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A Behavioral Economic Perspective on the EU Retail Investment Strategy

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1 Introduction

1.1 Participation of EU Retail Investors in the Capital Markets

The European Commission's retail investment strategy (RIS) is primarily motivated by the low participation of retail investors in capital markets in Europe and the recognition that developing retail investment is essential for securing the financial future of EU citizens. The participation of EU citizens in the capital markets is relatively low, as evidenced by the composition of European household financial assets. According to the Organization for Economic Cooperation and Development (OECD), the primary financial assets of EU households in 2022 were currency and deposits (34.1%), equity and investment fund shares (32.8%), and insurance, pensions, and standardized guarantees (27.8%).[1] These assets had a total value of €33,546 billion, which was 3.6 times more than the financial liabilities of EU households.[2] This data from the OECD indicates a substantial accumulation of wealth in forms that have traditionally been considered safer or less volatile, implying a cautious or conservative approach among EU citizens to investing directly in capital markets. The preference for liquidity and security, as evidenced by the high allocation to currency, deposits, and insurance products, implies limited engagement with higher-risk financial instruments, such as equities and bonds, reflecting an overall risk-averse sentiment toward capital market participation. As of March 2024, the EU's annual inflation rate was 2.4%, down from its previous peak in mid-2021 to the end of 2023.[3] Despite this drop, inflation continues to pose a serious challenge to household purchasing power. Given the devaluation of traditional savings (such as bank deposits and savings accounts) and the increasing concerns over the adequacy of statutory pensions, the composition of EU households financial assets underscores the vital importance for individuals to engage more actively in capital markets (e.g., stocks and mutual funds) to secure their financial future (Alda, 2017).

In the US, the distribution of household assets indicates that households are more involved with capital markets as compared to the EU, with equities and mutual funds accounting for a large portion of households financial resources. This engagement is evidenced by the Securities Industry and Financial Markets Association's report, which shows that, in 2018, more than half of U.S. retirement assets, totaling $34.6 trillion, were individually funded through defined contribution pension plans, individual retirement accounts (IRAs), and annuities, emphasizing the proactive role individuals play in their retirement planning.[4]

[1] Appendix I, Figure 1.
[2] Appendix I, Figure 2.
[3] Appendix I, Figure 3.
[4] Appendix I, Figure 4.

This distinction derives from the structural differences between the pension systems in the EU and the US. In the US, 401(k) plans, which are employer-sponsored defined-contribution pension accounts, are essential for retirement savings. Employees contribute a percentage of their earnings to their 401(k) plans, which are subsequently invested in a variety of securities.[5] This type of retirement planning explains the asset allocation of US households and encourages them to participate actively in capital markets. In contrast, the EU relies primarily on statutory pension systems, with retirement income generally provided under pay-as-you-go schemes. These schemes are funded by current employees' contributions to pay for retiree pensions, with less focus on individual retirement savings accounts, such as the 401(k) (Fornero & Wilke, 2020). The pension systems of the EU and US reflect not only regulatory distinctions but also cultural differences in how people approach retirement savings (Blasi, Kruse, Sesil, & Kroumova, 2003). To match the US level of capital market engagement among retail investors, the EU must undergo a significant transformation in both policy and mentality. This transformation entails encouraging retail investors to engage more in the capital markets as a crucial component of their retirement planning, moving beyond the conventional reliance on statutory pensions and establishing a more proactive investment culture among EU citizens. Following the introduction of the pan-European Personal Pension Product, the EU RIS is another critical step toward this goal, aiming to safeguard EU citizens' financial futures.

1.2 Changes with the COVID Crisis

Since the outbreak of the COVID-19 pandemic, two notable trends have been observed in the EU retail investing sector, both indicating a dynamic movement toward higher capital market activity. Pandemic-induced lockdowns and ongoing government financial support in several European countries resulted in an increase in household savings, with the EU's saving rate rising to 19% in 2020 from 12% at the end of 2019, indicating a significant increase in disposable income reserved by European households.[6] Traditionally, these savings are held in bank deposits and similar accounts. However, a notable shift has been observed in several countries, including Denmark, France, Germany, and Italy, where retail investment activity surged during and after the pandemic, especially among the younger demographic aged 18-35.[7] Given that the level of European capital market inclusion cannot rival that of the US, this trend underscores the pandemic's role as both a disruptor and a catalyst for financial markets.

[5] Subsection 401(k) of the U.S. Internal Revenue Code (IRC).
[6] Appendix I, Figure 5.
[7] Appendix I, Figure 6.

However, concerns remain about the sustainability of this trend, as well as the regulatory challenges and potential risks that it brings (Arrigoni, 2021).

1.3 Capital Markets Union

After the first year of the pandemic, the European Commission officially recognized the importance of developing the retail investment environment to increase market participation. This acknowledgment was outlined in the Capital Markets Union (CMU) action plan, released in September 2020. The CMU aims to establish a single market for capital to facilitate the flow of capital, including investments and savings, throughout the EU thereby benefiting consumers, investors, and corporations regardless of their location (Mitra et al., 2019) To achieve these goals, the CMU envisions a unified market that promotes increased cross-border investments (European Central Bank, 2022). This framework will establish a solid foundation for capital flows, attracting greater investment in sustainable projects and facilitating the green and digital transition of the EU (European Central Bank, 2022; Demertzis, Merler, & Wolff, 2018). This is particularly crucial, given the EU's plans to allocate over €500 billion for updating its energy grids, which will help the EU meet its goals under the Paris Agreement (Macchiavello & Siri, 2020) Additionally, the Commission aims to support the economy's recovery from the crisis and address the exacerbated pension gap resulting from an ageing population and changing labor markets through this initiative (Cunha Rodrigues, 2019). (Demertzis, Merler, & Wolff, 2018; Brühl, 2021).

Through the CMU action plan, the Commission also aims to enhance the EU's reputation as a secure environment for long-term saving and investment.[8] However, a significant portion of individuals face challenges such as securing loans at favorable rates, navigating investment choices, and preparing for retirement. Eurobarometer (2023) reveals that only 18% of EU citizens possess a high level of financial literacy, with considerable disparities among member states.[9] In recognition of these disparities, the Commission has committed to enhance financial literacy across Europe under the CMU action plan.[10] Collaborating with national authorities and stakeholders, the Commission has established frameworks, policies, educational resources, and targeted workshops to improve financial literacy. Moreover, joint efforts with the OECD have resulted in the development of financial competence frameworks for children, youth, and adults, highlighting a proactive approach to addressing this issue. Expanding on the objectives outlined in the CMU action plan, EU RIS also implements targeted measures to enhance financial literacy and the efficiency of cross-border supervision

[8] Objective 2 of the 2020 Capital Markets Union (CMU) Action Plan.
[9] Appendix I, Figure 7.
[10] Action 7 of the Capital Markets Union (CMU) Action Plan.

and enforcement. However, this thesis does not analyze specific measures aimed at achieving these objectives. Instead, it focuses on their indirect integration into other measures designed to address challenges not directly associated with financial literacy or cross-border supervision and enforcement. This approach is adopted because understanding how these objectives are reflected in other measures provides deeper insight into their implications. By examining their indirect integration into other proposals, it becomes apparent how these objectives intersect with and contribute to addressing multifaceted challenges within the EU framework, highlighting that they cannot be fully addressed through direct measures alone.

1.4 Retail Investment Strategy

The RIS, which launched on May 24, 2023, is the CMU's flagship initiative aimed at transforming the EU retail investment environment. The initiative's general objectives are to strengthen the protection framework for retail investors to empower them when making investment decisions and ensure their fair treatment when using investment services so that they can achieve better investment performance. The RIS also aims to improve the efficiency and integration of the internal market across all retail financial services.

The specific objectives of this initiative are as follows:[11]
1. Improving information provided to investors and their ability to make well-informed investment decisions. The initiative aims to improve the legal framework by adapting disclosures to the digital environment, making disclosures more relevant for retail investors and ensuring retail investors receive marketing communications, also through online channels, that are relevant and not misleading.
2. Better aligning interests between intermediaries and investors. The improvements to the framework would ensure that the advice given to retail investors is not biased by monetary or non-monetary incentives provided by product manufacturers to intermediaries and that it is of good quality and adapted to the investors' needs, preferences, and objectives.
3. Ensuring that retail investors are offered cost-effective products. A strengthened approach in the legislative framework based around the value offered aims to help retail investors achieve better returns and more easily access retail investment products that are more cost efficient.

[11] Proposal for a Directive of The European Parliament and of The Council amending Directives (EU) 2009/65/EC, 2009/138/EC, 2011/61/EU, 2014/65/EU and (EU) 2016/97 as regards the Union retail investor protection rules.

These proposals should address the following challenges:[12]
1. Retail investors lack relevant, comparable, and easily understandable investment product information, while being inappropriately influenced by marketing communications.
2. Shortcomings exist in the investment product manufacturing and distribution process related to the payment of inducements and the extent to which product design reflects cost efficiency and value for the retail investor.

1.5 Research Objective and Questions

This thesis aims to analyze the European Commission's retail investment strategy (RIS) from a behavioral economics perspective, focusing on the challenges identified by the Commission and its objectives for regulatory amendments. It seeks to explore how these objectives specifically address cognitive biases, heuristic decision-making processes, conflicts of interest, and information asymmetries. This analysis contributes to a deeper understanding of how behavioral insights can inform and improve regulatory frameworks within the EU's financial markets.
In the context of retail investors lacking relevant, comparable, and easily understandable investment product information, while being inappropriately influenced by marketing communications, the thesis aims to answer the following research questions:
1. How can behavioral economics principles be applied to optimize the design of the key information document for packaged retail and insurance-based investment products to address cognitive biases and enhance decision-making among European retail investors?
2. How can principles from behavioral economics be utilized to shape regulatory frameworks that protect retail investors from the manipulative practices of financial influencers on social media, while promoting accurate and responsible decision-making?
3. How do behavioral economics insights explain the influence of herd behavior on market dynamics, particularly during the GameStop trading event, and what measures can be implemented to mitigate its impact on financial markets?
Similarly, within the context of shortcomings in the investment product manufacturing and distribution process related to the payment of inducements and the extent to which product design reflects cost efficiency and value for the retail investor, the thesis aims to address the following questions:
1. How do regulatory measures aimed at mitigating conflicts of interest, such as Payment for Order Flow, affect execution quality and value in investment products?

[12] Proposal for a Directive of The European Parliament and of The Council amending Directives (EU) 2009/65/EC, 2009/138/EC, 2011/61/EU, 2014/65/EU and (EU) 2016/97 as regards the Union retail investor protection rules.

2. How can improvements in investor categorization and the enhancement of financial advisors' competence address information asymmetries and thereby strengthen investor protection within the European Union?

1.6 Importance of Behavioral Economics for the Analysis

Behavioral economics, a field at the intersection of economics and psychology, explores how individuals make decisions and behave in economic contexts (Wilkinson & Klaes, 2017) Unlike traditional economic theory, which assumes rational decision making, behavioral economics acknowledges that humans often exhibit systematic biases and cognitive limitations that influence their choices (Wilkinson & Klaes, 2017). By studying these behavioral patterns, such as loss aversion, overconfidence, and herd behavior, behavioral economists provide insights into how individuals deviate from rationality and the implications of these deviations on economic outcomes (Wilkinson & Klaes, 2017).

Whether being developed, analyzed, or understood, knowledge of behavioral economics is crucial for the RIS. Looking at the RIS from a behavioral economics perspective can enable policymakers to understand the complexities of investor behavior and design strategies accordingly to address the cognitive limitations and biases that affect investor behavior. This ultimately leads to more-informed decision making, improved investor protection, and better outcomes in the capital markets.

1.7 Thesis Roadmap

The main part of this thesis is comprised of two chapters. **Chapter 2**, focuses on financial information, while **Chapter 3**, delves into financial advice. **Chapter 2** is comprised of three sections, each addressing specific aspects of financial information. **Section 2.1** investigates how behavioral economics principles can be applied to optimize the design of key information documents for packaged retail and insurance-based investment products. **In Section 2.2**, the focus shifts to exploring how principles from behavioral economics can be utilized to shape regulatory frameworks that protect retail investors from the manipulative practices of financial influencers. **Section 2.3** delves into how behavioral economics insights can explain the influence of herd behavior on market dynamics, particularly during events such as the GameStop trading frenzy. **Chapter 3** is dedicated to the topic of financial advice, with a focus on addressing conflicts of interest and information asymmetries. **Section 3.1** examines regulatory measures aimed at mitigating conflicts of interest in the financial advice sector, such as Payment for Order Flow. **In Section 3.2**, the discussion centers on improving investor categorization and enhancing the competence of financial advisors to address information asymmetries within the financial advice sector.

2 Financial Information

2.1 Amendments to General Product Disclosures: Packaged Retail and Insurance-Based Investment Products Key Information Document

Under the current regulatory framework, retail investors have difficulties accessing relevant, comparable, and easily understandable information on investment products to help them make informed investment decisions (Annunziata, 2023). To address this informational challenge, the European Commission proposes several amendments to improve the efficiency, understandability and transparency of general product disclosures. The proposal includes amendments on individual disclosures provided to retail investors before and after making an investment decision, the general product information provided in the packaged retail and insurance-based investment products (PRIIPs) key information document (KID), and the disclosure rules in Solvency II and the Insurance Distribution Directive (IDD) for insurance and insurance-based products (Annunziata, 2023). Given the extensive range of amendments under consideration, this thesis only analyzes the proposal for amending the PRIIPs KID. This focus has been chosen because the proposal to amend PRIPPs KID[13] exhibits only minor differences from other regulatory proposals, while the fundamental objective remains consistent. Moreover, PRIPPs KID stands as one of the most prevalent financial disclosures encountered by retail investors.

The PRIPPs KID is an essential instrument for retail investors, as it outlines the main characteristics of an investment product that they are considering purchasing. Specifically, it outlines important information about the investment product by answering the following questions: What is the product? What are the risks and what could I get in return? What happens if [the name of the PRIIP manufacturer] is unable to pay out? What are the costs? How long should I hold it, and can I take money out early? How can I complain?[14]

To achieve its goals, one modification the European Commission has planned for the PRIPPs KID is layering the section divided by these questions. The layering option allows users to expand sections of the document by clicking on their titles, therefore allowing greater versatility in presenting information and a more user-friendly experience than the regular static PDF format of the PRIPPs KID as it is today.[15] To further ensure that critical information is not overlooked, the Commission has introduced a “summary dashboard,” also known as the “product at a glance” section, at the beginning of the document.[16] This feature prominently displays key details about the investment product’s costs and risks and ensures

[13] Amendment to Regulation (EU) No 1286/2014.
[14] Current consolidated (09.01.2024) version of (EU) 1286/2014, Article 8.
[15] Amendment to Regulation (EU) 1286/2014, Article 1(7).
[16] Amendment to Regulation (EU) 1286/2014, Article 1(5)(a).

that essential information is immediately visible and accessible. This offers a significant improvement over the current PRIPPs KID, where investors must scroll down to find the risk indicator and performance scenarios.[17]

One of the biggest challenges concerning the design of the PRIPPs KID is crafting the section that displays the risk indicator and scenarios. This section serves as the primary reference point for investors when comparing products based on their potential returns (Kwon & Lee, 2009). The Commission recognizes that financial decisions are not always driven by rational considerations; cognitive biases, heuristics, and framing effects can significantly influence investor behavior (Bihari, et al., 2023). To better understand how various content presentations and formats in the KID affect retail investors' ability to comprehend, compare, and select investment products, an online consumer test was conducted by DevStat on behalf of the European Commission. This study aims to refine the effectiveness of information delivery in PRIPPs KID to enhance decision-making processes (DevStat, 2020). The consumer test, conducted online with a sample size of 7,638 subjects from France, Germany, Italy, Poland, and Sweden, covered 11 examples of funds, structured products, and insurance-based investment products (IBIPs), and analyzed the impact of different versions of the PRIPPs KID: the current version, a probabilistic version, and a version combining probabilistic information and past performance data.[18] The test found that more than 75% of the participants selected the optimal investment product among other products of the same type for all types of products and versions of the PRIPPs KID. However, most of the participants struggled to identify a product based on its main characteristics and to answer the control questions. The current PRIPPs KID version includes four scenarios under the performance scenarios section, namely stress, unfavorable, moderate, and favorable scenarios.[19] As the returns from a specific investment product depend on the future market performance and cannot be predicted accurately, these scenarios show an estimate of possible returns based on the performance of the financial markets.

In the probabilistic version of the PRIPPs KID, the stress scenario, calculated by detrending the historical time series of the product's returns and exaggerating its volatility to display the worst 95% quantile, is replaced by a minimum scenario. This minimum scenario shows a minimum guaranteed return if the product is not unstructured; otherwise, it indicates that there are no guaranteed returns, and a total loss is also a possible outcome. The estimated chance

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[17] Current consolidated (09.01.2024) version of (EU) 1286/2014, Article 8 (3)(d)(iii).

[18] Appendix I, Figure 8, 9.
The illustrative version of the PRIPPs KID is not addressed in this thesis due to the lack of significant evidence supporting its inclusion. Further research may be warranted to explore its potential effectiveness in enhancing comprehension.

[19] Current consolidated (09.01.2024) version of (EU) 1286/2014, Article 8.

that this scenario occurs is framed as "XX in 10 chances of doing worse" than the performance scenario. Although only a small portion of the participants clearly understood the probabilistic information, this addition to the current PRIPPs KID increased the percentage of correct answers to the question for identifying the optimal investment by 9 percentage points for funds, 4 percentage points for structured products, and 11 percentage points for insurance-based investment products.

The report on the consumer test accurately highlights that the framing of probabilistic information must be reevaluated to maximize its effectiveness. This framing must aim to ensure that cognitive biases do not interfere with the process from identifying the optimal investment to committing to it. The effectiveness of scenario comparisons could be improved by modifying the framing of probabilistic information. Drawing on prospect theory, which posits that individuals weigh losses more heavily than gains when making decisions involving risk, probability, and uncertainty (Kahneman & Tversky, Loss Aversion in Riskless Choice: A Reference-Dependent Model, 1991), a strategic change in presentation could lead to more favorable outcomes. Specifically, replacing the phrasing "XX in 10 chances of doing worse" with "XX in 10 chances of occurrence" could better guide the decision-making process. This adjustment can help loss-averse investors to refocus on potential gains, thereby reducing loss aversion biases and avoiding optimism bias through more understandable ways of presenting percentages (Bracha & Brown, 2012). Furthermore, pictorial displays indicating risk, such as charts and graphs, can influence individuals' perception of risk and may assist retail investors in making decisions that are better informed. For instance, an Experimental Study discovered that pictorial framing notably decreased the level of risk aversion among participants who prioritized the likelihood of favorable outcomes in their decision-making process (Congiu, 2023).

The past performance version of the PRIPPs KID includes the same information as the probabilistic version and has past performance data of the product over the last 10 years. Compared to using the current version of the PRIPPs KID, this approach also improves the response accuracy and has no negative effect, regarding funds and, when the simpler (two-element) version is considered, regarding IBIPs.[20] While the inclusion of past performance data in financial disclosures may introduce anchoring bias, an effect where individuals rely too heavily on an initial piece of information (the "anchor") when making decisions (Kahneman, Slovic, & Tversky, Judgment under uncertainty: Heuristics and biases, 1982), the consumer testing indicated that participants were capable of distinguishing between past and

[20] However, a version of KID that solely includes past performance has not been independently tested, making it difficult to determine the relative significance of each type of information.

future product performance, understanding that previous performance cannot accurately predict future performance. Consequently, concerns regarding anchoring bias may not be as significant. However, it may be more prudent to address potential cognitive biases stemming from information overload. The testing revealed that including detailed past performance data could lead to cognitive overload and analysis paralysis, resulting in suboptimal decision making. This issue was particularly evident in the case of IBIPs, where the PRIPPs KID presented 10 years of data on minimum yearly bonuses, and government bond returns as benchmarks.[21] Therefore, streamlining information presentation and avoiding overwhelming data dumps could reduce the risk of information overload, and it may enhance individuals' capacity to make well-informed investment decisions (Agnew & Szykman, 2005).

In line with the European Commission's ongoing efforts to amend the PRIIPs KID and enhance financial literacy among European citizens, there is evident room for improvement. Notably, during the user test conducted by DevStat, many participants found it challenging to identify products based on their key characteristics and to understand control questions. Enhancing financial literacy can promote better comprehension, addressing this identification issue regarding financial products. To ensure that retail investors fully comprehend the key characteristics of the product in which they are investing, incorporating interactive elements such as question mark-shaped pop-up buttons to explain essential parts of the document might be a viable approach. Nudging in behavioral economics, a concept popularized by Richard Thaler and Cass Sunstein, refers to influencing people's decisions and behaviors in a predictable way without restricting their options or significantly changing their economic incentives (Sunstein & Thaler, 2009). These buttons can serve as gentle nudges, providing on-demand explanations in the document, thereby reducing cognitive load and decision-making friction (Zhang, 2021). This feature would not only engage users more deeply with the document but also foster more informed decision making, transforming the PRIIPs KID into a dynamic tool beyond merely a source of product information.

In conclusion, the European Commission is responding to the evolving needs of retail investors and the growing preference for digital platforms by planning significant modifications to general product disclosures (European Investment Bank, 2023). These updates aim to enhance accessibility, understanding, and comparability of investment products, particularly for digital consumption.[22] Additionally, a new section on sustainability is being introduced[23], aligning with the findings from the 2022 Flash Eurobarometer survey

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[21] Appendix I, Figure 10.
[22] Amendment to Directive 2014/65/EU, Article 24(5b) and (EU) 2016/97, Article 23, 4.
[23] Amendment to Regulation (EU) 1286/2014, Article 1(5)(d).

that indicated a strong investor interest in sustainable financial products, with 49% of respondents expressing a likelihood to invest in such options.[24] As highlighted by the DevStat report, the framing of information in the PRIIPs KID is of significant importance. It necessitates careful consideration of all potential cognitive biases before designing the main section for retail investors to compare investment products. Additionally, given the low levels of financial literacy across the EU, it is essential to strike a balance in the PRIIPs KID design, providing just the right amount of information to avoid overload while ensuring that retail investors have all the necessary details to understand the key characteristics of the product.

2.2 The Impact of Digitalization on Financial Services Marketing: Finfluencers

The digital revolution has caused a significant transformation in the financial sector, particularly in marketing (Annunziata, 2023). The advent of digital technologies has revolutionized how financial institutions promote their products and services, leading to a paradigm shift in marketing strategies (Akre, Rajan, Ahamed, Al Amri, & Al Daisi, 2019). Companies operating in the financial sector have increasingly turned to sophisticated online methods to reach a wider audience and attract potential investors, exploiting digital platforms' vast reach to market their financial solutions (Akre, Rajan, Ahamed, Al Amri, & Al Daisi, 2019). The utilization of online strategies in financial services marketing has proven to be highly successful, outperforming conventional sales approaches. By leveraging digital tools such as social media, search engine optimization, content marketing, and email campaigns, financial institutions can engage with their target audience in a more personalized and targeted manner (Patil & Kumar, 2021). These digital marketing techniques allow companies to tailor their messaging to specific demographics, behaviors, and interests, thereby enhancing the effectiveness of their marketing efforts. However, the shift toward digital marketing in the financial sector also creates challenges, particularly regarding regulatory compliance. As financial institutions increasingly rely on online platforms to market their products and services, it must be ensured that their marketing practices adhere to strict regulatory guidelines and compliance standards and that regulatory bodies closely monitor digital marketing activities in the financial sector to safeguard consumers and maintain the integrity of the financial markets (IOSCO, 2022)

To address the impact of behavioral biases on retail investors' decision-making processes, particularly in the context of financial services marketing, the European Commission has proposed amendments to articles of the IDD and the Markets in Financial Instruments Directive (MiFID). The proposed regulations focus on addressing issues related to unbalanced

[24] Appendix I, Figure 11.

or misleading marketing communications, whether direct or indirect, that may exploit cognitive biases and mislead investors.[25] By introducing these regulations, the Commission aims to protect investors from potentially harmful digital marketing practices and promote a more transparent and trustworthy financial services marketing environment. The amendments introduce numerous significant changes, such as precise definitions of marketing communications and practices[26], along with new requirements for investment firms to adopt a detailed policy on these communications and practices. This policy should be defined, approved, and continuously reviewed by the firm's management board.[27] Additionally, the management board must verify that the production of financial instruments is consistent with the designated target market in terms of marketing communication.[28]

The policy also aims to define the responsibilities of investment firms and insurance distributors in marketing communications, especially when using online platforms or engaging third parties. Marketing efforts generally fall into two categories: direct marketing, in which the company promotes its products or services directly to consumers, and indirect marketing, in which the firm uses third parties such as influencers, affiliates, or advertising agencies to promote its offerings on its behalf (Helmold, 2022). The European Commission proposes that when a manufacturer of a financial instrument prepares and provides a marketing communication for use by the distributor, the manufacturer will bear responsibility for the content of such communication and its updates.[29] The distributor, in turn, will be responsible for utilizing this marketing communication solely for the identified target market and in accordance with the distribution strategy specified for that market.[30] Additionally, where an investment firm offers or recommends financial instruments that it does not manufacture and organizes its own marketing communication, it will assume full responsibility for ensuring the appropriateness, updating, and use of the marketing communication.[31] This responsibility extends to aligning the content with the identified target market and, particularly, with the identified client categorization.[32] Consider a scenario where an influencer enthusiastically promotes a free investment event hosted by a financial company on their social media platforms. Followers trust their judgment and eagerly sign up, assuming it is a valuable opportunity. According to the proposal, this promotion qualifies as marketing communication, and the financial company bears responsibility for its content. Should the

[25] Amendment to Directive 2014/65/EU, Article 24c and (EU) 2016/97, Article 26a.
[26] Amendments to Directive 2014/65/EU, Article 4(1)(66), (67) and (EU) 2016/97, Article 2 (20)(21).
[27] Amendment to Directive 2014/65/EU, Article 9(3).
[28] Amendment to Directive 2014/65/EU, Article 24(2).
[29] Amendment to Directive 2014/65/EU, Article 24c(4) and (EU) 2016/97, Article 26a(4).
[30] Amendment to Directive 2014/65/EU, Article 24c(4) and (EU) 2016/97, Article 26a(4).
[31] Amendment to Directive 2014/65/EU, Article 24c and (EU) 2016/97, Article 26a.
[32] Amendment to Directive 2014/65/EU, Article 24c and (EU) 2016/97, Article 26a.

promotion be found misleading – potentially by overstating benefits or understating risks– the company could face regulatory consequences.[33] To ensure regulatory compliance, the Commission advocates for new reporting duties for investment companies. This includes keeping detailed records of all marketing communications, especially in indirect marketing, and maintaining them for a minimum of five years for reporting purposes, extendable to seven years upon request of the competent authority.[34] Additionally, the Commission stresses the importance of granting national authorities the necessary authority to effectively address noncompliance.[35] This includes the ability to impose measures such as content restriction or removal for swift action. Overall, the Commission's proposal represents a robust regulatory framework aimed at enhancing marketing practices in the financial services sector.

The impact of social media in indirect marketing cannot be underestimated. Investment firms are increasingly leveraging affiliate marketing and "finfluencers" to promote their products and services across social media and digital platforms (Pflücke, 2022). A finfluencer, short for financial influencer, utilizes platforms such as Instagram, YouTube, or TikTok to offer content on personal finance, investing, budgeting, and other financial subjects (Arrowood, 2024). Finfluencers regularly dispense advice and insights on various aspects of financial management, aiming to shape their audience's financial decisions and behaviors (Espeute & Preece, 2024). Additionally, they frequently endorse financial products or services and collaborate with finance-related businesses to deliver sponsored content (Zülch, Kovarova-Simecek, Mölders, Bock, & Barrantes, 2024).

Several surveys around the world suggest that social media users frequently heed the advice of finfluencers without conducting any further analysis or research (Moneysmart, 2021; FINRA Foundation; CFA Institute, 2023). This tendency may arise from cognitive biases that interfere with individuals' decision-making processes. The authority bias, a fundamental concept in behavioral sciences, explains individuals' tendency to attribute greater accuracy to an authority figure's opinion (unrelated to its content) and be more influenced by that opinion (Howard, 2018). This authority is typically established on social media by accruing many followers and generating high levels of engagement. However, the new era of digitalization presents a unique challenge, as individuals can easily manipulate their image on these platforms. Financial influencers, also known as finfluencers, may use artificial strategies to increase their number of followers or engagement, creating a false impression of competence and trustworthiness that may not reflect their actual financial knowledge (Aggarwal, Kumar,

[33] Amendment to Directive 2014/65/EU, Article 24c(6) and (EU) 2016/97, Article 26a(6).
[34] Amendment to Directive 2014/65/EU, Article 24c(7) and (EU) 2016/97, Article 26a(7).
[35] Amendment to Directive 2014/65/EU, Article 24c(6) and (EU) 2016/97, Article 26a(6).

Bhargava, & Kumaraguru, 2018). Despite this discrepancy, the perception of authority gives credibility to these influencers, leading people to believe that their advice is reliable and deserving of attention.

The decision-making process of social media users can also be influenced by the halo effect. This cognitive bias can lead individuals to develop favorable perceptions of others based on specific traits, such as physical attractiveness, which in turn can affect how their intelligence, success, and trustworthiness are perceived (Meng, 2022). This might lead to financial decisions being made with incomplete information, as the positive bias in one area spills over into other aspects, influencing judgment and decision-making processes (Beckwith, Kassarjian, & Lehmann, 1978; Murphy, Jako, & Anhalt, 1993). These surveys have raised regulatory concerns and sparked research within the EU. According to the findings of the 2022 Flash Eurobarometer survey on retail financial products and services, only a small fraction, 5% of EU citizens, seek guidance from social media and influencers before making personal finance decisions, a figure relatively small compared to other parts of the world. However, there is a notable generational difference in this behavior: a larger proportion of young people rely on these platforms, with usage declining as age increases (9% among 15–24-year-olds, 8% among 25–39-year-olds, 5% among 40–54-year-olds, and 2% among those aged 55 and above). This underscores the importance of a proactive approach in designing a new regulatory framework to ensure that even the younger generation receives the necessary financial education as they come of age and begin to invest. To address this need, the European Commission collaborated with the OECD to design a joint financial competence framework for children and teenagers. This framework highlights the significance of early education in recognizing advertisements, particularly online and on social media, and understanding the influence of peers, social media, and advertising on purchasing decisions (European Commission; OECD, 2023). It advocates for starting this education as early as age 6 and emphasizes the importance of teenagers developing critical thinking skills by age 16, despite external pressures such as marketing, peer influence, and social media trends like social trading and finfluencer endorsements (European Commission; OECD, 2023). In addition to proposing measures to directly protect social media users, the European Commission also aims to improve legal awareness among influencers. As frequent advertisers or sellers of products, influencers fall under the legal classification of traders in the EU.[36] Like any business interacting with consumers, traders in the EU must adhere to numerous regulations. In October 2023, it launched a collaborative project called the Influencer Legal

[36] Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights.

Hub, tailored to this purpose, with academic experts from Utrecht University in the Netherlands and the University of Leeds in the UK. The hub comprises a variety of resources, including video trainings, written legal briefs, summaries of key European laws, and case studies from the Court of Justice of the European Union.

Implementing preventive measures to mitigate the impact of potential market inefficiencies is crucial. However, equally important is the availability of tools that minimize the need for individual effort. An effective tool that applies the concept of liberal paternalism from the nudge theory, ensuring it does not impact legitimate finfluencers while still serving as a caution against potential misleading advice, could contribute to addressing potential market inefficiencies proactively (Sunstein & Thaler, 2009). There are tools implemented on various social media platforms to automatically detect and either ask for permission or warn users about sensitive or adult content (Washington, DC: United States Patent and Trademark Office Patentnr. US9600688B2, 2015). Typically, these tools obscure the content and display a pop-up requesting permission. The same system can be utilized to detect (potentially misleading) financial information and obscure content to alert social media users. Essentially, this system would act as a behavioral nudge, improving the conventional method of disclosing advertisements and sponsored content within the content itself or its captions, while still preserving users' freedom of choice (Sunstein & Thaler, 2009).

In conclusion, the proposed regulations by the Commission addressing issues related to unbalanced or misleading marketing communications represent a robust regulatory framework aimed at enhancing marketing practices in the financial services sector. Furthermore, the Commission demonstrates its commitment to improving financial literacy and awareness of misleading marketing practices through proactive measures targeting younger individuals. These proposed measures on improving financial literacy are designed to mitigate the impact of social media influence on financial decision-making, particularly given the presence of cognitive biases such as authority bias and the halo effect. To further address the impact of interventions like the proposed warning system designed to detect and obscure (potentially misleading) financial information, which leverages the nudge theory, research can be conducted to assess its effectiveness in safeguarding retail investors from undue influence.

2.3 Noise Trader Risk: GameStop Short Squeeze

Given the anticipated increase in retail investing activity in capital markets, ensuring market protection is a primary objective of the European Commission. The International Organization of Securities Commissions notes that the use of closed channels, such as chat groups on platforms like Telegram and Reddit, for marketing financial products, is an issue of concern (IOSCO, 2022). Recent events during and after COVID-19, particularly the GameStop short squeeze in early 2021, have raised questions about the impact of social media on stock prices (Long, Lucey, & Yarovaya, 2022). This event, defined as the first meme stock wave in financial history, has dramatically transformed the face of retail investment, requiring a rethinking of market dynamics. However, this is not an entirely novel problem; it has occurred throughout history and is likely to continue happening in the future. The internet enabled the creation of chat rooms and forums dedicated to investing conversations and stock promotion (Xu, 2023). In the late 1990s and early 2000s, these platforms played a critical part in pushing up the prices of so-called dotcom stocks, resulting in a financial bubble that finally burst, with substantial economic consequences (Xu, 2023). In contrast, the concept of meme stocks, characterized by their unforeseeable trading patterns influenced by social media popularity, did not really take off until the end of 2020, owing to the subreddit WallStreetBets. The main distinction between the two incidents is that this time, it all started with a video by a YouTube finfluencer. GameStop (GME), a longtime leading retailer in the video game industry, had a decline in revenue beginning in 2017 due to the growing popularity of digital game purchases (Malz, 2022). Concurrently, investment companies, particularly hedge funds, engaged in major short selling of GameStop shares, anticipating a further decline in the company's finances (Malz, 2022). Keith Gill, a former financial analyst better known as "The Roaring Kitty" on YouTube, began promoting GameStop's potential through influential content on his channel in August 2020. Later, using his username "DeepF***ingValue," he continued promoting GME stock on Reddit. By January 4, 2021, GME stock was trading at approximately $17.15 per share.[37] However, on January 27, 2021, the stock reached an all-time high of $483 (intraday) per share.[38]

Studies have proven the connection between Reddit sentiment and trends in stock market prices for several stocks, including GME (Anand & Pathak, 2021). Therefore, this roughly 1,900% increase in GameStop's stock price can be linked to herd behavior among retail investors – a tendency among individuals to follow the actions of the majority, leading to a positive feedback loop in purchasing behavior (Bikhchandani & Sharma, 2000).

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[37] Based on the Nasdaq Official Close Price (NOCP).
[38] Nasdaq Official Close Price (NOCP): $347.51

This collective tendency can be observed in many fields, including the retail investment industry, where investors tend to mimic the behaviors of their peers rather than rely on independent research (Choi & Sias, 2008; Economou, Kostakis, & Philippas, 2011). The herd instinct is known to trigger asset bubbles and cause market crashes through episodes of panic buying and selling[39], as seen by the GameStop short squeeze (Prieto & Perote, 2017). In response to the increased trading volume of GME stock, certain retail trading firms, such as Trade Republic and Robinhood, decided to place trading restrictions on GME and other equities demonstrating similar behavior (Malz, 2022). However, this decision caused outrage among users, resulting in many class action lawsuits, regulatory penalties, and restitutions totaling nearly $70 million (Malz, 2022).

This case clearly demonstrates that the view of retail investors as mere noise traders, with little influence compared to institutional investors such as hedge funds and investment banks, is outdated. As shown in the case, retail investors clearly have the potential to trigger market inefficiencies when their tendency to follow the herd impedes their independent and analytical decision-making processes (Aloosh, Choi, & Ouzan, 2021). To proactively address potential market inefficiencies that could arise from the expected increase in retail investment in Europe, stringent regulations regarding web and app design are necessary for brokerage firms. Additionally, tools for social media surveillance are needed to reactively manage similar challenges. Notably, brokerage firms such as Trade Republic have been known to share lists of stocks that are popular with their clients based on recent trading activity. This marketing strategy has the potential to trigger herd behavior, which must be carefully reconsidered to ensure market protection. In the context of social media surveillance, the tools employed for analyzing social media sentiment and stock prices to identify herding behavior can also provide a solution. Correlations between social media sentiment and stock prices are typically identified using approaches such as web scraping; machine-based sentiment classifiers, such as SVM and logistic regression models; content metadata time series analysis; and VADER sentiment analysis (Sohangir, Petty, & Wang, 2018; Derakhshan & Beigy, 2019; Mehta, Pandya, & Kotecha, 2021). By integrating an ongoing analysis mechanism into a warning system, it may be possible to predict herding behavior and warn investors before it reaches its highest point. This can be achieved through scanning for specified keywords in post content across several social media platforms, and the system could promptly notify retail investors using the trading app if a stock they intend to purchase recently received increased social media attention, indicating potential vulnerability to manipulation or speculative bubbles.

[39] Appendix I, Figure 12.

This will most likely serve as an effective nudge, enabling users to reconsider their purchase decisions. However, such nudges have weaknesses and may lead to unintended negative effects (Viale, 2019). Therefore, it is necessary to further study the potential advantages and disadvantages of integrating such a warning system into trading applications.

In conclusion, this event revealed that being unprepared can cause market crashes and losses for several parties; therefore, EU regulators must learn from the GameStop event and encourage research to design systems addressing such problems with underlying behavioral patterns.

3 Financial Advice

3.1 Addressing Conflicts of Interest in Financial Advice

The current regulatory framework falls short in addressing issues in the investment product manufacturing and distribution process, particularly concerning the payment of inducements and the degree to which product design aligns with cost-efficiency and value for the retail investor (Annunziata, 2023). In response to these challenges, the European Commission has proposed amendments to MiFID and IDD aimed at enhancing the quality of financial advice and promoting transparency in the financial advisory environment. The key strategies of the proposal involve requirements on disclosing the independence of advice and received inducements to the retail investor[40], enhancing advisor competency standards[41], banning inducements for execution-only sales[42], and reinforcing conditions under which inducements are permissible. However, ensuring that retail investors trust the advice they receive presents greater challenges. According to the Eurobarometer findings in 2022, 45% of European citizens relied on recommendations from bank personnel or financial advisors for their financial decisions. Nonetheless, a subsequent study in 2023 highlighted a notable mistrust, with only 38% of respondents expressing confidence in the advice they received from financial advisors, while 45% openly stated mistrust, signaling concerns in the reliability of financial advice (European Commission, 2023).[43]

To uncover the source of this mistrust, the European Commission conducted a segmentation analysis of 10,500 customers from 10 member states, aiming to identify characteristics that make individuals vulnerable to inadequate financial advice (CEPS; European Commission; Kantar; Milieu, 2023). Through this analysis, the Commission identified five consumer categories based on their confidence in financial investment decision making, trust in

[40] Amendment to Directive 2014/65/EU, Article 24(4), 24b and (EU) 2016/97, Article 29.
[41] Amendment to Directive 2014/65/EU, Article 24d, Annex V and (EU) 2016/97, Annex I.
[42] Amendment to Directive 2014/65/EU, Article 24a and (EU) 2016/97, Article 29a.
[43] Appendix I, Figure 13.

financial advisors, and level of financial literacy: struggling consumers (those lacking savings), disinterested investors (individuals with savings but lacking interest in financial products), vulnerable investors (individuals with limited financial literacy), cautious investors (individuals with moderate financial literacy), and experienced investors (individuals with high financial literacy).[44]

The results indicate that disinterested investors, who possess savings but do not invest them in the economy through financial products, exhibit a strong confidence in advisors' commitment to acting in the best interests of clients and possess a high level of trust in banks and financial institutions, even surpassing experienced investors. Conversely, mistrust originates from other investor categories, such as experienced and cautious investors. As it is the advisor's duty to find the suitable investment product for the investor, mistrust usually originates from product mis-selling. This also explains why disinterested consumers, who do not hold any investment products, expressed higher trust in the advice they receive.

To prevent product mis-selling and ensure that financial advice serves the consumer's best interests, the Commission aims to mitigate conflicts of interest between retail investors and financial advisors, including but not limited to the payment of inducements. Inducements are any type of payment or non-monetary benefit, commonly known as commissions, made by parties other than the retail investor to those who distribute investment products (Inderst & Ottaviani, 2012). Since the inducements are made by parties other than the retail investor, it may create a common agency problem, causing conflicts of interest in the distribution of retail investment products (Voorn, van Genugten, & van Thiel, 2019). These conflicts of interest may cause the advisor's behavior to differ significantly from what is in the joint principals' interest, resulting in inefficiencies, such as negative net returns on investment products and poor quality of investment advice (CEPS; European Commission; Kantar; Milieu, 2023).

To address these inefficiencies, the Commission proposes transparency requirements, such as mandating distributors to disclose the nature, costs, and impact on investment returns of any inducements.[45] Additionally, it introduces a ban on inducements in non-advised (execution-only) sales[46], which means that inducements are permitted when a retail investor makes an investment based on an individual suggestion from a bank or broker, but not when the investment is made independently through the bank's or broker's website. Concerning the ban on inducements, the Commission adopts a gradual approach and plans to wait three years

[44] Appendix I, Figure 14.
[45] Amendment to Directive 2014/65/EU, Article 24(4), 24b and (EU) 2016/97, Article 29.
[46] Amendment to Directive 2014/65/EU, Article 24a(2) and (EU) 2016/97, Article 29a(1).

following the implementation of these measures to assess their impact on inducements and the outcomes for retail investors before considering imposing an absolute ban.[47]

The ban also has drawn criticism due to the expectation that it will increase investment costs, given that inducements are the explanation behind the growing number of low- or zero-commission trading platforms, which are anticipated to begin imposing commissions on transactions subsequent to the ban (Bundesverband Investment und Asset Management , 2023; Adams, Kasten, & Kelley, 2023). However, to fully comprehend what "the cost of investment" truly entails, it is necessary to first grasp the concept of payment for order flow (PFOF) and the role of market makers in the system (Adams, Kasten, & Kelley, Do Investors Save When Market Makers Pay? Retail Execution Costs Under Payment for Order Flow Models, 2021). PFOF, a type of inducement paid by market makers to brokers for routing trades to them, enables brokers to avoid charging direct commissions on transactions, as they receive compensation from market makers (Ernst & Spatt, 2022). While avoiding direct commissions on transactions might lower investors' upfront expenditures, the hidden costs due to conflicts of interest arising from these inducements could be greater (Adams, Kasten, & Kelley, How Free is Free? Retail Trading Costs with Zero Commissions, 2023). For example, instead of selecting the market maker that offers the best order execution quality—ensuring prompt execution of client orders, favorable prices, and minimal slippage or market impact—brokers may route transactions to the one that offers the highest payment for order flow, potentially resulting in suboptimal execution quality for the retail investor. A study conducted by the Comisión Nacional del Mercado de Valores on the order execution quality of a zero-commission broker on Spanish stocks indicates that best execution quality was achieved in only 3.3% of trades, with the majority (86%) of prices being worse compared to those available on similar trading platforms (CNMV, 2022). Due to this controversy, the Commission has decided to ban inducements for execution-only sales starting in 2026.[48]
Brokers will be permitted to receive payments for order flow solely from their clients within their member states until the regulation takes effect.

[47] Amendment to Directive 2014/65/EU, Article 24a (8) and (EU) 2016/97, Article 29a(6).
[48] Amendment to Directive 2014/65/EU, Article 39a.

To analyze the driving forces behind this regulatory change and its potential impacts, this thesis introduces a simple model. The model incorporates three parties: the retail investor, the broker, and the market maker. It presents a stylized decision-making scenario for brokers, who are faced with two options that represent multiple market makers.

Choosing **Option A** entails directing orders to a market maker **(MM1)** who provides high execution quality but does not compensate the broker with payment for order flow. Conversely, choosing **Option B** routes orders to a market maker **(MM2)** known for lower execution quality but compensates the broker with an inducement $\boldsymbol{i} > 0$.
If the broker selects **Option B**, they will receive an inducement $\boldsymbol{i} > 0$ from the market maker but will incur a disutility $\boldsymbol{d}$ (customer dissatisfaction). Conversely, if they choose **Option A**, the inducement equals zero $(\boldsymbol{i} = 0)$. It is also important to note that the broker will make their decision based on the option that maximizes their utility.
In this model, the probability that the investor is indifferent between high and low quality of execution is represented by $\boldsymbol{\pi}$, which is exogenous. Conversely, $1 - \boldsymbol{\pi}$ represents the probability that the investor prefers high execution quality. Additionally, the investor's state is unobservable to the broker.
The following cutoff threshold was derived from the scenario in which the broker is indifferent about choosing one market maker over another:[49]

$$\boldsymbol{\pi}^* = 1 - \frac{\boldsymbol{i}}{\boldsymbol{d}}$$

If $\boldsymbol{\pi}^* > 1 - \frac{\boldsymbol{i}}{\boldsymbol{d}}$, the broker will consistently prefer **MM1**. This preference occurs as $\boldsymbol{i}$ approaches **0**, because the expected disutility $\boldsymbol{d}$ associated with choosing **MM2** outweighs the benefit derived from the inducement $\boldsymbol{i}$.
If $\boldsymbol{\pi}^* < 1 - \frac{\boldsymbol{i}}{\boldsymbol{d}}$, the broker will always prefer **MM2**, particularly as the ratio $\frac{\boldsymbol{i}}{\boldsymbol{d}}$ approaches **1**. This preference occurs because the benefit of the inducement $\boldsymbol{i}$ outweighs the expected disutility $\boldsymbol{d}$ when choosing **MM2**.

This underscores the rationale for banning inducements for execution-only sales. As inducement $\boldsymbol{i}$ approaches zero, brokers are more likely to route orders to the market maker that offers the best execution quality. This highlights the effectiveness and precision of banning payments for order flows in mitigating conflicts of interest within the financial advisory sector.

[49] Appendix II

Beyond surveys and controlled experiments, the European Commission has access to a more reliable source of information through natural experiments, as seen in the Netherlands and the UK. These real-world examples provide important insight into the actual effects of the regulatory changes, allowing for a better understanding of the consequences and challenges of the inducement ban. The Netherlands initially limited inducements in 2009 before implementing an entire inducement ban in 2014, which applied to a wide range of financial products.[50] The aftermath of the ban in the Netherlands showed that the ban improved access to simpler, less expensive investment products, increased competition, and eliminated conflicts of interest (Tweede Kamer der Staten-Generaal , 2018). However, the inducement ban caused a decrease in the amount of retail investors getting financial advice, indicating a shift toward execution-only services (Tweede Kamer der Staten-Generaal , 2018). In the UK, the quality of advice improved after the ban on inducements in 2013, and no "advice gap" arose (Ministry of Justice, 2014). However, according to the Financial Conduct Authority's review, the most common reason in the UK for not seeking advice is that consumers believe they do not need it (67% of cases), and only 10% of consumers surveyed stated that they cannot afford financial advice (Financial Conduct Authority, 2020). Although the UK results may be influenced by an overconfidence bias, it is crucial to note that both the UK and the Netherlands have high levels of financial literacy, with the Netherlands ranking as the most financially literate country in the EU (European Commission, 2023). This ban on inducements is particularly crucial, given the evidence indicating that certain products, due to their high costs, do not provide value for money (European Insurance and Occupational Pensions Authority, 2021).

A 2019 study that examines the structure and magnitude of costs associated with the distribution and management of investment funds offers compelling insights into the prevalence and impact of inducements in markets where they are permitted (Beard, Chan, & Choy, 2019). The report distinguishes between equity, fixed income, and allocation funds across various jurisdictions, including Germany, France, Denmark, the Netherlands, and the UK, by analyzing the median costs and ranges of investment funds. Notably, the study also reveals that the least expensive investment funds, both in terms of median cost and annual range, are found in the Netherlands and the UK. This trend coincides with the implementation of inducement bans in these countries in 2013 and 2014, respectively. To achieve a similar trend, the European Commission has proposed amendments to MiFID and IDD to strengthen product governance rules. These amendments entail new requirements for manufacturers to

[50] Staatsblad van het Koninkrijk der Nederlanden 2014, 524.

establish a transparent pricing process, enabling the identification and quantification of all costs and charges associated with the product, thereby assessing whether these costs align with the product's expected value.[51] To assess the value of products, the European Securities and Markets Authority (ESMA) and the European Insurance and Occupational Pensions Authority (EIOPA) have been mandated to develop publicly available cost and performance benchmarks.[52] To facilitate this benchmark development, the European Commission has also introduced new reporting obligations for manufacturers and national competent authorities to the ESMA and the EIOPA, concerning the data on the costs and performance of the PRIIPs.[53] These benchmarks serve as crucial tools for ensuring pricing objectivity across the manufacturing and distribution channels. Any deviation from these benchmarks would indicate unjustifiably high costs, necessitating the requirement for the manufacturer or distributor to prove otherwise.[54] This increased transparency, resulting from standardized cost disclosures and benchmark comparisons, will not only help mitigate conflicts of interest in the financial advisory sector but also incentivize manufacturers and distributors to maintain competitive and equitable pricing structures.

3.2 Addressing the Information Asymmetry in Financial Advice

The RIS aims to further improve the quality of financial advice and ensure it aligns with consumers' best interests by reducing information asymmetries between financial advisors and retail investors. To address these asymmetries, the European Commission proposes three main solutions: first, strengthening the requirements that financial product distributors must comply with when assessing the appropriateness of an investment product or the suitability of a recommendation for retail investors[55]; second, improving the accessibility of products and services for sophisticated retail investors by adjusting the eligibility criteria for professional investors upon request[56]; and third, revising the requirements for the knowledge and competence of advisors[57].

The first measure aims to strengthen the requirements that financial product distributors must meet when conducting comprehensive evaluations of retail investors' financial situations. This measure is designed to ensure that the selected investment product not only aligns with the investor's financial objectives but also reflects their risk preferences. According to a consumer

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[51] Amendment to Directive 2014/65/EU, Article 16(3) and (EU) 2016/97, Article 25(1).
[52] Amendment to Directive 2014/65/EU, Article 16a(9); (EU) 2016/97, Article 25(8); 2009/65/EC, Article 14(1f) and 2011/61/EU, Article 12(1f).
[53] Amendment to Directive 2014/65/EU, Article 16a(2); (EU) 2016/97, Article 25(4); 2009/65/EC, Article 20a and 2011/61/EU, Article 24(2).
[54] Amendment to Directive 2014/65/EU, Article 16a(1) and (EU) 2016/97, Article 25(2).
[55] Amendment to Directive 2014/65/EU, Article 25 and (EU) 2016/97, Article 30.
[56] Amendment to Directive 2014/65/EU, Annex II(II)(1).
[57] Amendment to Directive 2014/65/EU, Article 24d and (EU) 2016/97, Article 10, Annex I.

survey performed by the European Commission, 65% of those who recall completing a suitability assessment reported receiving such a statement (CEPS; European Commission; Kantar; Milieu, 2023). The majority of them (65%) found the report informative.[58] However, this data may be misleading because respondents who stated that they found the report useful were from countries with the lowest financial literacy levels among their member states, such as Romania, which ranks first with 88% finding the report useful but ranks last in the financial knowledge score (European Commission, 2023). Typically, these evaluations are carried out through two types of assessments: suitability and appropriateness. Suitability assessments determine whether a particular investment product is appropriate for an investor based on factors such as their financial situation, investment objectives, and risk tolerance (Baisch & Weber, 2015). Appropriateness assessments, on the other hand, focus on whether the specific investment matches the investor's knowledge and experience in financial matters (Baisch & Weber, 2015). The Commission clearly mandates that these assessments be conducted before any financial service is provided or before a retail investor agrees to an insurance contract.[59] This requirement allows investors sufficient time to seek clarification before completing a transaction. Furthermore, if a customer intends to purchase a sophisticated product without prior advice, or if the assessments yield an unfavorable outcome, intermediaries are responsible for evaluating the client's capacity to handle losses and their risk tolerance.[60] Transactions under these circumstances may only proceed at the specific request of the client.[61]

The second measure aiming to improve the accessibility of products and services for sophisticated retail investors by adjusting the eligibility criteria for professional investors upon request through amending Annex II of the MiFID II. The Commission has observed that existing provisions are often criticized in relation to more knowledgeable and skilled investors, who differ from the average retail investor and may not require the same level of protection (Hacker, 2017). Therefore, this amendment[62] adjusts the eligibility criteria for professional investors upon request. Professional investors are individuals with relevant knowledge and expertise who want to opt out of the investor protection framework.[63] The modification entails reducing the existing monetary barriers for professional investors upon request, lowering the wealth criterion from €500,000 to €250,000, and allowing for greater

[58] Appendix I, Figure 14.
[59] Amendment to Directive 2014/65/EU, Article 25 and (EU) 2016/97, Article 30.
[60] Amendment to Directive 2014/65/EU, Article 25 and (EU) 2016/97, Article 30.
[61] Amendment to Directive 2014/65/EU, Article 25 and (EU) 2016/97, Article 30.
[62] Amendment to Directive 2014/65/EU Annex II(II)(1).
[63] Directive 2014/65/EU, Annex II(II)(1).

consideration of the client's experience and education.[64] However, the proposed amendments do not significantly change the dichotomy between professional and retail investors. Given the Commission's focus on investor protection, it would be more proactive to move beyond the current dichotomous approach and introduce the category of semi-professional investors, as Germany did in 2013. This semi-professional investor category includes wealthy individuals experienced in alternative investments who are committed to investing at least €200,000.[65] This type of classification not only enhances investor protection but also empowers investors to engage with the market in a manner that more closely aligns with their actual capabilities and understanding. A similar inclusion would substantially improve the flexibility and effectiveness of investor protections within the EU, addressing the limitations of the current dichotomous categorization.

The third and final measure addressing information asymmetries between financial advisors and retail investors involves revising the requirements for advisors' knowledge and competence. A major concern is that many financial advisors do not fully understand their clients' individual financial goals and risk tolerance before offering financial advice or recommending investment products, which can lead to generic or mismatched recommendations (Mullainathan, Noeth, & Schoar, 2012). This issue may stem from cognitive biases that impair financial advisors' decision-making skills, including but not limited to overconfidence, anchoring, and limited attention bias. For example, advisors might focus solely on the most obvious aspects of an investor's financial profile, neglecting a thorough investigation due to limited attention bias (Dean, Kıbrıs, & Masatlioglu, 2017). They might also anchor too heavily on initial information, such as initial client disclosures, using it as a reference point for subsequent decisions due to anchoring bias (Kahneman, Slovic, & Tversky, Judgment under uncertainty: Heuristics and biases, 1982), or simply place excessive trust in their judgments due to overconfidence bias (Moore & Healy, 2008; Mullainathan, Noeth, & Schoar, 2012). Such biases could lead advisors to incorrectly categorize clients based on inadequate or misleading initial impressions. To address these issues, the Commission is introducing new requirements for minimum certification standards and ongoing professional training.[66] This initiative aims to enhance advisors' capabilities and ensure more accurate and tailored financial guidance.

In accordance with this third measure and recognizing that financial advisors often serve as the initial point of contact for retail investors, particularly those new to the financial markets,

[64] Amendment to Directive 2014/65/EU Annex II(II)(1).
[65] § 1 XIX Nr.33 KAGB- Kapitalanlagegesetzbuch (German Investment Code).
[66] Amendment to Directive 2014/65/EU, Article 24d and (EU) 2016/97, Article 10, Annex I.

the Commission aims to ensure a uniform quality standard throughout Europe for financial advice. It plans to explore the feasibility of developing a voluntary pan-EU label for financial advisors. This label would standardize qualifications across Europe, enhancing client trust and facilitating cross-border business and advisor mobility, as advisors accredited with the pan-European label would have their credentials recognized across all member states (Zunzunegui, et al., 2023). However, it is important to acknowledge that the proposed pan-EU label would face competition from established global certifications, such as the Chartered Financial Analyst designation, as well as existing national certifications (Zunzunegui, et al., 2023). For instance, certifications from the European Financial Planning Association demonstrate strong financial knowledge and expertise but are limited by local constraints. The European Financial Planning Association examinations in each country are tailored to include topics such as local taxation, laws, and pension schemes (EFPA, n.d.). This means that obtaining a European Financial Planning Association Certificate in a specific country involves studying not only general financial concepts but also market-specific information relevant to that country. In contrast, the pan-EU label aims to establish a foundational level of professionalism and competence for advisors working across all EU member states. This standardized approach not only enhances client confidence and facilitates advisor mobility within the EU but could also help streamline cross-border financial advisory operations (Gortsos, 2022).

From a behavioral economics standpoint, the introduction of a pan-EU label for financial advisors carries significant implications for quality assurance and competence. Drawing from contract theory, signaling plays a crucial role in efficiently conveying information from one party (the agent) to another (the principal) (Spence, 1973). In this context, the label acts as a robust signal, helping to address the information asymmetry between retail investors and financial advisors and thereby reducing the risk of adverse selection in the financial advisory market (Akerlof, 1978; Spence, 1973). The informational value of the pan-EU label lies in the perception that it signifies superior knowledge and expertise in cross-border financial advisory services compared to advisors lacking such certification. This distinction enables retail investors to better differentiate between low- and high-quality financial advisors when it comes to cross-border investments. As the number of advisors obtaining the label increases, it may become the expected standard in the financial industry to remain competitive. Advisors lacking this accreditation could face perceived incompetence, potentially placing them at a disadvantage in cross-border issues. Therefore, advisors may seek this accreditation not only out of social proof or herding behavior but also as a strategic move to demonstrate their dedication to quality and adherence to European standards.

4 Conclusion – Main Findings

This thesis aimed to analyze the European Commission's retail investment strategy through the lens of behavioral economics, focusing on the identified challenges and the Commission's goals for regulatory amendments.

It delved into how behavioral economics principles can refine the design of the new key information document for packaged retail and insurance-based investment products, examining the Commission's approach and the cognitive biases that could hinder the decision-making processes of retail investors. These biases, including anchoring, loss aversion, and information overload, underscore the importance of properly framing probabilistic information in the key information document to mitigate loss aversion bias. The thesis highlighted the critical importance of how information is provided and how it should be balanced: enough to prevent overwhelming investors, yet adequate to ensure a comprehensive understanding of the essential characteristics of the investment products.

Furthermore, it recommended the integration of informational nudges into the key information document, proposing enhancements to the document's design to improve financial literacy and significantly bolster the decision-making capabilities of retail investors. This approach not only aims to streamline the decision-making process but also enhances the overall effectiveness of the key information document as a tool for informed investment choices, aligning it more closely with the needs and behaviors of European retail investors.

The thesis also explored the potential of applying insights from behavioral economics to enhance regulatory frameworks for social media, aiming to protect retail investors from the undue influence of financial influencers. The analysis focused on proposed regulations by the Commission that address issues related to unbalanced or misleading marketing communications. It delved deeper into the challenges posed by affiliate marketing and the use of financial influencers by investment firms to promote their products. This practice can induce cognitive biases in the financial decision-making processes of retail investors, such as authority bias and the halo effect.

The research also emphasized the critical need for awareness in the new era of digitalization, where finfluencers may employ artificial strategies to inflate their follower counts or engagement levels. Such tactics create a misleading aura of competence and trustworthiness that might not truly reflect their financial expertise. To address these concerns, the thesis proposed a solution grounded in nudge theory. This involves developing a system designed to detect potentially misleading financial information and obscure content, thereby alerting social media users to potential inaccuracies and biases. This preventive approach aims to mitigate the impact of potential market inefficiencies and enhance the integrity of financial decision-making among users engaged with digital platforms.

The thesis examined the GameStop phenomenon, employing behavioral economics insights to assess whether the European Union can learn from such events to improve preparedness. This research challenged the outdated perception of retail investors as mere noise traders with minimal influence compared to institutional investors like hedge funds and investment banks. It delved into the tendency of retail investors to engage in herd behavior, particularly in the context of meme stocks, and demonstrated that retail investors can indeed catalyze market inefficiencies when such behavior compromises their independent and analytical decision-making. In examining herd behavior, the thesis argued that the design of trading platforms must be reevaluated to prevent the facilitation of such behavior. It underscored the critical importance of detecting herd behavior and implementing measures to address it. Consequently, the thesis proposed that employing tools for analyzing social media sentiment and stock prices – through techniques such as web scraping, machine-based sentiment classifiers including SVM and logistic regression models, content metadata time series analysis, and VADER sentiment analysis – could potentially predict herd behavior and provide timely warnings to investors before it peaks. This proactive approach could enhance investor awareness and contribute to more stable market conditions.

The thesis examined how addressing conflicts of interest, such as Payment for Order Flow (PFOF), contributes to enhanced execution quality and improved value for investment products. It explored proposed transparency requirements by the Commission, which include mandating distributors to disclose the nature, costs, and impacts on investment returns of any inducements, along with other proposals aimed at minimizing conflicts of interest within the financial advisory sector. Notably, this research introduced a model to analyze what “the cost of investment” truly entails, especially in light of the Commission's proposal to ban inducements in non-advised (execution-only) sales. The findings revealed that as the level of inducement approaches zero, brokers are increasingly likely to route orders to the market maker that offers the best execution quality. This underscores the effectiveness and precision of banning payments for order flows in reducing conflicts of interest within the financial advisory sector. Additionally, the thesis also assessed the impact of the ban on inducements in ensuring value for money for financial products, illustrating a positive impact as demonstrated by case studies from the UK and the Netherlands. This analysis highlights the potential for regulatory frameworks to significantly enhance both market integrity and consumer trust.

Finally, the thesis investigated how addressing information asymmetries through improved investor categorization and enhancing the competence of financial advisors can bolster investor protection. It examined several solutions proposed by the Commission to mitigate these asymmetries. These include strengthening the requirements that distributors of financial products must meet when conducting suitability and appropriateness tests. Additionally, it explored enhancing the accessibility of products and services for sophisticated retail investors by adjusting the eligibility criteria to allow them to request classification as professional investors and revising the standards for the knowledge and competence of advisors. In the context of improving accessibility for sophisticated retail investors, the thesis advocated for an approach similar to Germany's 2013 introduction of the semi-professional investor category. This inclusion could significantly enhance the flexibility and effectiveness of investor protections within the EU, addressing the limitations inherent in the current dichotomous categorization.

Furthermore, this research examined why the Commission is exploring the feasibility of developing a voluntary pan-European label for financial advisors. It highlighted that such a label could serve as a robust signal, helping to bridge the information asymmetry between retail investors and financial advisors, and this, in turn, could reduce the risk of adverse selection in the financial advisory market, leading to more informed and secure investment decisions.

Appendix I

Figure 1: *Share of type of assets of households*

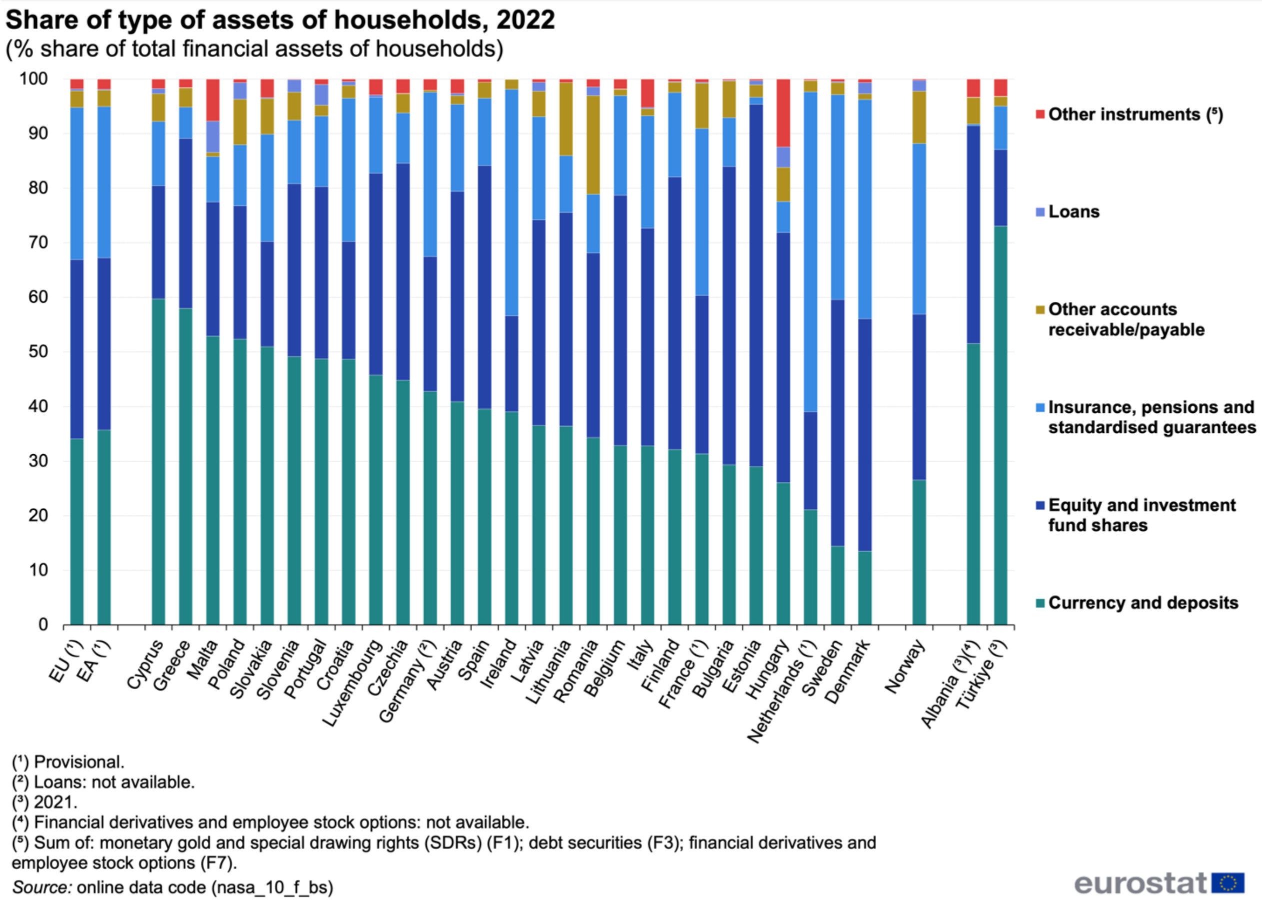


Figure 2: *Financial assets and liabilities of households as a percentage*

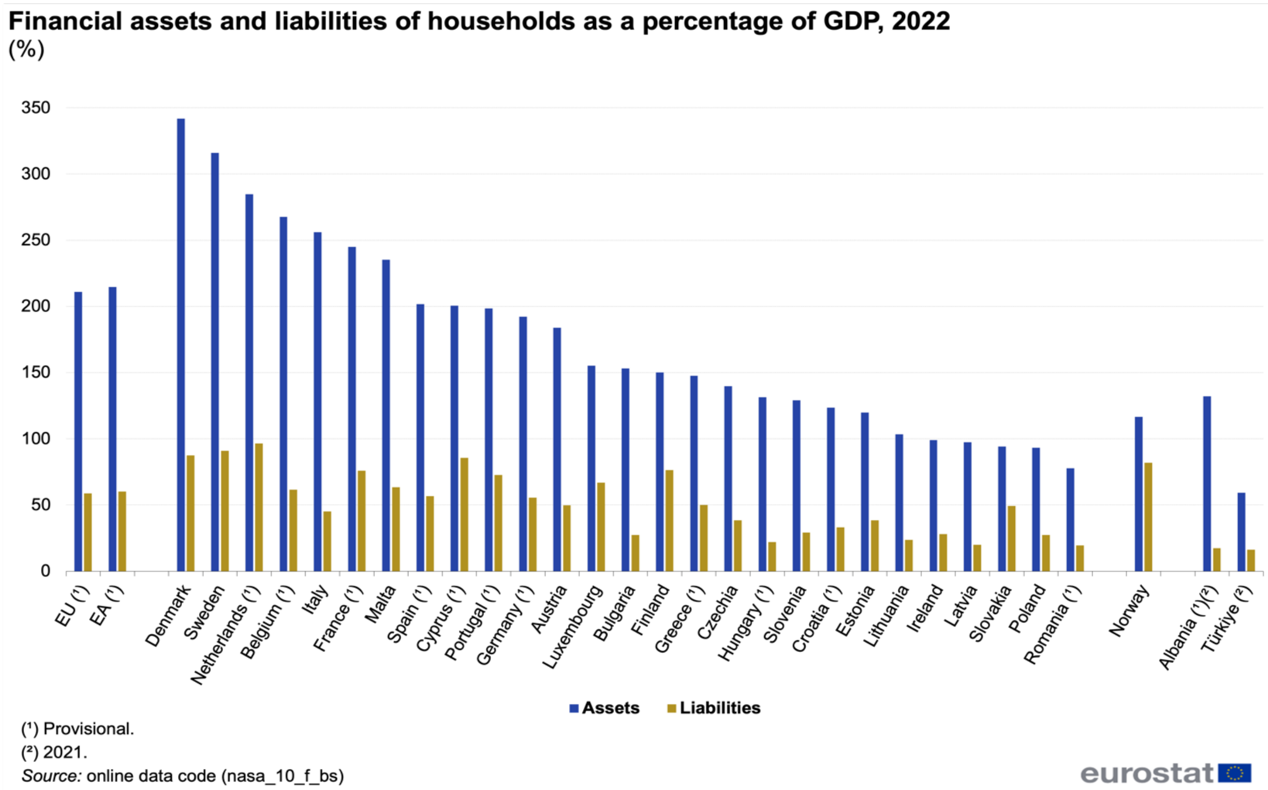


***Figure 3**: Annual Inflation*

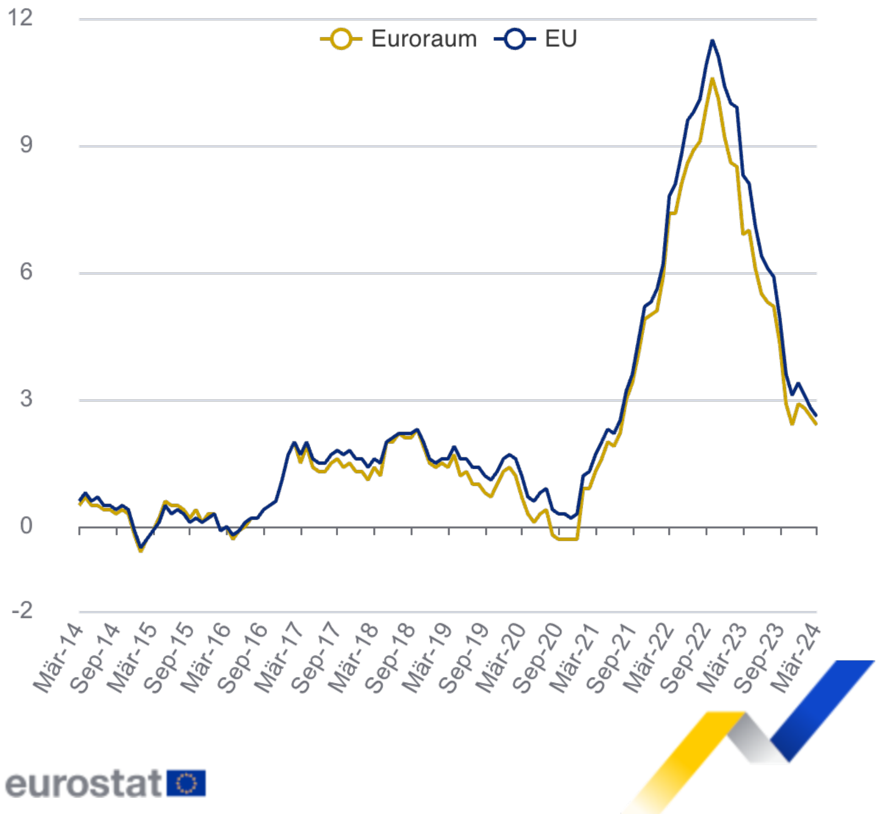
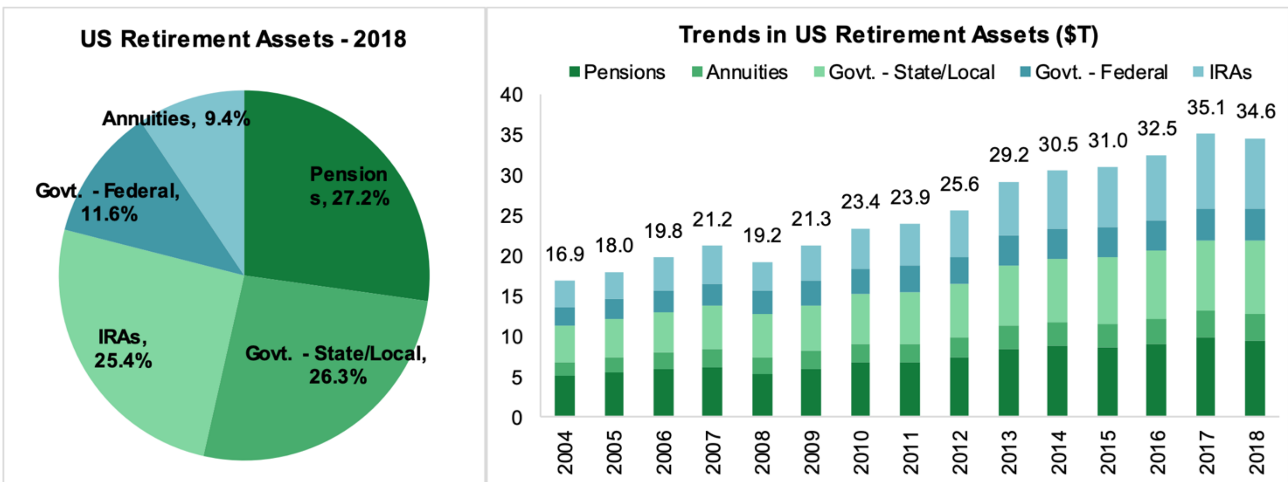


***Figure 4:** US Retirement Assets - 2018*



Source: Federal Reserve Flow of Funds Accounts L.227, SIFMA estimates
Note: Pensions includes defined benefit and defined contribution plans held by private individuals; 403 plans are included in private pensions

Figure 5: *EU's saving rate*

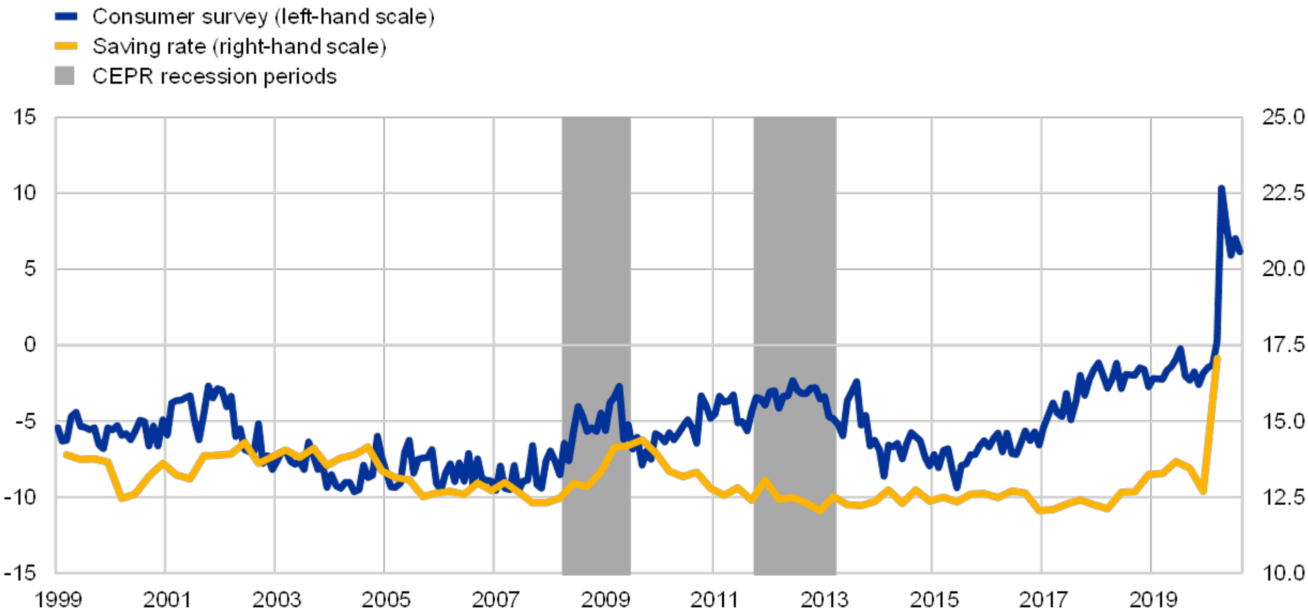


Figure 6: *Evolution of French private investors by age cohort (2018-2021)*

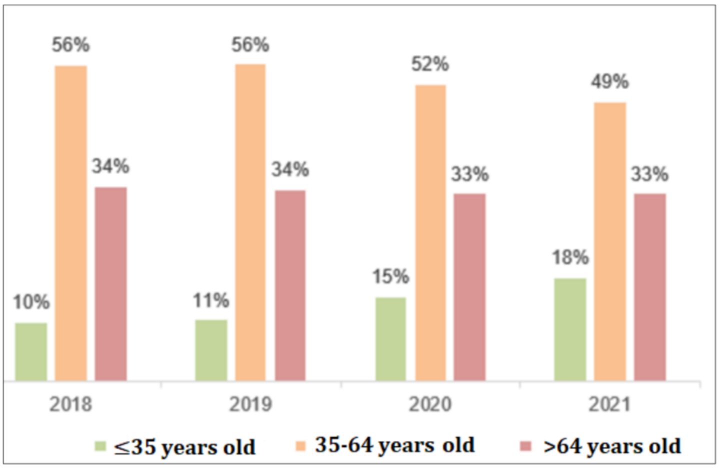


Figure 7: *Financial Knowledge Score*

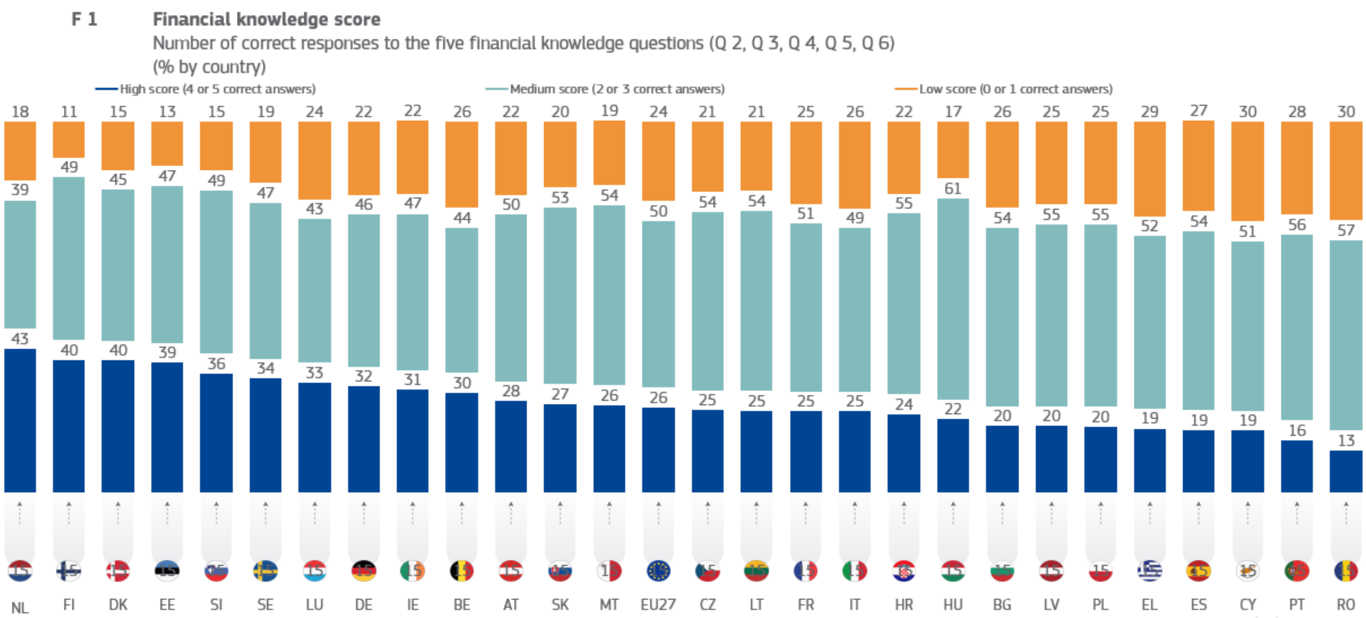


Figure 8: *Different versions of the PRIPPs KID I*

Investment: EUR 10.000				
Scenarios		**1 year**	**3 years**	**5 years (Recommended holding period)**
Stress Scenario	What you might get back after costs	3.501 €	4.065 €	3.000 €
	Average return each year	-64,99%	-25,92%	-21,40%
Unfavourable Scenario	What you might get back after costs	7.934 €	6.684 €	5.933 €
	Average return each year	-20,66%	-12,57%	-9,91%
Moderate Scenario	What you might get back after costs	9.999 €	9.956 €	9.918 €
	Average return each year	-0,08%	-0,15%	-0,16%
Favourable Scenario	What you might get back after costs	12.641 €	14.779 €	16.528 €
	Average return each year	25,41%	13,91%	10,57%

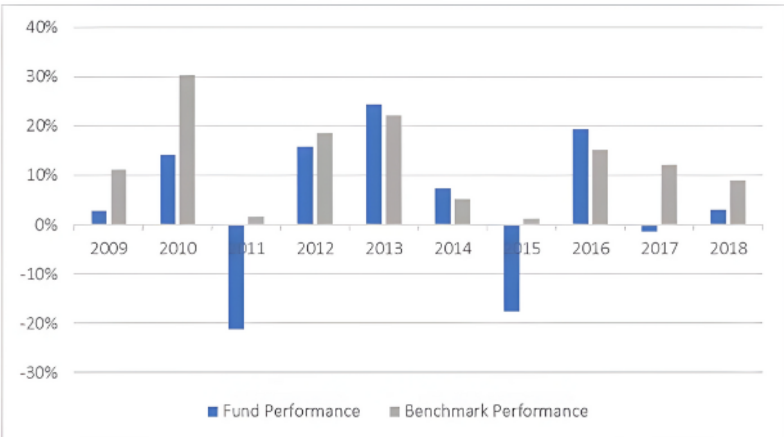
Current KID

- Shows 4 performance scerarios over 3 periods
- Longest period is the recommended holding period

Example investment: EUR 10.000 Recommended holding period: 5 years			
Scenarios	**What you might get back after costs after 5 years**	**Average return per year**	**Estimated chance this scenario occurs**
Minimum	There is no minimum guaranteed return. You could lose some or all of your investment.		
Unfavourable	5.933 €	-9,91%	10 in 100 chance you do worse
Moderate	9.918 €	-0,16%	50 in 100 chance you do worse
Favourable	16.528 €	10,57%	90 in 100 chance you do worse

Probabilistic approach

- Shows 4 performance scerarios over the recommended holding period
- Shows the estimated chance each scenario occurs



Past Performance

- Shows the product performance as the percentage loss or gain per year over last 10 years against a benchmark index

Figure 9: *Different Versions of the PRIPPs KID II*

Investment: EUR 10.000				
Scenarios		**1 year**	**3 years**	**5 years (Recommended holding period)**
Stress Scenario	What you might get back after costs	6.513 €	5.116 €	3.566 €
	Average return each year	-35,0%	-20,0%	-18,6%
Unfavourable Scenario	What you might get back after costs	9.291 €	8.537 €	10.000 €
	Average return each year	-7,1%	-5,1%	0,0%
Moderate Scenario	What you might get back after costs	10.233 €	10.103 €	10.800 €
	Average return each year	2,3%	0,3%	1,6%
Favourable Scenario	What you might get back after costs	10.800 €	10.800 €	12.400 €
	Average return each year	8,0%	2,6%	4,4%

Current KID

- Shows 4 performance scerarios over 3 periods
- Longest period is the recommended holding period

Example investment: EUR 10.000 Recommended holding period: 5 years			
Scenarios	**What you might get back after costs**	**Average return per year**	**Estimated chance this scenario occurs**
Minimum	There is no minimum guaranteed return. You could lose some or all of your investment.		
Unfavourable	10.000 €	0,0%	10 in 100 chance you do worse
Moderate	10.800 €	8,0%	50 in 100 chance you do worse
Favourable	12.400 €	7,4%	90 in 100 chance you do worse

Probabilistic approach

- Shows 4 performance scerarios over the recommended holding period
- Shows the estimated chance each scenario occurs

Figure 10: *Different Versions of the PRIPPs KID III*

Investment: EUR 10.000
Insurance premium: EUR 300

Scenarios		1 year	5 years	15 years (Recommended holding period)
Survival Scenarios				
Stress Scenario	What you might get back after costs		5.668 €	10.681 €
	Average return each year	-	-6,85%	0.44%
Unfavourable Scenario	What you might get back after costs		6.168 €	11.853 €
	Average return each year	-	-5.88%	1.14%
Moderate Scenario	What you might get back after costs		6.447 €	13.399 €
	Average return each year	-	-5.34%	1.97%
Favourable Scenario	What you might get back after costs		6.781 €	14.168 €
	Average return each year	-	-4.74%	2.35%
Death Scenario				
What your beneficiaries might get back after costs		10.000 €	10.710 €	14.068 €

Current KID

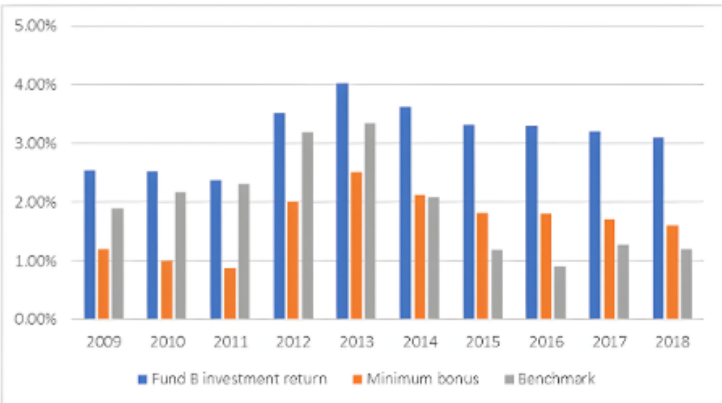
- Shows 4 performance scerarios over 3 periods
- Longest period is the recommended holding period

Example investment: EUR 10.000
Example insurance premium: EUR 300
Recommended holding period: 15 years

Scenarios	What you might get back after costs after 15 years	Average return per year	Estimated chance this scenario occurs
Survival Scenarios			
Minimum	10.000 €	0.00%	
Unfavourable	11.853 €	1.14%	10 in 100 chance you do worse
Moderate	13.399 €	1.97%	50 in 100 chance you do worse
Favourable	14.168 €	2.35%	90 in 100 chance you do worse
	What your beneficiaries might get back after costs		
Death Scenario			
Moderate	14.068 €	2.30%	50 in 100 chance they will do worse

Probabilistic approach

- Shows 4 performance scerarios over the recommended holding period
- Shows the estimated chance each scenario occurs



Past Performance 3 elements

The graph shows over last 10 years:

- The investment returns per year of Fund B
- The minimum annual bonuses
- The returns of government bonds as a benchmark

Past Performance 2 elements

- The graph shows the minimum annual bonuses over 10 years against a benchmark of the return on government bonds

Figure 11: Sustainable Finance

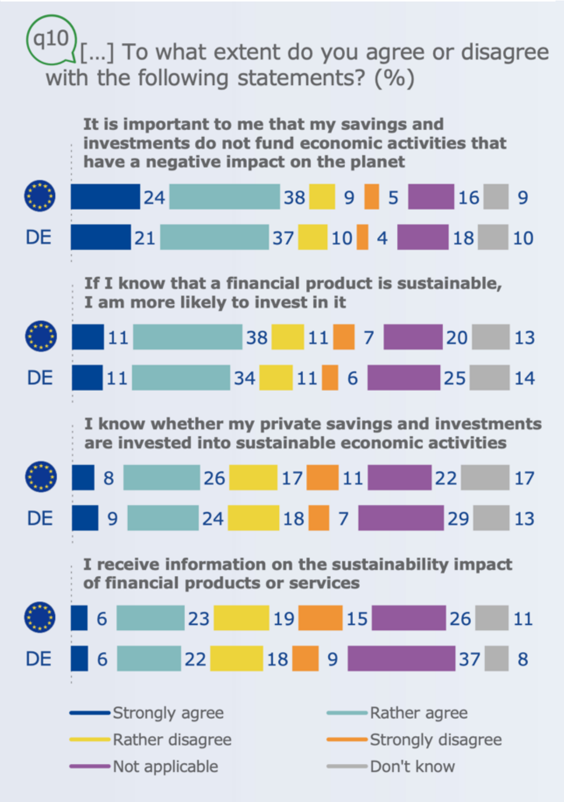


Figure 12: GameStop's Wild Week

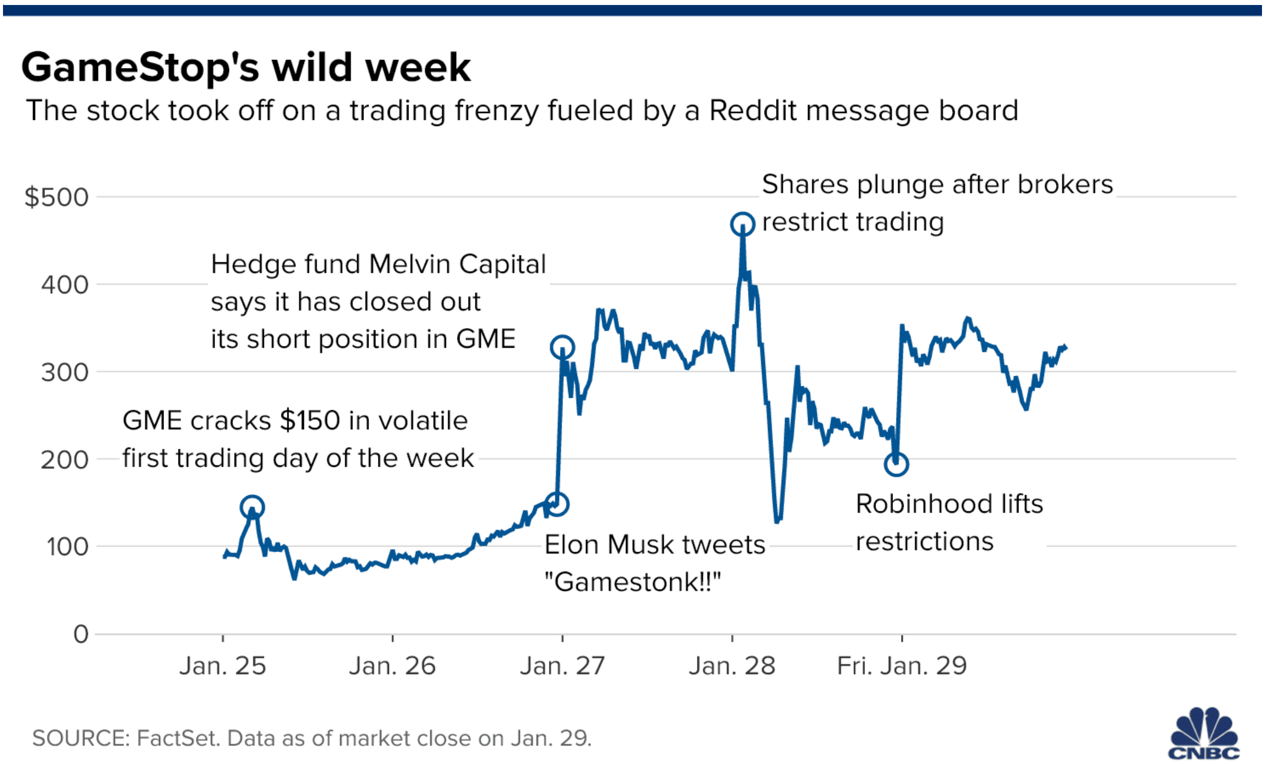


__Figure 13:__ Confidence: Investment Advice

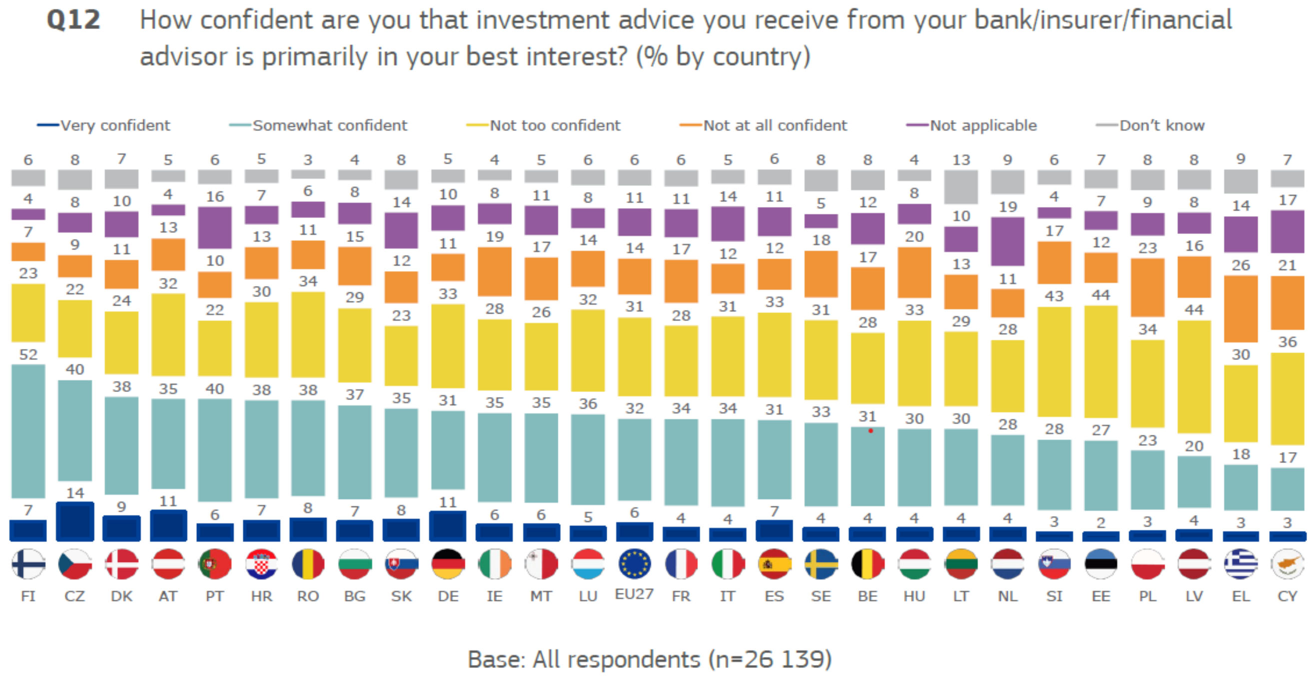


__Figure 14:__ Three Segments of (potential) investors

Vulnerable (potential) investors

Consumers who either have already invested in financial products or are interested/ considering doing so. Low/ medium confidence in making financial investment decisions on their own. They also tend to have a low to medium level of financial literacy. Medium trust in advice.

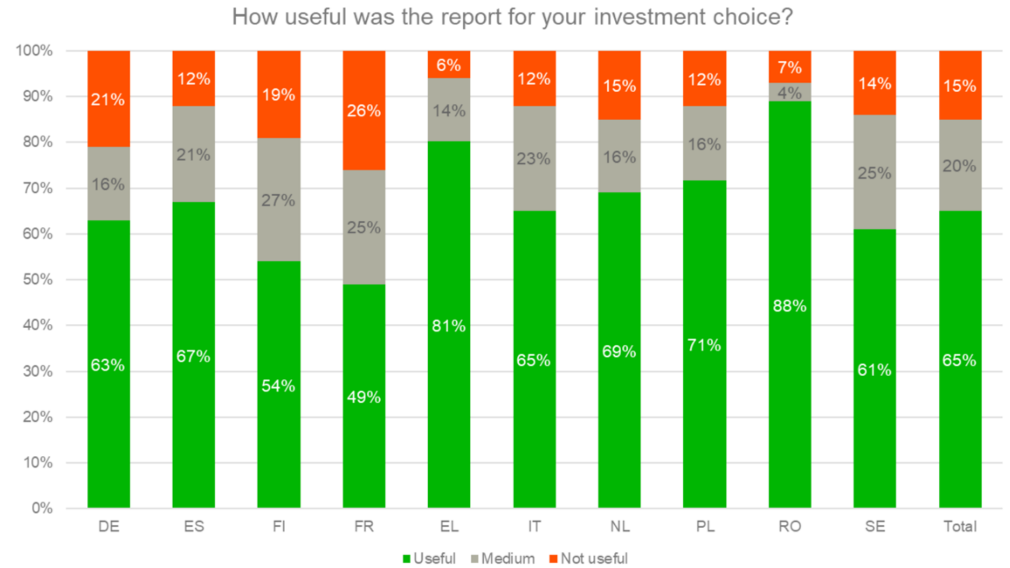
Cautious (potential) investors

Consumers who either have already invested in financial products or are interested/ considering doing so. They have medium confidence in making investment decisions on their own. Medium to high level of financial literacy and the same when it comes to trust in advisors

Experienced and confident investors

Consumers who typically have invested in financial products. Have high confidence in making investment decisions. High level of financial literacy. Mixed trust in advice but this is mitigated by their own proficiency

__Figure 15:__ Suitability Statement



Source: Consortium, based on the consumer survey (n=1906 - only respondents who have at least one investment product and who recall the screening process were asked this question.

Appendix II

$$U_B(MM1): Expected\ Utility\ for\ the\ broker, if\ they\ choose\ MM1$$
$$U_B(MM2): Expected\ Utility\ for\ the\ broker, if\ they\ choose\ MM2$$

$$\pi: Probability\ that\ the\ investor\ is\ indifferent\ on\ execution\ quality$$
$$i: Inducement$$
$$d: Disutility$$

$$The\ state\ of\ the\ investor\ is\ unobservable\ for\ the\ broker:$$

Investor is indifferent:

$$U_B(MM1) = 0$$
$$U_B(MM2) = i$$

Investor prefers high quality:

$$U_B(MM1) = 0$$
$$U_B(MM2) = i - d$$

Broker's Indifference Condition:

$$\pi * U_B(MM1) + (1-\pi) * U_B(MM1) = \pi * U_B(MM2) + (1-\pi) * U_B(MM2)$$

$$\pi * 0 + (1-\pi) * 0 = \pi * i + (1-\pi) * (i-d)$$

$$0 = \pi * i + (1-\pi) * (i-d)$$

$$0 = i - (1-\pi) * d$$

$$i = (1-\pi) * d$$

$$\frac{i}{d} = (1-\pi)$$

$$\boldsymbol{Cutoff\text{ - }Value: \pi = 1 - \frac{i}{d}}$$

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