Consumer Finance

Harvard College Consulting Group

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2. Executive Summary

Consumer finance and fintech is very likely to represent the largest potential disruptions in the finance industry over the next decade. This report discusses the research on long-term trends in consumer finance and the potential results of the exogenous shock of the COVID-19 pandemic. This report also takes a particular focus on Gen Z as they are experiencing the greatest behavioral change relative to both older generations and their own pre-pandemic behaviors. In analyzing the rise of consumer finance, findings are broken down into potential causes, results, and concerns.

CAUSES 1

HCCG has identified three drivers of higher adoption of consumer finance and fintech. These are **high socialization, the growth of market familiarity driven by "celebrity stocks" and market hype, and a quarantine-fueled search for entertainment and novelty**. The market has seen a significant increase in the reported number of conversations and social interactions Gen Z has based on the stock market. Young people are talking about the market more than ever before. This popularity has been fueled by a media focus on stocks and trading, which has led to a hyper-focus on a small number of popular stocks and trading platforms.

2 RESULTS

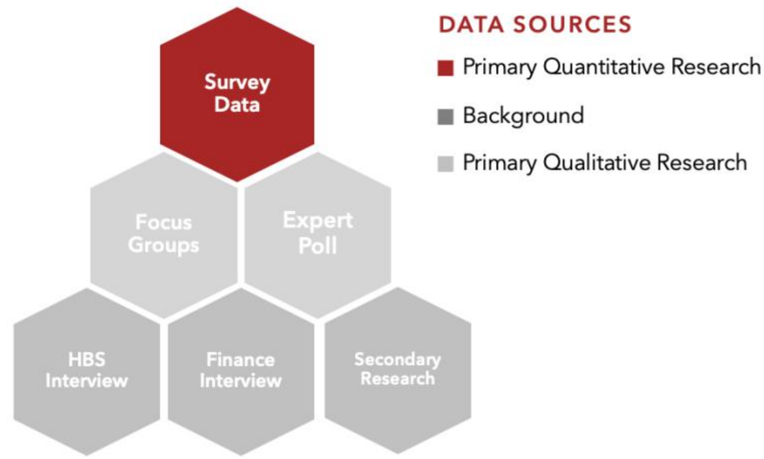
The rising popularity of fintech and consumer finance has caused the rise of increasingly important financial platforms disrupting the old methods of investment banking. **The balance of accounts has shifted strongly to favor individual investors rather than the old professional-based system.** This shift may cause unexpected market trends, such as higher volatility, as traders make decisions away from any sort of institutional backbone, but it is also connecting people more closely to the economy and creating new opportunities.

CONCERNS 3

These trends have caused concern amongst expert and regulators. The largest concern is that **consumers are being falsely promised high returns when that is not necessarily the case.** This concern is related to the worry that consumers are being fed a stream of **increasingly unreliable information** in unedited channels on social media, which many are taking as fact rather than opinion. Our research finds that many survey and focus group respondents share these fears.

3. Methodology

To study the consumer finance habits and preferences of Gen Z, **HCCG conducted a survey of 234 people under the age of 24.** Data was collected on how young people manage their money, what product features are prioritized, where young people learn about investing strategies, and how COVID has impacted Gen Z investing trends. A particular focus was placed on how Gen Z felt about financial markets, specifically relative levels of comfort and popularity of financial trading apps. HCCG also collected information on **knowledge of financial markets and financial literacy** and asked respondents to approximate how that knowledge has changed over the course of the pandemic.



In addition to secondary research, HCCG also conducted **two focus groups of Harvard undergraduate students** to expand upon survey results. The data gained from the focus groups were used to provide a clearer understanding of the rationale behind consumer choices. All focus group participants were current college students.

RESEARCH AREAS

Furthermore, HCCG **interviewed three consumer finance experts at Harvard Business School and four finance professionals.** The additional insights provided by experts drew connections to broader perspectives of future trends in investing, particularly with regards to the impacts of COVID-19. Expert interviews also allowed us to match the data to professionally gathered data sets and inform the context of our commentary. HCCG conducted **expert consultations** of the key questions of the report in order to determine industry and professional consensus.

4. Introduction

Even prior to COVID-19, finance and financial markets were increasingly leaving the realm of traditional firms and professional financiers and becoming the domain of ordinary people, interacting with markets through apps and on an individual basis. Consumers, especially tech-savvy Gen Z-ers and Millennials, have taken to fintech and consumer finance offerings in large and growing numbers. Apps like Venmo have become the norm for splitting checks and paying small bills. Banks and insurers have noticed the rise in consumer finance and offered app options for borrowing, saving, and insuring. Some banks, such as Tangerine, are almost entirely web-based.

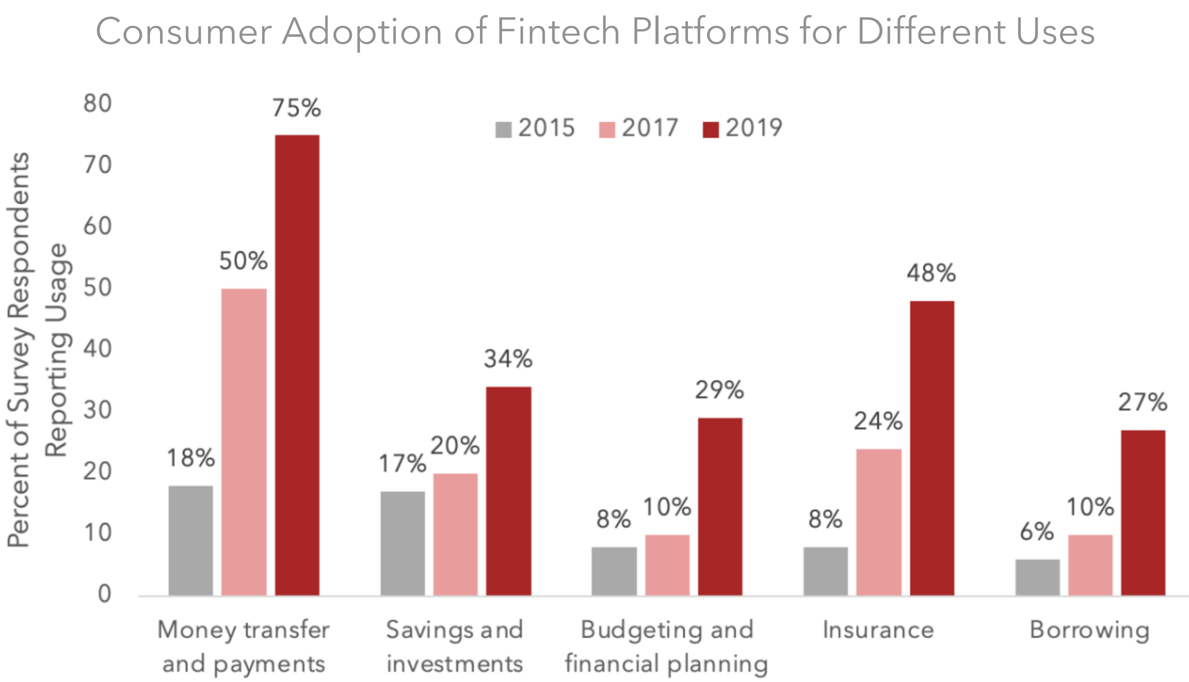


Exhibit 1: Global consumer fintech adoption rates 2015-2019, by category

In addition to this disruption in the way that people handle their day-to-day transactions, consumer finance has revolutionized the way many invest, using apps such as Robinhood and TD Ameritrade to interact directly with the market. The COVID-19 pandemic has exacerbated these trends. This report examines why these shifts have happened, how consumers feel about them, and what trends and features will shape markets in the years to come.

5. Trends and Changes

HCCG first explored the larger secular trends in the consumer finance sector, focusing in on changes related to Gen Z consumers and those due to the pandemic. The team investigated the literature surrounding the **significant growth of mobile banking** among Gen Z consumers, which has only escalated due to the pandemic and the spread of information about financial markets on

non-conventional news sources, such as social media sites like Reddit and blogs. HCCG found that Gen Z-ers are increasingly likely to incorporate discussions on financial markets into their everyday lives and that markets have felt this elevated interest in finance through a rise in personal trading accounts.

5.1 Market Overview: Gen Z and Consumer Finance

Generation Z, defined as people born between 1996 and the 2010, will hold up to $143 billion in spending power throughout their lifetimes, but many of them have not settled on their long-term to financial products yet, making the recognition of younger generations' preferences in consumer finance and the development of services and technologies that support these preferences crucial for the continued growth of consumer finance sectors.[1]

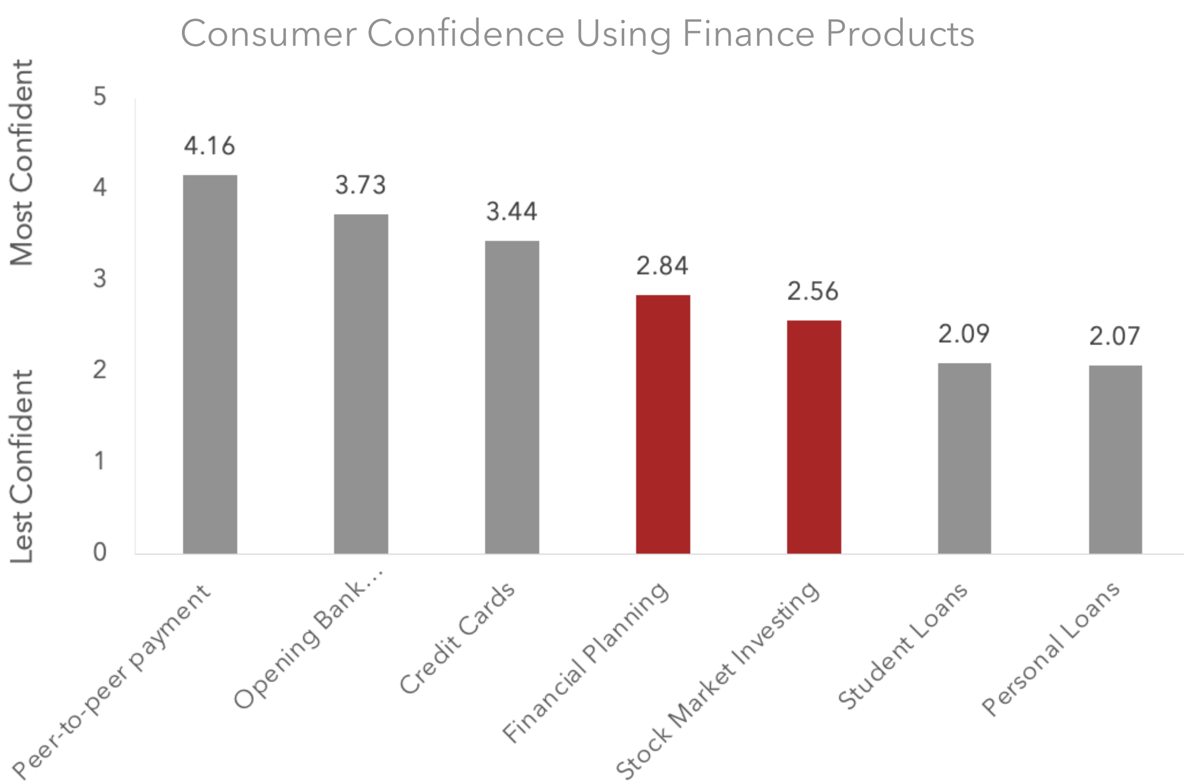


Exhibit 2: Ranked consumer confidence with finance products on 0-5 scale (Source: HCCG Survey)

Over the past ten years, the emergence of new consumer finance technologies and businesses, such as digital-first banks, cryptocurrencies, online stock trading apps, micro-investing apps, and more, have revolutionized the consumer finance industry and enticed growing numbers of young people. The prevalence of mobile banking solutions is only growing, as a Morgan Stanley survey of 6,000 consumers aged 16 to 34 in 2018 found that **47% of 16- to 17-year-olds and 71% of 18- to 19-year-olds use mobile apps to help manage their money**, a number that has

[1] Business Insider

likely only increased in the years since.[2] Adoption of consumer-facing fintech tools is also at a peak across age groups. A Business Insider survey also found that **over three quarters of Gen Z use digital payment or peer-to-peer payment apps,**[3] **and over half of Gen Z uses a digital wallet on a regular basis (at least once a month).** [45]

These usage trends are reflected in a survey conducted by HCCG of over 200 Gen Z students. Respondents were **most comfortable using peer-to-peer payment services** (such as Venmo), which received a confidence score of 4.13 out of 5 and is popular on college campuses and among young people broadly.[6] Survey respondents also reported being confident opening bank accounts (3.71) and using credit cards (3.43). However, people noted that they were **only moderately comfortable investing in the stock market** (2.86) and creating a financial plan (2.57). Respondents felt least comfortable with managing loans (both student and personal), which received confidence ranking of 2.06 and 2.07 respectively.

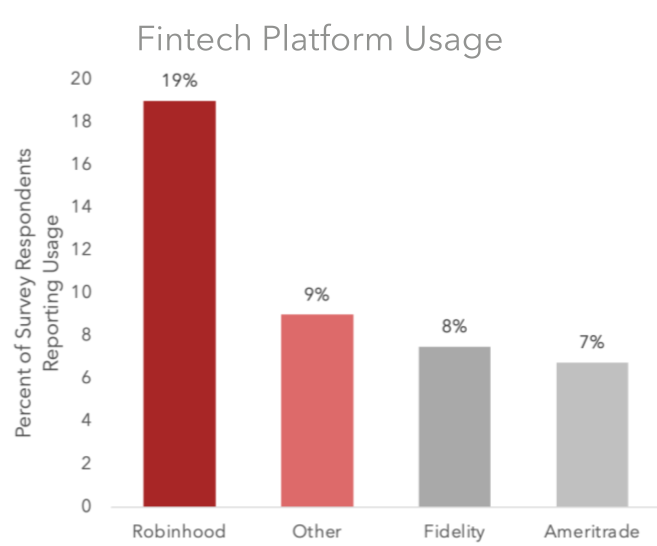


Exhibit 3: Percentage of respondents using varied fintech platforms (Source: HCCG Survey)

Apps which had zero-commission trading and fractional-share trading, such as Robinhood, took the stock investment space by storm in 2013. Robinhood had 500,000 users in its first year, and the company now reports 13 million users and over $180 million in revenue.[7] In order to compete, companies like Charles Schwab, TD Ameritrade, Ally Invest, and Fidelity have **dropped their electronic transfer fees to zero**, lowering barriers to entry and making cost much less prohibitive when looking to invest, especially for younger generations.[8] Robinhood, of HCCG survey respondents, was the most used investment platform with 19% of respondents having used it, followed by Fidelity Investments and TD Ameritrade.[9] Of Gen Z members surveyed by HCCG, 55% also report trading stocks. When asked about important factors considered in their choice of investment platforms, **zero-commission stock trading and fractional shares ranked as the most important factors** among Gen Z respondents.[10]

In response, more young people are investing in stocks than ever before. In the foreign exchange market, the average age of investors is also becoming younger, **with 43.5% of traders being between the ages of 25 and 34 in 2017**, a trend which is expected to continue.[11]

[2] Morgan Stanley
[3] Business Insider
[4] Business Insider
[5] Business Insider
[6] HCCG survey
[7] Business Of Apps
[8] Wall Street Journal
[9] HCCG Survey
[10] Ibid.
[11] BrokerNotes

Interestingly, many of these investment platforms are used by young people to learn more about financial markets and investing as a whole. **Although the most common reason for initial investment was to create future savings, the second most common reason was due to intellectual curiosity with 41% of respondents listing it as a primary reason.** One interviewee noted that she began investing for fun but now focuses on learning financial trends to become more experienced for when she has a larger income. This example demonstrates how lower barriers to entry created by easy-to-use apps and low trading costs have enabled young people to casually invest as a way to learn more about the stock market and saving potentials. However, despite this interest in learning, **long-term savings remains important among young people** with focus groups emphasizing the value of compounded interest and **investing in safe long-term holdings, such as index funds**. A survey conducted by Betterment also noted that 20% of Gen Z and 18% of Millennials place building a savings fund as their top financial priority.[12]

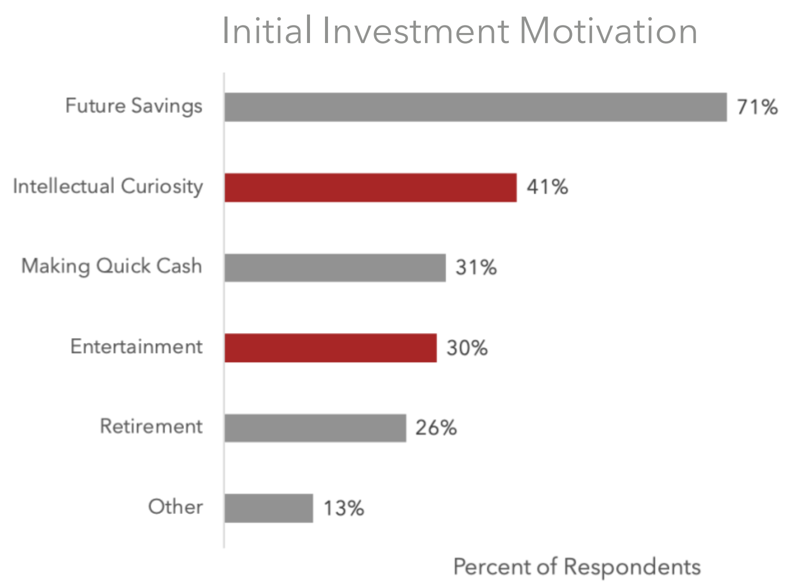


Exhibit 4: Survey response to question "Why did you begin investing?" (Source: HCCG Survey)

Young people also make their choices of financial products and services based on peer influence and social popularity, according to an expert interviewed by HCCG. As one student put it, "If my friends are using it, I'd be more inclined to switch."[13] Furthermore 43% of Gen Z survey respondents say that they discuss the financial market finance at least once a month socially, suggesting that they are receiving regular social exposure to the market.

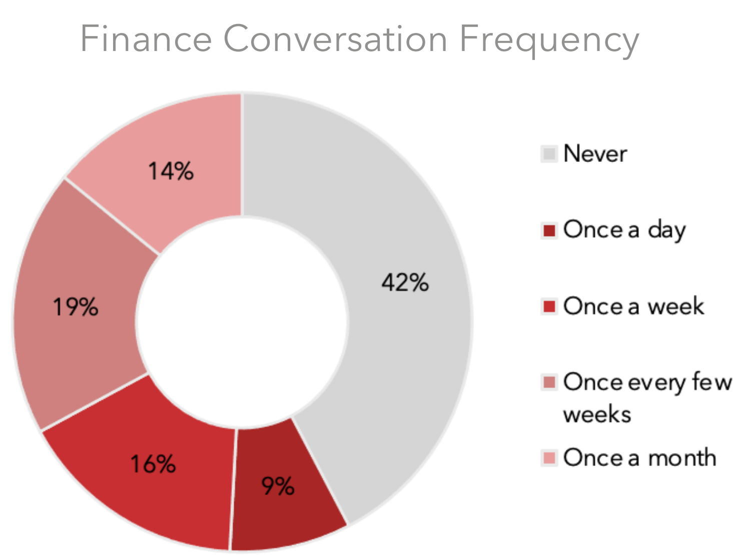


Exhibit 4: Finance Conversation Frequency

[12] Betterment

[13] RSW Focus Group

When looking at investment trends across the United States, the holding amounts vary predictably with age and economic strength. When separating different demographics by age, 41% of families under the age of 35 own stocks with a median holding of $7,700.[14] The median holding of American families then rises with age to $22,000 between 35 and 44 and $51,000 between 45 and 54 years of age.[15] Overall, 35% of adults in the United States own stocks, bonds, or mutual funds excluding retirement accounts, but ownership varies significantly by socioeconomic status and income levels, with upper-income adults being five times more likely to own stocks than those of low-income.[16]

Furthermore, when looking at credit and debt usage among Generation Z, HCCG observed unique finance trends. **Although only 8% of Gen Z is over the age of 18, 66% of that population is credit active, and the average person owns about 1.5 accounts per consumer, with a median balance per card of $606.**[17] Despite this interest in credit cards as a form of taking on debt, personal loans are not common, with only 4% of credit active Gen Z consumers obtaining one.[18] This lack of personal loan popularity may either explain or be explained by consumer discomfort at obtaining a loan. Despite the worry that taking on debt can be risky at a young age, roughly half of Gen Z consumers that are credit active have a VantageScore of 661 or above, placing them in the prime range.[19]

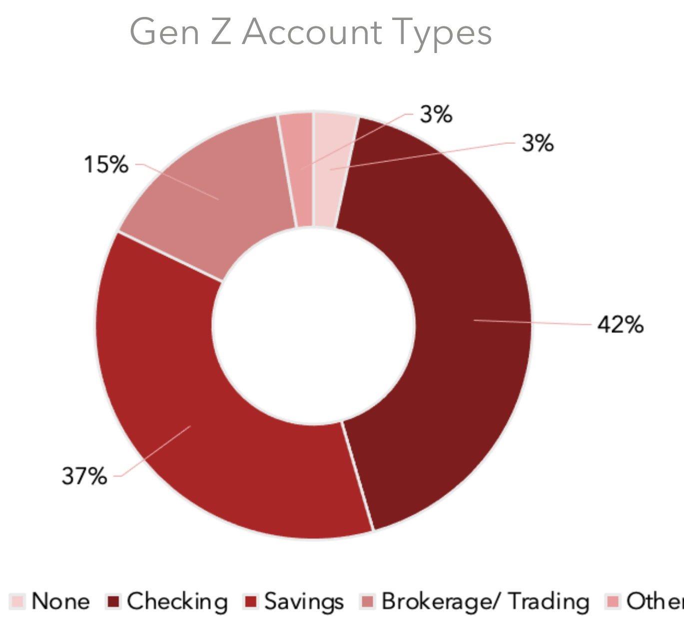


Exhibit 5: Primary account types of Gen Z survey respondents (Source: HCCG Survey)

5.2 Mechanisms and Features

The surge of retail investors, finance forums, and finance social media channels in 2020 is no accident. The advent of zero-commission and fractional-share trading democratized online finance and trading. As traditional financial platforms, such as TD Ameritrade, Charles Schwab, and E*TRADE, slashed their commissions in an effort to compete with newer financial platforms, such as Robinhood and Acorns, millions of retail investors started to make their first trades.[20] **Over one and a half million new users joined Charles Schwab, TD Ameritrade, and E*TRADE combined in Q1 2020, a 125% average year-over-year increase in registration between the three platforms.** Comparatively, **in Q1 2020, three million new users joined**

[14] Pew Research - Parker and Fry
[15] Ibid.
[16] Pew Research - Igielnik
[17] TransUnion
[18] Ibid.
[19] Ibid.
[20] NPR

Robinhood alone, perhaps allured by the easy-to-use user interfaces or the free stocks that many newer financial platforms offer to new users and referrers.[21,22]

Fintech Registered Accounts

	Q1 2019	Q2 2020	% Change
Charles Schwab	386	609	58%
TD Ameritrade	244	608	149%
E*Trade	135	363	169%
Total	**765**	**1580**	**106%**

Exhibit 6: Registered Accounts at Fintech Brokerages (in Thousands) (Source: Wall Street Journal)

As millions of younger retail investors created their first brokerage accounts, online finance and trading communities surged in popularity. One of the **most popular communities, the "WallStreetBets" subreddit (r/wallstreetbets), gained over one million subscribers throughout 2020 and is one of the most active Reddit forums.**[23] The WallStreetBets subreddit is a public online forum in which anyone can view, comment on, and create posts related to financial investing; WallStreetBets is known for promoting high-risk, high-reward trades, such as users putting their life savings in out-of-the-money options with less than 1 week expiry.[24,25]

Many young investors get a majority of their finance knowledge from WallStreetBets and similar finance forums and channels on Reddit, YouTube, Instagram, TikTok, and other social media platforms. 70% of survey respondents used online forums, with 30% using Reddit in particular. **Young investors are increasingly using these social media platforms that promote risky financial habits and sensationalize trading**. Retail investors are primarily interested in tech-related stocks, such as Tesla, Shopify, Roku, Palantir, and Zoom, due to their remarkably high returns during COVID (e.g., $TSLA has appreciated over 860% since the trough during the height of COVID uncertainty).[26,27,28] This interest in high-growth tech stocks was backed by the survey, which found 92% stock recognition for Tesla, 84% for Airbnb, and 80% for Doordash.[29]

The democratization of financial investing during a period of massive volatility in the stock market has created an increase in speculative investing strategies, such as trading options. Equity option trading volume increased by over 50% from December 2019 to 2020 on all options platforms, and many of these new trades are made by younger retail investors.[30] While options can provide more leverage for smaller initial investments, they can be extremely risky, particularly to the untrained retail investor. Despite the risk, many users on forums like

21 NPR
22 Bloomberg
23 SubredditStats
24 WallStreetBets "YOLO Bets" Forum Page
25 WallStreetBets Subreddit: Options Trading Example
26 CNBC
27 CNBC Mad Money
28 NASDAQ
29 HCCG Survey
30 CNBC

WallStreetBets tout their extreme winnings and losses, bragging about **treating financial investing like gambling at a casino.**[31] Some of these investors' trades are remarkably successful, such as a 200,000% return on long-term $TSLA calls by "Anono-mon".[32]

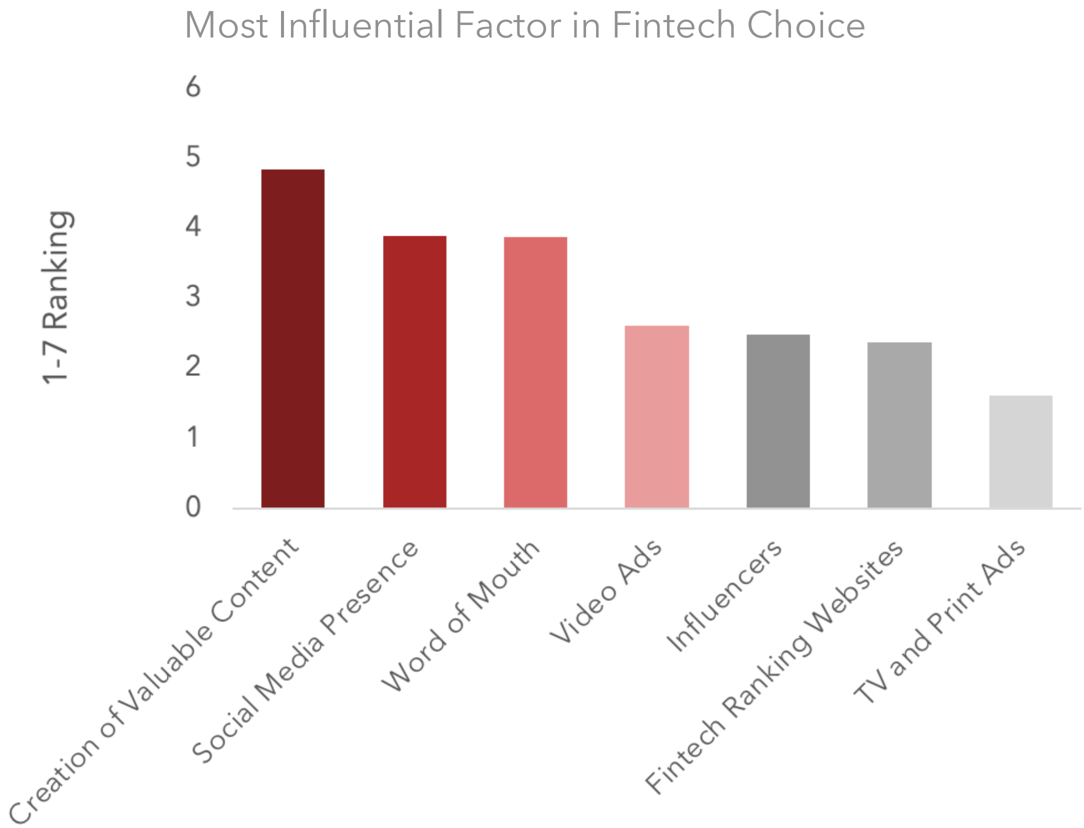


Exhibit 7: Ranked Answers to "What most influences your choice of fintech platform?"

Many, if not most, retail investors trading options are not as fortunate, which can result in tragic, life-changing financial losses. In June 2020, a 20-year-old Robinhood trader committed suicide after seeing a negative $730,000 balance in his account (it is unclear whether the negative balance was permanent or possibly temporary due to a multi-legged trading strategy).[33] A note by his computer found after his death read: **"How was a 20-year-old with no income able to get assigned almost a million dollars worth of leverage?"** There are real risks to speculative investing; people's lives and livelihoods are at stake. These tragic stories of financial and personal ruin do not seem to phase most retail investors. According to a Goldman Sachs analysis, single-contract options volume has risen 14% in 2020.[34]

The recent surge in retail investing has been supported by free online finance education materials. JJ Kinahan, Chief Market Strategist at TD Ameritrade, said there has been "no dropoff in the interest in education material on our website." In fact, their most watched videos, stock fundamentals and getting started with options, have received three times as

[31] WallStreetBets Reddit
[32] WallStreetBets Reddit
[33] Forbes
[34] Wall Street Journal

many views than the previous year.[35] Finance YouTube creators like Graham Stephan and Andrei Jikh have collectively amassed millions of subscribers, and while larger finance channels typically give responsible financial advice, viewers may be pulled into the world of speculative investing and make poor financial decisions. **Many "stock-picking" gurus and companies are heavily investing in YouTube advertisements that promote their newsletters, Discords, and private stock groups that promote their hand-picked stocks (that are often penny stocks) to day trade**. Recently, one of the leading "stock-pick" companies, Raging Bull, has been accused by the FTC of $137,000,000 worth of fraud through their "deceptive marketing campaigns, filled with false earnings claims and targeting scores of new consumer victims."[36] While the increase of financial education resources online brings the opportunity to empower retail investors, sources that sensationalize returns may inadvertently (or in some cases, advertently) promote risky, speculative trading.

5.3 Market Overview

Leading Fintech Brokerages

With the pandemic forcing a wider array of activities virtual, the digitalization of the consumer finance industry has likewise been accelerated. In this process, several key players had a profound impact on this pandemic-induced acceleration. The firms in focus are mainly from the brokerage industry, including **Robinhood, TD Ameritrade, Interactive Brokers, Charles Schwab, and E-Trade.** As of June 2020, shortly after the first round of stimulus had been released, these five firms had the highest daily average revenue trades (DARTS), which are a measure of how well brokerages make profit from commissions. With regards to DARTS, Robinhood leads the pack with 4.3 million with a total of 12.84 million between the five firms.[37] Due to the accessibility of app-trading and their commission-free nature, Robinhood added 3 million more accounts, and TD Ameritrade saw the largest increase in DARTs with "312% increase from comparable quarter last year". [38] The success of this new wave of digitalized brokerage platforms lies not only in the unique financial environment but also their respective business models.

Business Models

Robinhood and many of these other rising brokerage firms market their commission-free trading of "stocks, ETFs, options, ADRs, and cryptocurrencies" as a means to "democratize America's financial system", attracting a large Millennial base.[39] With this large base, Robinhood earns mostly from interest as they can lend out idle cash on user's accounts with net assets under management in the tens of billions.[40] Like most other firms, Robinhood also **earns some fees from premium accounts and margin trading**. Similarly, both TD Ameritrade and Charles Schwab moved to zero commission brokerage in 2019. Like Robinhood, both earn significant

[35] CNBC
[36] Marketwatch
[37] CNBC
[38] TheStreet and CNBC
[39] TheStreet and Investopedia
[40] Motley Fool

portions of their revenue through lending out users' cash balances with Charles Schwab earning 57% of its 2018 revenue from net interest margin, and TD Ameritrade earning 28%.[41] Since TD Ameritrade does not own a bank, they instead partner with other banks, including its affiliate TD Bank. Likewise, E-Trade and Interactive Brokers both have zero commission for listed stocks and ETFs.

A comparison can be made with a previously popular business model of earning revenue from commissions. **Previously, Interactive Brokers did take a commission based on the value or volume of transactions each investor makes, accounting for 37% of its FY2019 revenue.**[42] A larger portion (56%) now comes from net interest income. Results of an HCCG-conducted survey reveal that zero commission trading is more highly valued than other mechanisms and features, including fractional shares and crypto trading. Indeed, more firms are now moving towards zero commission business models.

Consumer Outlook

Compared to the commission-based model, the current model has many advantages for consumers. One of these advantages is the reduction of fees for trading any US listed stocks and ETFs. In addition, while these brokerage firms largely profit off the interest on idle cash, some major players do compensate consumers, sometimes more so than traditional brokerages. Whereas the national average interest rate stands at roughly 0.05% APY (annual percentage yield), Robinhood provides a 0.30% APY.[43] In contrast, for consumers with only several thousand dollars in idle cash, Charles Schwab, Interactive Brokers, and E-Trade all have rates near the national average of 0.05%, with TD Ameritrade providing the lowest rates at just 0.01%.[44] These rates are much lower than prior to the COVID-19 pandemic due to the aggressive lowering of the federal funds rate in wake of the pandemic.

However, consumers can also face increased costs when purchasing premium accounts, used for margin trading or options, which can have monthly or contract fees. However, **the cost to consumers from fees is often much lower than the cost from trading high risk complex financial products,** which these brokerages make easily accessible for often consumers uneducated in the underlying financial products**.** One example of these costs is a Navy medic lost more than $800,00 dollars in March 2020 through Robinhood.[45] Specifically, Robinhood outranks its peers in the number of options contracts traded per dollar in the average account at a staggering 25,840 in Q1 2020 whereas TD-Ameritrade, Charles Schwab and E-Trade make up less than 4,500 combined.[46]

Many, if not most, of **the consumer-facing costs and benefits of these brokerages stem from a new accessibility to financial markets –** it "democratizes" the system but simultaneously exposes inexperienced users to large risks (oftentimes to a magnitude that is unbeknownst to them).

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41 NY Mag
42 Fifth Person
43 Smart Asset and Robinhood
44 TD Ameritrade, Benzinga
45 NY Times
46 NY Times

Robinhood and other brokerages' success stems from their marketing: from the "falling confetti and emoji-filled phone notifications", users find these platforms as fun and cool forms of entertainment unaware of the dangers. [47]

Consumer Opinion

While 56% of respondents did not use an investment platform, of those that did, **Robinhood is the most popular platform** with 33% using it, followed by 13.9% using Fidelity, 12.5% using TD

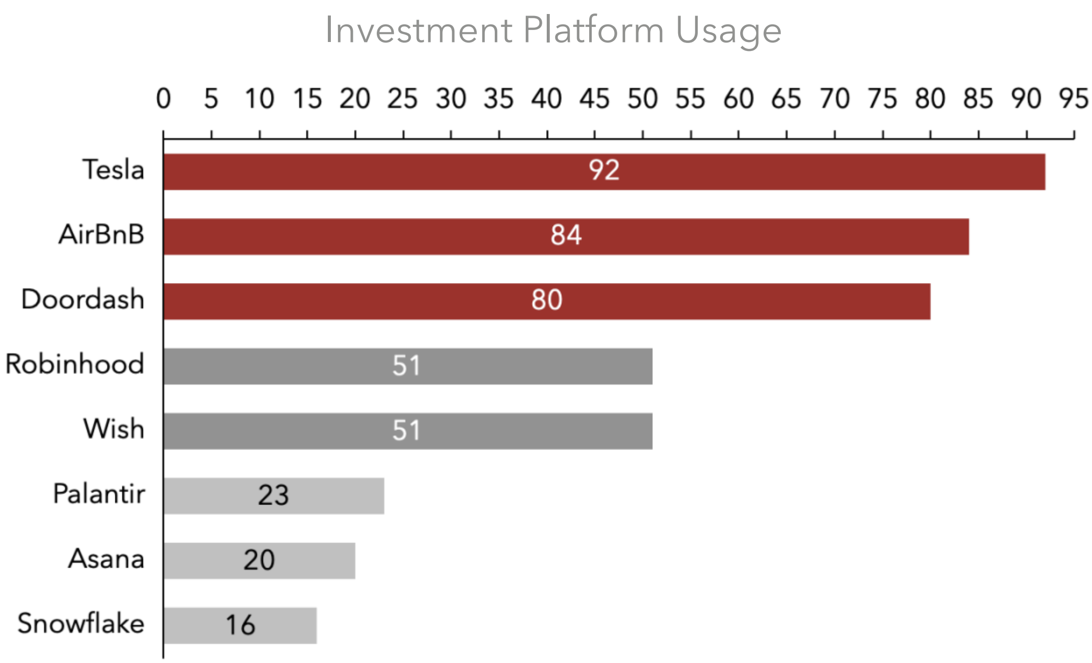

Exhibit 8: Percent Usage of Investment Platforms by Survey Respondents (Source: HCCG Survey)

Ameritrade. In terms of trust for these platforms, on a scale of 0 – 5 with 5 as the most reliable,

Charles Schwab (3.65), Fidelity (3.62), and TD Ameritrade (3.44) were seen as highly reliable, while Robinhood (2.89) and Webull (1.92) were seen as mildly reliable. Given the generally low amount of trust in these platforms, the survey also found that "word of mouth" and "creation of valuable content" are the two most appealing marketing techniques. TV and print ads, fintech ranking websites, endorsements, and video-based advertisements all ranked low. In the age of "fake news", the largely Gen-Z respondents find it most reliable to trust the opinion of friends, and those firms who are willing to share knowledge without strings attached. Finally, ease of use is also a major player in determining a certain platform's popularity. On a scale of 0 – 5 with 5 as easiest to use, **Robinhood had a score of 4.03, followed by Acorns (3.31), TD Ameritrade**

[47] NY Times

(3.06), Fidelity (2.96), Webull (2.95) and Charles Schwab (2.78). HCCG found a slight negative correlation between ease of use with a platform's popularity and perceived reliability.

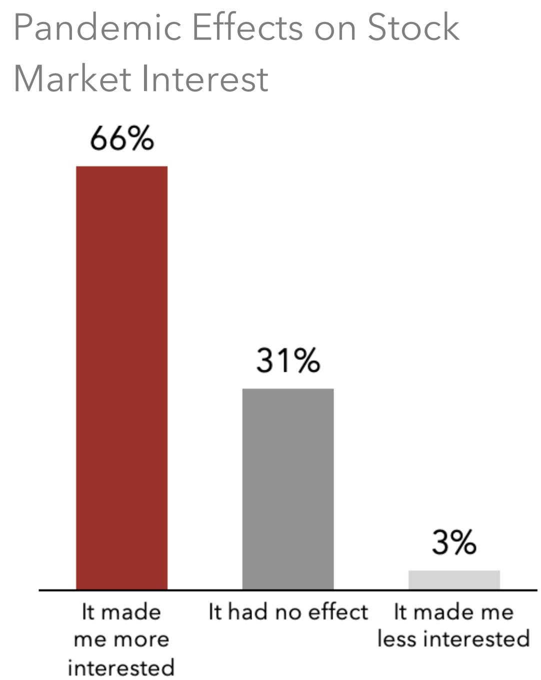

Exhibit 9: Reported Impact of COVID-19 on Interest in Stock Market (Source: HCCG)

Market Impact

According to HCCG's, **the pandemic made Gen-Z individuals significantly more interested in investing (with 65% reporting higher interest and just 3% reporting lower interest).** This increased exposure to online investment platforms begin to challenge another key function of traditional banks - providing checking and savings accounts. As far back as 2018, Robinhood already challenged traditional banks with a 3% interest rate as opposed to 2.25% from online banks and the measly 0.01% from traditional banks.[48] Along with the fact that Millennials "rather conduct all their banking and investing from their smartphone than in-person", these new competitors are drawing Millennials from traditional banks at an increasing rate, impacting a main revenue stream for them. [49]

In light of this, Barclays has launched its own digital features, allowing customers to "restrict spending at certain retailers through its mobile app". [50] For many other traditional banks, during the age of COVID, **the need to fast-track digital accessibility is great enough to "ask fintech firms for assistance in bringing better digital banking solutions to the marketplace"**.[51] These partnerships can be mutually beneficial by providing many of these burgeoning investment platforms a financial lifeline when many VC firms have become hesitant.

5.4 Stock Market Effects

Despite the negative economic shock of COVID-19, stock markets the world over have climbed during the pandemic. This has led many economists to fear that the world economy is facing a major bubble, as traders bet on government stimulus and an optimistic future rather than on market fundamentals. Consumer finance, which puts power to traders with relatively low economics training, may be increasing the amount of money bet on spurious market claims. One economy which offers a valuable case study is China, which is facing COVID-19 on an advanced time span and which has previously experienced broad stock market bubbles.

[48] Forbes
[49] Forbes
[50] Forbes
[51] The Financial Brand

Case Study: China’s Stock Markets

After emerging from lockdowns in the early months of 2020 with minimal COVID-19 case counts, China’s economy has managed to grow in 2020 unlike almost all major world economies. In fact, **the Chinese stock market has also experienced positive effects as a result with it soaring to its “highest level since the 2008 financial crisis”.**[52] The market’s capitalization climbed to over $10 trillion for the first time since the “great bubble” of 2015[53] and notably, the country has seen high levels of trade with the rest of the world, with imports rising 13.2% compared to 9.9% at the same time last year.[54]

However, some investors are concerned that 2020 performance of the Chinese stock market may constitute a bubble. In contrast to the pandemic-related bubble concerns, the “great bubble” of 2015 was largely fueled by **unreasonable leverage trading and the high number of lay investors.**[55] Experts contend that the 2020 market performance is fundamentally stronger than 2015’s with newly established tougher legal frameworks, and the emergence of a regulatory environment. Compared to 2015, many of the underlying fundamentals of the markets have improved. Now, “professional institutional investors own more than 70 percent of the free float of all Chinese stocks, foreign investors hold about 5 percent, margin and leveraged financing are equivalent to about 5 percent of market capitalization, compared with about 10 percent during 2015's bubble.” Currently, China’s stock market index – the CSI 300 – trades at less than 19 times its past 12-month earnings.[56]

While many of the current market conditions indicate higher stability than 2015, recent economic analyses suggest the higher uncertainty accompanying the COVID-19 pandemic can result in “bigger volatility of stock returns for both composite index and sector indices”.[57] In a study using Google Trends search results, it was found that the **“higher uncertainty resulting from Covid-19 can cause the significant drop of the composite index in the Chinese stock markets”** but that the impact differs for different sectors. It was “generally negative for sectors including energy, consumer discretionary, industrials, transport and telecom, but positive for IT Sector”. The positive impact on the information technology sector can be attributed to increased demand for services such as web conferencing and entertainment due to the pandemic.[58]

[52] The Guardian
[53] CGTN
[54] The Guardian
[55] CGTN
[56] CGTN
[57] SSRN
[58] China Studies Center, University of Sydney

Celebrity Stocks

113%

AIRBNB EARLY-IPO STOCK SURGE

Airbnb, an American vacation rental online marketplace company, went public on December 9th, 2020 and its shares began trading on December 10th, 2020. Prior to its IPO, Airbnb aimed for a stock price between $44 and $50 per share but later raised its target IPO price to between $56 and $60 per share.[59] On December 10th, the stock opened for public trading at $146 per share – valuing the company at more than $100 billion – and quickly accelerated to $165 on the same day. These bearish moves by Airbnb suggest that the company has been effective in cutting costs during the pandemic but also points **towards a larger phenomenon that investors are increasingly demanding fast-growing tech startups as low interest rates "limit interesting alternatives".**[60] As seen with companies such as Airbnb, a trend of both institutional and retail investors demanding tech stocks becomes clearer. However, this trend also calls into question whether valuations will drastically and suddenly fall in the near future.[61]

Unsurprisingly, despite initial bearish analyst calls, Airbnb's shares started dropping to $124 apiece just five days after its IPO. According to Forbes, "Gordon Haskett analysis Robert Mollins said Airbnb's IPO surge 'more than stretched' the firm's share prices" and also that "Airbnb's valuation, relative to its revenue potential, is more than three times higher than the average among competing online travel agencies".[62]

Tesla is an American electric vehicle company known for promoting sustainable and renewable energy. Founded in 2003, the company achieved great success under Elon Musk who served as the chairman beginning in 2004. Releasing its first completely electric car in 2008, Tesla has since experienced profound success – it's stock price "has risen by 4125% since the close of its first day as a public company" in 2010.[63] Tesla's stock has soared since 2010 and has outperformed big tech companies such as Apple and Amazon despite its ups and downs. In 2020, Tesla has seen a meteoric rise in stock prices with a jump from $85 a share in mid-March 2020 to $880 on January 8, despite little underlying change to revenue or revenue projections.

Despite its booming success and recent popularity, Tesla stock is potentially a high-risk investment. Tesla cars are potentially too expensive for consumers, the company could face a shortage of batteries, and as an electric vehicle company, it faces challenges with low gas prices.[64] Even though it's one of the hottest stocks on the market and is one of the most valuable companies in the world with a $630 billion valuation, competition and overvaluation could prove to be challenges both for companies and for investors.[65]

59 Investor Place
60 CNN
61 CNN
62 Forbes
63 CNBC
64 Investopedia
65 The Motley Fool

DoorDash is a major food delivery company that has made significant market share gains over the course of the COVID-19 pandemic. The discrepancy between stock price and true valuation was not a phenomenon unique to Airbnb as DoorDash also experienced a major difference between its true profitability potential and stock price. CEO of market research firm New Constructs, David Trainer, labeled DoorDash's IPO as "the most ridiculous IPO of 2020" because of the company's **"lack of profitability; huge competition; and a potential example of pandemic pull-forward in demand"**[66]. Stating that the company doesn't have a way to make money in the long-term, Trainer said just after DoorDash began trading on December 9th, 2020 that **the business is "a race to a zero-margin business" and that the short-lived pandemic boost will end and mean the end of growth in orders for all food delivery apps.**

267%

DOORDASH COVID REVENUE GROWTH

5.5 Effects of COVID-19

Adoption of Digital Services

Nationwide lockdown orders prevented consumers from leaving their homes and getting to banks and brokers, presenting new opportunities for fintech and digitized trading to expedite a digital transition. While adoption of digital finance services has been on the rise globally, increasing from 16% of consumers in 2015 to 64% in 2019, a degree of institutional inertia, especially for older consumers who prefer physical banks and meeting with brokers in person, has slowed the transition to digital services.[67] But only five months into national lockdown orders, results of a survey by the Harris Poll, which randomly sampled 2,000 Americans, revealed that **73% of Americans now see managing their money online as the "new normal."[68]** In fact, even consumers in the 61-65 and 66+ year age groups saw increases of 37% and 33%, respectively, in the adoption of digital payments.[2] **More than half of consumers now see digital financial services as more than a viable alternative to in-person services**. 56% of Americans reported that they "could not have coped" without the apps they used to manage their money and make new investments.[69]

A Generation of New Investors

A subset of Americans has also taken the pandemic and the volatility of the stock market as an opportunity to try their hand at investing for the first time. Robinhood reported that more than 1.5 million of its new accounts were new investors.[70] Similarly, TD Ameritrade saw that **two-**

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[66] Yahoo Finance
[67] EY Global FinTech Adoption Index 2019
[68] Plaid
[69] Merkle
[70] Robinhood

thirds of the 608,000 new accounts opened during the same quarter were opened in March, the same month national lockdowns began.[71] Part of the reason for this boom may be attributable to the **sudden loss of typical sources of entertainment**, such as sports. As explained by a professor at Harvard Business School, investing, and day trading in particular, took the place of typical sources of entertainment. An increase in the number of first-time investors during a down market also isn't surprising (a similar trend was observed during the 2008 financial crisis) but combined with the competitive shift to zero-commission trading in 2019, Millennials and Generation X in particular have seen heightened interest in investing.[4]

Heightened Interest in Saving

The threat of unemployment and low hiring rates contributes to one of the first-order effects of the pandemic - limited spending. A survey of 11,200 consumers across 11 countries at the beginning of April 2020 reported that 63% participants said that their focus over the next six to nine months would be on boosting their savings.[72] HCCG's survey data corroborated this, finding that saving was a primary trading motivation for 73% of respondents, while only 42% listed intellectual curiosity as a primary motivation[73]. While the national personal saving rate, or the percentage of income left after all expenses are paid, has historically been between 6 and 8%, it reached a high of 32.2% in April 2020.[74] However, this savings increase isn't seen

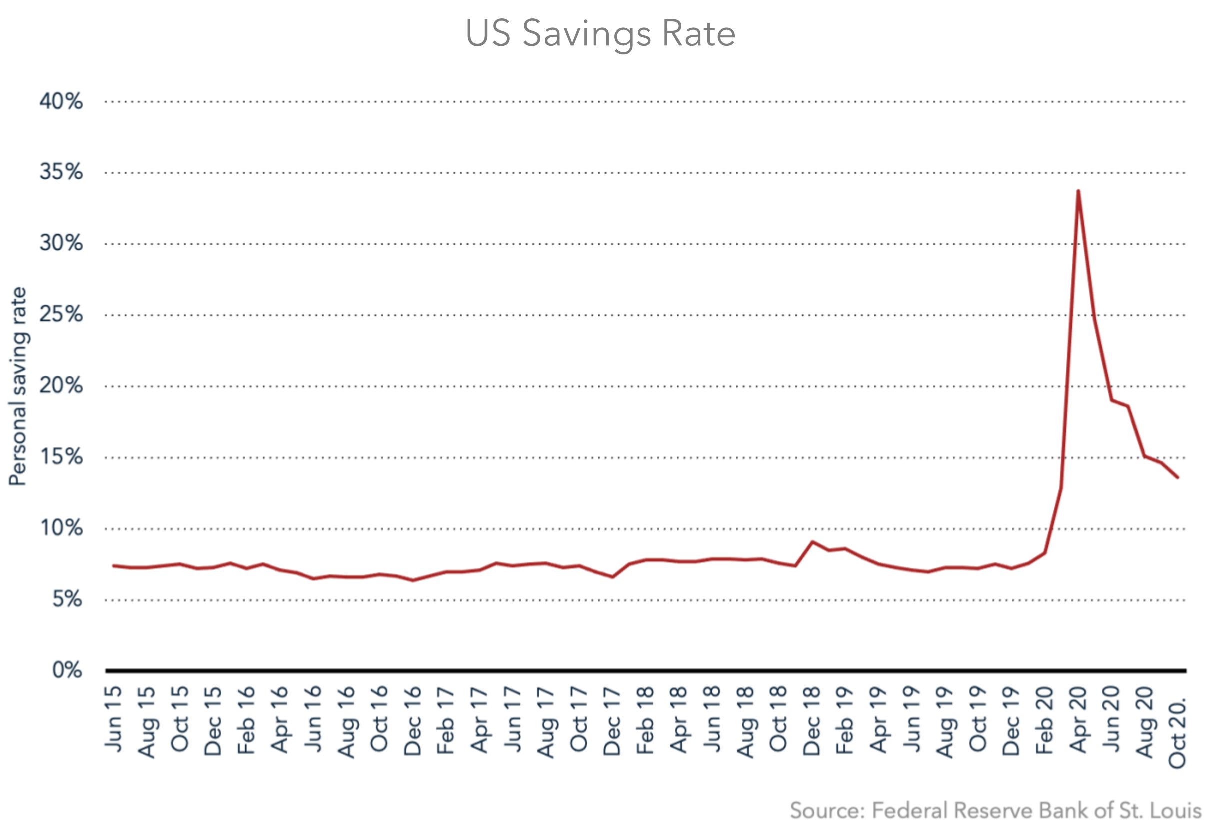


Exhibit 10: US Savings Rate (Source: St. Louis Fed)

[71] U.S. Securities and Exchange Commission
[72] Capgemini Research Institute
[73] HCCG Survey Data
[74] Federal Reserve Bank of St. Louis

equally across socioeconomic lines. In fact, while **"more than two thirds of the reduction in credit card spending" between January and May 2020 came from the "top 25% of the income distribution," the bottom 25% continued spending at the same rate[75].**
Increased saving for high-income households also had a direct impact on low-income households. Businesses in zip codes with the highest average rent prices were quick to lay off workers only two weeks after national lockdowns began. While less than 30% of low-income workers were laid off in low-rent zip codes, more than 50% of low-income workers working in high-rent zip codes were laid off.[76]

Effects of Stimulus Checks

The arrival of stimulus checks into Americans' accounts signaled much-needed relief for some and a drop in the bucket for others. Researchers at the Becker Friedman Institute for Research in Economics found that families with less than $500 in their checking accounts spent almost half of their CARES payment within 10 days, while families with more than $3,000 spent none of it.[77] Stimulus checks had the biggest impact on these lower-income households, who primarily used the funds on expenses including food, utilities,

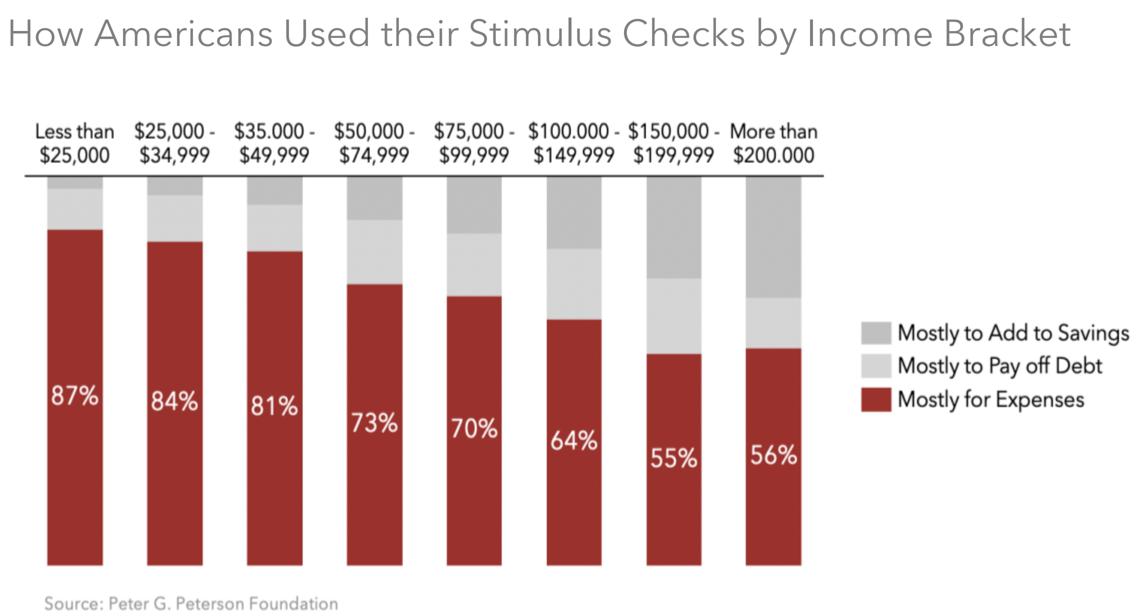


Exhibit 11: Stimulus Check End Usage, but Income Bracket (Source: Peter G. Peterson Foundation)

[75] Opportunity Insights
[76] Opportunity Insights
[77] Becker Friedman Institute for Research in Economics

household supplies, and rent, in that order.[78] But even in income groups that spent the bulk of their stimulus checks on necessities, a study of bank account transfers of 2.5 million Americans who received checks reveals that spending on stimulus checks **to increase securities trading, including investing in stocks, was commonly done.** Americans earning between $35,000 and

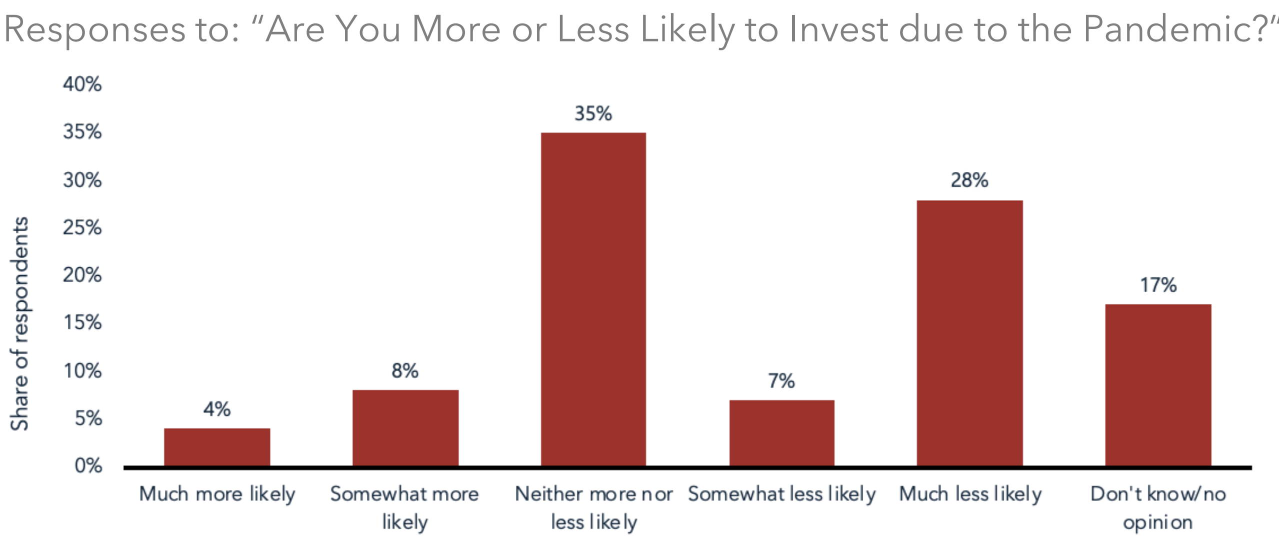


Exhibit 11: Likelihood of Registered Voters Investing in the Stock Market During COVID-19

$75,000 a year **increased trading by 90%** in the week after receiving their check while those earning between $100,000 and $150,000 a year saw similar gains, increasing by 82%.[79] Considering only 12% of registered voters reported that they were either "much more likely" or "somewhat more likely" to invest in the stock market in March 2020 a trend which continued into April and May, the additional capital provided by the stimulus checks appears to have had a significant effect on trading behavior

6. Stakeholder Effects

HCCG also investigated the perspectives of three stakeholder groups on the above trends in consumer finance. HCCG interviewed traditional investors and experts, who report having felt significant changes in the market and growing concerns that the rise in fintech and personalized trading will create less informed trading decisions. Interviews with first time investors confirmed prior research that knowledge about finance markets is increasingly part of young peoples' lives and that investing has taken on a social element. Research into the role of government suggests that this sector could lack adequate regulation in order to curb the riskier "casino-like" aspects of some fintech platforms.

6.1 Traditional Investors

[78] Peter G. Peterson Foundation

[79] Envestnet Yodlee

Institutional investors, as opposed to retail investors, are companies and organizations that trade securities on an industrial scale. Due to their sophistication and specialization, they are able to pool money and invest for others as well. They are large and influential in the market; as they buy and sell large volumes of stocks, bonds, and other assets, they wield significant price-making power. There are six main types of institutional investors: **commercial banks, endowment funds, hedge funds, insurance companies, mutual funds, and pension funds.**[80] Due to their deeper understanding of the market, they are often considered "smart money", and individual firms often research their investment decisions to follow it. As they often make block trades of 10000 shares, the restrictions on them are meant **to prevent any from acquiring significant control over certain securities.** Regulation 13D outlines the necessary procedures and paperwork for acquiring more than 5% of a publicly traded company[81].

The Effect of COVID-19

With the pandemic accelerating the movement towards digital platforms, the brokerage industry for retail investors has flourished, detracting from the influence of institutional investors. The rise of easy-access digital trading platforms plays right into Robinhood's motto to "democratize finance for all" **as individuals will feel less compelled to go through the intermediary of institutional investors**. An HBS professor interviewed by HCCG notes however that this comes with its own risk as the increased accessibility allows less informed retail investors to enter the market, and he is especially worried about the "lessons" that some investors may be learning from this stimulus-buoyed market.

Many institutional investors, worried for a potential correction after a decade-long bull run, were largely positioned defensively by prioritizing greater liquidity before going into the pandemic-fueled recession. As a result, there was much less panic, and pension funds and endowment funds were much better off than they were in the 2008 financial crisis. With many expecting the "other shoe" to drop given the magnitude of the pandemic's economic damage, most institutional investors interviewed by McKinsey followed three key steps to protect themselves: **maintain stakeholder trust, defuse portfolio risks, and increase liquidity to be "alive" for opportunities.**

6.2 First Time Investors

The pandemic's effect of increasing the digitization of finance resulted in a new wave of consumers joining the market as first-time investors. When commenting on these new fintech investment services, focus group participants noted how the digital platforms they used made investing quicker and more accessible than before. Digital investing platforms brought the

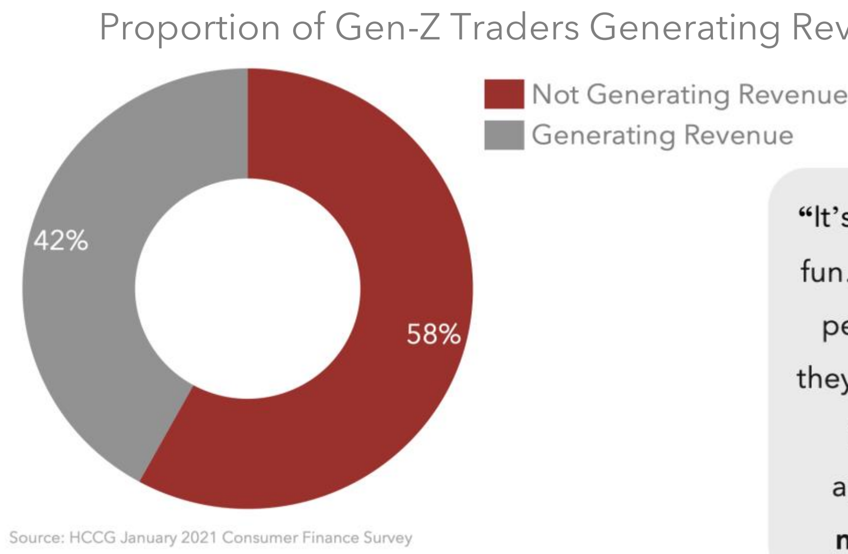
[80] Investopedia

[81] Investment Fund Law Blog

complex world of the stock market to more familiar mobile, web, and application-based interfaces.[82]

Revenue Generation and Investment Strategy

Despite a strong average rate of return of 16% on investment portfolios across all survey respondents (compared to the general market average of about 9%),[83] **first-time investors are largely unsuccessful in generating revenue from their investment endeavors**, per results from the HCCG survey. Among 42% of investors that do generate revenue, the average return on investment is a sizable 21.4%.



"It's something I do for fun…but I think a lot of people think of it as they're money working for fun, which is appealing **but not necessarily true."**

Exhibit 12: Percentage of Respondents Generating Revenue (HCCG)

One potential explanation for these differing outcomes is the use of an investment strategy and the variance in success between different investment strategies. Across all respondents, the most successful investment strategy was Dollar-Cost Averaging (DCA), with 89% of users generating revenue, and **the least**

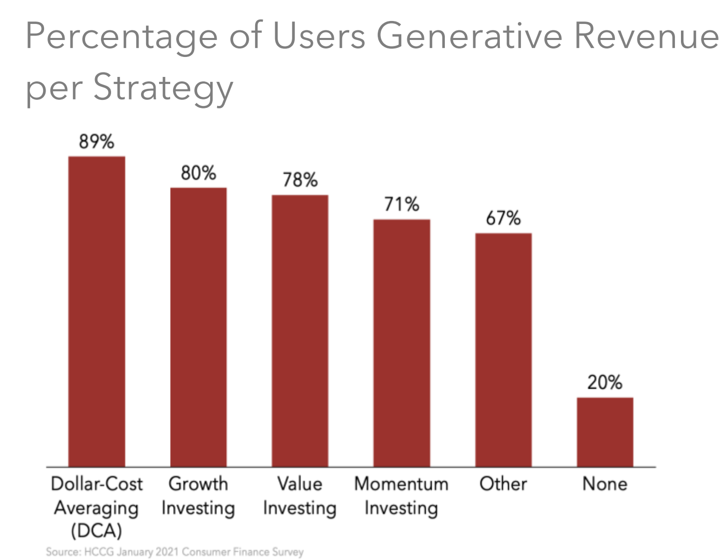


Exhibit 13: Percentage of Respondents Generating Revenue per Strategy (HCCG)

[82] Forbes Business Council

[83] Investopedia

successful investors were those who did not use any strategy, with a 20% rate of success in generating revenue.

In terms of both the use of a strategy as well as the type of strategy used, first-time investors who indicated that they did generate revenue were in a better position. **Only 29% of investors that generated revenue did not use an investing strategy, compared to 82% of investors that did not generate revenue.**

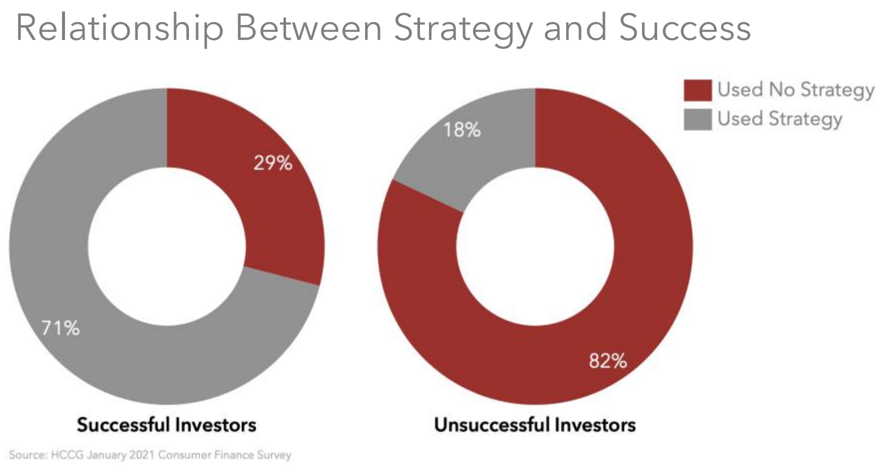


Exhibit 14: Proportions of successful and unsuccessful investors that used strategies (Source: HCCG Survey)

Additionally, among the three most effective strategies, 18% of successful investors used DCA, 48% used growth investing, and 32% value investing, compared to 2%, 9%, and 6% respectively for unsuccessful investors. The survey data points to the critical importance of having a strategy when investing. Many focus group participants displayed similar sentiments, **noting the importance of research and strategic planning when investing money in the market.**

Motives for Investing

First-time investors display various motives for investing, but **future savings was by far the most frequently cited by young investors**. Many focus group participants expressed a desire to possess greater financial security in regard to their savings, and it seems that these sentiments were heightened by the pandemic. One focus group participant noted that "COVID showed that anything can happen to the economy" while another explained that **the pandemic "changed how [she] see[s] retirement."**

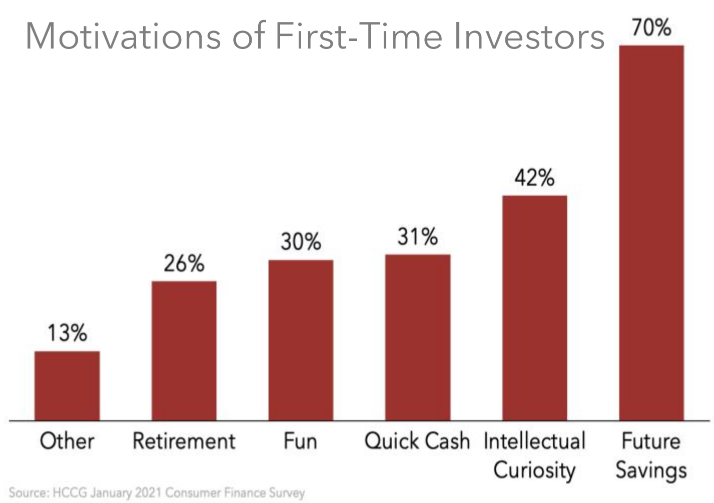


Exhibit 15: Responses to "Why did you begin investing?" (Source: HCCG Survey)

Future savings was overwhelmingly popular in survey responses, having been cited by 70% of respondents. Of these investors, 36% also indicated an interest in saving for retirement, and females were just slightly more likely to save than males (72% compared to 68%). Some focus group participants also stated that they began investing because they have had more time on their hands during the pandemic, a trend that is also reflected in the survey with 42% and 30% of respondents selecting intellectual curiosity and fun, respectively, as reasons for starting to invest as well.

Motivations also may have a role in first-time investment success. **The HCCG survey found that 81% of investors who reported generating revenue were motivated by future savings compared to 68% of investors who reported not generating revenue**. This difference could potentially be attributed to varying **risk tolerance.** Some focus group participants noted that their motive of future savings had pushed them to invest more safely, while other focus group participants who cited curiosity and "making quick cash" as motives were more willing to experiment with investments. The survey results corroborated this desire to experiment, with **65% of first-time investors citing "making quick cash" as a motive did not generate revenue**.

Investment Platform Preference

Although Robinhood was the most frequently used platform across all first-time investors, Robinhood's popularity is at odds with investors' success rate using it; of all of the platforms surveyed, **investors had the least success on Robinhood, with 72% of investors generating revenue**. This lower rate of success corroborates many of the concerns that have been brought up against Robinhood regarding its **lack of guardrails for first-time investors**.[84] Respondents had the **most success using Fidelity Investments' services, with 90% of users reporting generating revenue.**

It seems that there is not a consistent reason among first-time investors for using one platform or another. One focus group participant acknowledged the risk that Robinhood poses for first-time investors but explained that she still began investing using Robinhood because "[her] mom used it." Other focus group participants had similar reasons for using certain platforms, noting that their friends and family using certain services makes them more likely to do the same. Ease, accessibility, and the presence of certain features also play a role in user preference. One focus group participant liked **"how quick it was to get started investing on Robinhood,"** while another mentioned that he **preferred using Fidelity Investments due to its provision of investment research and news.** There were also participants who chose their respective platforms at random or simply to get a taste of online investing, indicating that the choice of platform is not always tied to a specific reason.

Platform Preference and Risk

On average, retail investors using Robinhood do not have very diversified portfolios and assume more risk than the S&P 500 by industry exposure. According to Robintrack, a service that tracks aggregate behavioral and trading data from Robinhood users, the average December 2019

[84] The New York Times

Robinhood investor allocates 32.2% of their portfolio to the technology sector, a historically more volatile and risky industry, versus the 18.1% the technology industry holds in the S&P 500. Further, in December 2019, the roughly six million Robinhood users held roughly 12 million unique holdings. Thus, the average Robinhood investor has two unique holdings (whether companies or ETFs), which is not a diversified portfolio. As a result**, these investors may be more susceptible to market volatility, meaning that while they may experience high returns, they may also experience high losses**. It is worth noting that some of Robintrack's data may be slightly skewed due to Robinhood's free stock referral systems.[85][86]

Robinhood investors appear to not only have higher risk tolerances on average, but also trade more frequently. In June 2020, Robinhood experienced over 4.3 million daily average revenue trades (DARTs), more than Charles Schwab (1.8 million) and E*Trade (1.1 million) combined. In Q2 2020, all of Robinhood's publicly traded rivals more than doubled their year over year trading volumes.[87] According to HCCG surveys and focus groups, Robinhood is quite popular among Gen Z, with Robinhood being voted as easiest to use and the most commonly used; over 32% of Gen Z survey respondents that invest use Robinhood.[88] **Robinhood's success suggests that Gen Z traders are disproportionately likely to have high risk trading strategies.**

Financial Education Background

First-time investors, definitionally, are inexperienced, but their financial backgrounds can vary drastically. Some focus group participants possessed strong academic backgrounds in finance and economics, but the vast majority primarily used news sources like Yahoo! Finance and the Wall Street Journal to follow the stock market. The HCCG survey results displayed similar findings, with 74%, 78%, and 81% of respondents **ranking financial forums, financial news websites, and newspapers**, respectively, in their top five sources to use for learning about stocks and finance**. Media sources, including social media sites like TikTok and Instagram, as well as more traditional content platforms like YouTube and Reddit, are growing in popularity as well,** and the survey corroborated this trend. 35% and 27% of respondents ranked TikTok and Instagram, respectively, in their top five financial informational sources, and 77% and 23% of those surveyed placed YouTube and Reddit, respectively, in their top five. Social media sources certainly provide new risk, but first-time investors feel confidence in their ability to gauge the reliability of these sources. **One focus group participant acknowledged that "sources like Reddit pose risk" but felt that other sources like YouTube have quality content that simply has to be filtered during searches.**

"It's good that it's [Robinhood] is so accessible but it comes with its own drawbacks and creates issues for **people since they don't do due diligence**"

[85] Robintrack
[86] The Next Web
[87] CNBC
[88] HCCG

6.3 Government and Regulators

Automated Advising and Decision-making Services

Across online trading platforms, automated ("robo-") advising and decision-making services have surged in popularity, with growth around 3.1% in the just the first quarter of 2020.[89] Online trading services have seen accelerated growth in this area in 2020, with examples including TD Ameritrade's 150% growth in automated investing accounts and Betterment's 25% increase in account openings since 2019.[90] However, these present a variety of new risks. Even prior to the pandemic, the U.S. Securities and Exchange Commission (SEC) noted the existence of misconduct between online investment platforms and retail investors.[91] Despite this acknowledged risk, current consumer protection regulations have not been extended to consumers of digital advising services, leaving them unprotected against potential risks. **Governments will need to implement more technology-neutral regulations, meaning that consumers of robo-services receive the same protections as consumers of traditional services**,[92] which countries like Australia and Singapore have already begun to experiment with.[93] Given the greater role of data, robust enforcement of algorithm transparency and data quality standards will be critical to prevent misconduct.[94]

Cybersecurity

Online trading platforms' dependence on technology and data collection opens the door to new security risks. On average, mobile trading services have a 12% risk for fraud and scam compared to 3% for traditional trading services.[95] **With companies having greater freedoms regarding movement of data, there are also additional issues of breaches and leaks, opaque ("black box") usage of data, and preferential policies that favor certain investors**.[96] Regulator frameworks have to be flexible, consisting of both technological requirements and room for adaptation. As such, requiring encryption and security standards will be important,[97] but also creating regulatory sandboxes, where fintech can be tested prior to use, is important to adapt to new risks.[98] Ensuring uniformity when instituting these regulations can further strengthen their effectiveness.

Consumer Protections

89 Corporate Vision
90 Investment News
91 U.S. Securities and Exchange Commission
92 Bank for International Settlements
93 Lexology
94 University of Pennsylvania Carey Law School
95 Harvard Kennedy School
96 Harvard Kennedy School
97 Payments Journal
98 Alliance for Financial Inclusion

> **“**If you don’t have that wealth of information you succumb to public perception because it’s what’s there and what’s available. **I wish that there were more protections because I know people that have lost hundreds of dollars on these platforms.”**

Online trading’s democratization of finance has proven to be a double-edged sword. Its effect of bringing in new investors creates potential for substantial volatility given these individuals’ inexperience in trading. Robinhood is a case in point. More than half of Robinhood users are first-time investors, and between January and March of 2020**, consumers using Robinhood traded “nine times as many shares as E-Trade customers” and approximately “forty times as many shares as Charles Schwab customers.”**[99] The data is more concerning when looking at options trading, in which Robinhood customers traded “88 times as many risky options contracts as Schwab customers.”[100] These are side effects of new investors that, having little financial background, now have sudden access to a host of investment opportunities without guidance. Establishing regulations that create guardrails for consumers is an area of possible government involvement.[101]

Gamification

Online trading platforms have certainly opened doors in the realm of finance, but the risks these platforms entail have jolted the government into action. At the forefront of the government concerns that have accompanied the rise of consumer finance is the “gamification” of financial markets by online investment platforms and services. Online investment platforms provide new features that bring excitement to the traditional flow of trading. **Customers can now invest in brands or companies that they are familiar with, receive instant nudges and notifications, and access the full force of the market in a way that was not possible before for first-time investors.**[102] Some trading platforms, like eToro, an Israeli-British platform, have pioneered a new phenomenon known as “social trading,” in which customers can view their friends’ investment portfolios, compete with them, and even copy their investment moves.[103] **Cumulatively, these elements have fostered an environment that, while being more accessible to first-time investors, encourages increasingly fast, risky, and impulsive trading.** Robinhood has become the face of investing’s gamification, having faced various legal challenges from government actors. Recently, Robinhood paid a settlement of $65 million after being charged by the SEC for misinforming customers on Robinhood’s revenue sources,[104] and the company now faces a lawsuit from the Massachusetts Securities Division, which has accused Robinhood of using various features to lure inexperienced investors to risky trades on the platform.[105] **As online platforms increase consumers’ risk tolerance, the traditional and safe buy-and-hold investment strategy will likely decline in popularity.**

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99 New York Times
100 New York Times
101 Bank for International Settlements
102 Forbes Business Council
103 Bloomberg
104 CNBC
105 Financial Times

7. Conclusion

Due to Gen Z's **increased exposure to financial markets**, the incorporation of market-based discussion into Gen Z's social lives, the proliferation of consumer finance mediums, and boredom due to the pandemic, **Gen Z's use of personal finance management tools and stock market trading has sky rocketed during the pandemic**. Gen Z's increasing interaction with the stock market has caused concern among experts that consumers are receiving an unrealistic message regarding their potential returns and as a result are risking money recklessly. HCCG's research has shown that young people are increasingly getting their financial information from **relatively unreliable sources** such as social media platforms, but that they are feeling more connected to markets and **overall rate the growth in personal finance as being positive to their futures and financial well-being**.

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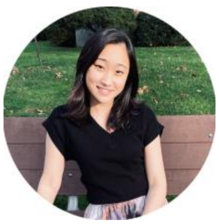

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