

# Trading Isn't the Same Thing as Investing: The Lessons of GameStop

## ACADEMIC PERSPECTIVE

The GameStop saga of January 2021 is now widely known. What's lesser known, however, are the lessons it can teach us about market efficiency, diversification, investing and trading.

The saga began when WallStreetBets, a subreddit community of amateur investors on the Reddit social media platform, sparked a virtual flash mob attempting to cause a short squeeze by buying shares of a long-struggling company. Their target was GameStop (GME), a Blockbuster-like video game retailer that thrived years ago when malls dominated the brick-and-mortar retail landscape. Egging on one another, these individuals bought significant amounts of GameStop shares using Robinhood, the no-commission mobile trading app popular among many millennial retail investors. The viral trading frenzy continued and rocketed GameStop's price from less than \$20 per share in early January to a high of \$483 later that month, only to plummet back to around \$50 in early February. (Source: Yahoo Finance.)

Doesn't the GameStop saga prove the stock market isn't efficient? How could the price of GameStop shares rocket and crash with no change in GameStop's intrinsic value?



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*(GME's stock price has risen since mid-February when Dr. Statman submitted this article for publication.)*

## The Efficient Market Hypothesis

The efficient market hypothesis lies at the heart of standard finance, and many believe behavioral finance refutes it. Indeed, many believe refutation of the efficient market hypothesis is the most important contribution of behavioral finance. This issue becomes confused, however, when we fail to distinguish between two versions of efficient markets and their corresponding efficient market hypotheses—the *price-equals-value efficient market* hypothesis and *hard-to-beat efficient market* hypothesis.

Price-equals-value efficient markets are markets wherein investment prices always equal their intrinsic values, and the price-equals-value efficient market hypothesis is the claim that investment prices always equal their intrinsic values. The intrinsic value of an investment is the present value of its expected future payments, such as dividends, discounted by an expected return determined by a correct asset pricing model.

Hard-to-beat efficient markets are markets wherein some investors may be able to beat the market, earning abnormal returns over time, but most are unable to do so. Abnormal returns are those exceeding the returns one would expect based on a correct asset pricing model.

Price-equals-value efficient markets are impossible to beat because abnormal returns come from exploiting discrepancies between prices and values. Such discrepancies are absent in price-equals-value efficient markets. But hard-to-beat efficient markets aren't necessarily price-equals-value efficient markets. It might be that substantial discrepancies between prices and values are common, implying markets are far from price-equals-value efficiency, but discrepancies are hard to identify in time or difficult to exploit for abnormal returns. As I often say, markets can seem crazy, but this doesn't make you a psychiatrist.

Both standard and behavioral finance provide evidence refuting the price-equals-value efficient market hypothesis.

The GameStop saga adds to that evidence. The value of the GameStop company likely didn't change in January and February 2021, surely not by as much as the price of its shares changed during this period.

Nevertheless, the evidence of both standard and behavioral finance supports the hard-to-beat efficient market hypothesis. Buying and selling shares of GameStop is like moving a lighted match from hand to hand. Someone's fingers will be singed. But unlike a lighted match, you don't get a signal when the fire is reaching your fingers.

The rational investors described in standard finance know markets are hard to beat, but many of the normal investors described in behavioral finance, such as GameStop's amateur investors, believe markets are easy to beat. In reality, the market beats most investors who attempt to beat it. Cognitive and emotional errors mislead many investors into thinking that beating the market is easy.

## Short Selling

Short selling tends to have a bad image as the province of greedy speculators who sell shares of stocks they don't own. But short selling can be beneficial to all investors because it often moves share prices closer to their values, moving markets closer to price-equals-value efficiency.

For example, some professional investors found through research that Enron's accounting was fraudulent, and the value of their shares was much lower than their price. They proceeded to short sell Enron's shares, causing the price to drop and moving it closer to the shares' value. This short selling not only benefited the hedge funds, it also benefited other investors who got to buy Enron shares at less inflated prices.

Short selling is risky, however, because sellers lose if share prices rise rather than plummet. Moreover, sellers can lose even if their research is accurate, because prices of shares sold short might increase for some period before they decrease. Citron Capital, Maplelane Capital, Melvin Capital, and other hedge funds lost billions on GameStop shares as they were compelled to buy GameStop shares at prices higher than the prices at which they sold them.

Indeed, the GameStop saga illustrates what we know as "limits to arbitrage." The standard argument for price-equals-value market efficiency is that whenever a gap forms between prices and values, clever arbitrageurs, such

as hedge funds, eliminate these gaps by trading. By that argument, arbitrageurs sell shares whenever their prices exceed values, thereby pressing prices down toward values, and arbitrageurs buy shares whenever their prices are short of values, thereby pushing their prices up toward values. Yet, as the famous economist John Maynard Keynes said, "The markets can remain irrational longer than you can remain solvent." The hedge funds that shorted GameStop shares demonstrated the truth of limits to arbitrage. They found that markets

are hard-to-beat efficient even when they are not price-equals-value efficient.

Some amateur traders made money on GameStop shares by selling them before GameStop's lighted match singed their fingers. But many others weren't so lucky. I advised a former student to place no more than \$1,000 in GameStop shares if he wanted the fun of the trading game and to be ready to lose most of it. Unfortunately, he decided to place much more than \$1,000 in GameStop shares and lost \$6,000.

## Trading, Investing and Diversifying

The lessons I draw from the GameStop saga are likely the same lessons you draw and the same lessons we try to teach our students and clients. Trading is not investing. If shares of GameStop were among the thousands of holdings in your stock market index fund, you didn't trade

so your fingers wouldn't be singed. Moreover, the broad diversification that funds can offer would have helped ensure the GameStop saga was a mere bump on the way to your financial goals, rather than a stop.

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## GLOSSARY

**Expected returns.** Valuation theory shows that the expected return of a security is a function of its current price, its book equity (assets minus liabilities) and expected future profits. We use information in current market prices and company financials to identify differences in expected returns among securities, seeking to overweight securities with higher expected returns based on this current market information. Actual returns may be different than expected returns, and there is no guarantee that the strategy will be successful.

**Long position.** What most people think of as "normal" ownership of an asset or investment, giving the owner the right to transfer ownership, right to any income generated by the asset and right to any profits or losses due to value changes. Generally, investors take long positions under the assumption that the value of what they own will go up and/or generate a significant amount of income.

**Short position.** This refers to selling short, the sale of a security or futures contract not owned by the seller (the seller borrows it for delivery at the time of the short sale). If the seller can buy the security or contract later (to return what was borrowed) at a lower price, a profit results. If the price rises, the borrower/seller suffers a loss. It's a technique used to 1) take advantage of anticipated price declines or 2) protect a profit in a long position.

**Short selling.** Short selling is a trading strategy intended to capitalize on a falling stock price. In a short sale, a portfolio manager borrows and sells the stock that he anticipates will decline in price. The manager does not own the stock. Instead, he must buy back the shares in the future to return them to the original owner. The profit (or loss) from short selling is the difference between the amount the manager originally sold the stock for and the amount paid to buy it back. Short sales theoretically involve unlimited loss potential since the market price of securities sold short may continuously increase.

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Investment return and principal value of security investments will fluctuate. The value at the time of redemption may be more or less than the original cost. Past performance is no guarantee of future results.

Diversification does not assure a profit nor does it protect against loss of principal.

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