The Consideration of Meme Stock
Case Study of GameStop Saga

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ABSTRACT
The stock price riot of GameStop in the American stock market has aroused widespread concern. In previous years, the company's share price fluctuated between a few dollars and more than a dozen dollars. Some American investors, mainly individual investors, began to rush to buy the company's shares, and the company's stock price rose beyond the fundamentals. As one of meme stocks, through studying the GameStop stock, we found significant problems in the existing stock market supervision. The prevalence of social media in the information era has led to the current supervision system not being able to deal well with unexpected situations like GME events, which is likely to lead to financial risks. This article tries to analyze the investment motivation of retail investors from a Behavioral-Economics perspective. It concludes that resistance and herd effect may be the primary motivation to purchase shares. Social media platforms should unite with regulators to play the role of supervision. Not only do regulators need to supervise the stock market, but social media platforms can also supervise the direction of public opinion at the source.

Keywords: *GameStop, Meme stock, Financial regulation, Behavioral economics*

1. INTRODUCTION

A meme stock is a type of stock that has gained a substantial febrile following online. It can be created through the conversations happening in communities created around a stock on social media platforms. GameStop (GME), as a typical representative of meme stock, has recently attracted extensive attention from investors and the media. In this paper, we question the existing regulatory theory because the GME event is not a case. The competition between such institutions and retail investors is likely to cause a short squeeze, leading to the outbreak of financial risks. It fully exposes the shortcomings of the existing regulatory theory.

Some studies indicated that traditional securities laws have been unable to adapt to the current situations. Expressly, Win, in his research, indicated that 'Reddit users' behavior is suspected of 'open market manipulation', which is a large group of traders unites to cause a vicious rise in stock prices, which is not conducive to market stability and will lead to financial risks [1]. The core purpose of securities law is to protect the interests of investors. Umar et al. employ the wavelet coherence approach to illustrate a strong and positive link between other unrelated securities. Short selling of a stock will lead to a large number of short selling and will cause systemic financial risks [2]. James put forward the sharp fluctuation of prices will naturally cause people's worries about manipulation. Loss-making investors tend to think that the market is "manipulated", even if the losses are due to their own bad trading decisions. They are likely to stop investing. It will cause a chain effect: many investors who stop investing will deprive the company of the capital needed for development, thus damaging the whole economy. The reduction of economic growth reduces employment and tax revenue, thus hurting many people who do not participate in the stock market at all [3].

However, Aloosh et al. found through empirical research in the United States that retail investors can freely obtain complex financial information as never before, and the information efficiency can be improved [4]. Jarrow and Li pointed out that these media traders can restrain the short-selling motives of big traders [5]. Yahya and Chiu put forward the "meme stock paradox", that is, the short-selling squeezing behavior of retail investors will eventually make the company's stock price rise to the original level instead of fall, which will not only constitute fraud but also bring new risks and opportunities [6]. Some scholars have also explained the events of GameStop through noise traders, who are investors who can't get inside information and deal irrationally with noise as information (noise information). De long et al. put forward an iterative model to show that noise traders can get a higher average portfolio return than sophisticated investors. They point out that although noise traders increase the risk of asset returns, they may also be compensated (risk compensation) for taking risks and getting high returns. Noise traders would influence each other's expectations and eventually form herd mentality [7]. Ricci and Sautter review the GameStop saga and analysis the WSB Redditor's development and the influence of generational differences on individual investment trends. They conclude that wireless investors have taken on institutional investors with new media and predict they will apply similar dynamics to engage with the company governance. The individual investment holding method may be changed that retail investors may more likely focus on minimizing negative externalities. New media combines retail investors to have unprecedented power to cause business corporations to serve the interest of people and the planet [8].

Overall, in the existing scholars' research, some scholars conclude the demonstration of investors' behavior and the analysis of establishing mathematical models and think that meme stocks have had an unstable impact on the stock market, and the regulatory reform should be carried out. Other scholars point out that the behavior of retail investors can improve market efficiency through data analysis from the perspective of Fama's efficient market hypothesis. Generally speaking, listed companies disclose financial reports, and investors invest according to the company's fundamentals. However, in the social media environment, users are passive receivers of information and producers and disseminators of information, so information is easier to spread and most likely exaggerated. The financial data disclosed by enterprises is no longer the only information for people to make investment decisions. The interaction and information exchange among social media users weakens the control of enterprises on information production and dissemination, which pushes enterprises to face a brand-new information environment in the social media era. Therefore, from the perspective of supervision, it is not only the supervision of the post-event behavior of regulators but also the participation of social platforms to supervise at the source to prevent extreme crisis events.

GameStop is just one of many meme stocks, similar stocks include AMC, Blackberry, and other stocks, and the trend of meme stocks is still growing and even has entered the future market. The existing research has analyzed meme stocks from various angles, which is convenient for us to examine the influence of meme stocks more comprehensively. However, there are still some shortcomings in the existing research. First, some studies only focus on analyzing meme stocks from the data level and then draw conclusions, without thinking about the nature of this phenomenon from multiple angles; The second is the research involving supervision, which only starts from the level of regulatory agencies, ignoring that social platforms at the source can also act as supervision; The issue of meme stocks involves finance, shareholder behavior, supervision, public social opinion and so on. Therefore, the supervision of meme stocks is an interdisciplinary issue, which requires us to think about and solve problems from multiple angles and in a wide range of fields.

GME event challenges present security regulation laws, our studies by reviewing the existing literature and relevant statutes and regulations to study the causes of formation of GME, what kind of behavioral economic model is reflected, and legal suggestions and behavioral thinking.

2. EVENT DESCRIPTION

GameStop Company was founded in 1984 and experienced many mergers and acquisitions. It was renamed GameStop in 2000 and listed on the New York Stock Exchange in 2002 (stock code GME) and achieved global expansion through mergers and acquisitions. In 2005, GameStop had 7,000 retail chain stores around the world, becoming the world's largest retailer of hard games. In recent years, under the impact of Internet games, The GameStop company operated by the entity has been going downhill, and its share price has dropped from 28 USD/share in 2016 to 2.57 USD/share in April 2020. The shareholders' return has been declining year by year, and it is far lower than the S&P 500 and the industry average in the same period. Due to the ineffective transformation and the impact of the COVID-19 epidemic, there is great uncertainty in the future operation of the company, and some institutional investors are bearish on its future stock price, which makes GameStop company with the highest short-selling position among institutional investors on Wall Street.

However, since August 2020, Ryan Cohen, the founder of Chewy, a pet product e-commerce, believes that after the digital transformation, GameStop can become Amazon in the game industry and be optimistic about the future of GameStop keeps buying the company's stock. Nevertheless, the share price of GameStop only started to exceed $10 in the fourth quarter of 2020.

The fuse of the incident was January 19th, when Citron Research released a short-selling report on

GameStop. Andrew Left, the founder of Citron Research, thought that the share price of GameStop was seriously overvalued and would eventually fall to $20. Then, several hedge funds took part in short-selling GameStop, betting that the stock price would continue to fall. At one time, shares equivalent to 140% of the total share capital of GameStop were shorted.

The short-selling of short-selling institutions caused the dissatisfaction of retail investors, so in a forum software called Reddit, a large number of retail investors joined forces to stop institutions from short-selling through continuous buying. For a time, the stock price was like a roller coaster. On January 28th, the stock price reached the highest point of $480, 190 times higher than the stock's all-time low of 2.57 dollars. Finally, the stock price dropped, the institutions were forced to close their positions, and the retail investors who took over at high points also suffered heavy losses. On that day, the US stock index fell sharply.

Generally speaking, the American people have long hated Wall Street. The fermentation of the GameStop incident made retail investors rise against Wall Street hedge funds for the first time in history and win a complete victory. The US financial system is facing an unprecedented crisis. What the hell is going on? Today, let's talk about the reasons. GameStop is a declining game store. Because more and more people buy games online, Wall Street hedge funds believe that GameStop will follow the footsteps of ToysRus and blockbuster and eventually go bankrupt. So, these hedge funds have long been short-selling GameStop stocks. If stock prices continue to fall, hedge funds will be profitable. If the stock price rises, it will lose money.

But suddenly, GameStop came out with good news one after another, which made retail investors think GameStop might turn the tide. The good news included a 519% increase in sales, Chewy took a stake in the reorganization of GameStop and formed a strategic partnership with Microsoft in the next few years. The largest online platform in the United States, Reddit has a user group of more than 2 million people called Wall Street bets. One user in the group found that institutional investors on Wall Street had sold more stocks than currently on the market, which meant that once the stock price began to rise, the stock would be in short supply.

After the rise of GameStop shares, countless retail investors who bought GameStop became rich overnight. Someone has an extra $1 million in overnight accounts. Michael burry, a short seller in the 2008 subprime mortgage crisis, made 233 million in four months because of GameStop.

3 REASON ANALYSIS

3.1. Social media

With the development of social media, significant changes have taken place in people's investment methods, and their ability and means to obtain information have been continuously enhanced. It is debatable for retail investors to hold a group through social media. Because these retail investors cannot distinguish whether they invest by using correct and valuable information or being misled by 'noise' information. Therefore, the market may be manipulated by people with great power of public opinion in this seemingly legal way. So, we need to consider whether there is someone behind meme stocks who use the power of public opinion to manipulate the stock price, and regulators need to innovate the supervision theory from this situation.

3.2. Resistance psychology

GME event can be considered as a resistance to the information asymmetry between individual investors and institutional investors. Many studies have shown that major investors have informational advantages over typical investors [4]. Short-selling institutional investors have more information and benefit from publishing short-selling announcements to suppress stock prices, while long-term individual investors can only endure losses. The excess short-selling rate allows individual investors and institutional investors to compete. Constantly buying and raising the stock price makes short sellers have to buy stocks to cover short options. If the buying force is strong, short selling can only be purchased at a higher price. This will further increase the stock price and increase the possibility of short-squeeze. In 2019, GameStop began to receive attention on Reddit, including discussions about the short squeeze. This attention is growing throughout 2020. For example, according to reports, in April 2020, GME's 84% short-term interest rate was mentioned on Reddit [9]. In addition, retail investors believe that their cause is just. Even if the stock price rises, many investors still hold their stocks. Even after the price drops (and sometimes sharp drops), many people still refuse to surrender to the decline, which shows a strong and sincere belief in their meme stocks. These investors are trying to teach hedge funds a lesson as if individual investors are collectively punishing short sales. Elon Musk also expressed support for individual investors to join forces against short-selling institutional investors on Twitter.

3.3. Herd mentality

The initial main purpose of gathering individual investors in the forum was to resist the short-selling behavior of institutional investors and gain benefits at the same time. However, with the development of the situation and the rise of the stock price, more and more investors join the trading team for profit, hoping to make profits from the drastic fluctuation of the stock price. The number of stock transactions and the volume of transactions are rising rapidly. By January 27th, the number of individual accounts for trading GME increased from less than 10,000 at the beginning of the month to nearly 900,000, and large positions in these accounts were all retail investors. The purchase of Institutional Investors who have large short interest to cover short options only accounts for small a small part of whole the whole trading volume, so the impact of a short squeeze is relatively small, and the swarm of retail investors is the key driving force behind the soaring stock price [10]. However, the hype and attractive profits of the company on social media have made more and more people buy stocks in the market.

4. CONCLUSION

In mid and late January 2021, GameStop and other individual US stocks staged an incredible roller-coaster market. Prices soared and plummeted (the share price rose 27 times in three weeks, but then fell rapidly, down 90%), fueled by social media, a large influx of retail investors, heavy losses of some hedge funds, heated debates between media people, and fund managers, unexpected restrictions on trading platform Robin Hood and other related events have become the global focus, which has also aroused regulatory and policy concerns. At present, the "noise" on the surface has gradually subsided, but the exposed deep-seated problems are still worth thinking about, and some aftershocks will continue.

This paper reviewed the process of the GME event and concluded from the perspective of supervision and Herd mentality. It is necessary to innovate the theory of stock market supervision to fill the gap of market manipulation supervision under social media. Social media platforms should unite with regulators to prevent excessive public opinion. With the development and progress of information technology, the efficiency of information circulation and use will be greatly increased. Powerful social media is the main platform for meme stock retail investors to communicate, which also affects their investment motivation and investment psychology. Because of the dissatisfactory information asymmetry between retail investors and institutions, and the influence of short-selling investors on retail investors' returns, many retail investors have joined forces to fight back against short-selling forces. Meme stocks bring huge profits and strong social influence, which makes more retail investors and speculators join in, and promotes the stock price growth. Our research provides a useful reference idea for preventing the financial risk caused by public opinion in the stock market in the era of social media prevalence.

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