitcoin's price, and second, after this decline when the price has stabilized. The psychology of traders varies slightly between these two periods, warranting separate discussion.

When the price of Bitcoin dropped rapidly on February 22nd, no news came out and traders were completely unaware of the price crash. Some people, affected by the rapid decline in prices, promptly close their positions to stop losses, which exacerbates the price drop. However, others, driven by a sense of loss aversion, are reluctant to close their positions when prices fall, still

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believing that prices will rise to cover losses. As a result, they persist in holding their positions, eventually leading to forced liquidation.

After the price stabilized, it dropped rapidly. Some traders who closed their positions in time and those who blew their positions still held an upward attitude towards the Bitcoin price due to the psychological effect of the anchoring effect mentioned earlier. Meanwhile, traders who have already lost their principal are affected by loss aversion and attempt to cover their principal deficits by choosing to purchase Bitcoin. These traders eventually suffered further personal losses due to irrational behavior.

3.3. Discussion

Writing in their paper in the Journal of risk and Uncertainty, Professors Schmidt and Traub cast doubt on the traditional theory of loss aversion, which resists description through mathematical models and equations [8]. Their findings highlight that loss aversion is highly influenced by the way individuals think and act, as demonstrated by the Bitcoin incident. In addition, loss aversion is a continuous effect, which does not affect investors' behavior temporarily, but has a long-term psychological impact on investors, leading investors to make irrational judgments and behaviors. Statistically, most traders who suffer significant losses are those who hold on to their positions when prices fall. These traders are deeply affected by loss aversion. Under the effect of evaluation bias, the impact of losses on their emotions and minds is amplified. The reaction deviation further aggravates the irrational nature of traders, leading some traders to hesitate to miss the opportunity to reduce losses, while the other part of traders made irrational behavior. They are unable to make rational decisions and end up losing not only their initial investment, but any potential gains they might have made.

4. Further discussion

In summary, the research on psychological finance reveals that the anchoring effect and loss aversion significantly influence traders' behaviors in the trading process. It further examines how these biases manifest, their impact on traders, and strategies for navigating market fluctuations [9]. The Bitcoin crash provides a vivid example of how psychological factors such as anchoring effect and loss aversion affect trading behavior. Under the influence of the anchoring effect, Bitcoin market traders are very confident about market trends while ignoring the existence of potential risks. When the price of Bitcoin suddenly drops, loss aversion prevails, leading to irrational and unprofitable trading decisions.

Understanding these psychological factors is crucial for traders. It can help them make more rational decisions and avoid falling into the trap of overconfidence and irrational behavior. By recognizing the impact of the anchoring effect and loss aversion, traders can better manage risks and increase their chances of success in the highly volatile Bitcoin market [10].

5. Conclusion

In this bitcoin crash, only two small theories, anchoring effect and loss aversion, have a great impact on traders' psychology, and the impact of psychonomics on traders runs through the pre- and post-trade. To sum up, from the perspective of neuroscience, this paper explores the anchoring effect and loss aversion, as well as the causes and conditions of their occurrence in neuroscience, thereby drawing relatively general and scientific conclusions. The findings suggest that traders' actions throughout the trading process are greatly influenced by the anchoring effect and loss aversion.

However, there exist some limitations in this paper. It does not spend too much space analyzing these two psychological concepts, such as how the anchoring effect and loss aversion are triggered and affect traders from a medical or neurological perspective. Furthermore, the focus of this study is

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on the impact of traders' psychology on the market and trading behavior in the Bitcoin contract trading market, which is not fully applicable to other trading markets.

With the continuous development of neuroscience and psychology, the occurrence mechanisms of psychological concepts such as anchoring effect and loss aversion will become clearer and more scientific, making up for the existing shortcomings and deficiencies, and making them more universal for all trading markets. At that time, traders in major trading markets will be able to better grasp trading psychology, enhance trading vigilance, and thereby improve the rationality and correctness of trading. Reduce losses.

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