









THE BOTTOM LINE

Market Efficiency









FOREWORD

Dear Readers.

Hope this finds you well.

We are pleased to launch the seventh edition of **The Bottomline** – a joint initiative of the finance and investment clubs of IIM Ahmedabad, IIM Bangalore, IIM Calcutta and IIM Lucknow.

Early last year we saw the Robinhood Effect in play, wherein an equity buying spree by retail traders led to irrational rises in stocks of bankrupt and distressed companies. More recently, the GameStop saga dented the theory of market efficiency. In light of the above, this edition of Bottomline will explore the theme of "Market Efficiency", through insightful articles written by professors, students and professionals.

In this feature, we talk about alternate views on the Robinhood effect, and the underlying debate on democratisation vis-a-vis gamification of financial markets by discount brokers. We also deep dive into the GameStop short squeeze, which shocked the financial markets last month. A piece contributed by Finshots covers the reasons behind the recent rise in Bitcoin prices. Given the rise in SPACs as an alternative to traditional methods of listing, we discuss this theme with respect to global trends and the Indian scenario. Lastly, feature articles on anomalies in the financial markets, and a contemporary view on asset market bubbles and market efficiency.

As always, any feedback from our readers is welcome and we strive to achieve new heights of quality with each subsequent edition.

Happy reading!

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ROBINHOOD: DEMOCRATIZING OR GAMIFYING?

Stock prices in the United States in 1940s were set by people trading to buy and sell shares that they owned, for their own account. This pattern changed with the growth of pension funds and by the turn of the millennium, trading was largely institutionalized.

Institutionalization had two major effects that created an air of inevitability around them for a while. First, it introduced the classic principals and agents problem to the market. Fund managers' salaries are largely a function of their assets under management and not the money that they make with them which fostered herding and groupthink. Since everyone, more or less, had the same choices and picks, there was little risk that somebody could strongly outperform them. Second, since majority of the money was being controlled by very talented, well-resourced group of people who had access to high-powered trading technologies and research, it became exceedingly difficult for the individual investors to fight back. The less skillful were squeezed out of the game.

This trend is now set to reverse again. Equity ownership by households is seeing an upward trend mainly driven by exchange traded funds and foreign holdings, at the expense of pension and mutual funds. Why is the proportion of the stock market held by individual investors starting to rise again? I can think of two reasons. First, stock based compensation. Companies in the Silicon Valley are increasingly rewarding their employees with equity. Given that the market will continue to rise, this is cheaper for the employer and more lucrative for the employee, making it a win-win for both. And second, retail trading. The coronavirus pandemic sent a flood of new investors into the stock market in 2020. With Robinhood reaching 13 million users, small traders are beginning to gain more control on the stock market.

Interestingly, Robinhooders were more willing to buy during the March slump than their counterparts at the big institutions. They not only bought during the disconcerting period, but also gambled with extremely risky stuff eventually beating the institutions! But all the retail money was not smart. The electric truck manufacturer Nikola Inc. endured both a boom and a breakdown during the year as it made some claims for sizeable progress that later came under fire. Then there was the extraordinary goof-up of the tiny Chinese company Zoom Technologies and Zoom Video Communications. The GameStop ordeal only added to this madness. Incidents like these make the markets frothy and the growth of individual trading extremely worrying. Robinhood's no-commissions policy and minimum trade size enable its inexperienced users to buy and sell the riskiest of financial products and to do so more frequently.

The gamification accusation

I read a very interesting article that correlated the cancellation of the 2019-20 NBA season on 11th March 2020 with the surge in Robinhood investors. Sounds really weird, doesn't it? To equate the end of sports with the resurgence of retail investors. But this link is widely accepted. The lack of sports betting pushed would-be gamblers into the stock market. The "boredom market hypothesis" theorized that the money that would have found its way into sports books had to find a new home, and that new home was the stock market.

The Robinhood app has the trappings of many of the online games that youngsters find addictive. It strategizes a gaming interface to lure customers into consistent participation and long-term engagement with its trading platform. For example, the app showers a confetti rain when Robinhood users complete trades. The app is currently facing legal action from regulators who claim that Robinhood is very aggressive in its marketing and is trying to turn stock market trading into a game. The biggest proof underpinning this claim is their recent plan to cut interest on margin loans from 5% to 2.5%. They are literally halving the price of going into debt to encourage people to put more money at risk in the stock market! Long story short, Robinhood is training people to trade against the backdrop of some kind of a game. Several academic studies show that in the long-run it is very difficult for day traders to beat the market. So those who get addicted to trading could lose the money that they cannot afford to lose.

The return of individual investors is genuinely helping in democratizing the markets but is also encouraging excessive trading which will ultimately benefit large institutions who currently enjoy the greatest power over the markets. Democratization matters but these are not the best ways to achieve it. Hopefully the test cases around Robinhood will help produce some ground rules for both-the retail investors and the SEC, and rightfully encourage people into the stock markets. That would be a good result indeed.

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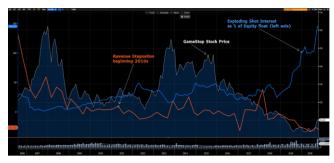
THE FUN ENDS WHEN THE GAMESTOPS!

A struggling video game retailer, GameStop, victim of sprawling e-commerce platforms beginning 2010s, witnessed a stock-market frenzy hitherto unseen, bringing hedge funds to its knees, and challenging conventional wisdom about systematic might of retail investors.

The Setup

In early January, the announcement of three new board members of GameStop, with a proven history of building an e-commerce value chain, sparked some interest on a Reddit forum Wall street bets with 3 million followers. Subsequent posts on the forum pointed out certain hedge funds sitting on huge short positions of the otherwise thinly traded stock.

The stock had become a short seller favorite off late, with many hedge funds expecting stock to go to ZERO. As a result, short interest as a % of equity float swelled from a low of 2% in 2007, 30% in 2014, 50% in 2018 to a staggering 144% by the end of Dec'20, making it the highest shortest stock as a % of market float



Melvin Capital, a Hedge fund with \$12 Bn of AUM was down 53% in January and had to secure \$2.75 Bn of additional funding from Citadeland Point72 to survive.

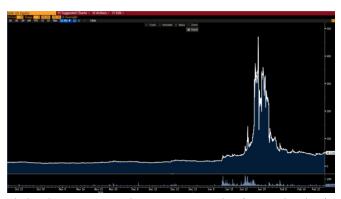
Nothing else captured the shift in power as brilliantly as one NYT headline- "Dumb Money is on GameStop, and it's beating Wall street at its own game"

The Party Ends

Many trading platforms, including Robinhood,

imposed fresh buying restrictions on GameStop, citing increased volatility. This resulted in stock plummeting from a high of \$483 to a low of \$112xx the very same day. The trading restrictions invited criticism that even united the likes of Ted Cruz and AOC. Just an interesting fact- Robinhood routes all its trades via trading giant Citadel, the same Citadel which had participated in cash infusion, just 2 days before to save Melvin Capital.

Sentiments flipped again, and the stock duly plummeted, almost as fast it went up. Only two types of people made big money, those who joined in early and exited timely, and those who shorted very late in the rally. A good number of people refused to book profits, perhaps, maybe because of this newly oriented concept of YOLO. People who went long at \$450, were now down 90% within a matter of 10 days.



 ${\it Glitch in the Matrix-Zoomed out Game Stopprice\ chart\ (Source:\ Bloomberg)}$

The Aftermath

The GameStop Saga made front pages of even non-financial newspapersand hogged footage on business channels. It even echoed in the corridors of power, from Fed Chair Jerome Powell being peppered in a Monetary Policy press conference, to Biden's Treasury pick, Janet Yellen mentioning a close watch being kept.Wallstreetbets' Keith Gill, one of the earlymembers who brought attention to the stock, who ironically goes by the handle "DeepF***ingValue", as well as Robinhood CEO had to testify before the US Congress.

The firepower that scores of YOLO millennials

exhibited was astonishing as well as scaring, with some even ready to bear losses in order to win this game of Commoners vs the establishment. While a setup as unique as GameStop might be extremely rare, widespread access to financial markets

coupled with ability to stage coordinated price action with the help of social media, indicates that the social media driven market volatility is here to stay.



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ROBINHOOD INVESTORS – A Gamified Approach of Noise Traders

The recent phenomenon of zero commission trading platforms has made the stock market investment more accessible to everyone and increased retail investor participation, especially in the US. Robinhood is a popular stock trading platform accessed through a website or a mobile app with zero commission fee. It became an attractive app among young adolescents and firsttime investors. The lockdown during the Covid-19 pandemic added some fuel to this platform. During this lockdown, the young crowd abandoned the online video games and kindled their stock market craze through this app. This was evident from the 3 million new users registered during the first quarter of 2020 alone. The app was designed in such a way the customers can buy and sell stocks and stock options with ease. They made stock trading a game, and lured the young and inexperienced traders into making more trades without understanding the risk involved in such trades. The gamification was anudge to these Robinhood investors.

Robinhood never charges commission from their customers. They make revenue by selling the customer trade orders to market makers like Citadel securities, two sigma, etc. Unlike other brokerage firms, the Robinhood app doesn't charge a flat fee from the market makersrather, they charge a percentage of the spread. The highly liquid stocks like Apple, Google have many market makers making the bid-ask spread narrower. However, illiquid stocks are highly volatile and bid-ask spread would be wider, providing a fertile ground for Robinhood and its market making partners. Thus, there exists a profit opportunity for Robinhood to market these distressed companies to their customers aggressively.

Typically, any market will have two types of investors, viz arbitrageurs and noise traders.

Arbitrageurs are those who have adequate information and form rational expectations about the security returns. They play a critical role in bringing the prices back to fundamentals and making the market efficient. On the other hand, noise traders are irrational investors. They don't possess any information, but they trade on the response of pseudo signals that they believe to convey information about future security returns. Robinhood traders aretypically noise traders who trade without any information about the stocks and invest in small penny stocks. They move the price far away from the fundamentals. Example: Hertz stock rallied from 40 cents right after their bankruptcy filings on May 22 to \$6.25 on June 8, 2020. Will any rational investor buy the shares of Hertz, whose fundamental value is zero? But Robinhood investors traded those securities and pushed their prices. Some analysts argued that Robinhood investors were gambling with their money. Robinhood investors would earn a high average return in a shorter time horizon. Many investors would imitate them, ignoring the fact that there could be a risk in it. Any shift in the demand for stock that does not depend on fundamental factors is likely to fall in the long run. Robinhood investors becoming rich is of a very trivial probability, but may lose the money for sure.



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GAMESTOP SHORT SQUEEZE: RETAIL INVESTOR' DIGITAL REBELLION

The GameStop and Video Gaming Industry

GameStop is a brick-and-mortar retailer of video games and other merchandise with headquarters near Dallas, Texas in the USA. At the beginning of 2020, it had more than 5500 stores under various brands in North America, Europe, Australia, and New Zealand which were facing major business challenges given the covid 19 pandemic causing people to skip visiting the retail stores of all kinds. As per Nielsen (Nielsen, 2020, #) research, video game playing has increased 46% in the USA due to Covid induced lockdowns, but (MacroTrend.net, 2021) GameStop has lost its net revenue by 22% while having an 800% jump in online revenue. GameStop has lost 795M\$ in 2019 and lost much more in 2020. This trend of declining sales of packaged video game for last 15 years are causing fundamental risk for companies like GameStop for survival. A recent fund infusion by Billionaire in GameStop stock in Aug 2020 came with the advice to shift the business model towards digital distribution based than physical stores.

The Short Sellers and the Short Squeeze Looking at all the fundamental weaknesses of the GameStop Business model, many hedge funds of wall street started to short the GameStop stock. The biggest Short-sellers of the GameStop stock were Melvin Capital, Maplelane, and Citron which theorized that the stock of GameStop is overvalued and will be going down. At one point in Jan 2021 total shorted stock of GameStop reached as high as 140% When the Stock is so heavily shorted, there is an apparent risk of a short squeeze, which is triggered due to a sudden increase in the price of the highly shorted stock and the shorts are forced to correct their position after recording loss.

The Rebel Investors

Many retail traders interested in discussing various stocks have been using Reddit for a long time. (Wikipedia, 2020)One of such subreddit wallstreetbets was founded in early 2012 where mostly young retail investors would exchange information for highly aggressive speculative

trades. Currently, more than 9Million users are associated with the wallstreetbets Reddit page. Through 2020 the subreddit users started discussing the stock of GameStop, one of the users Keith Gill AKA DeepF***ingValue started posting about his due diligence as early as July 2020 on his bullish view on GameStop Stock and countering every short seller's arguments. (Gill, 2020)He has discussed all the points in detail in one of his Youtube videos. (Wikipedia, 21)Keith Gill had been invested in long positions of GameStop Stock since Sept 2019. He had posted evidence of him investing 53000\$\$\frac{1}{2}\$ in GameStop stock citing them being undervalued. On 20 Feb 2021, Keith Gill bought 50000 more shares of GameStop.

The Direct Action

With bigger Hedge Funds betting against the GameStop Stock going down, and Reddit traders with help of easy to use investing apps like Robinhood, the information provided by Keith Gill about GameStop's best-case scenario and the general angst against the wall street corporations, created a social trigger that lit the fire which would cause massive demand for the GameStop stocks. This change in supply and demand created a steady surge in GameStop stock price from below 5\$ in Mid 2020 to Upwards of 18\$ by Dec 2020. Come Jan 2021, the news spreads about the movement of stock price against the short sellers and catches the attention of Elon Musk, who on 26th Jan 2021 USA time, tweets the link of Wallstreetbets Reddit page, drawing the attention of the whole world about it. On 27th Jan 2021, GameStop stock price opens at 100% up from the previous close. Making the hedge funds to square off their positions at much higher prices than anticipated. Robinhood stepped in and stopped its users from buying further stocks of GameStop creating public anger and catching the attention of US Government

The Aftereffects

Total losses due to the short squeeze caused by retail investors to the hedge funds are yet debated by various media outlets. (Li, 2021)CNBC claims the losses to be about 20B\$ while (Reuters Staff, 2021)Reuters cites Ortex data for losses of 12.5B\$

to the hedge funds. A House Financial Services Committee hearing is set up to investigate the matter and has called various hedge fund

executives, Robinhood CEO and Keith Gill to testify before the committee.



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WHY IS BITCOIN RALLYING?

The Story

Bitcoin isn't like your regular currency. It's a digital currency that runs on a blockchain.

Meaning

- 1. Nobody controls the currency (no central bank that prints the notes)
- 2. Nobody decides who gets to transact with the currency (theoretically available to everyone irrespective of their nationality)
- It provides an unalterable record of all transactions ever committed on the network (nobody can sneak into the network and alter records)
- 4. And these transactions are anonymous

So clearly there are material benefits in using Bitcoin. But it also comes with a few caveats. For starters, the value of Bitcoin is still susceptible to wild swings and most people believe that this will likely continue for the foreseeable future. Meaning, using it as an actual currency to transact might not be the most prudent thing to do. More importantly, not everybody is convinced Bitcoin is the future. They don't think it merits any kind of adulation and are confident that it's all a bubble.

But irrespective of your personal opinions, know this much — Bitcoin has been on a rally like no other. Just a few months back it was hovering at ~\$10,000. But by January 1st 2021, it had peaked at ~\$32,000. That is quite incredible. And this isn't the first time it's happening either. Remember December 2017 — When Bitcoin truly broke into the scene? That was when you couldn't go a day without some random bloke talking to you about Bitcoin. News media was raving about Bitcoin millionaires. Office boys were discussing cryptos in dining halls. Hell, even that uncle selling LIC policies began taking a keen interest in these things. And then came the big crash. Within just one year it's price dropped from ~\$20,000 to roughly \$3,000. It was a massacre. So there's been some speculation that the new rally will end in catastrophe just like the crash we had a few years back.

However, proponents of Bitcoin argue otherwise. They believe this time it's different. Last time regular retail investors propped up the price of

Bitcoin by hoping to make some extra money on the side. They weren't in it for the long run and were primarily making a bet because of FOMO — the fear of missing out. But this time, the rally seems to be driven (at least at some level) by participation from institutional investors — supposedly the more sophisticated kind.

As one article notes —

A survey by Fidelity of 800 large institutional investors in the US and Europe found that more than a quarter of them owned Bitcoin. Fidelity, which manages \$3.3 trillion in assets, said in August it was launching its first Bitcoin fund.

By October there was even more evidence of institutional endorsement. PayPal announced that it would allow customers in the US to buy and sell Bitcoin on its platform and let them purchase items using cryptocurrencies. Soon the price of Bitcoin rallied even further.

But the principal dissidents of Bitcoin note that neither reason is cause to celebrate. They contest that institutional investors are equally susceptible, if not more likely to follow the herd. As one article on Finception notes —

A trait that humans have adopted since time immemorial is the ability to seek out information that aids their survival. These could be social cues that help you fit in or behavioural traits that help you adapt to ambiguous situations. It's an evolutionary mechanism that prods us to "follow the herd", lest we stand out. However, when you carry this sentiment over to financial markets, the outcome can prove particularly disastrous especially when large fund houses are also inon the herd.

In a 2005 paper titled "Thy Neighbour's portfolio," researchers concluded that a mutual fund manager is more likely to buy (or sell) a particular stock in any quarter if other managers in the same city are buying (or selling) that same stock. This was an attempt to study how investors spread information and ideas about stocks to one another directly, through word-of-mouth communication. When information spreads quick enough the surge in buying activity will self reinforce and propel the

markets to react even faster setting off a dangerous chain reaction. When the collective conscience of the market finally realises that prices have reached unsustainable levels the sentiment reverses. Such booms and busts are characteristic of all financial markets, regardless of size, location, or even the era in which they exist.

So despite all the optimism surrounding Bitcoin, perhaps it's prudent to exercise restraint, especially if you are planning to invest a large part of your savings in crypto assets. On the flip side, it no longer seems viable to dismiss the idea of Bitcoin as a scam either. There's definitely more to this ethereal asset than what meets the eye. So maybe the only question now is — What is it really worth?



Article courtesy of Finshots

Join Finshots (finshots.in) and get your daily dose of latest, most important Financial developments delivered in plain English.

SPAC ATTACK: BREAKING DOWN THE GLOBAL TREND& THE INDIAN SCENARIO

Wall Street was abuzz the past year with a rejuvenated interest in its golden-eyed boy – the SPAC. In 2020 alone, Special Purpose Acquisition Companies (SPACs) raised more than what they had raised in the prior decade – a whopping USD 83 billion in the US markets alone. To put this number into perspective, it forms around 46% of the total equity raised in the USA using the Initial Public Offering (IPO) route. Some numbers below would help you gauge the frenzied action in this space. The numbers in the boxes indicate the number of SPAC IPOs and the proceeds raised by them in the US markets year on year:





But wait. What are these SPACs?

SPACs are a type of blank check companies, or colloquially shell companies. They are listed companies, primarily created as investment vehicles to invest in targets yet to be identified, by raising capital from sponsors and the public at large. Generally, the final objective is to provide the target a quick way to get itself listed on the stock exchange through a merger with the holding SPAC. The below diagram would help understand the process:



Accordingly, some advantages of the SPAC route are:

- Quicker and less cumbersome than the traditional IPO due to lack of past operational history
- Potentially longer-term investor base owing to the anchor sponsor
- A potentially well thought out investment thesis helps gain the trust of public investors
- Risk diversification/ spreading and a ready exit option available to the sponsor through the public markets

However, all is not as good as it seems.

A recent study conducted by a few professors at Stanford, NYU School of Law, and others try to debunk the entire transaction's hidden costs. According to their research, the median SPAC costs as a percentage of cash delivered in mergers is as high as 51%. These costs are caused due to dilutions arising from non-cash shares issued to sponsors (aka 'net promote'), underwriting fees, and warrant issues. The above math means that on average, the SPAC is left with only USD 6.67 (while undertaking the merger) on every USD 10 raised initially. When the numbers are converted based on post-merger equity, a 14% median surplus for the SPAC and the target's shareholders are required to break even. Their analysis further throws light on the fact that it is generally the initial public shareholders in the SPAC that bear these costs.

Thus, it could be said that the sheen of the promise shown by sponsors starts waning once the implicit costs are considered. It becomes

imperative for the public investor to thoroughly understand the SPAC's terms and the track record of the sponsor.

So, how does this scene pan out in India?

India is no newbie to SPACs. They have been historically used to get listed outside India. As recently as 2016, Yatra Online underwent a reverse merger with a Terrapin 3 Acquisition, US-based SPAC, to get listed on the NASDAQ. In 2015, Silver Eagle Securities closed a deal with Videocon d2h to distribute its ADRs in the US. However, a few notable misses include Trans-India Acquisition, which was liquidated following the falling offof its deal with Solar Semiconductor Ltd., and Constellation Alpha Capital, which failed to acquire Medall Healthcare Pvt. Ltd.

These were all US listings. But is India riding the SPAC wave itself?

Short answer – no. Though India allows inward investments through Indian companies listing abroad using SPACs, regulations in India do not allow SPAC listings on Indian stock exchanges.

- The Companies Act, 2013 requires a company to commence its stated business within 1 year if of its incorporation, failing which the authorities are empowered to remove the subject company's name from the official register of companies – in effect, unrecognizing the company. SPACs generally take around 2 years to identify and close the deal with the target.
- The SEBI regulations impose further restrictions on getting a company listed. A company proposed to be listed requires a history of compliance with minimum thresholds of net tangible assets, pre-tax operating profits, and net worth. A SPAC would naturally fail all these

limits as it has no operations in principle before it is listed.

While other hurdles exist, the above two issues form the cornerstone of the Indian regulatory framework's discouraging the existence and use of SPACs in Indian listings. The SEBI crackdowns on allegedly fraudulent shell companies, citing them as money laundering vehicles, have done enough to erode investor confidence. These actions look justifiable when seen from an investor protection perspective. One also needs to recognize the difference in the maturity of Indian and US securities markets and investors' comfort level with complex securities, vehicles, and structures.

However, a question remains whether the Government can use regulations to promote such transactions with control over their legitimacy. Distinguishing between fraudulent shell companies and select investment vehicles like SPACs could be a start. Further, the initial due diligencecould be tightened at the sponsor level by stringent regulatory controls imposed instead of on the listing.

The current boom will surely help throw light on various aspects of SPACs and draw the authorities' attention towards the finer details of what works and what does not. But still, a lot needs to be done on this front in the Indian context.



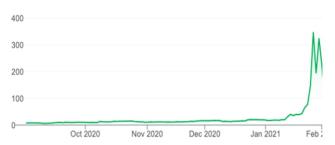
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\$GME: WHO IS LEFT HOLDING THE BAG WHEN THE MUSIC STOPS?

The Gamestop Saga

You've probably heard all of it. Seen all the news and the memes. Most of the press coverage around the meteoric rise of Gamestop's share price revolved around how a bunch of anonymous everyday retail investors organizing on Reddit brought down a hedge fund - Melvin Capital - with \$12 billion dollars of assets under management (AUM) to its knees and the subsequent trading restrictions on the popular trading platform, Robinhood.

While the jury is still out on the ethics and legality of the actions of all parties - Robinhood is facing a slew of lawsuits and regulatory inquiries for halting trading during the Gamestop frenzy and hedge funds face accusations of naked shorting (At its peak, the shorts on Gamestop stock was 141.8% of the float), there is a cautionary tale here for the everyday investor.



Gamestop shares soared almost 2400% from early January levels.

Image Source: Google Finance

The inevitable crash and the aftermath

The stock, which shot to a 52-week high of \$483 at the peak of the rally, inevitably crashed to a price band of \$40-60 within a matter of days. While Melvin Capital was quick to exit their short position with not-so-insignificant losses, retail investors who bought into the hype in search of quick money bore the brunt of this fall - a loss of almost 90% from its peak. A good portion of \$GME retail investors were first-time investors hoping to get lucky and ride the wave.

The same forum - r/wallstreetbets - was filled

with screenshots of people losing a huge chunk of their investments and messages of despair from people who had invested more than they could afford to lose with some even losing their life savings. A 25-year old security guard borrowed \$20,000 to invest in Gamestop stock and ended up losing 80% of it within days.

Somewhere along the line, what probably started out as a few activist investors trying to send a message to the big guys, quickly became a classic pump and dump scheme with gullible investors being pulled into a trap by anonymous posters on a social media platform who urged people to "hold to the moon" while they used the hype to exit. Even as the stock plummeted, there were war-cries on the subreddit and social media by influencers who urged newbies to hold on, while it is not entirely sure when these influencers exited their position.

In short, a small group of individuals, who got in really early made life-changing money. Some hedge funds rode the rally too to book some quick profits but both of this was at the cost of a large number of retail investors who got in way too late and lost more than they could afford to.

The basics never go out of vogue

In this age of algorithmic trading and social-media organized takedowns, some adages of investing still stand strong.

- 1) Fundamental investing is time tested: Investing based on the fundamental strengths of a company - its business model, financials and growth potential - is always more likely to bear fruit over the long term than short-term speculation fuelled trading. Take your time to learn investing fundamentals and understand a business and invest only if you have the conviction to hold and add through the ups and downs of the market.
- 2) Do not overextend: Never invest more than you can afford to lose and certainly do not borrow to

invest. If you are going in on a risky investment, only go in if you would be okay to lose 100% of the invested capital and in the event of that happening, your other financial and lifestyle commitments wouldn't be affected.

3) There are no shortcuts to getting rich quickly: If you heard about a short squeeze or a rally on the news or on social media, it is likely that you are already too late to get in. Timing the market is difficult - more so for the average retail investor. It is way better to stay long and ride out the market vagaries. As the saying goes, be fearful when others are greedy!

P.S - Over the last week, Gamestop shares have again rallied to around \$100 for no apparent reason

triggering renewed media interest. Proceed with caution, cut out the noise and happy investing!



Hari Ayyappan PGP 2020-22 IIM Bangalore

ROBINHOOD: DEMOCRATIZATION OF FINANCIAL MARKETS

Company Background

The stock markets were perceived to be a cozy club dominated by Wall Street honchos. However, the recent drama ensuing the GameStop frenzy is testament to the changing pattern of the US market. The internet has levelled the field between retail investors and the Wall Street. One company which has been instrumental for this tectonic shift in the US is Robinhood.

Founded by Stanford graduates Baiju Bhatt and Vlamidir Tenev in 2013, Robinhood is a discount broker and is on a mission to democratize the investing. For nearly 200 years, brokers used to charge fixed-rate commissions to retail investors. Even the cheapest online brokers used to charge \$5 to \$8 a trade. Robinhood showed that even that was essentially gouging, and the company pushed the trend in trading costs to its theoretical limit: zero. The move pushed even the traditional brokers like Charles Schwab and E-tradeto adopt the commission-free model. However, the change was painful for these traditional brokers and their stock prices suffered a major dent. The David did not beat Goliath by playing him at his own game, it in fact changed the game and forced them to play it.

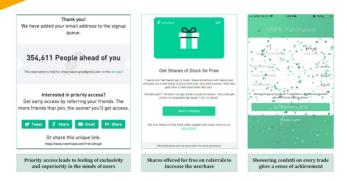
Robinhood had an audacious and radical business model. It married the unprecedented concept of no minimum account or trading fees with a sleek, easy-to-navigate mobile app to build an ecosystem of investing. The ecosystem boosts of 13 million users, primarily young investors, with an average user age of 31. Robinhood with its elegant UI & attractive trading platform is in prime position to transform the industry. One would feel that Robinhood would have to change its stance now that the other big online brokerages have started to offer zero commission trading. However, the company's moat remains the user-friendly addictive platform which can be scaled with little or no costs.

Gamified experience

The platform is attracting the youth audience by gamifying the platform. It introduced the application with exclusivity invites in order to give a superiority complex to users. They showered confetti on every transaction to develop a sense of achievement among the users. It incentivized users to invite friends and family, offering a free stock usually a cheap stock—for each invitee that funded a Robinhood account. The referral program really helped to limit customer acquisition costs, and once those customers got there, Robinhood made investing frictionless, cheap and accessible. The platform kept on providing value-added features such as crypto trading, margin buying and importantly, no account minimums which attracted millions of users, mostly millennials. Thus, the gamification of a previously boring investment process has altered the perception among many investors, especially the youth. The COVID-19 lockdown provided a fillip to this experience as betting on other outdoor activities was halted.

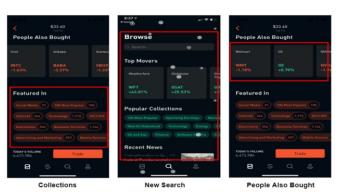
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Irrationality induced market inefficiencies

All has not been rosy in the Robinhood universe. The platform has faced tremendous criticism as well as the ire of the regulators for failing to take substantial precautionary measures to educate uninformed users. The interface is similar to social media in order to hook people and make them spend more time on the platform. This can potentially lead to more trades undertaken by users, which would be mostly uninformed. There have been seemingly irrational trading activities observed like investing in a bankrupt stock and also sudden spikes in stock prices fueled by minor developments. The stock of Zoom Technologies, a small Chinese wireless communications company without significant operations, soared a whopping 47,000% when it was mistaken for Zoom Communications. This clearly illustrates the strong bandwagon effect and herd mentality prevalent in the market, to which retail investors often fall prev. Similarly, a thorough analysis of social media platforms like Facebook, Instagram, Twitter etc. yields an abundance of pages, posts and advertisements that offer trading advice, promise of easy returns, celebrate novice traders who make million overnight. This highlights the optimism, overconfidence and survivor's biases at play. In an extreme situation, a 20-Year-Old Robinhood user died by suicide after erroneously interpreting a \$730,000 negative balance.



Indian Context

The situation back home appears to be much better on this front. Even though Zerodha contains several features of Robinhood in terms of zero commission, it has steered away from venturing into the gamification frenzy. Recently, Zerodha launched a feature which displays a warning message when an investor tries to trade in illiquid or penny stocks, which is a step in the right direction. Robinhood is also trying to educate its users by providing tutorials pertaining to basics of investing.

Thus, the step of providing a free investment platform coupled with the requisite investor knowledge has the potential to fundamentally alter the investment experience.



Jugal Shah PGP 2019-20 IIM Bangalore

MARKET ANOMALIES

Various types of anomalies exist in the financial markets that exist today. The advent of algorithmic and High-Frequency Trading was touted to get rid of many of the anomalous market movements by using cutting-edge tech to enter and exit trades in the fraction of a nanosecond. However, while arbitrage opportunities have reduced significantly with algo-trading and HFT, market anomalies continue to exist in the markets around us.

A major reason for this is that technology has still not been able to replicate individual human behaviour leading to different interpretations of the "anomalies" and the extent to which they exist, if at all. Thus there are still quite a few opportunities for investors and traders to benefit from if they have the conviction to believe that the anomaly exists and that it'll continue to persist.

Here are a few common anomalies that you can look to spot in the markets around us today:

January Effect

A very well-known anomaly is the January Effect. The theory here is that stocks that underperformed in the fourth quarter of the preceding year appear to outperform the January markets. It is so logical that the explanation for the January impact is that it is almost impossible to call it an anomaly.

Investors will also look at jettisoning underperforming securities late in the year and use their losses to offset taxes on capital gains (or to take the small deduction that the IRS allows if there is a net capital loss for the year). Many individuals term this incident "tax-loss harvesting."

Likewise, investors in the fourth quarter will always stop buying underperforming stocks and wait until January to avoid being swept up in the sale of tax losses. As a result, before January, there is excess selling pressure and after January 1, there is excess buying pressure, leading to this effect.

Reversals

Some evidence indicates that stocks appear to change direction over periods of time (usually a year) at either end of the performance continuum in the following year. Yesterday's top performers become the underperformers of tomorrow, and vice yersa.

Not only does statistical data support this, but according to investment fundamentals, the anomaly still makes sense. If a stock is a top seller on the market, it is possible that its success has made it costly; the opposite is also true for underperformers. Then, it would seem like common sense to expect the over-priced stocks to underperform while the under-priced stocks outperform (bringing their valuation back in line). In part, reversals are also likely to work because people expect them to work.

If sufficient investors typically sell the winners of last year and buy the losers of last year, that will help drive the stocks in exactly the anticipated directions, making it something of a self-fulfilling anomaly.

The Days of the Week

The "Days of the Week" anomaly is despised by efficient market supporters because it not only seems to be real, but it also makes little sense. Analysis has shown that on Fridays, stocks appear to move more than on Mondays and that on Fridays there is a tendency towards better market results. It's not an immense difference, but it's a persistent one. There is no specific explanation on a fundamental level why this should be so. There may be some psychological variables at work. Perhaps, as traders and investors look forward to the weekend, an end-of-week optimism permeates the market.

Alternatively, maybe the weekend offers investors an opportunity to catch up on their market research, simmer and panic, and build

pessimism going into Monday.

Ultimately, anomalies are just empirical phenomena observed in the markets with no necessary logical explanations about their existence. Anomalies are also sometimes quite unpredictable and irregular and hence trading based on them requires conviction in the idea and proper execution.



Varad Vyapari On Behalf of Economics Club, IIM Calcutta

ASSET MARKET BUBBLES & MARKET EFFICIENCY – A CONTEMPORARY VIEW

The concept of Efficient Market Hypothesis (EMH) took steam in the middle of the 20th century and has remained in debate since then. The basic tenet behind the same is that information is universal and markets are priced perfectly such that no excess return can be made. But then, how do we explain asset market bubbles 1929, 1989 in Japan, dotcom era, etc.? Remember that a standard bull and bear market can also be considered as defying norms of EMH but then there are so many assumptions infused in the theory that the real world is far from it. Some of the major ones are (i) information is universal as well as interpreted only in one way - which it clearly isn't - and (ii) market participants are rational – this one shouldn't need any proof. Bubbles, on the other hand, can be put in a completely different category. A bubble is a fairly long period of bull market where asset prices move drastically upwards from their fair value.

Such long bull markets where prices constantly move up test the patience and acumen of asset managers around the globe. Tackling the onslaught of clients must be very tough for these managers for how can clients differentiate between a market that is behaving like a bubble and managers incapable of reading the market? Would it be prudent to call a bubble one year too early and miss out on 30-40% supernormal returns and save yourself from a 50% market downfall? The essential point is plenty of asset managers, experts can call that a bubble exists. But none of them can accurately predict when it will burst. And maybe that is why we don't hear a lot on market timing from asset managers.

Should we label this group of asset managers as rational because they stayed away from the madness in financial markets? Did financial markets cease to climb new peaks every day because of their non-participation? Clearly, we have enough examples of events in the past to deny this claim. Hence, the level of optimism differs a lot among participants in the market. On the other hand, a wave of pessimism takes along

with it everyone in the market. Behavioral finance would obviously easily explain this phenomena by delving deep into aspects of loss aversion, utility, etc.

Coming to recent happenings, the current frenzy in financial markets, especially equities, have met with strong opinions from veterans that it is a clear bubble. Yet it is quite different from previous ones in one respect. Previous bubbles have witnessed conditions of accommodative policies coupled with positive signs in overall economy. Today's economy suffers from the scars of the Covid pandemic. There has been only part recovery, possibilities of a second wave remain even though several institutions have plugged in estimates of robust recovery in the near future. Markets have long crossed the levels of pre-pandemic highs at a time when economic indicators are nowhere close to similar periods. Of course, there is the argument that unlike economic indicators which talk much about the present, financial markets are forward looking and with vaccines rolling out, the future seems bright. So what should we say about the current state of markets then? Are they efficient in correctly weighing the prospects of future recovery or will this become another case of a bubble that history books will talk about in the next millennium?



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finance, he is currently pursuing an MBA from the Indian Institute of Management, Calcutta (IIM-C) and has completed his internship with Arga Investment Management last summer.































