Disruption and Resilience In Finance: Social Media, Online Brokers, and the Entrance of Retail Investors

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Abstract

The world's financial system is being disrupted. Several factors add up to trigger this fundamental change, such as financial technology (FinTech) companies or cryptocurrencies. This article focuses on another one of the main disruptive drivers: retail investing. It explores the theory of the citizen-speculator as the ideal mindset and establishes technology, more specifically the internet and social media, as a point of origin. Additionally, it identifies and connects two catalysts, the 2008 financial crisis and the COVID-19 pandemic. This article argues that even though the rise of retail investors is another consequence of financialisation, it represents a reactive act of resilience of common citizens that are trying to adapt to an increasingly financialised environment. It ends with an analysis of a recent example of retail investing's impact and possible consequences: the GameStop case. As with any other disruptive innovation, retail investing is controversial, it raises questions that are currently being addressed. This article aims to shed some light on this phenomenon.

KEYWORDS: Retail investing, citizen-speculator, financialisation, internet, social media, COVID-19.

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INTRODUCTION

Speculation has expanded progressively, dominating today's economic activities not just at the business level, but also at the national level with governmental agencies participating in stock market activities as well. Furthermore, due to the financialisation of people's everyday life and the shaping of the citizen-speculator,[1] the entrance of retail investors meant that individuals are impacting this scenario as well.

Two decades ago, to participate in this type of activity was considered to be reserved for a reduced elite, learned in financial studies, and knowledgeable of techniques and methods alien to the common people, managing large quantities of capital. This has progressively become a myth as more ordinary people enter the investing and trading communities. Considering the entrance of retail investors and its evolving dynamics in the financial world, two main questions guide this article: How have regular individuals been employing and adapting to technology in response to the growing financialisation of their everyday life? What have been the events that have fuelled the growing retail investing phenomenon?

One disruptive milestone and two main catalysts have impacted the dynamic mentioned above. In the first place, the internet, and more specifically the evolution of social media—such as Twitter, WhatsApp, Reddit, and Discord—along with a multiplicity of platforms and applications, represent the source of communication and knowledge for regular but pioneer citizens. This article considers that internet-based social media embodies the technological infrastructure, and that the constitution of the citizen-speculator is the psychological infrastructure. Both of which allowed the initial development of retail investing. On the other hand, the two main catalysts are the financial crisis of 2008 and the COVID-19 pandemic, which have impacted people's worldviews and have encouraged an intense shift toward online life.

In a context of crisis, this evolving force, mainly composed of outsiders from the established financial world, emerged. This is a phenomenon that deserves further research, as it can represent an expanding trend within this financialised system. As the increased number and enhanced impact of retail investors is a relatively recent phenomenon of the 21st

[1] Randy Martin, *Financialization of Daily Life* (Philadelphia, PA: Temple University Press, 2002) ; Fiona Allon, "Speculating on Everyday Life: The Cultural Economy of the Quotidian," *Journal of Communication Inquiry* 34, no. 4 (October 1, 2010): 366-81.

century, there is plenty of disinformation about how this originated and how it has been operating and developing. The main objective of this article is to shed light on this process, in order to better understand the connections between the several milestones and crises that enabled the shaping of what this disruptive phenomenon is today.

This article consists of six parts. Sections I and II will provide the article's theoretical foundation. Section I will explore both the notions of financialisation and the citizen-speculator as the psychological structure behind the emergence of retail investing. Section II will focus on the concept of disruptive innovation and will connect it to what has been happening in the financial world and the role that technology has in this matter. Section III will address the origins of the retail investing force and trace its evolution, highlighting how technology has bridged the gap between the old and the 21st-century investors. Section IV will dig deeper into the two main catalysts that have enhanced the rise of retail investors: the financial crisis of 2008 and the COVID-19 pandemic. Section V will go into more detail regarding the pandemic as a second catalyst, as well as the emergence of a new group of investors who started investing in 2020, which have been labelled as the "Generation Investors" or "Gen I".[2] Finally, Section VI presents the case study of GameStop and Reddit, to prove the expanding significance and power of retail investors.

Financialisation and the Creation of the Citizen-Speculator

Epstein (2001) defined financialisation as "the increasing importance of financial markets, financial motives, financial institutions, and financial elites in the operations of the economy and its governing institutions, both at the national and international levels".[3] The impact of financialisation has been spreading to multiple aspects of today's society. For the purpose of this article, it is key to highlight its effects on households and the indebtedness that it generates. As explained by Lapavitsas and Soydan (2020), in the case of developing

[2] "The Rise of the Investor Generation: 15% of U.S. Stock Market Investors Got Their Start in 2020," Charles Schwab Corporation, 2021, https://www.aboutschwab.com/generation-investor-study-2021; Maggie Fitzgerald, "A Large Chunk of the Retail Investing Crowd Started during the Pandemic, Schwab Survey Shows," CNBC, April 8, 2021, https://www.cnbc.com/2021/04/08/a-large-chunk-of-the-retail-investing-crowd-got-their-start-during-the-pandemic-schwab-survey-shows.html.

[3] Gerald Epstein, "Financialization, Rentier Interests, and Central Bank Policy," (paper prepared for PERI Conference on "Financialization of the World Economy", Department of Economics, University of Massachusetts, Amherst, MA, December 2001), 3, https://peri.umass.edu/fileadmin/pdf/financial/fin_Epstein.pdf.

countries, the empirical literature underlines that households are attracted to private finance networks and comprise an essential component of financialisation.

Relevant "in this connection is deregulation of labour markets and sustained downward pressure on real wages making it harder for households to maintain living conditions". [4] Moreover, Lapavitsas and Soydan (2020) stressed that household financialisation has been encouraged by a reduction in the public supply of critical goods and services such as education, housing, and health, together with the privatisation of pension schemes. The outcome of this matter "is growing household indebtedness, a hallmark of financialisation in both developed and developing countries".[5] Although the emergence of retail investors is a result of financialisation, this article argues that it is a responsive act of resilience by regular individuals striving to adapt to an increasingly financialised system, seeking in the stock market a source of extra income or a way to integrate into these mechanisms.

The phenomenon of financialisation has gradually transcended the economic sphere and nowadays a broad spectrum of regular activities are associated with financial markets.[6] As the literature mentions, some of these daily practices include the purchase in instalments of consumer goods and houses or the payment of bills and loans, along with participation in retirement systems and pensions.[7] Investment nowadays holds a relevant position "not just in formal financial institutions and centers but also in everyday spaces such as the home, the workplace, and the lifeworld more generally".[8] Financialisation has been penetrating the non-financial sector, and investment-related practices now form part of individuals' lives until the extent that it is feasible "to use just about anything as a platform for more speculative financial activity".[9]

In this regard, Allon (2010) acknowledged the shaping of the person as a citizen-speculator, where "everyday life is increasingly framed as a space of investment yielding

[4] Costas Lapavitsas and Aylin Soydan, "Financialisation in Developing Countries: Approaches, Concepts, and Metrics," *International Review of Applied Economics* (2022): 21.

[5] Allon, "Speculating on Everyday Life," 367.

[6] Allon, "Speculating on Everyday Life"; Martin, *Financialization of Daily Life*.

[7] Allon, "Speculating on Everyday Life"; Steven Pardo López and Claudia Milena Pico, "Financiarización e Inversiones de los Fondos de Pensiones en la Alianza del Pacífico," *Perfiles Latinoamericanos* 28, no. 56 (2020): 207-233, https://doi.org/10.18504/pl2856-009-2020.

[8] Allon, "Speculating on Everyday Life," 372.

[9] Andrew Leyshon and Nigel Thrift, "The Capitalization of Almost Everything: The Future of Finance and Capitalism," *Theory, Culture & Society* 24, no. 7-8 (December 1, 2007): 99, https://doi.org/10.1177/0263276407084699.

both financial and personal returns".[10] One of the consequences of this matter is that the individual is placed "as an investor in a life project that requires the constant pursuit of opportunities and the negotiation of risks in order to yield rewards".[11] Thus, citizens are more familiar with practices that involve calculation, speculation, and risk, internalising investment activities as part of their day-to-day routine. As the author puts it, these types of practices adopted by ordinary individuals are seized as a symbol of enterprise and personal initiative.[12]

Delineating the origin of individuals as citizen-speculators is not the aim of this article and trying to solve this puzzle deserves a whole investigation of its own. Nonetheless, evidence indicates that its shaping elements can be traced back to the transition to neo-liberal governments in the 1980s and therefore, it has signified a gradual gestation process over the last four decades. As explained by Langley (2008), neoliberal policies increasingly emphasise "personal responsibility", which implies not just the expansion "of market technologies of risk into domains where state-based welfare and insurance previously prevailed, but also turn on the re-articulation of market technologies of risk in the name of individualised 'self-care' and 'security'[…]".[13] Following the same idea, Allon (2010) discussed that as a result of the increased calls for people to guarantee their own autonomy through financial markets rather than the state, speculation, calculation, and investing activities are more often related to domestication as well as normalisation.

In this context, it is not surprising that an increasing number of retail investors entered the global financial market, as "the fluorescence of online investing seems as tangible a measure as any of the larger phenomenon's reach into daily life".[14] Considering the global tendency of citizen-speculators and bearing in mind the presence of the two catalysts that will be discussed in the following sections, an environment that facilitates this type of phenomenon has been created. Individuals "are socialised into the world of finance both by participation in investment activity and by exposure to popular media saturated with news,

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[10] Allon, "Speculating on Everyday Life," 367.

[11] Ibid.

[12] Allon, "Speculating on Everyday Life."

[13] Paul Langley, *The Everyday Life of Global Finance: Saving and Borrowing in Anglo-America* (Oxford and New York: Oxford University Press, 2008), 55.

[14] Martin, *Financialization of Daily Life*, 122.

images, and the attractions of money management".[15] Consequently, taking into account all the conditions mentioned above, "risk too becomes a way of life".[16]

Section I has explored the psychological infrastructure that enables the rise of retail investing. The next section will turn to its technological infrastructure. It will concentrate on the notion of disruptive innovation, relating it to recent developments in the financial sector, and the significance of the internet and social media.

Disruptive Innovation in Finance and the Role of the Internet and Social Media

Retail investing is one of the examples of the disruption that has been happening in finance, where other examples are financial technology (FinTech) companies, like Robinhood or Square, and cryptocurrencies.[17] This disruption could be characterised as dispersion from the traditional elite to the overall population. The notion of disruptive innovation is generally employed "in a broader sense to designate any innovation that revolutionises an industry and substantially changes its competitive patterns".[18] Similarly, other authors consider that disruptive innovation implies "the creation of new markets and value networks that eventually disrupt existing markets and value networks, displacing established market leaders and alliances".[19] In this regard, Iris H-Y Chiu (2016) elaborated a framework related to disruptive innovation, which underlines the ascension of three factors: change, substitutive potential, as well as structural impact.

Some scholars emphasised that the surge of FinTech signifies a system-level transformation across the entire industry, which has driven the rise of new players, together with competency convergence.[20] For the authors, this matter represents the reason why

[15] Ibid., 121.

[16] Allon, "Speculating on Everyday Life," 374.

[17] FinTech refers to financial technology, or new technologies applied to financial services. In practice, it is also commonly used to refer to financial startups, or companies that have recently begun operations commercialising a new technology that disrupts the financial sector. Cryptocurrencies such as Bitcoin or Ethereum are virtual currencies based on blockchain technology, mainly credited for their decentralised nature.

[18] Maxmilian Palmié et al., "The Evolution of the Financial Technology Ecosystem: An Introduction and Agenda for Future Research on Disruptive Innovations in Ecosystems," *Technological Forecasting and Social Change* 151 (February, 2020): 2, https://doi.org/10.1016/j.techfore.2019.119779.

[19] Iris H-Y Chiu, "Fintech and Disruptive Business Models in Financial Products, Intermediation and Markets - Policy Implications for Financial Regulators," *Journal of Technology Law and Policy* 21, no. 1 (2016): 65, https://discovery.ucl.ac.uk/id/eprint/1528728/.

[20] Palmié et al., "The Evolution of the Financial Technology Ecosystem."

FinTech gives a significant context to analyse phenomena related to disruptive innovation ecosystems. The fast development of FinTech has impacted and restructured a wide variety of areas related to the financial industry including banking, payment, commerce, and investment.[21] As detailed by the authors, the "FinTech ecosystem of incumbent and entrepreneurial actors has benefited from technological advancements in online payments, cryptocurrency, and artificial intelligence, and it has enabled applications of innovations that have proved disruptive to incumbents".[22]

It is relevant to highlight that retail investing requires the space and tools provided by FinTech, and therefore, there is a symbiotic relationship between them. In order to fully understand this relationship, it is also necessary to go back and mention the emergence of social media and the evolution of the Web, which represent its background. Without the internet and the prompt progress and massification of social media throughout the 21st century, the development of retail investing would have lacked the required instruments and platforms to be the phenomenon that it is nowadays.

Dale Dougherty, O'Reilly Media Vice President, popularised the term Web 2.0 during a brainstorming discussion with MediaLive International in 2003. It is in posterior publications that the details about this concept and the key distinction between Web 1.0 and Web 2.0 were polished.[23] The author provided seven principles that characterise Web 2.0: its companies provide services, rather than packaged software; manage unique data sources that rise in value as the number of users increase; users are trusted and treated as co-developers; transform the web in a sort of global brain, that is, harnessing collective intelligence; leverages customer self-service; the software above the level of a single device (multi-platform), and finally, lightweight user interfaces and models.[24]

As it is possible to deduce from the elements mentioned above, Web 2.0 requires the active involvement of users, along with high levels of collaboration. Some of the authors that also stressed these features are Smits and Mogos (2013). According to them, "Web 2.0 brings about an emphasis on collaborative learning as well as on user engagement through participation. Second, Web 2.0 is regarded user friendly, as it enables immediate publication

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[21] Ibid.

[22] Ibid., 3.

[23] Tim O'Reilly, "What Is Web 2.0: Design Patterns and Business Models for the Next Generation of Software," *International Journal of Digital Economics*, no. 65 (March 2007): 17-37, https://mpra.ub.uni-muenchen.de/4580/.

[24] Ibid.

and wide distribution of user generated content".[25] Moreover, for the authors, one of the motivating forces of this new wave, relies on their design, which promotes the contributions of users with a simple, agreeable, and easy-to-use interface.[26] These web platforms have continuously evolved, and nowadays, several industries—including not just finance and banking, but also areas as diverse as transport, healthcare, or tourism—encounter the possibility of being disrupted by new digital technologies.[27]

Old and New Investors: Bridging the Gap Through Technology

In the 50s or 60s, anyone interested in investing had to follow the stock quotes in their local newspaper, [28] dive through the company's books,[29] visit the company's different facilities or talk to their investor relations department to analyse a company. Once the decision to buy was made, they had to call their personal broker to give the order. Brokers were few and the lack of competition enabled them to impose high commissions. Investing was costly, both in terms of money and time, and impracticable for any middle-class individual with a full-time job and social obligations. In 1952, only 4.2% of the United States (US) population owned stocks.[30]

Technology has completely transformed the way of investing. Today, there is an internet connection in every home. Companies must post their quarterly and annual results online; professional analysts write their reports and post them online as well. There are websites like TIKR, Koyfin, or Yahoo Finance that process most of that information and make it more accessible and easier to understand. There are thousands of blogs from professionals, people with an edge, or anyone who is interested in a specific topic available for everyone to read. All of these tools make analysing a company much easier.[31] Once the

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[25] Martin Smits and Serban Mogos, "The Impact of Social Media on Business Performance," *ECIS 2013 Completed Research* 125 (2013): 3, https://aisel.aisnet.org/ecis2013_cr/125.

[26] Ibid.

[27] Palmié et al., "The Evolution of the Financial Technology Ecosystem."

[28] The stock quotes are the prices of the companies' shares that are publicly offered in a stock market. Today, these prices are updated every fraction of a second. This is much faster than in times preceding the digital era.

[29] "Books" here refers to the company's financial statements. These firms are required by law to periodically provide detailed and accurate information of their accountability. In the times before the internet, this information was contained in thick physical books.

[30] Edwin Burk Cox, *Trends in the Distribution of Stock Ownership* (Philadelphia, PA: University of Pennsylvania Press, 1963), https://www.jstor.org/stable/j.ctv4t80wk.

[31] Michael Farrell et al., "The Democratization of Investment Research and the Informativeness of Retail Investor Trading," SSRN Scholarly Paper (July 21, 2020), http://dx.doi.org/10.2139/ssrn.3222841.

decision to buy is made, any person can open an account in less than ten minutes in a zero-commission online broker, like Robinhood or Degiro, and buy the stock after a couple of clicks. Now, anyone with a full-time job and social obligations can invest in the stock market.

Zero commission online brokers make cents out of every transaction, benefitting from tiny imperceptible spreads between the offer price of the stocks and the buying price. They will thrive as long as the number of transactions grows. That is why they are interested in making buying and selling stocks as easy as possible, and their platforms are simple and appealing.[32] Some critics have targeted this particular aspect, denouncing that new online brokers are "gamifying" investing, prompting young or inexperienced people to spend real money on an activity that they do not fully understand as if it was a game.[33] On the other hand, these new companies like Robinhood sell themselves as zero commission brokers, achieving two objectives with this: first, taking clients from traditional brokers; second, broadening the market to any individual with savings or spare money. They have been successful at both, to such an extent that traditional brokers, like Charles Schwab, have reduced or erased their commissions completely. They have disrupted the industry.[34]

Investing might be easier nowadays but being successful at it is not. The vast amount of information online makes it more difficult to find good and well-priced companies. A sizeable proportion of people take investing as a hobby, almost like a casino, not willing to invest all of their savings but just a small part of it that can be lost. Only a few make sufficient money from profitable trades to call themselves "investors". These people take investing as a part-time or even full-time job. They are not "professionals", because they do not have a degree in finance and they do not work for a bank or an investment fund, but they dedicate as much effort and they depend on it financially. This group of people, who are using the tools that technology has provided to earn a living or an extra income away from traditional institutions, are called "retail investors". Retail meaning that investing is now available to everyone, like Walmart.

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[32] Kate Rooney and Maggie Fitzgerald, "Here's How Robinhood Is Raking in Record Cash on Customer Trades — Despite Making It Free," *CNBC*, August 13, 2020, https://www.cnbc.com/2020/08/13/how-robinhood-makes-money-on-customer-trades-despite-making-it-free.html.

[33] Tony Dokoupil et al., "Alex Kearns Died Thinking He Owed Hundreds of Thousands for Stock Market Losses on Robinhood. His Parents Have Sued over His Suicide," *CBS News*, February 8, 2021, https://www.cbsnews.com/news/alex-kearns-robinhood-trader-suicide-wrongful-death-suit/.

[34] C Nivedita and John McCrank, "Charles Schwab to End Commissions for Stock Trading, Shares Fall," *Reuters*, October 1, 2019, https://www.reuters.com/article/us-charles-schwab-commissions-idUSKBN1WG41J.

The internet was the infrastructure necessary for the birth of online brokers, data-processing platforms, and social media. Thus, technological improvement is indeed the point of origin of retail investing. Nevertheless, it is not a chronological point of origin, this period of time should instead coincide with the adoption of the technological progress in question. As has been stressed by other experts, the force of social media leads "all these factors to the boil. Whether it is Reddit's WallStreetBets forum, Twitter, WhatsApp messaging groups, live trading sessions streamed and discussed on sites like Discord or Twitch […] social media is adding vim to the trend".[35]

Two Main catalysts: The 2008 Financial Crisis and Covid-19

The rise of retail investing is a phenomenon born out of zero-commission online brokers and financial data processing websites, whose impact on society is not yet certain. If technology, particularly the internet, is the origin, the 2008 financial crisis, and the COVID pandemic have been the main catalysts. First, the 2008 financial crisis had a twofold consequence. On the one hand, it caused a financial setback for many middle-class families where earning members lost their jobs or their savings. Many of the children or young adolescents who lived through this crisis have now become adults with some savings and an awareness of the importance of finance. Thus, what happened in 2008 has been a powerful motivator for them to start investing on their own. They function as citizen-speculators. On the other hand, the crisis deteriorated the image of traditional financial institutions, because the crisis originated from the greediness, misbehaving, and laissez-faire of professionals in the industry. This diminished the general public's trust in Wall Street's ability to manage their money.

An illustrative example of the deteriorating reputation of Wall Street firms after the 2008 crisis was the emergence of the Occupy Wall Street (OWS) movement in 2011, a crusade that started in New York but that expanded across the whole US, even reaching a global scale, as this movement inspired "protests spread across the world to 951 cities in 82 countries".[36] The origin of the OWS dates back to the Adbusters' magazine blog post

[35] Katie Martin and Robin Wigglesworth, "Rise of the Retail Army: The Amateur Traders Transforming Markets," *Financial Times*, March 9, 2021, https://www.ft.com/content/7a91e3ea-b9ec-4611-9a03-a8dd3b8bddb5.

[36] Jana Kasperkevic, "Occupy Wall Street: Four Years Later," *The Guardian*, September 16, 2015, https://www.theguardian.com/world/ng-interactive/2015/sep/16/occupy-wall-street-four-years-later-timeline.

published in July 2011, calling Americans to set up tents in lower Manhattan and peacefully occupy Wall Street.[37] In less than two weeks "the movement had its own website, Twitter and Facebook. The social media accounts were used to promote the first protest".[38]

The Occupy groups sought "to demonstrate against the corrupt and hypocritical culture in mainstream politics and Wall Street".[39] Moreover, as the literature mentions, this movement highlighted "the threat posed by the power of major corporations, including financial institutions, to the common good that democratic governments were […] committed to perpetuate".[40] Furthermore, the participants of this movement emphasised that corporate power entrenched inequality in the society of the United States.[41]

It is noteworthy to mention that without "the 2008 financial crisis, Occupy Wall Street might never have come to be".[42] Even though the government of the United States dedicated billions to support and save the financial system and Wall Street, individual citizens did not receive the same assistance.[43] Consequently, around "2.6m jobs were lost in 2008, and many went on to lose their homes and their savings".[44]

According to the Makovsky Wall Street Reputation Study published in 2016, because of the enduring consequences of the 2008 financial crisis, roughly 30% of consumers consider that their confidence in the financial services sector has been lost.[45] Similarly, in a study published by the same institution in the year 2019, "64% say they would prefer to work with a regional bank instead of a large "Wall Street" bank".[46]

More recently, the second catalyst has been the COVID-19 pandemic which confined people at home and forced people to rely on online platforms to conduct daily activities. Due

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37 Ibid.

38 Ibid.

39 Heather Gautney, "What Is Occupy Wall Street?: The History of Leaderless Movements," *The Washington Post*, October 10, 2011, https://www.washingtonpost.com/national/on-leadership/what-is-occupy-wall-street-the-history-of-leaderless-movements/2011/10/10/gIQAwkFjaL_story.html.

40 Ronald Mendel, "The Occupy Wall Street Movement in the American Radical Tradition," *USAbroad–Journal of American History and Politics* 3, no. 1, 54, https://doi.org/10.6092/issn.2611-2752/9869.

41 Mendel, "The Occupy Wall Street Movement in the American Radical Tradition."

42 Kasperkevic, "Occupy Wall Street."

43 Ibid.

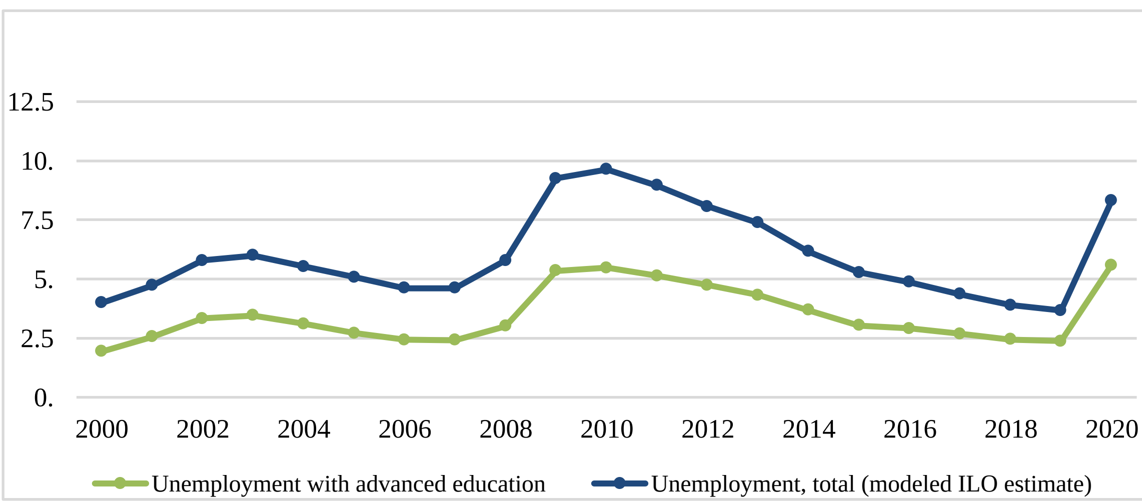
44 Ibid.

45 Jordan McCrary, "The Impact of the Financial Crisis Still Lingers: 2016 Makovsky Wall Street Reputation Survey," *Institute for Public Relations*, June 12, 2017, https://instituteforpr.org/impact-financial-crisis-still-lingers-2016-makovsky-wall-street-reputation-survey/.

46 Ben Jaffe, "Banks Are Squandering an Opportunity to Grow Consumer Trust," *Institute for Public Relations*, October 29, 2019, https://instituteforpr.org/banks-are-squandering-an-opportunity-to-grow-consumer-trust/ .

to lockdowns and the economic slowdown that ensued, people lost their jobs (as Figure N°1 illustrates) and dedicated their time to online activities like online investing. As recent literature underlined, when "stay-at-home" instructions were announced "and large portions of the economy were shut down to mitigate the spread of the virus, millions of suddenly idle Americans struggled to occupy their days, and many were attracted to "zero cost" trading services such as Robinhood".[47] As the authors indicated, in comparison with the previous year's trading volume levels, during March 2020 Robinhood tripled its average customer trading amount. This happened despite the fact that the stocks declined sharply.[48]

Figure 1 displays the trend of unemployment in the United States, where its rise is evident after the 2008 crisis. The graph provides information regarding both unemployment of people with advanced education (% of the total labour force with advanced education) and total unemployment as a percentage of the total labour force (modelled International Labour Organization (ILO) estimate). Total unemployment rose from 5.78% in 2008, to 9.25% in 2009, reaching a peak of 9.63% in 2010. The figures also illustrate a similar spike during the 2020 pandemic. The subsequent section will discuss more details about this pandemic as a second catalyst and the upsurge of more retail investors.



Source: World Bank, *World Development Indicators*, accessed on 18 April 2021.

Figure 1: Unemployment in the United States (% of total labour force) Years 2000-2020

[47] Michael Pagano, John Sedunov and Raisa Velthuis, "How Did Retail Investors Respond to the COVID-19 Pandemic? The Effect of Robinhood Brokerage Customers on Market Quality," Working Paper, 2020, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3703815 .

[48] Ibid., 1.

The Rise of the Generation Investor

A recent study made by the Charles Schwab Corporation demonstrated that the COVID-19 pandemic prompted a surge of new retail investors keen on the stock market, encouraging the creation of a new cohort of investors that commenced investing in the year 2020, which has been denominated by Charles Schwab as the "Generation Investor" or "Gen I".[49] According to "an analysis of about 500 investors, the brokerage firm found that 15% of current retail investors began playing the market in 2020".[50]

As reported by the Schwab Generation Investor Study (2021), over 60% of the inquired said that the current pandemic financially affected them. Additionally, even though "Gen I was more financially impacted by the COVID-19 pandemic than those invested before 2020, the group turned its challenges into an opportunity".[51] More than half of the surveyed—more precisely, 54%—stated that they began investing to create a fund for emergencies. Similarly, 53% declared they started to obtain a supplementary income from investment or trading.[52] According to Steve Huffman, Co-Founder & Chief Executive Officer (CEO) of Reddit, "[…] our unemployment community had become a source of support for hundreds of thousands of Americans, who had turned to Reddit after losing their jobs during the pandemic".[53]

Even though many lost their jobs temporarily when the pandemic restrictions slowed economic activity, the governments of the developed countries launched financial relief packages to mitigate the negative effects of the latter. These "stimulus checks" as they were popularly called in the US, fuelled the phenomenon of retail investing. According to an online survey, more than 40% of the enquired online brokerage account users under 34 years

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49 Charles Schwab Corporation, "The Rise of the Investor Generation"; Fitzgerald, "A Large Chunk of the Retail Investing Crowd".

50 Fitzgerald, "A Large Chunk of the Retail Investing Crowd."

51 Charles Schwab Corporation, "The Rise of the Investor Generation."

52 Ibid.

53 CNBC Television, "GameStop Hearing: Robinhood, Citadel and Reddit CEOs Testify- 2/18/21," February 18, 2021, video, https://www.youtube.com/watch?v=D7N4S_FKMq4.

old planned to invest the stimulus checks in the stock market.[54] A similar process happened in countries of the European Union.[55]

Concerning Gen I's age, the median is 35 years, several years "younger than those who began investing before 2020 whose median age is 48".[56] Table 1 provides more details in this regard, where it is possible to identify that 51% of Gen I are millennials, that is, people between 25 and 40 years old; followed by 22% of investors between 41 and 56 years old (Gen X); 16% are Gen Z and finally, just 11% are baby boomers. Thus, more than half of Gen I is composed of millennials. This group is the main actor in the retail investing phenomenon, not just as an active member but also as an originator. They are younger, thus less averse to risk, and more willing to risk their money in pursuit of a greater reward. Many think that they will have time to earn that money back if they lose it.

Table 1: Distribution of the Generation Investor according to age

Gen I: median age 35 years			
Gen Z	Millennials	Gen X	Boomers
Born 1997-2012	Born 1981- 1996	Born 1965-1980	Born 1946-1964
Ages 9-24*	Ages 25-40	Ages 41- 56	Ages 57-75
16%	51%	22%	11%

Source: Schwab Generation Investor Study 2021, own modifications according to Dimock 2019. Generation ages are calculated according to the year 2021. *No chronological endpoint has been set for this group.

To further illustrate the influence of millennials on the investment community, it is necessary to take into account that several of the platforms that have enabled the rise of retail investing were created by individuals belonging to this same age group. Vladimir Tenev and

[54] Matthew Rocco, "US Retail Investors Poised to Deploy Stimulus Cheques in Stocks," *Financial Times*, March 15, 2021, https://www.ft.com/content/51cd6faf-dc42-4d77-b232-fddf447a46fa ; Martin and Wigglesworth, "Rise of the Retail Army."

[55] BETTER FINANCE, "ANNEX 1: Individual Investor Behaviour during the COVID-19 Crisis in Selected Jurisdictions," 2021, https://betterfinance.eu/wp-content/uploads/BETTER-FINANCE-Response-EC-Strategy-for-Retail-Investors-03082021-Annex-2.pdf.

[56] Charles Schwab Corporation, "The Rise of the Investor Generation."

Baiju Bhatt, Co-Founders of Robinhood, Alexis Ohanian and Steve Huffman, Co-Founders of Reddit, Brian Armstrong, Co-Founder of Coinbase, or Mark Zuckerberg, Co-Founder of Facebook, are some examples of millennials who have contributed with their ideas to shape investing as it is today. Table 2 provides a list of some of these relevant individuals.

Table 2: Age of relevant individuals and their activity during the 2008 financial crisis

Name	Relevant for	Birth Year	What was he doing in 2008?
Vladimir Tenev	Co-Founder & CEO of Robinhood	1986/1987	Studying a master's degree in Mathematics at Stanford University
Baiju Bhatt	Co-Founder of Robinhood	1984/1985	Completing a master's degree in Mathematics at Stanford University
Mark Zuckerberg	Co-Founder & CEO of Facebook	1984	Running Facebook
Brian Armstrong	Co-Founder & CEO of Coinbase	1983	Living in Argentina
Keith Gill	Retail Investor, aka "Roaring Kitty"	1986	Studying at Stonehill College
Vitalik Buterin	Author of the Ethereum white paper	1994	Attending school in Toronto
Gavin Wood	Co-Founder of Ethereum	1980	Working at Microsoft
Andrew Kortina	Co-Founder of Venmo	1983	Founding Venmo
Iqram Magdon-Ismail	Co-Founder of Venmo	1983	Founding Venmo
Taavet Hinrikus	Co-Founder & Chairman of Wise	1981	Recently graduated from Tartu University and working at Deloitte.
Kristo Kaarman	Co-Founder & CEO of Wise	1981	Working at Skype
Alexis Ohanian	Co-Founder of Reddit	1983	Running Reddit

Steve Huffman	Co-Founder & CEO of Reddit	1983	Running Reddit
Aaron Swartz	Co-Founder of Reddit	1986	Founding Watchdog.net
Satoshi Nakamoto	Author of the Bitcoin white paper	1976	Publishing the Bitcoin white paper

Source: Own elaboration. Data retrieved, June 2021.

The last column of Table 2 displays a relevant link between the origin of their ideas and the financial crisis of 2008. Most of them originated around that period and it is possible to presume that they were highly influenced by the unfortunate events of the financial crash. Millennials were young adults that had just graduated or were on the verge of graduation at the time, they were the first to enter a ravaged labour force where unemployment was very high. The ideas that some of them thought of are the origin of today's phenomena.

The creation of Robinhood is the best example of the situation mentioned above. As Baiju Bhatt said in a TechCrunch Disrupt conference in 2018: "We had the idea [...] when we were entering the working world, we saw what was happening with Occupy Wall Street".[57] Moreover, the Co-Founder of Robinhood also stated that after a few years of working in finance, it was visible that capital markets were not allowing "a lot of people be a part of them, and the $10 trade commission was a major [reason]. If we made it free and really easy to use on mobiles, we would see a new generation of customers".[58] Later in 2021, Vladimir Tenev restated this idea before the House of Representatives: "We don't serve hedge funds".[59]

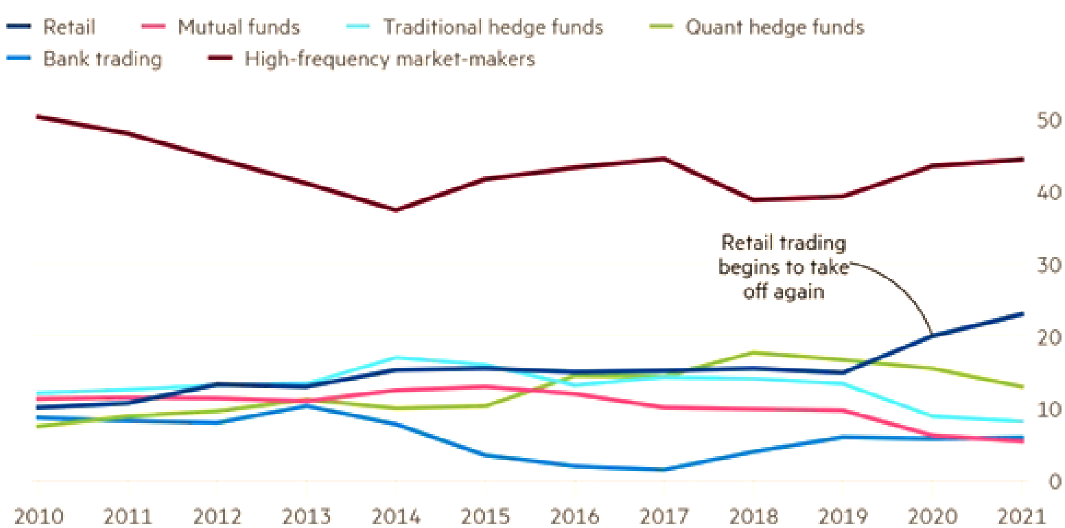
Other institutions such as JMP Securities calculated that "the brokerage industry added roughly 10 million new clients in 2020, according to app download data from SimilarWeb. More than 6 million of those clients flocked to Robinhood".[60] In 2021, this boom in retail investing was maintained and even reinforced "by the epic short squeeze in

[57] TechCrunch, "Live from Disrupt SF 2018 Day 2," September 6, 2018, video, https://www.youtube.com/watch?v=GOCOshEdrDo.
[58] Ibid.
[59] CNBC Television, "GameStop Hearing."
[60] Fitzgerald, "A Large Chunk of the Retail Investing Crowd."

GameStop's stock in January. JMP estimates that more than 7.8 million new retail clients entered the market in January and February".[61]

Further sources also underline the escalation of this phenomenon, stressing that retail investors had proven their potential to impact market movements and also highlighting that today, the flows are substantial enough to matter.[62] Likewise, the year 2021 has shown "to be a breakthrough year for the amateur traders. Credit Suisse estimates that at times this year they have accounted for a third of all US stock market trading".[63] The following two figures provide more details regarding the increase in retail trading volume and how this boom has impacted the US stock market, enabling stock trading volumes to reach ground-breaking records. As Figure 2 displays, since 2019, and markedly during the subsequent 2 years, it is possible to identify a clear upward trend of retail trading (shown in dark blue). As a result, retail trading[64] constitutes nearly as much size as mutual funds and hedge funds together.

Market share of overall US equity, trading volumes (%)



[61] Ibid.

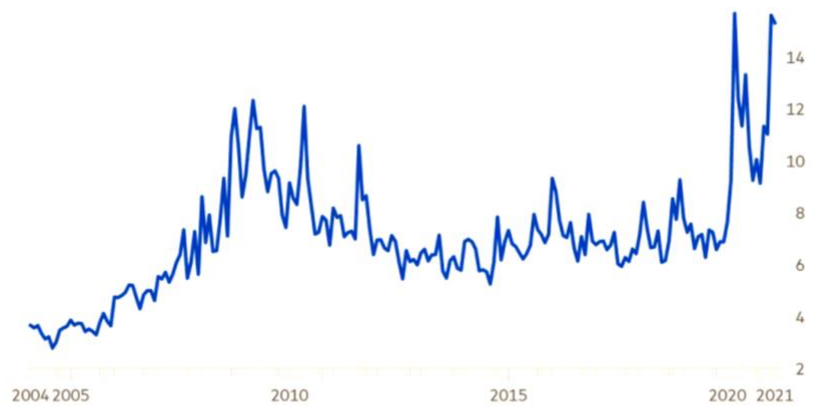
[62] Martin and Wigglesworth, "Rise of the Retail Army."

[63] Ibid.

[64] The difference between trading and investing lies in the time that the shares are held. A trading operation, on the one hand, holds shares for a short period of time, hoping to benefit from quick price fluctuations. Investing, on the other hand, is based on the fundamentals of companies, holding shares for a minimum of three to five years.

Source: Katie Martin and Robin Wigglesworth, “Rise of the Retail Army: The Amateur Traders Transforming Markets,” *Financial Times*, March 9, 2021, https://www.ft.com/content/7a91e3ea-b9ec-4611-9a03-a8dd3b8bddb5.

Figure 2: Retail trading now accounts for almost as much volume as mutual funds and hedge funds combined



Source: Katie Martin and Robin Wigglesworth. “Rise of the retail army: the amateur traders transforming markets”. *Financial Times*, March 9, 2021. https://www.ft.com/content/7a91e3ea-b9ec-4611-9a03-a8dd3b8bddb5.

Figure 3: Retail frenzy helps US stock trading spike to new records

Average daily trading volumes (billions of shares changing hands)

GAMESTOP AND REDDIT: PROOF OF RETAIL INVESTING’S POWER

The recent cases of GameStop and Reddit are not new—short squeezes such as the one with GameStop are not uncommon in the stock market. What is indeed new is the media and governmental attention given to it, confirming the relevance of the retail investing phenomenon. This is one of the justifying reasons why the Gamestop case has been chosen for this article. It is the paradigm of financial disruption in the stock markets, and it may signify the beginning of a whole different investment strategy created by and for retail investors.

This section will explore what occurred with GameStop and will briefly define what a short squeeze is. GameStop is a video game retailer in the US that has been disrupted by online platforms, like Steam, as a result of which fewer people go to a store to buy video games. This means that GameStop is not profitable anymore, and therefore it is headed to bankruptcy unless it is able to transform its business model. The company trades on the stock market, but few people would buy it after doing a thorough analysis. In fact, its stock price had been trending low since 2013.

In January 2021, GameStop became known in WallStreetBets, a trading blog popular among retail investors available on Reddit, a social media platform. A retail investor whose nickname is "Roaring Kitty" posted that more than 100% of GameStop's shares were shorted. This meant that some people, traditional investment funds, were betting substantial amounts of money on the fall of GameStop's stock price. This is understandable, as the video game retailer was headed to go bankrupt. Retail investors in WallStreetBets proposed the short squeeze, if many of them bought the company's stock its price would rise and the people who were betting against it would lose their bet. For this to happen, the amount of money spent to buy GameStop should be larger than the amount spent on betting against it and on shorting it.[65]

[65] Robert A. Jarrow, "Market Manipulation, Bubbles, Corners, and Short Squeezes," *The Journal of Financial and Quantitative Analysis* 27, no. 3 (1992): 311-36, https://econpapers.repec.org/article/cupjfinqa/v_3a27_3ay_3a1992_3ai_3a03_3ap_3a311-336_5f00.htm ; Usman W. Chohan, "Counter-Hegemonic Finance: The Gamestop Short Squeeze," *SSRN Scholarly Paper*, January 28, 2021, http://dx.doi.org/10.2139/ssrn.3775127.

Source: Koyfin, accessed on 19 April 2021.

Figure 4: Evolution of GameStop's stock price from April 2020 to April 2021

The case of GameStop can be encased into a modus operandi that has been used by certain retail investors and posted on social media like Reddit. It focuses on stocks whose business might appeal to this particular group, stocks that are viewed as "cool" like GameStop's video game retail, AMC's theatre chain, Blackberry's mobile nostalgia, or Wendy's fast-food brand. These businesses are popular enough to spark the buying frenzy needed to push the price up past the short bets. On the technical side, these stocks should have a very high short float percentage[66] for the short squeeze to have a meaningful impact—ideally over 100%.[67] Furthermore, if the number of shares outstanding is too large the capital needed to buy enough shares and pull the short squeeze off would be too high for the retail

66 A high short float percentage is a high percentage of the total number of shares (the float) borrowed to be shorted. In order to short a company, one "borrows" shares from another and sells them hoping to repurchase them for a lower price in the future and give them back. This difference is the benefit for the short-seller. Similarly, O'Neil and Morales add "it is simply the opposite of buying first and selling later. You sell first and buy back later, hopefully at a lower price, in which case you will have made a profit.", O'Neil and Morales, *How to Make Money Selling Stocks Short* (Hoboken, NJ: Wiley, 2015), 3).

67 The float can be multiplied by derivatives, which enables percentages over 100% (more short contracts are issued than there are shares in the float). This is a risky practice that multiplies potential benefits, but also losses. If the price of the shorted security rises past a certain point the short-sellers are forced to exit their positions, which in turn forces the price of the stock even higher (short-sellers exit their positions by buying the shares and giving them back).

investors participating in it. The smaller the market capitalisation[68] of a stock, the easier it is for a short squeeze to happen. The fact that this is, in essence, a short squeeze and that the usual actors that are short are institutional investors gives the whole strategy the aura of rebellion that impregnates retail investing—“little guy vs. the suits”. This modus operandi has been labelled by specialised media as “meme trading”, referring to one of the most popular ways of communicating in social media, that is via *memes*, an image, or a short video combined with text, transmitting an idea, often in a humorous manner.[69]

Meme trading is yet to be validated as an investing strategy. Many people have been very successful with it and have made large amounts of money. These are usually experienced day traders or momentum traders,[70] who know when to buy and sell the stock and have the technology and platforms to execute the orders instantly. As was explained earlier, a retail investor is not necessarily an amateur or new to investing, many successful and experienced individual investors do not work for a firm and thus are labelled as retail investors. On the other hand, many have lost money following meme trading. These are usually inexperienced investors who gambled their money trying to make a quick benefit, misled by a social media post. These are the ones that buy too late or do not sell at the right time and are left *holding the bag*, or holding a stock whose current price is much lower than the price they paid for it.

Even though the modus operandi has been repeated during the first half of 2021, achieving similar results, it is still too early to validate it as a strategy. The first major test will come with the next major correction in the equity markets or *bear market*. These are hard times for investors when it is much more difficult to achieve any gains—only the most experienced and resilient survive these periods, minimising losses or reaching small benefits. They are prepared for bear markets and have a roadmap to follow. If meme trading proves to be successful for those who apply it correctly even during difficult times, its legitimacy will grow. However, another possible outcome is that most of the inexperienced retail

[68] The market capitalisation of a given security is its price multiplied by the number of shares available.

[69] Yoel Minkoff, “To the Moon! Deeper Dive into Meme Stock Trading,” *Seeking Alpha*, 2021, https://seekingalpha.com/news/3704682-to-the-moon-deeper-dive-into-.

[70] Linked to a previous footnote, a day trader does not hold shares more than a day, sometimes only a few minutes. Momentum traders benefit from a trend (momentum) that has already started, ending the operation when they see signs that the trend is fading.

investors will lose money and flee the stock market, and meme trading would then be associated with other forms of gambling, like casinos.

For the time being and until the next bear market arrives, meme trading is still a popular modus operandi and institutional investors have to adapt to it, benefiting from it via day trading and being more careful with which stocks to short. On the other hand, its possible ephemeral nature might be the reason why the US government has taken a prudent approach, choosing only a public discussion via a hearing before the US House of Representatives Committee on Financial Services after the GameStop event, instead of legislating over it or taking judicial steps.

What caught the eye of the media and the government, was that, for the first time, a group of retail investors, on a social media platform and away from Wall Street were able to take on traditional investment institutions and win. The short squeeze was not new—many other examples can be found—but the power of retail investors was. As Steve Huffman, Co-Founder & CEO of Reddit stated in the Committee on Financial Services' hearing, "WallStreetBets may look sophomoric or chaotic from the outside, but the fact that we're here today means they've managed to raise an important issue about fairness and opportunity in our financial system".[71] Keith Gill, the famous retail investor nicknamed "Roaring Kitty", added in the same hearing:

> Hedge funds and other Wall Street firms have teams of analysts working together to compile research and analyze shares of companies, individual investors do not have those resources. Social media platforms like YouTube, Twitter, and WallStreetBets on Reddit are leveling the playing field. […] I support retail investors' right to invest in what they want, when they want. I support the right of individuals to send a message based on how they invest.[72]

Conclusion

The GameStop case was the first example of the impact that the retail investing phenomenon can have. Inevitably, many ethical and legal questions surged. Did WallStreetBets infringe on the law by manipulating the market? To which extent were the retail investors in this platform organised? Should someone be blamed? Who? Roaring Kitty for posting his analysis? Robinhood for being a zero-commission broker? Is it acceptable to

[71] CNBC Television, "GameStop Hearing."
[72] Ibid.

bet so much money on a company's failure? What about the jobs that this company might still provide? Should shorting a stock be prohibited? All of these questions prompted the US government to intervene prudently—the process has not finished, and the consequences are yet to be seen.[73]

Retail investing is a natural extension of the citizen-speculator—individuals are socialised into the world of speculation and financial calculation, and are constantly bombarded by the myth of progress and wealth. Investing in the equity market therefore becomes a logical step. Its point of origin is located in the wide adoption of a major technological development: the internet. It is the infrastructure for the proliferation of platforms like social media, online brokers, and data-processing web pages. These make investing accessible to the majority of the population and level the playing field between retail and institutional investors. The retail investing group is composed in its majority of millennials. They are young enough to be tech-savvy and old enough to have a stable income and a sufficient amount of savings to invest. Many of them were young adults or adolescents at the time of the 2008 financial crisis, they lived through it and suffered its consequences as they graduated from college and started their professional careers.

The economic hardships of that moment became the foundation of the ideas that have shaped retail investing as we now know it. Thus, the 2008 financial crisis should be considered one of the major catalysts of this phenomenon. Finally, the COVID pandemic of 2020-2021 triggered spikes of unemployment and confined the population inside their homes, reducing their daily routines to online activities. Consequently, online investing became an appealing solution for an extra source of income or a financial cushion. This phenomenon was fuelled by the combination of extraordinary financial help from the government and fewer spending options. The pandemic, therefore, became the second major catalyst of retail investing.

New technologies, ideas, or ways of doing business bring benefits but also mean the end of the old ways and institutions. Traditional banks, investment funds, brokers, and the

[73] Sarah Frier, "'Roaring Kitty' Gets the Congressional Hearing Treatment," *Bloomberg*, February 18, 2021, https://www.bloomberg.com/news/newsletters/2021-02-18/-roaring-kitty-gets-the-congressional-hearing-treatment; Dave Michaels, "GameStop Mania Is Focus of Federal Probes Into Possible Manipulation," *The Wall Street Journal*, February 11, 2021, https://www.wsj.com/articles/gamestop-mania-is-focus-of-federal-probes-into-possible-manipulation-11613066950; Dominic Rushe and Kari Paul, "GameStop Hearing: Robinhood Founder Defends Halt to Trading," *The Guardian*, February 18, 2021, https://www.theguardian.com/business/2021/feb/18/gamestop-hearing-latest-robinhood-founder-testimony-vlad-tenev-stocks-app.

whole financial system, are facing a hard dilemma: embrace change or disappear. It is just normal that many will try to resist innovation. Moreover, as this process continues its course, new problems appear, new questions must be answered, governments must update regulations, and people must adapt. Retail investing is a controversial phenomenon because it is socialising an activity that only the elite could benefit from in the past, but it could also bring chaos to a system that is central in today's economy.

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