

Stock Investment Industry Augmented by Mobile Technology

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[Abstract] This concise article explores and discusses the stock investment industry and how stock investment has been enhanced by mobile technology/applications. It details the stock investment industry; the introduction of vital forces that affect the investment industry; services provided by the investment industry; the value chain of the investment industry; the business process of the investment industry; mobile applications used in stock investment/trading; the leading mobile apps; challenges, benefits, legal and ethical issues faced by mobile applications; and concise inferences.

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Investment Industry

A common perception of wealth is that it leads to financial stability and freedom. People are interested in finding ways to generate wealth; thus, the concept of “investing” one’s wealth to produce more wealth becomes paramount. Investing involves using a certain amount of money to generate profits through different financial methods, such as buying property and putting money into bonds or savings accounts that accrue interest or trading securities (Napoletano2020; Smith, 2021). Additionally, according to *Forbes Magazine*, simply investing encompasses buying an asset at a low price and selling it at a higher price (*What Is Investing? How Can You Start Investing?*). This type of investment is what generates “capital gains” by selling an asset for a profit. Assets may also appreciate through time. Appreciation refers to the value an asset has gained since it was bought. Furthermore, investing has been enhanced through mobile platforms, which has given access to many more “retail investors” that did not have access in the past. Investopedia defines a retail investor as an “individual nonprofessional investor” that uses his/her account to trade securities (*Retail Investor Definition*) (Hayes, 2021).

Through the many mobile platforms created by many institutions, such as Chase, Wells Fargo, Robinhood, Webull, and many others, retail investors have gained an advantage to trade from the comfort of their mobile phones (Gillian, 2020). The simplicity of being able to invest from one’s phone has given an edge to today’s small investors, an edge that only institutions used to have before technology introduced mobile trading. In essence, mobile trading opened the doors to investment opportunities that were only privy to the few in the earlier period. The investment industry can be considered a subdivision of the financial services industry. It involves a transformational, value-added, and active management strategy. The investment industry serves different types of individual and institutional investors. It helps investors invest their money and helps clients grow capital in the financial market. It is important to note that the

investment industry and people who participate in investments operate within economic systems that are different for all countries (Mitchell, 2020; Investopedia, 2021). In this article, for ease of readability reason terms, “Stock Investment” and “Investment” are used interchangeably.

This concise article explores and discusses the stock investment industry and how stock investment has been enhanced by mobile technology/applications. The following sections are detailed in this article: investment industry; vital forces that affect the investment industry; services provided by the investment industry; value chain of the investment industry; the business process of the investment industry; mobile applications in stock investment/trading; the leading mobile apps; challenges, benefits, legal, and ethical issues faced by mobile applications; and concise inferences.

Vital Forces that Affect Investment Industry

There are internal and external vital forces that affect the investment industry (Harris, 2020). The internal forces include competition and technology, while the external forces include regulation, market volatility, and globalization. Brief descriptions are provided below:

Internal Forces

- *Competition*: The relationship between the investment industry and competition is one of the most important relationships in the economy. Competition in the investment industry is fierce. Competition brings more innovative investment products and services for investors, which guarantees that all the participants are satisfied in the industry.
- *Technology*: Technology is impacting all industries. New technology, especially computer use, has significantly reduced trade processing costs and improved trade processing capacity. Developments and analysis services in the investment industry are increasing, which brings in innovative investment products.

External Forces

- *Regulation*: The regulations in the investment industry are high. Plus, every region or country has its regulations. Sometimes regulations of other countries also affect our countries’ investment industry. These regulations play a crucial role in increasing global standards and security regulations.
- *Market Volatility*: The ease of access to trading platforms has enabled uneducated consumer trading. This onslaught of trades has led to unexpected market changes.
- *Globalization*: Technology has revolutionized the global economy. Investors can invest outside their regional markets. Investments that are done in foreign countries also contribute to economic development, which ultimately benefits the investment industry.

Services Provided by Investment Industry

The investment industry provides a variety of services, such as financial planning, investment management, investment information, liquidity, etc. Here are brief descriptions of the main and selected types of services:

- *Financial Planning*: The investment industry provides consulting services to investors and potential investors to help them better understand their needs.
- *Investment Management*: The investment industry also assists investors in selecting their investments by providing proper information about the investment market.
- *Investment Information*: It also provides financial data and market research information so that investors can make their decisions to invest their money.
- *Brokerage Services*: The investment industry also provides brokerage services through which brokers assist investors and help them connect to the investment market.
- *Liquidity*: Investors or savers get liquidity in the investment industry, as they do get the ability to buy and sell stocks, bonds, and/or other products on time and at the market value price.

- *Trading Support and Resistance:* Settlement agents, brokers, and custodians in the investment industry provide charts based on trendlines and the moving average of investments. Investors study these charts and buy near support, when prices are moving up, and sell near resistance when prices are moving down.
- *Securitization and Financial Intermediation:* In simple language, financial intermediation means transferring funds from investors to borrowers. The investment industry provides liability and asset instruments that satisfy the needs of participants.

Value Chain of the Investment Industry

There are many phases involved in the investment industry's value chain process. Value chain analysis in investment industries includes examining various stages of investment product creation. Corporate boards and institutional investors play an important role in the investment industry's value chain (Baumgardner, 2019; Drexler & Mendelsohn; 2019; What Is a Value Chain? 2020).

Investment Governance Activities

- *Strategic asset allocation:* Investment industries limit financial goals when deciding how much funding they will require in the future and how much of it can they withdraw from the market.
- *Manager selection:* Investments require skillful manager selection. Some investors hire brokers who specialize in particular investment products to get accurate information about new trends in the investment industry. Selecting the right managers could add substantial value to a portfolio; on the other hand, poor manager selection could potentially damage one's investment performance.

Asset Management Activities

- *Market research:* Investment industries examine current market trends and calculate the risks and returns on the investments.
- *Asset selection, sourcing, and due diligence:* Investment industry professionals provide investors with proper knowledge, which helps them select investment assets. Sourcing is very important when it comes to "investment due diligence." Investors need to make sure that they review enough managers and check that the quality of the provided data is high.
- *Investment decision:* Savers and investors receive assistance from experts working in the industry and decide how they should invest their savings.
- *Financing:* It holds, handles, and accounts for the securities and assets that investors have invested in the industry.
- *Ongoing management:* Once investors invest their money, it does not mean that it is the end of the process. Managing investors' money and controlling the market is an ongoing activity of the investment industry. Continuous monitoring of investments is very important because it provides ongoing evaluations and reviews of invested funds.
- *Asset sale or exit:* An asset sale is buying individual assets. When investors get asset sales, they do not have to deal with certain disputes, such as liability claims, contract claims, and warranty disputes.

Supporting Activities

- *Legal and compliance:* This includes an understanding of the legal and compliance framework in which the fund is invested. Risks are involved in investing activities, which is why strong compliance policies and procedures are required.
- *Risk management:* Risk is always associated with investing. Risk management is all about understanding the security and the sensitivity of interest change on investment. It helps in reducing the likelihood and severity of adverse effects associated with investment values. It provides a structure for recognizing and prioritizing risks.

- *Performance measurements and reporting:* The main objective of performance measurement is to help potential investors choose investments and provide them with ongoing information about how their invested funds are doing. This is accomplished by using the same key performance indicators (KPIs) for each security.

The Business Process of the Investment Industry

The investment process is described as all the work activities the investment managers do when they operate a new account, work with a new account holder, collect investment-related data, manage investments, etc. Like any other industry, the investment industry's business process includes a set of guidelines that regulates the behavior of investors, which allows them to remain faithful to the company they invested their savings (Walker, 2018; 5 Important Steps of Investment Process, 2018). The investment business process is designed to drive an output that gives satisfactory returns to investors. Five phases of investment business include the following:

Know Your Customer (KYC): The first phase in an investment process is to understand potential investors' needs and to know how much of a risk they are willing to take. This will give the investment manager an idea of what their clients want to get out of the investment. Based on an investor's needs, investment managers can create a portfolio that will help them manage their investments and provide them with the KPIs to evaluate the performance of the investment.

Asset allocation decision: Decisions regarding asset allocation are made in the second phase. Investors also must decide whether they want to invest in domestic assets or foreign assets. Also, assets fall into three categories: equities, fixed-income, and cash and equivalents. So, investors also have to decide where they want to invest because different asset classes will offer different returns. Before making any decision, investors should study macroeconomic conditions, as well as the overall market, minimize investment risks.

Portfolio strategy selection: Once investors identify long-term goals and investment objectives, they need to select a strategy for a portfolio, which is the third phase of the process. Investors can choose a strategy based on their risk tolerance, their investment goals, their long-term objectives, and their financial and tax situations. A portfolio strategy for one investor might not be suitable for another investor. Investors can get help from financial advisors to develop an asset allocation strategy that fits their unique needs and wants. There are two types of portfolio strategy: active portfolio management and passive portfolio management.

Asset selection decision: Within each asset class, there are different sub-classes, and investors need to select the asset in this fourth phase of the investment process. While selecting the asset, investors need to consider the long-term goal and objectives. They also need to verify if their investment objectives match the investment policies. If they do not match, then the whole process becomes meaningless.

Evaluation of portfolio performance: The final and very important phase of the investment process is evaluating portfolio management. It measures the performance of the investment concerning the benchmark in both absolute and relative terms. This evaluation will tell investors if their objectives are being achieved or not. It indicates the extent to which the portfolio has underperformed or outperformed. There are two methods of portfolio evaluation: conventional and risk-adjusted.

Mobile Application in the Stock Investment/Trading

Mobile technology for stock investments allows users to access stock accounts and make trades in an instant. While mobile phones, such as Apple iPhone and Android phones, come equipped with an app that allows for stock market monitoring, they do not allow access to accounts, nor do they have trading capabilities ("How Mobile Apps Have Changed Investing in the Financial Markets," September 28, 2018). However, applications are available for download onto a mobile device that will allow investment information easily accessible. Stock applications such as Fidelity and Charles Schwab offer a traditional investment and banking experience. "Every major brokerage has an Android app or iPhone app or both, to allow their customers to trade directly from their mobile devices" (Scott, 2019).

The use of mobile trading apps is quite straightforward. The main idea is to give access to the stock market to millions of users with the sole intent of increasing the amount of money that flows into the market which, by proxy, it can create bigger fluctuations in certain securities (Gillian, 2020). For instance, in January 2021, there was a huge rally in GameStop stock (NYSE: GME) a company that was on the brink of bankruptcy due to the pandemic 2020. Samir Jeraj writes, “During the heady January days of the GameStop moment, downloads of Robinhood registered a 747 percent increase in the US alone, while in the UK downloads of Freetrade and eToro went up by 287 percent and 197 percent respectively in that same period” (*An educated gamble: After the GameStop debacle, what needs to change for investment apps?*).

However, retail traders started to buy more shares of GameStop because they had spotted a flaw in the institutions that involved naked shorting, an investment strategy that focuses on betting that the price of a security will continue to decline. Yet, retail traders continued to buy the stock until the price of the shares skyrocketed from around \$17 a share in early January to a mid-day peak of \$483 a share near the end of January. This scenario is unique in the sense that if retail traders had not had access to mobile trading platforms, the squeeze of the GameStop stock would never have been possible. In sum, mobile trading apps have been crucial to the evolution of investing since it has increased the number of fluctuations within many securities that have allowed retail investors and institutional investors to reap the monetary benefits.

Investing/trading has been enhanced by mobile technology that gives access to millions of users around the world. By allowing the average individual to access trading platforms all over the world, more money has been flowing into the stock market. For instance, Robinhood, a mobile trading platform that intended to “democratize finance for all” (*The Inside Story of Robinhood's Billionaire Founders*), allowed millions of users to invest/trade commission-free. This is just one trading platform that allowed commission-free trading, and, due to the concept of trading without surcharges other than the SEC fees, retail traders were enticed to the idea of making money from the convenience of their mobile phones. The incentive of being able to trade commission-free led many retail investors to sign up for the Robinhood app, creating more traffic within the stock market. One could say that mobile trading has enhanced the investing industry by simply allowing the average Joe to access the stock market opportunities to make money, something that was not possible in the past.

The number of people that take advantage of trading apps instead of the old scene with investors speaking with other people to trade investments to turn a profit in meetings has increased. On these apps, the work needed to complete the process is cut nearly in half. Which means investors can spend more time making money. Going digital is not only useful in saving time but also making it simple and easy to view the status of people’s investments and their progress. This makes it an invaluable asset to the investment world. People, in general, value convenience, and that is what these apps provide. People get results almost instantly and crave the simplicity of the application’s user interface. As a result, this makes it appeal to numerous investors. So, far Robinhood has taken the lead in the number of users with 17,300,000 active users. Fidelity is second in the ranking for the most used trading platform at around 1,500,000 users.

Stock applications enhance and assist the non-professional investor more than the industry, making it easier for them to access their accounts without being tied to a desktop computer. More traditional investment firms, such as Charles Schwab and Fidelity, made it easier for their clients to gain quick access to their accounts with their stock applications. Traders also benefit from stock applications, as they can access their accounts immediately and make trades on the go. By and large, Robinhood appears to be a leader in the stock applications market. Tradition is not the allure for stock applications such as Robinhood. They have introduced a younger audience to investing, those who believed they needed to be wealthy to invest in the stock market, and amateur traders. Stock applications such as Robinhood have been an innovation and a disruptor in the market. Robinhood is not a conventional business model; it has attracted millions of inexperienced users who disrupt the market for its wealthier participants. Robinhood, specifically, “has brought about an increased level of liquidity and volatility” (“How Mobile Apps Have Changed Investing in the Financial Markets,” September 28, 2018).

Mobile applications belonging to traditional investment firms, such as Charles Schwab and Fidelity Investments, have an existing structure from many decades of operation that make them less problematic than newer investment applications. Newer investment applications like Robinhood attract a younger

demographic who are more inclined to be adventurous and not as structured with their investment choices. Many traditional investors and the industry believe that Robinhood has "gamified" investing, leading to more legal and ethical issues. "Robinhood feels very gamified. The act of trading stocks was boring for a long time, and even today, if you do it through Charles Schwab, it would seem boring. Robinhood makes it feel frictionless and fun and easy, and it can be very, very addicting," Noah Whinston, who founded Immortals, an eSports franchise, told U.S. news publication Vox" ("Robinhood and the Ethical Issues," 2020).

One ethical issue Robinhood faced was not providing proper limitations and assistance to amateur investors. For example, allowing investors to trade options, typically reserved for highly skilled traders. Another ethical issue is that Robinhood's interface appears more like a game than an educational trading tool, leading amateur investors into haphazardly investing with little interest in genuinely educating themselves. "And with just a few taps of a smartphone, a user with no investing experience can gain access to a world of risky assets. However, if the said user does not understand the nature of the risks that accompany taking positions, the consequences can be grim..." ("Robinhood and the Ethical Issues," 2020). Robinhood was involved in an SEC (Securities and Exchange Commission) investigation. "Robinhood Financial will pay a \$65 million settlement over the failure to disclose its relationships with high-speed trading firms" (Rich, 2020). Robinhood is a standout from traditional investment firms. While traditional investment firms experience ethical and legal issues, their mobile applications are not necessarily the cause, and their trading practice remains the same. There are no new rules applied to the process. The mobile application is in addition to the business. It enhances their clients' experience and relationship with their firms. Robinhood's investment application is strictly for the user, the millennial, a no-rules approach, which carries a greater risk to the user and the market.

Investing in stocks became extremely popular with a community within the social media website, Reddit, called r/Wallstreetbets. This community locked in on placing calls on the company GameStop. After significant hedge funds placed a call on GameStop, the company would not make it through the Covid-19 pandemic. With r/Wallstreetbets at war with hedge fund companies, this was able to shine a light on regulations for mobile financial investment platforms and how the United States Securities and Exchange Commission (SEC) functioned toward the working class. Because people using the checks as investments was an unplanned occurrence, like COVID-19, it created an even more volatile market (Burkett & Reynolds, 2020; Thorbecke, 2020).

Mobile trading allows users to trade securities, such as stocks, options, and ETF funds, from the convenient location of their phones. In the past, one needed a stockbroker to buy and sell securities. These days, almost any user can access trading platforms from their mobile phones and execute trades as they like. The vast amount of research that can be found over the internet enables users to build a portfolio from their phone making investing very easy. Mobile trading allows users to trade from any location around the world if they have an internet connection. Users can place trades while working, enjoying a walk, working out, and many other places. In essence, mobile trading revolutionized trading and investing by creating platforms that allow millions of individuals to take advantage of the stock market from their fingertips.

The technology behind mobile trading is quite complex since it involves a lot of features like buying and selling with predetermined limits, stop loss, trailing stop loss, calls and puts, and many other options. Moreover, trading starts with "orders." Investopedia defines an order as a set of instructions that tells a "broker or brokerage firm to purchase or sell a security on an investor's behalf" (*What is an Order?*). An order can be processed through a phone call or online through a trading platform. Moreover, for the execution of an order to take place, one must pay attention to the bid and ask process. The bid is the highest price a buyer is willing to pay for a security and the ask is the lowest price a seller is willing to sell a security for. The orders will only execute if the buyer meets the asking price or if the seller meets the bid price. There are several types of orders in which the investor instructs the brokerage firm on how to execute the trades. For instance, a market order involves executing an order at the next best available price. Another type of order involves a limit order, in which the investor wants to buy or sell a security at a predetermined price. In addition, a stop order involves selling security if the asset drops to a certain price. These are just a few of the many types of orders that investors can use when trying to execute their trades. Ultimately,

mobile trading allows users to access investing/trading platforms in a simple way that can be started with a simple bank deposit to fund a new account and start trading immediately from their mobile phones.

The Leading Mobile Apps [*Selected list*]

Robinhood app is an application that can be used for trading stocks, cryptocurrencies, options, and exchange-traded funds (Kauflin, 2020). This app offers free trading opportunities to consumer investors with no perceived commissions or fees whatsoever. The app provides a learning tool for those who are new to investing and offers new investors their first stock for free to get them acclimated to the system. The app ensures that the security of its customers is protected. They employ innovative security measures that help to protect the assets and personal information of investors. The cash management feature in the app allows for flexibility with an investor's brokerage account and earning money with incredibly competitive interest on their uninvested cash.

The goal of any business is to make a profit. Most investing platforms make their profit by gaining a commission from every trade that happens. Robinhood is not the first trading platform that advertises 100% commission-free trading, but "they are the first to do it successfully" ("Lopez" in *Forbes*, 2017). So, how do they profit? Think of Robinhood as a bank account that outsources its trading. Robinhood makes interest from every account with an uninvested balance like a bank account. For example, if "you have \$500 just sitting in your Robinhood account and interest rates are 2%, they would make \$10 off having your money sitting in their account per year" ("Lopez" in *Forbes*, 2017).

In addition to making interest on unused funds, Robinhood has other income streams as well. Every trade that goes through Robinhood gets sent to 1 of 4 exchanges and is not traded through Robinhood: KCG, CITADEL, APEX, and TWO SIGMA. Robinhood makes its profit "by routing non-direct orders to these four exchanges" (Yum, 2017). They make money by slightly increasing the offer of purchase or sale from what the user has put in. This practice allows them to keep the margin when selling the user's purchase/sell to one of the four companies. Using this method, Robinhood can advertise being commission-free but still have a "fee" for trading.

Robinhood also offers premium subscriptions. Subscription-based businesses have become one of the most successful business models in today's time, with advancements in apps and everyone having a cellphone. Robinhood Gold offers benefits not available to every user and only necessary to some users. By purchasing Gold at \$15 a month, "you get to trade 30 minutes before the market opens and 2 hours after the market closes" ("Lopez" in *Forbes*, 2017).[NOT in Ref List] Another benefit of Gold is the ability to buy and trade stocks before the deposit goes through. When making the initial deposit, it will typically take three days to go through. With Robinhood Gold, they will loan the customer money to start investing immediately rather than waiting for the deposit to clear three days later.

Webull app also offers in-depth stock trading to investors. They offer to trade with no commissions and a \$0 minimum deposit for trading. With a great and timely customer service base, Webull also offers real-time market data for trading. A unique feature included in the Webull app is the option to trade with voice commands. Investors can engage in the app with simple commands like "buy," "sell," "search," and "place order" without any difficulties. This is a very distinctive feature that is not common in other mobile trading applications. This feature can make it easier for investors who have disabilities that prevent them from typing or using the keyboard often. The app also offers an active trade widget that allows investors to quickly place orders for trade or cancel all open orders with just a click. Unlike some apps, Webull supports pre-market hours, which are between 4 am-9:30 am ET, and after hours, between 4 pm-8 pm ET. This distinctive feature gives investors ample time to get familiar with how the market will be for the day.

Coinbase app is used for buying, selling, and managing cryptocurrencies. Examples of cryptocurrencies available for trade on the Coinbase app are Litecoin, Ethereum, Ethereum Classic, Bitcoin, etc. The app promises to make the experience of buying and selling cryptocurrencies quite easy if a bank account or debit card is registered to the investment account. For budding investors, the Coinbase smart tool feature offers updates and additional features that can help them build their investment portfolios with alerts on buying and price. The app possesses a safety feature that protects investors' cryptocurrencies and investment accounts. This allows investors to lock their accounts or access them on another device if their

phone gets lost or stolen.

Charles Schwab, founded in 1971, has been able to thrive during the Covid-19 pandemic. Their customer base and earnings have increased with the continuing growth of small-time investors. Charles Schwab helped meet clients' and businesses' needs impacted by Covid-19. The company has offered advising services, strategies on keeping businesses open, and handling finances during a pandemic, all conveniently at the investor's fingertips in the Charles Schwab investing mobile application (Fitzgerald, 2021).

*E*TRADE* – The creation and integration of E*TRADE's mobile applications fall into various sectors of their value chain. The company continues to analyze and implement value chain management to further its success and expansion ("Mobile Platforms...", 2020). For example, the service sector of the value chain can be defined as "all of the activities the business performs to keep the customer satisfied, especially after the sale" (Robinhood, 2020). For E*TRADE's mobile applications, this section of the value chain would include the additional services it offers to users to keep them satisfied, such as streaming quotes and Bloomberg TV, and the ability to invest and trade stocks through the application quickly.

In addition to the service sector, E*TRADE also focuses on the marketing and sales aspect of the value chain advertising to potential buyers and highlighting its success in the industry as a pioneer of mobile trading. Finally, E*TRADE has utilized its mobile applications and internet outreach to assist customers during the pandemic. Focusing on the support activities highlighted in the value chain, the company has survived and flourished even amidst the COVID-19 pandemic (Liu, Choo, & Lee, 2020). E*TRADE prides itself on being a leader in mobile innovation and trading technology, allowing users to trade and invest without leaving their homes.

Fidelity Spire is the new mobile application for Fidelity Investments. Fidelity Investments is not known in the industry to attract young investors. They are on the path to doing so with their new mobile application, Fidelity Spire. It is in the top ten investment mobile applications deemed the best mobile app for beginners because of its ease and built-in learning tools. The application still maintains traditional standards of investing and trading by making professionals available to assist new investors.

Fidelity Spire is available to Apple users via Apple TV, iPhone, iPad, Apple watches, Android users, Amazon devices, and Google Assistant. Users can access their feeds, monitor their portfolios, and manage their workplace accounts. Fidelity Spire offers the ability to contribute to ROTH and Traditional IRA accounts, view the latest news and trends, and track their preferred stocks, tax forms, and educational, and financial podcasts. Users will have access to trade any time of day and anywhere if they have an internet connection. Fidelity Spire offers advanced encryption that protects their clients no matter where they are, whether they are on Wi-Fi or have a data connection. Fidelity Spire is offering an attractive protection guarantee should a client have their data breached. Should this happen, Fidelity offers reimbursement to their clients. Also, Fidelity servers are not connected to the internet, offering added security.

Fidelity does not want to miss the opportunity to connect with the next generation. John McCrank Editing by Marguerita Choy, writes Fidelity Investments in, 2021 launched a commission-free brokerage account for teens that lets them trade stocks on a mobile app, as well as save and spend using a debit card, to capture the next generation of investors.

Challenges, Benefits, and Legal and Ethical Issues Faced by Mobile Applications

One of the main challenges these companies have encountered with their mobile applications is that they keep crashing, which happens mostly when the trade is volatile. A major reason why these apps keep crashing is that there is always high demand and use of the apps. When this happens, people are unable to get access to their investment portfolios. Sometimes, this leads to frustration and loss on the part of the investors. There have been cases of the Robinhood, Webull, and Coinbase apps crashing in the past and people were not able to take advantage of the fluctuations in stock prices.

Furthermore, challenges for companies that give access to mobile trading platforms involve the security of confidential information. While signing up for a trading/investing account, the user must provide sensitive information, like bank account number, home address, social security number, phone number, full name, work information, etc. If the platforms were to experience a data breach, a lot of information could

be in jeopardy, and a lot of money could be lost since some accounts could have millions of dollars even if those accounts belong to retail investors.

Another challenge that companies face when it comes to mobile platforms is updates along with functionality. For instance, if companies do not coordinate their updates when the market hours are closed, then functionality might be impaired, and trades might not execute. Given the nature of the stock market, every minute and every second can make an enormous difference when it comes to executing trades. There have been many cases when platforms have crashed due to an increased volume of trading, and their servers cannot handle the spikes. Hence, it is especially important for companies to keep updating their platforms constantly to avoid limiting investors from executing their trades in which they can lose money or miss windows of opportunities.

In addition, the challenge that these companies have with their apps is slow and unresponsive customer service. When people encounter problems with their trading apps that they cannot easily fix by themselves, their first instinct is to contact the help desk or customer service department. Most times, investors get no immediate response. They are then forced to wait days for their issues to be fixed. This delay can be very costly, as the stock market is not always stable.

The main benefit these companies derive from the use of their mobile applications is that they generate income. These companies have millions of users who have downloaded their mobile applications for easier trading and this act generates income. With millions of trading taking place daily, they generate many trading fees, which pile up as profit for these companies.

The main benefit of mobile trading technology will always be the opportunity for retail traders to make money from the stock market. In the past, institutions, more so than individuals, were the ones that benefited the most from the stock market. The barriers of entry for retailers were lowered or removed through the implementation of mobile trading. In the present day, retail investors and institutions benefit from mobile trading platforms in different proportions, since institutions have more money at their disposal than retail investors. However, both types of investors benefit from the enhancements that mobile trading has brought to the investing world.

There have been several legal and ethical issues with these investment companies' apps. The Robinhood app recently had an issue in the year 2020 regarding its application (Leonhardt, 2021; "Webull Hit with Class Action Lawsuit over GameStop Chaos," 2021). It was reported by The Massachusetts Securities Division that the app uses "aggressive tactics to attract inexperienced investors" and also deceives investors by using "gamification strategies." Also, they were accused of preventing the frequent failures of their app (Millennials' Favorite Trading App Settles SEC Probe, But More Legal Battles Remain). The company has agreed to pay over 60 million dollars for its legal issues. Another similar case was a class action filed against Webull. The company was sued because it prevented trading on the Webull app. It was reported that in January 2021, Webull "prevented its 11 million customers from trading various stocks that had been rising earlier in the day, including those of GameStop (GME), AMC Entertainment (AMC), and Koss (KOSS)" (Webull Hit with Class Action Lawsuit over GameStop Chaos). The company took the privilege of preventing investors from taking the opportunity of the good market prices at their time to trade.

Even with the benefits and enhancements that mobile trading has brought to the investing world, many legal and ethical issues arise, since the market is always so unpredictable. Such was the case with the GameStop mania during January of 2021. The frenzy buying of the GameStop stock led some trading platforms to restrict trading in some securities that experienced unprecedented spikes in volume. The mobile trading app that took the center stage due to the halting of trading was Robinhood. Robinhood is known for taking from the rich to give to the poor. At least, that was what people thought of the Robinhood app until January 2021. Due to the high volume of GameStop and other securities, Robinhood was facing a liquidity issue in which they had to put in more collateral to cover the trades that were being executed at an extremely high rate. Millions of shares of GameStop were being traded daily, and Robinhood was not able to keep up with the demand. Thus, Robinhood claimed due to "market volatility" (*Robinhood Halts GameStop Trading, Angering Lawmakers and Investors*), they restricted the purchase of certain securities, but GameStop was the main concern. Since Robinhood restricted retailers from buying GameStop, shares of GameStop collapsed in a matter of days from over \$400 a share to \$40 a share. By the time GameStop lifted the

restrictions, the stock price had plummeted, and a lot of Class Action Lawsuits were filed all over the United States (*Robinhood Now Faces Roughly 90 Lawsuits after GameStop Trading Halt-Here's How Customers Might Actually Get Their Day in Court*). In addition, Robinhood had been part of another lawsuit in the past in which Robinhood was accused of misleading its “customers and failing to satisfy the duty of best execution” (*Robinhood Halts GameStop Trading, Angering Lawmakers and Investors*). In sum, legal and ethical issues can arise from unforeseen circumstances in the stock market due to the amount of money involved. Money will always be the main issue that will blur the lines of legal and ethical practices simply because different interests might be at stake, and, most of the time, these interests do not align amongst all investors.

Concise Inferences [General Opinion]

As merely an inference of the current stage of progress in investment and use of mobile technology, the dominant competitive strategy seems to go to Robinhood now for its exciting and addictive quality. Robinhood entered the investment industry and quickly appealed to millennials, a technologically driven generation making their application feel more like a gaming application than a stuffy investment tool. The downside is that millions of new investors have emerged in the market, making it volatile. Many of these new investors do not have the experience or education to invest and trade in the stock market. Volatility is problematic for the market; however, many young investors and those interested but lacking a large bank account are now interested in investing. Robinhood offers zero perceived commission and an opportunity to own a fraction of a share, throwing conventional investment strategies out of the door. Robinhood has implemented few educational tools to assist new investors, yet traditional investment firms like Charles Schwab and Fidelity Investments use mobile applications to enhance their investment practices. Fidelity Spire appears to be a clear standout to rival Robinhood with a solid, knowledgeable, and exciting upgrade to Robinhood's business model.

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