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Gaming the Stop on GameStop

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In January 2021, something strange happened on Wall Street. Shares of a small bricks-and-mortar retailer, GameStop (GME), exploded in price—increasing over 1700%! Figure 1 plots the miraculous move.



Figure 1: Share prices for GameStop stock from January 31, 2020 through February 5, 2021. Source: Bloomberg.

As a result of this dramatic event, a number of market participants faced some significant issues. It turns out that several hedge funds and other investors had been racing to short-sell the stock. GameStop has struggled in recent years, and its profits have been hit hard by the pandemic. Perhaps the short-sellers all thought that the pandemic would finally put a “stop on GameStop”. When prices increased instead, these investors were hit hard.

The recent and wild episode with GameStop’s shares provides a useful reminder that markets do not always behave in a way that’s consistent with traditional economic theories. This can be because investors are behaving irrationally, due to fear or greed, or because an asymmetry in information may lead to diverging views. For a savvy, practical investor, this represents an important reminder: investor behavior is a powerful force in markets that needs to be taken into account when managing risk or pursuing investment opportunities.

About Short-Selling

“Wait, you can sell something you don’t actually own?”

Let’s remind ourselves that short selling is when you sell something you don’t have, an invention of financial markets that has big risks with unlimited downside. A short seller is essentially betting that the price of a certain stock will decrease, instead of increase. These investors “borrow” shares of a stock or other asset, often from a broker, with a promise to return the shares on a future date and generally with a fee involved for the transaction. They

then sell those shares at the current market price. If the price has decreased when the shares must be returned to the broker, the investor gains the difference; if the price has increased, the investor loses an amount equal to the difference. This is a risky strategy, because (as GameStop demonstrated) there is no guarantee that a price will decrease, and short-sellers are on the hook for whatever the difference is when the transaction is closed out – even if it’s 1700%!

As an example, consider the case where you wanted to borrow my car. I’ll need it back on a specific day in the future, of course, and you’ll have to return it to me in the same condition. If you were willing to pay me 20% of the car’s value to borrow it for that time, I’d be delighted. In early January, the cost to borrow GameStop shares peaked at over 20% annualized. Investors borrowed shares, which at the time were priced around \$3.50/share, promising to return them at a later date. In simple terms, GameStop was a hot commodity to short. Figure 2 plots the short interest in GameStop, or the amount of shares being shorted since the fall. These short-sellers expected the price to continue to decrease. Instead, it increased to a high of over \$300 per share. The short-sellers got themselves caught in what is called a short squeeze—a self-explanatory name.



Figure 2: The chart shows the number of GameStop shares being shorted relative to the stock’s average daily trading volume from January 31, 2020 through January 15, 2021 (short interest data produced bi-monthly). This chart shows the amount of shares being shorted for GameStop. Source: Bloomberg.

How Did This Happen?

Retail investors who are part of an online community on social media website reddit.com called r/WallStreetBets were interested in GameStop. These individuals give each other stock tips and trade their own portfolios through low-cost brokerage apps. Over the last few months, possibly inspired by Chewy.com founder and GameStop board member Ryan Cohen, these investors began to buy GameStop shares. Part of their motivation was a view that hedge

funds had been short selling GameStop, and its shares were possibly undervalued. As positive enthusiasm ensued, the stock price went up, and the day trading frenzy continued. During the first month of 2021, the share price had gone up over 100%. From a low of around \$3/share in March 2020 at the beginning of the COVID-19 crisis, GameStop surged to a value over \$300 a share in January. The players on the short side felt the squeeze as prices continued to rally. Some estimates point to losses of \$5 billion. One dedicated short seller, Melvin Capital recently received a much-needed influx of cash estimated at \$2.75B from its investors.

Putting GameStop into Perspective

These types of events are often called bubbles or moments of irrational exuberance. Perhaps the most famous bubble, Tulip mania in the 1600s, took the price of tulip bulb contracts to more than the cost of a house. More recently, of course, the dot-com bubble led to a significant drop in the stock market. And in January, a seemingly-unimportant video game store rocked Wall Street with similar behavior. What happened to GameStop (GME) reminds us why markets are not always efficient.

The classic Efficient Markets Hypothesis (EMH) is a theory of financial markets that states that all relevant information is incorporated into price. It should be impossible to “time stocks” or to use technical analysis to follow trends. It also suggests that investors—and the market as a whole—are rational.

Why then did markets behave so irrationally? The EMH doesn’t provide any answers.

At AlphaSimplex, we often say the EMH isn’t broken, it’s just incomplete. Instead, we consider the Adaptive Markets Hypothesis (AMH). The AMH is an alternative approach to understanding market dynamics. According to the AMH, markets behave like an ecosystem. Success or failure is governed by the principles of evolutionary biology. For example, in evolutionary biology there exists a phenomenon called punctuated equilibrium—a moment with rapid speciation between periods of little or no change. These events can be a sign of change, of rumbling in the steady balance that is our market ecosystem.

From an ecological perspective, GameStop is just one example of what we might expect. As we see more participants in the marketplace, connected by technology and social media, we may see more potential to expose fragilities in the financial markets and more periods of punctuated equilibrium. In this case, a mass of people focused on individual stocks and connected through social networks proved strong enough to build a united force, with a longing to hold on to the staples of the past in the face of hedge funds and other short-sellers. Other companies are now also in the spotlight, Bed Bath and Beyond, Nokia, and AMC. The effects of frenzy have even spread to some commodities markets like silver and gold. At the

same time, GameStop share prices have fallen dramatically since their high at the end of January, perhaps reverting to a more normal equilibrium and demonstrating the fragility of these bubbles. These events are a sign of change, the growing pains necessary to react to a new world order.

The rumblings of change can be scary to investors who are trying to grow their investments or protect their retirement accounts. The AMH suggests that change, while scary, can also lead to opportunities, as long as investment strategies continuously adapt as markets evolve in order to deliver more consistent performance. At AlphaSimplex, we believe a diversified portfolio that includes multiple asset classes, strategies, and investment philosophies may allow investors to weather changing market environments, even if we see more events like the GameStop surge.

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