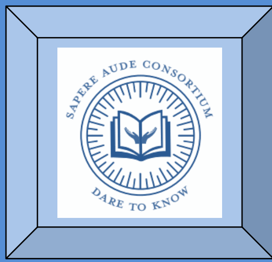

Evolution or Revolution? Retail and Gen Z Investors

Opinion Snapshot

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How has technology enabled retail investors; specifically, Gen Zers, to impact the market? What are the implications of these developments and how does this impact the asset management industry moving forward?

Introduction

Technology has changed how Generation Z (Gen Zers) navigates society and interacts with others. Gen Zers, people born between 1995 and 2010, are digital natives. Their exposure to the internet from an early age has made this generation exceedingly at ease with finding and integrating information from a variety of sources,[1] and their identities and daily activities are interwoven within the digital world. An example of how daily activities are connected to technology is Apple Pay. Apply Pay is a digital wallet service that allows users to make daily transactions by linking their credit or debit cards to their devices. Within one-two clicks, people can make purchases from their iPhone or Apple Watch. According to a study by Loup Ventures, the number of Apply Pay users has grown by 66 million over 2019, with approximately 507 million active users in 2020. This increase was largest among young consumers, including Gen Zers and Millennials.[2]

While technology impacts virtually every aspect of Gen Zers' daily life, it has also greatly enhanced the ability for individuals to invest. Direct trading platforms have enabled individuals to buy and sell securities without the services of a broker, decreasing the costs of trading and increasing accessibility. Trading platforms now offer mobile versions as well, meaning individual investors can trade within seconds, whenever and wherever they prefer. It is interesting to observe that retail trading volume is surging as new platforms have risen, trading costs have decreased, and accessibility is at all-time highs.[3]

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Why should asset managers care that Gen Zers are opening accounts? The world is about to see a major wealth transfer as younger generations inherit a mass amount of wealth from baby boomers, who have spent years accumulating significant wealth. According to the Federal Reserve data:

"Americans aged 70 and above had a net worth of nearly $35 trillion. That amounts to 27% of all U.S. wealth, up from 20% three decades ago."[4]

This wealth may give younger generations, including Gen Zers, a greater opportunity to invest because of their inherited capital.[5] This in combination with their increased interest in investing could lead them to become a major force in the market.

In this paper, we examine:

How has technology enabled retail investors, specifically Gen Zers, to impact the market? What are the implications of these developments and how does this impact the asset management industry moving forward?

We have divided our analysis into three sections including technological evolution, social media's influence, and our recommendations.

Key Points:

- *Technology Disruption of Investing*
  - *Increasing access to markets resulted in an increasing number of brokerage accounts;*
  - *Lower trading costs and management fees resulted in decreasing costs of investing;*
  - *Growth of ETFs compared to mutual funds.*
- *Social Media's Influence*
  - *A large percentage of Gen Zers investing and using social media for financial education;*
  - *The nature of social media makes herd investing more possible;*
  - *The misleading information and bias echo chambers can generate;*
  - *The increasing role influencers play in the push of different financial assets;*
  - *Manipulation of social media and potential increase of market volatility due to herd investing.*
- *Recommendations for Asset Managers*
  - *Use keywords such as "beginner," "guide," and specific investment products to attract Gen Z investors when using social media;*
  - *Incorporate gamified experience to engage and educate Gen Z investors.*

Technological Disruption of Investing

Technology has had a profound impact on financial markets and has given many new investors access to investing. Through increased accessibility, decreased costs of trading, and an expanded universe of investment vehicles, technology has altered the landscape of financial markets and will continue to do so moving forward.

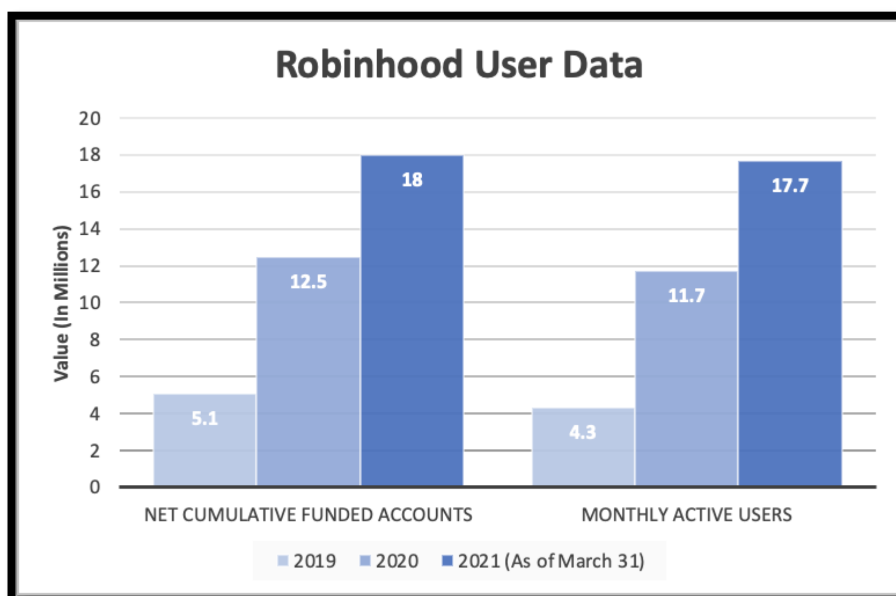
Accessibility

As technology continues to improve and become more widely adopted by people of all ages, investing tools have become much more accessible. Over the last decade, technology has enabled direct platforms to allow retail investors to trade without a broker. Charles Schwab, a leader in offering online brokerage accounts, saw steady growth in the number of new clients from 2013 to 2019.[6] In the past few years, the growth of new

online brokerage accounts has been further accelerated through the advent of apps such as Robinhood, providing investors with easy access to investing.

Robinhood in particular has become one of the most popular mobile applications that provides investment services and has seen unprecedented growth in users. Over the past two years, both net cumulative funded accounts and monthly active users have more than tripled on Robinhood. The amount of capital invested through the app has grown to nearly $80 billion,[7] indicating that retail investors are investing more and will continue to have an increasingly significant role in financial markets.

Exhibit 1: Robinhood User Data



Of the new retail investors in 2020, nearly 66% of them are under the age of 44, and 22% are between 18-29.[8] As investing has become more accessible, Gen Z has begun to make up a larger share of accounts opened, suggesting their influence may only continue to grow in the future.

Along with Robinhood, other direct platforms like Charles Schwab, Fidelity, and M1 Finance provide access to investing. It is estimated that more than 10 million new brokerage accounts were opened in the first half of 2021, nearing the total accounts created for the entire year of 2020.[9] Retail investors are on pace to invest over $1 trillion into equity markets this year, surpassing totals of any previous year.[10] We have already seen the significant impact retail investors can have – GameStop stock rallied over 1,900% in just 23 days in January 2021, in large part due to the influence of new, young investors. This trend has continued as many other stocks targeted by retail traders have experienced unprecedented returns. Asset managers will need to pay close attention to the activities and trends these retail investors are following. Melvin Capital, a hedge fund that had short positions against GameStop when the stock price skyrocketed in January 2021, was forced to exit its position at significant loss. Melvin Capital was not prepared for this action by retail traders who banded together through social media platforms to cause this price action. By analyzing systematic data on the drivers of retail investors' actions, asset managers, and firms such as Melvin Capital, may better position themselves to respond accordingly to market changes driven by the growing impact of retail traders.

Improvements in technology have enabled more access to information, although new investors may not fully understand how to utilize these resources.

At any time, retail investors may use the internet to research and analyze any public company they wish, with the availability to search through financial statement data sets posted by the SEC. Additionally, many websites offer charts of all equities, giving investors the ability to identify trends in the market. While we realize many Gen Z investors do not use these resources, there is potential to educate this generation with the abundant resources available. With the ability to access consumers through the internet, specifically social media, there is a great opportunity for asset management firms to engage the next generation of investors while assisting them in their financial education.

Costs of Trading

Another factor that has contributed to the rise of retail investing is the significant decrease in the cost of trading. Technological improvements have provided users with low-cost brokerage accounts and platforms through which to trade, as well as lower-fee investment vehicles. In the past, investors had to engage with a broker to buy and sell securities, often paying significant commission fees to do so. Other costs, such as management and administrative fees, were not clearly disclosed in vehicles such as mutual funds. Online brokers and index funds dramatically reduced the cost of trading and managing portfolios. In October 2019, Charles Schwab made an unprecedented announcement that it would eliminate commissions for stocks, ETFs, and options listed on exchanges in the United States and Canada. Shortly after, competitors TD Ameritrade, E*Trade, and Fidelity joined the movement and removed commissions on all trades. The evolution for commission-free trading manifested after decades of decreasing commission fees.[11]

Exhibit 2, Sample Commission Card, 1993

STOCKS

Overriding Minimum:	**$39 per trade**
Transaction Size	**Commission Rate**
$0 – 2,500	$30 + 1.7% of principal
$2,500 – 6,250	$56 + 0.66%
$6,250 – 20,000	$75 + 0.34%
$20,000 – 50,000	$100 + 0.22%
$50,000 – 500,000	$165 + 0.11%
$500,000+	$255 + 0.00%*
	OR

the following minimums and maximums:

Miniumum charge: $0.00 per share for the first 1,000 shares, plus $0.04 per share thereafter for stocks below $5 per share or $0.05 per share thereafter for stocks $5 per share or greater.

Maximum Charge: $55 for the first 100 shares, plus $0.55 per share thereafter.

Stocks less than $1 per share: $39 plus 4% of principal amount. For purchases of stock less than $1 per share, we require cleared funds in the account. When selling, we require stocks in advance.

***Large Block Transactions:** Please contact your local office on orders of 10,000 shares or more or on orders over $500,000. These orders may be eligible for special handling and/or special pricing.

As an example, the graphic above is a broker “commission card” from 1993. According to this card, the minimum commission fee for a retail investor to place a trade with a broker was $39, which could grow even higher in high-value trades. For example, if an investor was purchasing $600

worth of shares in a company in 1993, according to the commission card above, transaction fees would cost a minimum of $40.20, which is 6.7% of the principal amount. This means an investor must earn at least a 6.7% return just to break even on the investment. However, commission-free trading is now a standard in the industry, and investors can invest in a variety of vehicles without paying any fees.

Without generating income from commission, brokers have been able to maintain profits through payment for order flow (PFOF). PFOF is the practice of market makers paying brokers, typically retail brokers (such as Robinhood), for their clients' order flows. Retail brokers make money from the market makers, normally through a fixed percentage of the bid-ask spread at the time a trade is executed. This allows brokers to make a profit while also providing commission-free trading to retail investors.

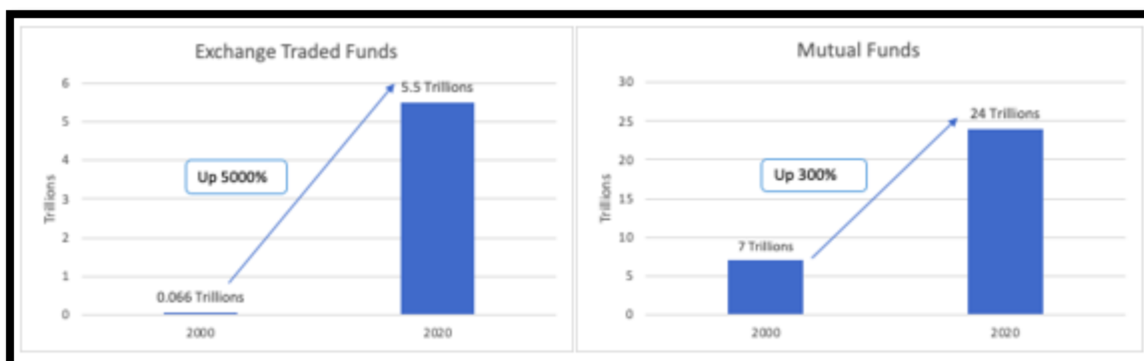
In addition to commission-free trading, many brokers now offer account creation with zero or very low minimum account sizes. This further lowered the barrier to enter the market. In the past, investors with small account sizes could not afford to invest, as the fee to place a trade was too high. A recent study shows that 56% of new investors have an account balance of less than $2,000, and 33% own accounts with less than $500.[12] With no trading commissions, no account minimums, and lower fund management fees, anyone with access to the internet can now invest without facing the high costs of trading.

Another development that has lowered the costs of trading is the availability to invest in fractional shares. Many brokerages, including Charles Schwab, Fidelity, M1 Finance, and Robinhood, now offer investors the ability to invest in “slices,” or fractions, of a single share in a company. This allows investors to select the exact dollar amount they want to invest in a company instead of the number of shares. This can be very beneficial for a new investor that may not have a large supply of capital but values a diversified portfolio. Suppose an investor wants to invest in Amazon, which is valued at over $3,500 per share (as of July 26, 2021), they would need at least $3,500 to buy an entire share. Fractional shares, combined with zero trading costs, have greatly expanded the investible universe for all investors. Fractional shares have provided many new investors with opportunities to invest in companies they may have never considered due to their price, further democratizing investing.

Additionally, the advent of low-cost investment vehicles has been an important trend. Investors now have access to a variety of investment vehicles at lower management fees than ever before. Along with commission-free trading, the costs of investing in actively managed funds have been driven down due to pressure from passively managed funds. From 2011 to 2020, domestic equity index mutual funds and ETFs received $1.9 trillion in new investments and reinvested dividends, while actively managed domestic equity mutual funds experienced net outflows of $1.9 trillion.[13] Additionally, from 2000 to 2020, the average expense ratio of index equity mutual funds fell from 0.27% to 0.06%, and the average expense ratio for actively managed equity mutual funds fell from 1.06% to 0.71%.[14] The downward trend in the fees of index and actively managed funds shows investors' preferences towards low-cost alternatives. This is also known as the ”Vanguard effect.” Recently, led by the example of the late Vanguard founder John Bogle, many firms have been offering more low-cost index funds, allowing investors to keep more of their investments. Additionally, actively managed equity mutual funds have experienced broad fee pressure due to underperformance compared to index funds. The growth in popularity of low-cost index funds continues to put pressure on the management fees of active funds. While many Gen Z investors have been drawn towards individual stocks, index and mutual funds are likely to be increasing beneficiaries of investor flows as Gen Zers broaden their investment portfolios.

Evolution of Investment Products

Exhibit 3: ETFs and Mutual Funds in the United States



Over the last few decades, technology has enabled the advent of investment vehicles and expanded ordinary investor's access to these products. For example, ETFs have become one of the most popular investment vehicles for both institutional and individual investors. Twenty years ago, ETFs were just a small fraction of the market, which was primarily dominated by mutual funds, stocks, and bonds. In the last two decades, the total net assets of ETFs increased by 5,000%, while assets under management in mutual funds only grew by 300%, as you can see in the graph above. ETFs have become extremely popular due to greater accessibility, lower costs, and better tax efficiency. For example, the lowest cost S&P 500 ETF is three basis points, while the average cost of a large blend mutual fund is 50 basis points.[15] ETFs differ from mutual funds as they are available on trading platforms like Robinhood, Charles Schwab, and Fidelity, which give retail investors the ability to trade ETFs.

ETFs have proven to be a robust technological advancement. Their design and structure have helped investors gain broad access to markets and invest in a specific sector or investment category (i.e., commodities, long duration bonds) in a diversified manner. However, while there are many ETFs in the market that investors may choose from, they still do not fulfill all investors' needs. The next phase of financial products will focus on making highly personalized products that meet investors' very specific needs.

One promising technology designed to provide highly personalized investment strategies is direct indexing.

"Direct indexing is the construction of a custom investment portfolio that mirrors the composition of an index."[16]

This can be based on a standard index or highly customized portfolios tailored to specific criteria. As a result, direct indexing will likely appeal to Gen Z investors who demand investment products that address their specific needs, such as Environmental Social Governance (ESG) investment options. Gen Z investors are increasingly becoming the biggest proponents of ESG. Bloomberg conducted a study on Gen Z investment mindsets and found that over 51% of the survey respondents identified green and sustainable investing as the trend with the biggest investment potential in 2021.[17] Although existing ETFs and mutual funds can provide sustainable solutions, individual investors are not able to customize the composition of the ETFs or mutual funds to what they prefer. Direct indexing, on the other hand, allows an individual to customize a portfolio based on their preferences. For example, an investor will be able to remove any company from a direct index if that company's stance on ESG does not align with their own. This flexibility and client-centric approach will likely appeal to young investors. However, some direct indexing strategies require a minimum investment of $250,000 to $500,000.[18] This is a significant amount of money compared to the average size of

a Robinhood account, which is around $4,500.[19] Nevertheless, there is an opportunity to make direct indexing more accessible to ordinary investors with smaller capital. Dave Nadig, the chief investment officer and director of research at ETF Database, claimed that it is just a “software problem” to make direct index wildly available to average investors with smaller accounts.[20] Once the “software problem” is solved, we can expect Gen Z retail investors to build more individualized portfolios.

Direct indexing not only allows investors to customize their portfolios, but also gives them the opportunity for tax-loss harvesting. When investors have personally re-created an index using direct indexing, they can sell those individual underperforming stocks and buy shares in similar companies to balance their portfolio allocations. “Meanwhile, they have generated a capital loss that can be used to reduce their overall tax liability.”[21]

O’Shaughnessy Asset Management’s direct indexing product, Canvas, designs customized tax profiles through automatically harvesting tax losses and adjusting the aggressiveness of tax-loss harvesting, which allows investors to optimize for the best after-tax returns.[22]

In general, direct indexing gives investors more flexibility to build their own portfolios and achieve personal investment goals, which can be applied to a wide range of potential customers. The two largest asset management firms and ETF providers, BlackRock and Vanguard, are now entering direct indexing with recent acquisitions. BlackRock and Vanguard recently acquired Aperio[23] and Just Invest respectively.[24] Both Aperio and Just Invest are providers of direct indexing solutions. This is an important message to other asset management firms about the significance of direct indexing going forward.

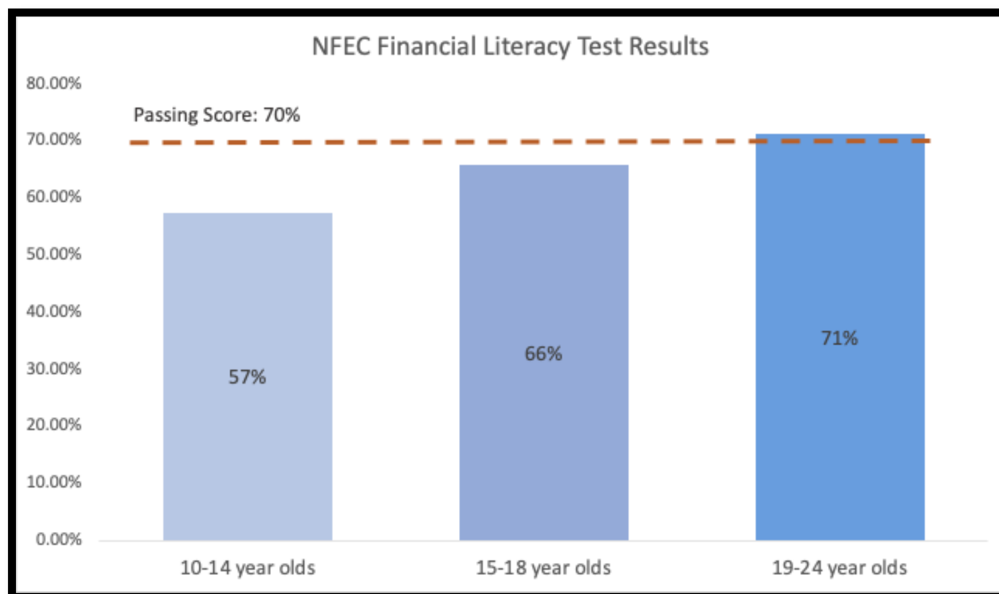
Social Media’s Influence

As Gen Z investors embrace new investing services and tools, they also have access to more information about investing. Gen Z investors are flocking to sign up for free brokerage accounts and teaching themselves how to invest through social media. Social media platforms like YouTube, Reddit, and TikTok are becoming the new-era investment guides for Gen Z investors. However, the quality of this information remains questionable. Social media has undoubtedly affected how Gen Z investors behave and subsequently the performance of the market.

How is Social Media Used in Investing?

Although Gen Zers are digital natives and have access to a wide range of information, there is an overall lack of financial literacy amongst this younger generation. Over the past year, National Financial Educators Council (NFEC)[25] asked 7,246 people across the US to respond to a test measuring their financial literacy, specifically their ability to earn, save, and grow money. The results were broken down into age groups.[26] Gen Z respondents averaged below the passing score, indicating an overall lack of financial literacy.[27]

Exhibit 4: NFEC Financial Literacy Test Results



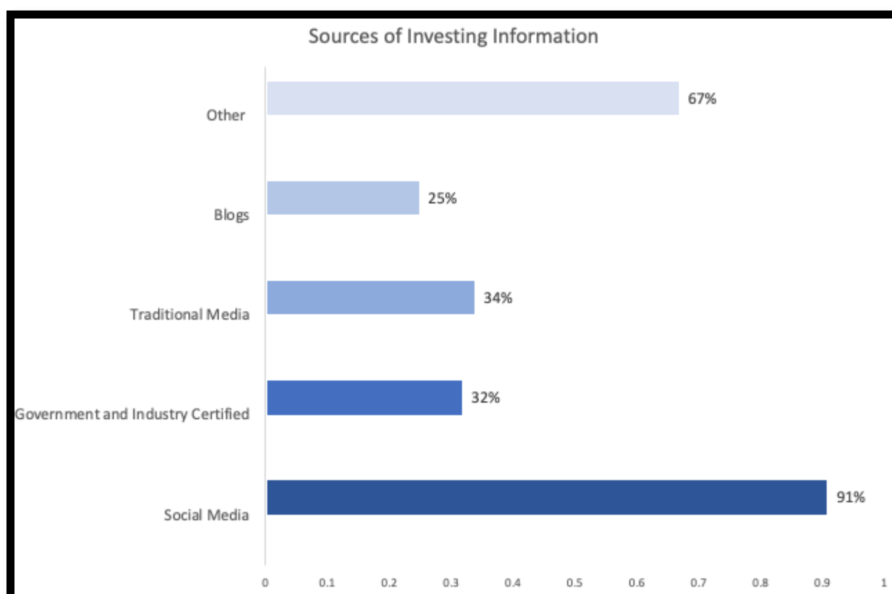
While the average NFEC Financial Literacy Test score for Gen Z investors has demonstrated an upward trend over the past few years, their low overall score implies that these young investors could certainly use additional financial literacy training.[28] Moreover, investing with limited financial literacy could potentially lead to increased market volatility and impede the efficiency of the capital markets, which will be discussed further in *The Danger of Herd Investing* section of the paper.

Since there is an overall lack of financial literacy for Gen Z, the question becomes:

Where do Gen Z investors obtain financial information from?

A survey by The Motley Fool found that 91% of Gen Z respondents use social media for financial information, while only 32% of them reported using government and industry certified sources, such as SEC filings and professional financial advisors, to obtain information. Another major source of financial information is through friends and family.[29]

Exhibit 5: Investing Information Sources



Among all the social media platforms, YouTube is the most popular for Gen Zers seeking investing information. 71% of respondents indicated that they turn to YouTube videos for investing information and advice. YouTube videos with eye-catching titles such as “From $0 to Millionaire | Investing for Beginners”[30] and “The 6 TOP Stocks to Buy in June 2021 (High Growth)”[31] attract millions of views. The content of the videos spans from basic investing concepts, such as risk, returns, and duration, to recommendations such as investing in index funds and real estate or specific stock picks. By using catchy headlines, content creators invite the audiences to click into the video. This strategy works most effectively for Gen Z investors with the mentality of “becoming rich quick.” YouTube allows content creators to share their insights into the market and lets investors be part of the community by posting comments to discuss their stock picks and share their thoughts on the content of the videos simultaneously. These comments help increase the influence of the videos, making them seem more trustworthy to the audiences.

However, the credibility of these YouTube videos remains questionable. For example, if you search “smart investment strategies” on YouTube, the top five results are: “5 INVESTING STRATEGIES THAT CHANGED MY LIFE (must watch),”[32] “Smart investing strategies in any market,”[33] “Investment Strategy for Beginners - Picking Winning Stocks,”[34] ”My Stock Investing Strategy For 2021,”[35] and “THE INTELLIGENT INVESTOR SUMMARY.”[36] As analyzed above, these authors invite audiences to watch their videos through catchy headlines but there are several critical observations to be wary of. The content varies dramatically: the videos contradict each other in several cases even when they share similar titles. More importantly, there is no other way to validate the authors’ credibility other than the number of subscribers, view counts, and the number of likes, none of which are empirical proof of the authors’ investment knowledge. However, as we will discuss later in the paper, it is not in YouTube’s interest to regulate the quality of information presented. Thus, it becomes the audiences’ responsibility to distinguish between reliable and misleading information. Because there is an overall lack of financial literacy among Gen Z investors, we believe it is extremely challenging for them to tell if the investing information on YouTube is credible, making them vulnerable to reliance on inaccurate information.

Gen Z investors also use Reddit forums frequently for investing information. In a recent Motley Fool survey, 42% of Gen Z investors have used Reddit

to gain better understandings of the market.[37] One of the most famous Reddit communities for investing- "WallStreetBets" – has more than 6.1 million members. According to the moderators of WallStreetBets:

"The self-deprecating culture, the wild and ridiculous bets some users made, and the sometimes-gigantic wins and losses that followed, attracted a lot more users than more serious-minded forums."[38]

The comments on Reddit are highly provoking and emotional, which makes it easier for crowd behaviors such as herd investing to take place. A study by Hu et al. demonstrates that "higher traffic (number of posts and comments), more positive tones, more disagreement, and higher connectedness, are all associated with more positive retail order flow."[39] This is evidence that Reddit engagement and sentiment influence retail investors' decisions.

Although some skepticism is raised around using social media for investing information, surprisingly, 73% of Gen Z investors found YouTube to be a trustworthy source for investing information. Meanwhile, 72% of Gen Z investors considered traditional investing websites, such as TD Ameritrade and Fidelity Investments, as well as financial statements, to be trustworthy.[40] Gen Z investors' reliance on social media for investing information, along with their trust in its credibility, contributed to the prominence of meme stocks, and consequently wild fluctuations in certain stocks.

IN SUMMARY, OUR ANALYSIS OF SOCIAL MEDIA'S INFLUENCE ON INVESTORS HAS CONVINCED US THAT SOCIAL MEDIA HAS MADE HERD INVESTING MORE PROMINENT.

The Madness of Crowds

Imperfect Information and Echo Chambers

Social media has allowed imperfect information to be easily spread due to the lack of regulation of and on these platforms. As a result, anyone has the ability to say what they want on social media, which can lead to the spread of imperfect information. Imperfect information refers to ideas that may be false or information that has not been substantiated with proper facts.

Not only are these platforms sources of misleading information, but they also are reinforcing users' views and beliefs through "echo chambers". This phenomenon is a result of the structure of social media platforms. Social media companies utilize big data and algorithms to make feeds tailored to users' interests, creating echo chambers to keep users on their platforms. As a result, users become separated from information that disagrees with their viewpoints, which reinforces the confirmation bias of their own beliefs.

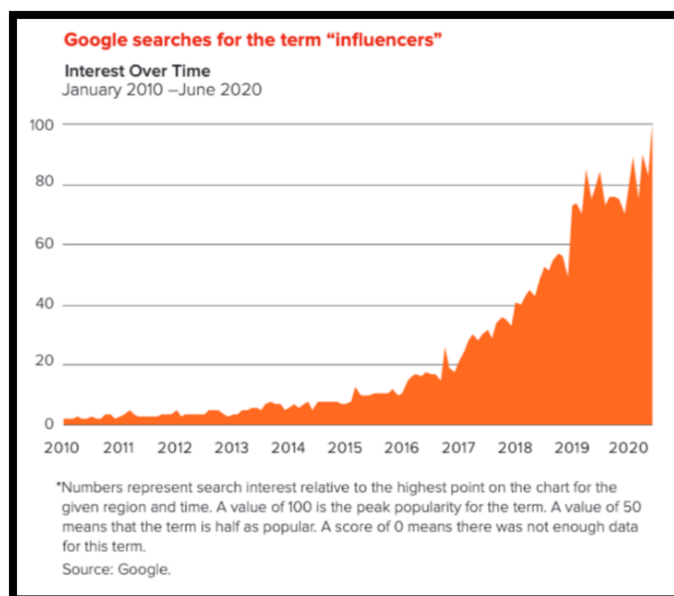
A paper from AQR Capital Management studies the diverse ways echo chambers can affect the validity of information shared online and the impact it has on investors' portfolios. The paper examines how quickly investment ideas on social platforms can generate trading frenzies and high turnover rates.[41] The author found that the GameStop frenzy occurred because of predatory trading, "a strategy in which a trader can profit by trading against another trader's position."[42] This strategy was discussed and embraced by Reddit users, despite the professionals' pessimistic viewpoints on GameStop's fundamentals. The Reddit users constantly updated the state of their GME investment and actively engaged with the community. As a result, Reddit helped create an echo chamber where retail investors were interacting with people who had the same beliefs in GameStop, and it became difficult for them to hear contrary views.

Echo chambers make it more likely for uneducated traders to invest in stocks that they do not understand. While imperfect information seems inevitable due to the nature of people's biases, investors become more susceptible to herd

investing as they invest based on emotions and biases. Within these echo chambers, users with high followings can share content with their followers without much regulation from the social media platforms or the government.

Influencers

Exhibit 6: Searching "Influencers" Online



A principal factor that has enabled herd investing is the rise of influencers on social media. Influencers are the backbone of social media platforms, and the chart above demonstrates the rising popularity of the term "influencers" over time. Influencers are a quintessential part of social media because they are vital to the businesses that run ads on social platforms. These platforms do not just provide entertainment to consumers, but also an advertising business that makes millions of dollars every year. As these social platforms have become more prevalent, so have influencers and their impact on their followers.

A real-life example of the power of influencers would be the push of different bogus coins, also known as "sh-t coins," in the cryptocurrency sector.

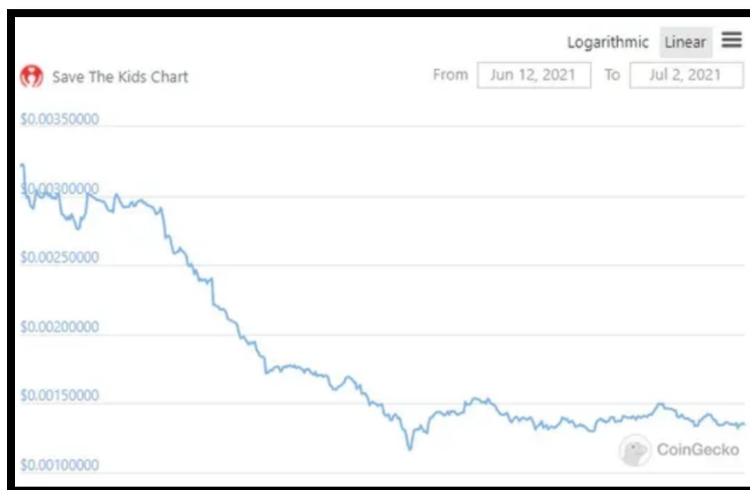
Save The Kids is a cryptocurrency that aims to "build a financial project that will remunerate investors but at the same time help children in need."[43] According to The Focus, Save The Kids stated:

> ***"We allocated 10% of the supply to the charity wallet from the beginning. When that supply gets a consistent value, the team will announce the community that we are going to convert the SAKI token into BNB for donation."***[44]

The FaZe Clan is one of America's largest E-sports organizations and currently has over 8.7 million subscribers on YouTube. When FaZe Kay, a YouTube star with over 6.25 million subscribers, started to push this coin, the price shot up as his fans invested in this coin. While the coin had initially been rising for a few days, around two weeks after FaZe Kay and other influencers had pushed up the price of this coin, its value plummeted. On June 12th, the coin traded at $0.0032, but over the span of a week the value of Save The Kids had dropped by over half to $0.00135.[45] Before the allegations of the pump and dump scheme, FaZe Kay was known to be

reputable influencer due to his association with Faze Clan, and genuinely cared for his fans. His followers may not have understood this coin entirely but FaZe Kay's popularity and previous reputation of being a good person may have influenced investors to invest in the cause of the coin, which has a genuine cause.

Exhibit 7: "Pump and Dump" of Save the Kids Coin



These influencers' ability to spread imperfect information, along with the echo chambers these viewers may have been stuck in, have contributed to younger investors being defrauded by these influencers. It is important to note that for many of the people who invested in Save The Kids, they were not making investment decisions off rational analysis. Rather, they were exploited by a 'reputable' influencer who led them to believe that they could make a great return by following the herd. Investment in altcoins has become a risky tactic that people are starting to copy, and these coins are known to jump in price before quickly dropping. It is important for asset managers to be aware of the history of these types of coins, and the lack of regulation being enforced regarding virtual currencies[46].

Having established the role influencers, echo chambers, and imperfect information play in the investing knowledge Gen Z receives, we now explore the implications and dive into the dangers of herd investing.

The Danger of Herd Investing

The herd mentality (herd investing) refers to "investors' tendency to follow and copy what other investors are doing."[47] Herd investing is based on emotions rather than analysis and can harm any investor, especially retail investors with limited investment knowledge. A danger of herd investing is that it allows the manipulation of retail investors who are heavily reliant on social media's echo chambers of information.

First, it is vital to understand that it is not in these platforms' best interest to regulate what individuals are allowed to say. The more people interact on these platforms, the more valuable these social media companies become. According to CNBC's *Here's how many social media followers you need to make $100,000*, "Influencer Marketing Hub's YouTube calculator estimates that the average YouTuber generates $7.60 per 1,000 views with 45% of that revenue going to Google."[48] Platforms want influencers to create content and actively engage with the online community because it will help them generate more revenue.

Influencers and social platforms are primarily profit-driven entities which can lead to consumers being financially manipulated. These platforms influence users by creating tailored feeds to their interests and allow users to spread imperfect or misleading financial advice, which makes individual investors vulnerable to herd investing. As previously explained, the advice may be incorrect and often

come from an exceedingly small group of people. The lack of diverse financial information and viewpoints, in conjunction with unsubstantiated proof statements, can explain how Gen Zers may be subject to a vicious cycle of herd investing and financial manipulation. Both retail investors and asset managers should be acutely aware of the danger of using social media for investment decisions. While the financial services industry has not been directly disrupted as much by the role of influencers, social media has played an enormous role in the market volatility of many companies and certain sectors.

The next danger of herd investing has to do with a potential increase in market volatility. The average retail investor is not a high net-worth individual. However, due to increasing accessibility, low trading costs, and the availability of information on social media, retail investors' presence continues to rise. These retail investors "have accounted for as much as 25% of the stock market's activity amid coronavirus-driven volatility," according to Joe Mecane, the head of execution services at Citadel.[49] Further analysis by Deutsche Bank suggests that:

"The stocks with the highest [retail trading volumes] relative to their market capitalization have tended to be companies that have already outperformed over the last 12 months, have very low profitability, and are smaller in size."[50]

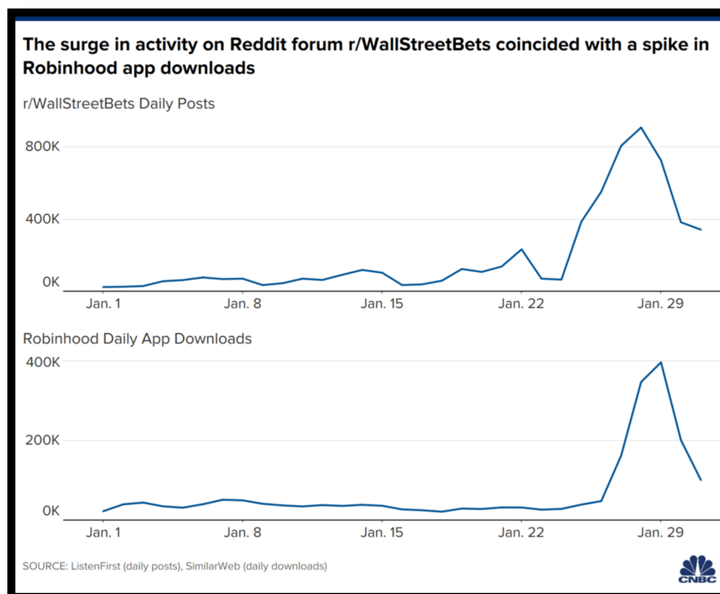
This includes stocks like GameStop, AMC Entertainment, and Bed Bath & Beyond, which have been discussed immensely on the Reddit forums. This substantiates the thesis that retail investors use social media platforms for investment information and decisions, as they follow the stock recommendations shared on those platforms and ultimately, the crowd.

Although GameStop's surge in January was not only driven by retail investors, they were the main force behind the big upside moves. Research by Vanda Research shows that:

"There were big spikes in daily net purchases by retail investors on January 26th and January 27th when the GameStop retail trade was peaking."[51]

The surges in retail buying helped push up GameStop's price to a record high of $483 per share on January 28th, but it closed at $193 per share, as Robinhood blocked retail investors from purchasing GameStop stocks on that same day, indicating an over 50% drop from the previous session. Melvin Capital, a hedge fund that had short positions against GameStop, was forced to exit its position at significant loss and the fund lost 53% in January alone. Uninformed individual investors who followed the Reddit crowd and invested in GameStop at its peak also suffered huge losses. Increased volatility in these meme stocks puts more risks on the investors, creating a greater need to have more knowledge of investing and risk management in order to better position themselves in the market. Researchers are observing signs of a new, younger, more social-media-savvy cohort entering the fray as a result of the GameStop mania. As posts on Reddit's WallStreetBets page grew during the week of January 29th, the number of accounts on Robinhood also increased tremendously.[52] While conversations on WallStreetBets spiked above 800,000 every day, daily downloads of Robinhood exceeded 400,000.[53]

Exhibit 8: WallStreetBets Daily Posts and Robinhood Daily Downloads



[54]

The heightened interest of young retail investors joining conversations on WallStreetBets and opening brokerage accounts suggests that retail investors are strongly influenced by social media and are vulnerable to herd investing. Echo chambers such as WallStreetBets could persist as investors look for the next target stock and as new investors have been brought into the frenzy after witnessing the GameStop saga. The epic story of GameStop only adds to the "credibility" of Reddit conversations for this social-media-savvy cohort, reinforcing the echo chamber and driving them to make similar investment decisions.

Recommendations

As more tech-savvy young retail investors enter the market, the danger of herd investing becomes more pronounced. One way that asset managers could better position themselves against the risks of herd investing is to provide more customized financial services that are tailored to Gen Z investor's interests.

Some institutional asset managers have recently taken steps to cater to smaller individual investors. In February 2021, Goldman Sachs, who has historically only offered wealth management services to high-income customers, released investment services for accounts with as little as $1,000 with an annual fee of 0.35%.[55] Users can choose from three model portfolios of ETFs from Goldman and other providers, and the service provides users with personal finance tools. Products and services once reserved for extremely wealthy clients are becoming more accessible for small retail investors, and asset managers are going to continue to compete for clients as services are expanded to all investors. The approach to distributing these products, and the experience provided for consumers, will be critical for asset managers moving forward.

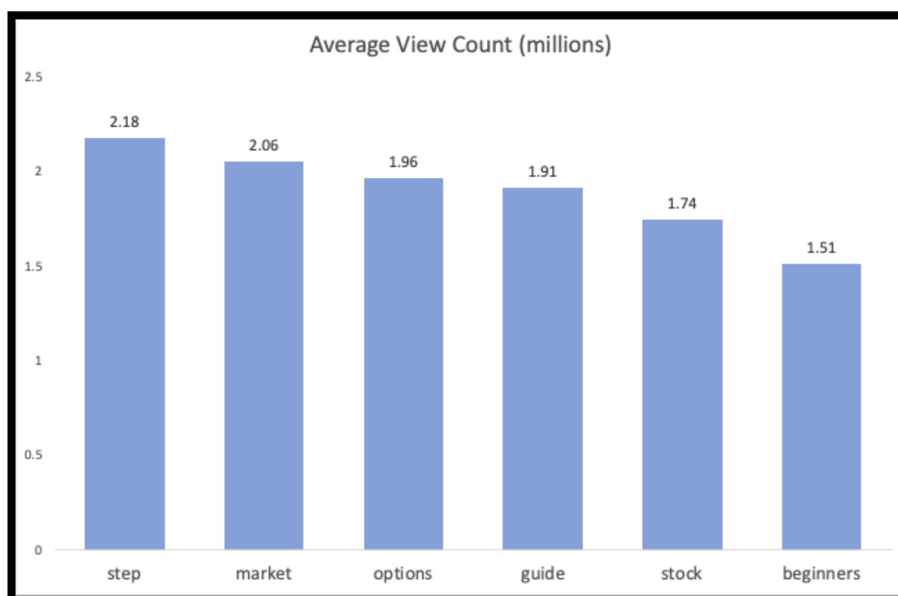
Use Keywords in Social Media Content to Educate Gen Z on Investing

Asset managers should use social media to their advantage and provide financial education for the Gen Z generation on social media platforms. We believe that asset managers should be mindful of their strategies to share information on these platforms. Specific approaches could include interesting keywords in titles, captions, and cover photos of videos that will entice the viewers to click, while still ensuring accurate information. A study by Briggsby illustrates a positive relationship between keyword usage and YouTube videos' view counts and the number of likes.[56] However, this study also

suggests that longer titles tend to underperform, meaning asset managers should not crowd their titles with keywords. Therefore, it is vital to understand which keywords are associated with more views to better capture the preferences of the younger generation of investors, thus making financial education more accessible to them. To understand which keywords promote more views, we conducted an experiment by randomly selecting 100 investing-related YouTube videos and performed a text analysis to discover the correlation between the words used in titles and their corresponding view counts.

We found that the words with the highest frequencies are: “investing,” “beginners,” “stock,” “trading,” “market,” “guide,” and “millionaire.” Furthermore, we calculated the average view counts associated with each word in the titles to understand how much traffic each keyword could potentially drive. After filtering out the filler words, we discovered that the words with the highest average view counts are “step,” “market,” “options,” “guide,” “stock,” and “beginners,” with “step” averaging 2.1 million views as the highest.

Exhibit 9: Top 6 Words with the Highest Average View



These keywords align with the profile of young retail investors: new to investing, prefer equities over fixed income, and curious about the market. Since this cohort of young investors is new to the market, they are looking for a guide that teaches them how to invest step by step. Thus, we recommend asset managers include keywords such as “guide,” “step,” and “beginners” in titles to encourage these unsophisticated investors to learn how to invest and reduce risks. Asset managers should also include keywords such as “equity,” “stock,” “options,” and other new investment vehicles and products, such as “ETF” and “index” to better capture the investment needs of these young investors. We found that “year” is also associated with high average views as investors are constantly looking for the most up-to-date information. Thus, we recommend asset managers include the date in the title, to demonstrate that the financial education content is most relevant to the market today.

Gamification of Education

While it is important for asset management firms to use keywords to attract Gen Z investors to their content, it is also important to provide a platform for financial education resources that will keep younger generations engaged and attentive. The gamification of education has seen extraordinarily

positive results. Duolingo, an app designed to provide free educational sessions to learn languages, has seen proven success with this tactic.[57] They reward persistence with “streaks” when users complete lessons multiple days in a row, similar to the practices in the gaming industry, which help motivate users to continue their lessons. Another gamification aspect that keeps Duolingo users interested is badges. Badges display users’ achievements which can be compared to friends and used to buy materials from the in-app store. This competitive, gamified experience draws people to continue learning, especially younger individuals who tend to be more drawn to video games and digital activities.

Zogo, a free app founded to improve financial literacy, has already started to incorporate gamification within its app. Launched in 2019, Zogo breaks down complicated topics including retail investing, housing, insurance, and car financing, into small modules for users to complete. This mobile app has seen recent success, as over 100,000 users have signed up and it has partnered with over 100 financial institutions. Zogo’s partnership with financial institutions suggests that these firms are creating new ways to engage with their customers and acquire younger generations of customers.

By combining the keywords mentioned above into the titles of these lessons with the gamified experience, we believe there is a significant opportunity for asset managers to capture the next generation through these practices. This is critical, as a study from Casey Quirk found that net new flows of assets under management have a strong relationship with the estimated spending on distribution technologies for asset managers. Firms in the bottom third of spending experienced average net new flows of – 6.8%, while those in the top third of spending averaged net new flows of 2.5%.[58] Moving forward, asset managers that can provide clients with more efficient and personalized experiences may be able to capture larger shares of the market. Asset managers could increase their educational capacities through partnering with platforms that have already established an educational experience tailored to younger users or creating their own learning platforms for their users.

Shorter lessons with a gamified experience may help attract and retain users to continue learning and create a more educated investor base. By expanding their social media presence, where Gen Zers are so active, asset managers can attract new clients while also educating the next generation of investors.

Gamification should be used in a thoughtful manner to educate new, young investors on the risks involved with investing with real money. We believe that gamification can be an effective learning tool to help teach lessons as investors build their knowledge. Investing personal capital comes with serious risks, which should not be downplayed on these investment apps, for example seeing a burst of confetti after making a transaction. We think a gamified experience can create a more enjoyable experience that attracts investors, helping them learn about the risk and strategies of investing before putting any of their personal capital at risk.

Conclusion

Technological developments, such as online trading platforms and the use of social media, have enabled Gen Z investors to impact the market in extraordinary ways. Some attractive features of investing today include the variety of investment vehicles and decreased costs of trading. This is a positive advancement because more Gen Zers are now able to invest. As a result, the number of brokerage accounts has skyrocketed, and this generation’s interest in investing continues to grow. Technology not only expands access to trading, but also access to information online through social media platforms like Reddit and YouTube. With unlimited access, Gen Zers often use these free platforms as credible sources of investing, which can present problems due to the lack of regulation and Gen Zers’ “get rich quick” mentality. Asset managers have an opportunity to customize financial education that will help Gen Z investors become more mature and educated in their financial decisions.

Authors' Note

The influence of technology on the market is profound and complex. We approached this topic from Gen Z's perspective, acknowledging the influence of social media on our investment decisions. This paper examines how technology has made investing more accessible and versatile, analyzes the risks associated with investing when influenced by social media, and reviews the steps that asset management firms can take to address these challenges. We recognize there are many other areas where technology influences the market, such as cryptocurrencies and cyber security. Additionally, the market is complicated, and we can by no means fully explain market behaviors. Therefore, our analysis is subject to change as technology and market conditions change. We recommend firms conduct further research and provided further financial education on these topics. The authors would like to acknowledge and thank Kaitlyn Fischer and Robert Job for their guidance and help.

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