Financial Intermediary Information Driven Investment Memory and Deviation of German Generation Z

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Abstract. This case takes German Generation Z investors (were born 1995-2010) as the research object. In the context of the expansion of digital finance, the energy crisis, and low interest rates, this study examines how differentiated information transmission by financial intermediaries shapes investment memory and behavioral bias. This study chooses the German digital bank N26 and the traditional bank Comdirect as financial intermediary cases and uses a mixed-method approach and comparative case analysis. Through these systematic analysis of the differences between digital financial intermediaries and traditional financial intermediaries in terms of information access channels, content presentation forms, and communication strategies. The study found that differences in the information transmission of financial intermediaries are a key factor driving the investment behavior deviation of German Generation Z. Among them, the socialization and lightweight information strategies of digital banks can easily strengthen investors' availability memory and induce behavioral biases such as over-investment and follow-up investment. The professional and high-threshold information model of traditional banks can easily lead to fragmentation of investor memory, causing problems such as decision-making delay and cognitive inertia. This study reveals the unique investment behavior mechanism of German Generation Z driven by financial intermediary information, and provides an empirical basis and practical implications for building an information disclosure memory correction mechanism and guiding this group to invest rationally.

Keywords: German Generation Z, Investment Memory, Behavior Bias, Financial Intermediation, Information Transmission.

1 Introduction

Generation Z refers to those born between 1995 and 2010. The investors in this generation grew up in the era of Internet popularization and rapid development of digital technology. In this context, the energy crisis, digital finance, and low-interest-rate risks coexist. Generation Z is the first generation to grow up in a fully digital environment. Their information consumption habits naturally adapt to lightweight content forms. However, after 2020 he German energy crisis is superimposed on the

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dual pressure of the European Central Bank's negative interest rates, which makes the investment decisions of German Generation Z investors reflect contradictory investment tendencies about "pursuing high liquidity tools" and "emotionally chasing sustainable targets". Now, the Exchange-Traded Fund (ETF) investment concentration of German Generation Z investors is more than 40% and the proportion of sustainable investment has reached 62% [1]. A key feature is what the article calls digital-native risk anxiety. Among them," digital native" refers to a generation who was born or grew up in the era of full popularization of digital technology, and regarded digital technologies such as the Internet, computers, mobile phone and social media as the underlying environment of life and cognition. They do not acquire digital literacy only through later learning. But are innate and naturally adapt to the digital ecology. Their way of thinking, behavior patterns, social interaction and information acquisition logic are all deeply shaped by the digital environment. "Risk anxiety" is a persistent negative emotional state generated by individuals based on risk perception, which reflects the subject's concern and anxiety about potential uncertainties, potential losses and external threats, and will significantly affect their decision-making behavior and risk-taking willingness. It is important to explore investment memory and bias of German Generation Z Financial intermediary information. First, German Generation Z is the core participant group of the future financial market. According to the 2025 data of the German Federal Statistical Office, this group accounts for 22% of the total population of Germany, and with the improvement of income capacity, the average annual growth rate of its investment scale has reached 18% [2]. Their investment behavior is significantly affected by the information transmission of financial intermediaries. From the perspective of market stability, analyzing the investment memory and information-induced bias of German Generation Z is conducive to accurately identifying the herd effect and systemic risk caused by digital intermediary information strategies, and early warning of abnormal fluctuations in asset prices. From the perspective of investor protection, analyzing the investment memory and biased financial intermediary information of German Generation Z can reveal the interference logic of different information strategies on investor decision-making, and provide a basis for formulating differentiated information disclosure rules and optimizing risk warning mechanisms. Secondly, the study found that the social media-oriented strategy of digital native financial intermediaries is more likely to cause behavioral biases of Generation Z investors, which provides guidance for financial institutions to develop financial products and services that are more suitable for young investors. Finally, from a social point of view, the study reveals the behavioral deviations and investment risks of Generation Z investors, which provides a basis for investor education and protection, and helps to improve investors' financial literacy and risk awareness.

This article focuses on how differences in the information transmission structure between German digital financial intermediaries and traditional financial intermediaries affects the investment memory and behavioral bias of Generation Z. At the same time, it analyzes how to shape Generation Z's investment memory and drive behavioral deviations based on the attributes of "digital native risk anxiety", and build a targeted information disclosure memory correction mechanism based on this. This article takes German Generation Z investors as the research object, takes financial

intermediary information transmission as the research entry point, combines mixed research methods and case comparative analysis techniques, and compares information strategies of Germany's representative digital bank N26 with traditional banks, including channels and content characteristics, to clarify the differential performance of financial intermediary information strategies and the internal driving mechanism for Generation Z's investment memory and behavior bias. This study found that the differentiated information strategies of digital banks and traditional banks have a significant heterogeneous impact on the shaping of investment memory of German Generation Z, and this type of information transmission is a key factor driving the investment behavior bias of this group. At the same time, the dual attributes of "digital native risk anxiety" of German Generation Z further amplify this influence effect. Therefore, building a memory correction mechanism for information disclosure is an effective path to guide this group to invest rationally.

This article expands the research scope of the investment cognitive mechanism of specific groups from the perspective of behavioral finance, takes German Generation Z investors as the core research object, and constructs a chain analysis of "financial intermediary information transmission-investment memory shaping-behavioral deviation formation" The framework provides a more targeted theoretical perspective for the behavior research of young investor groups. At present, most studies focus on the general impact of financial intermediary information transmission on investor behavior, but there is a lack of case studies on the memory shaping and behavioral bias mechanism of a specific group of German Generation Z. This study fills the research gap in the investment cognitive mechanism of specific groups, enriches the research on German Generation Z investors, and provides a reusable case study paradigm for the subdivision of financial intermediary information transmission. There are three main innovations in this study: The first is the innovation of the research framework. With the characteristics of "digital native and risk anxiety" of German Generation Z as the core, it builds a chain relationship between information transmission, memory shaping and behavioral deviation, breaking the existing research's split analysis model of group characteristics and information impact. The second is research method innovation, comparing the German digital bank N26 and the traditional transformation bank Comdirect case, quantifying the differentiated impact of the two types of information models on investment memory, and providing a reusable case study paradigm. The third is the innovation of the regulatory mechanism. Based on the analytical framework of "financial intermediary- information transmission-investment memory shaping-behavioral bias", this study proposes a differentiated information disclosure and memory correction mechanism for German Generation Z investors. This mechanism clarifies the differentiated regulatory requirements for information disclosure between digital banks and traditional banks, and provides operable policy tools and practices for regulators to deal with behavioral deviations of digital native investors, prevent systemic risks, and improve the investor protection system path.

2 Literature Review

2.1 Financial Intermediary Information Transmission and Investors' Cognitive Relation

As a professional information processor, financial intermediaries construct the cognitive basis of investors through information screening and simplification, risk identification guidance and value judgment benchmarks [2]. Prior studies pointed out that when German banks transmit ESG information through social media, "visual content and emotional narrative" can significantly improve the information reception efficiency of Generation Z, but it will also weaken their awareness of verifying the authenticity of information. This phenomenon is consistent with the "heuristic decision theory" proposed by Tversky and Kahneman, that is, investors tend to rely on intuitive judgments rather than rational analysis to process information. One prior study found through empirical research that the "real-time information push" of digital banks will strengthen investors' "Availability Heuristic"-that is, investors are more likely to recall recently received information, thereby forming decision-making dependence [3]. At the same time, investors' attention resources will affect the depth of their reception of intermediary information.

2.2 The Theoretical Basis of Generation Z's Investment Memory and Behavioral Bias

Behavioral finance suggests that investors' decisions are not based on completely rational information analysis, but are driven by factors such as memory bias and mental accounts. "Investment memory" is the memory investors form from historical transactions, market information, etc., and it is easily affected by emotional and cognitive biases. This kind of biased memory will interfere with investors' objective judgment on the current market. In the actual financial market, individuals often rely too much on the memory experience of past profits or losses, rather than rational decisions based on current information. For example, after experiencing a short-term sharp rise, it is easy to form an optimistic memory of "sustainable income", and then chase rising prices and enter the market; After encountering losses, it is easy to solidify the negative memory of "uncontrollable risks", resulting in excessive avoidance, selling and other behaviors. This in turn may lead to irrational decision-making [4]. proposed that the memory formation of young investors has the characteristics of "fragmentation and emotion", and the repeated push of information from financial intermediaries or some social media will amplify its availability bias-investors can only retrieve fragmented information from memory that is easy to obtain in the market ignores more comprehensive and critical market data, which eventually leads to decision-making deviating from the rational track. At the same time, research on Generation Z shows that this group's "mental account" cognition will interact with information transmission [5]. For example, when financial intermediaries emphasize "the low threshold attributes of ETFs", Generation Z will classify them as "risk-free account", resulting in over-investment bias.

2.3 Research on the Information Transmission of Financial Intermediaries

The digital transformation of the German financial intermediary industry has spawned two types of information strategies: one prior study pointed out that the information strategy of digital banks such as N26 is centered on social access to lightweight content [1]. For example: N26 pushes the "15-second ETF investment tutorial" through Instagram, which caters to the fragmented reading or information acquisition habits of Generation Z. Traditional transformational banks such as Comdirect retain "professional content and multi-channel coverage". Although the "Investment Weekly Report" on their official website has high information density, the reading threshold is relatively high. The reading completion rate of Generation Z is less than 30% [6]. The reading completion rate of this group in high information density texts is significantly lower than that of other age groups. This strategy differentiation provides a comparative scenario for studying the impact of information transmission.

3 Case Description

3.1 Investor Portraits and Behavioral Characteristics

German Generation Z is a digital-native generation who grew up in the wave of digital technology. Their average daily social media use time exceeds that of other age groups, and the information they receive is fragmented, socialized and lightweight. After 2020, due to policies such as the energy crisis and the European Central Bank's negative interest rates, the investment behavior of this group will show the contradictory characteristics of "preference for highly liquid tools and sustainable investment following the trend". Investment decisions present the characteristics of "digital native and risk anxiety". According to the 2025 data of the German Federal Statistical Office, the German Generation Z investor group accounts for 22% of the total population of Germany, and with the improvement of income capacity, the average annual growth rate of their investment scale has reached 18%. They are central participants in the future of Germany's financial markets [2]. However, their investment behavior presents clear contradictions: both pursue high-liquidity tools such as ETFs investment concentration has exceeded 40%; And emotionally chasing sustainable targets, for example: 62% of sustainable investment follows suit [1].

3.2 Comparison of Information Strategies of Financial Intermediaries

The digital transformation of Germany's financial intermediary industry has spawned two very different information strategies. They are the information strategy of "social access to lightweight content" adopted by digital banks represented by N26. And the traditional model of "professional content and multi-channel coverage" adopted by traditional transformation banks represented by Comdirect.

Digital banks represented by N26 release investment information such as 15-second ETF investment tutorials, ESG-themed short videos, and graphic posters through social media platforms such as Instagram and TikTok [1]. This type of investment strategy

has the characteristics of visualization, emotion, fragmentation, and low reading threshold. The completion rate of Gen Z reading exceeds 75%(See Figure 1) [6].

Traditional transformational banks represented by Comdirect transmit investment information such as weekly investment reports, industry research reports, and professional analysis papers through official websites, offline outlets, and email pushes [1]. This type of investment strategy has the characteristics of high information density, rigorous logic, strong professionalism, and high reading threshold [2]. However, Gen Z's reading completion rate is below 30% (See Figure 1) [6].

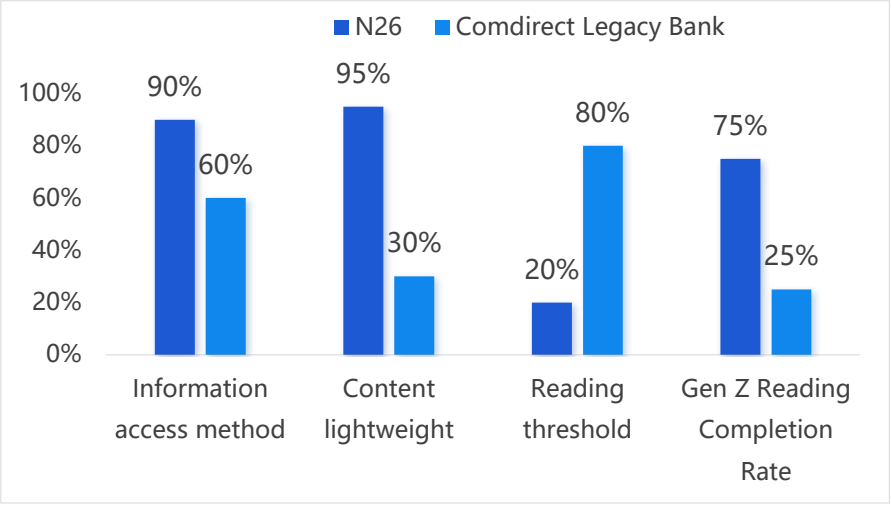


Fig. 1. Comparison of German financial intermediary information strategies (Picture credit: Original).

4 Case Analysis

4.1 The Influence of Information Strategy Difference on the Shaping of Investment Memory

N26's Enhancement of Memory Availability through Lightweight Social Communication. The real-time information push of digital banks will strengthen investors' availability memory, that is, it is easier for investors to recall recently received information [3]. Digital banks such as N26 push lightweight content such as 15-second ETF investment tutorials through social media platforms such as Instagram and TikTok, which fits the fragmented reading habits of Generation Z. The repeated access of these high-frequency and visual information enables investors to form a deep memory of the low threshold and high liquidity characteristics of ETFs. At the same time, the "visual content and emotional narrative" of social media will improve its information reception efficiency. N26's ESG-themed short videos convey investment value through emotional resonance, further deepening Generation Z's memory of

sustainable investment targets [2]. However, this lightweight information transmission method may also lead to investors' superficial understanding of investment information, forming a "fragmented" investment memory, thereby weakening investors' ability to build long-term risk assessment models.

Comdirect's Contribution to Memory Fragmentation through Specialized Information. Traditional banks such as Comdirect have a high density of professional content such as investment weekly reports, but the reading threshold is high, requiring readers to have certain relevant knowledge.Dimpfel and Morys (2014) conducted a quantitative experiment on webpage attention by combining eye-tracking with neuro-electroencephalogram monitoring technology, targeting the official websites of five German direct online banks including Comdirect. Empirical data indicated that only 27.2% of participants finished reading high-density professional financial texts such as commission schedules, legal agreements and trading rules on Comdirect in full. Given that Generation Z has long been immersed in fragmented short videos and short-phrase graphic reading environments, their concentration for in-depth long texts is far weaker than the middle-aged participants in the experiment. Accordingly, it can be inferred that the reading completion rate of Generation Z when browsing high-density professional texts on Comdirect is less than 30%. [7]. Investors can only obtain part of the information in a fragmented manner. This phenomenon can be explained by the “Cognitive Load Theory”. According to the “Cognitive Load Theory”, the individual working memory capacity is limited, and fragmented information will significantly increase the external cognitive load and crowd out the cognitive resources required for rational decision-making. It is difficult for investors to process and integrate large amounts of scattered information in depth and integrate massive scattered information, and can only rely on intuition, short-term experience and local information to form one-sided judgments, which will exacerbate investment memory bias and irrational behavior and ultimately fail to form a complete investment cognitive framework. Comdirect's information transmission model fails to adapt to the "fragmented and emotional" characteristics of Generation Z investors' memory, resulting in investors' vague memory of professional investment knowledge, making it difficult to build a systematic investment framework [4].

4.2 The Influence of Investment Memory Deviation on Investment Behavior

Over-investment and Follow-up Deviation Driven by N26 Information. Generation Z's"mental account"cognition will interact with financial intermediary information transmission. When N26 emphasizes the "the low-threshold nature of ETFs", Generation Z tends to classify it as a "risk-free account", combined with the enhanced impression of ETF high liquidity in availability memory, resulting in excessive investment bias [5]. Combined with the empirical research on investor memory by Gödker [4]. The study took German Generation Z investors as the core sample and collected a total of 1,200 valid questionnaires, including 620 local German samples, aged between 18 and 26 years old. This group has typical characteristics such as digital native, limited investment experience (average 0-3 years), and high dependence on

online fragmented channels for information acquisition. In the context of digital finance, a large amount of fragmented information leads to external cognitive load, making it difficult to systematically integrate and rationally analyze information, and then rely on past profit memories to form optimistic biases, which eventually drive irrational behaviors such as excessive investment. At the same time, N26 amplifies the hot information of sustainable investment through social media, and uses the emotional memory characteristics of Generation Z to trigger 62% of sustainable investment follow-up behaviors [1,8]. This kind of follow-up is not based on rational analysis, but is dominated by "popular, low-threshold" information in memory. In addition, the "risk anxiety" characteristics of German Generation Z investors may also exacerbate their investment behavior biases. In the context of the coexistence of energy crisis, digital finance and low interest rate risks, Generation Z investors will be more inclined to pursue high-liquidity tools and sustainable targets, resulting in an imbalance in their investment portfolios.

Decision Delay and Cognitive Inertia Bias Driven by Comdirect Information. Due to the high reading threshold of Comdirect's professional content, it is difficult to fully receive the information conveyed. Generation Z investors lack a comprehensive memory of the risks and returns of investment targets, which leads to cognitive inertia bias, that is, individuals tend to save cognitive resources. and rely on quick judgments based on intuition and experience, rather than active analysis and decision-making. It can be seen from the decision-making process (as shown in Figure 2) that such investors have gaps in understanding during the information reception stage, and the fragmented information in memory cannot support rational judgments, which eventually manifests as delayed investment decisions, missed market opportunities or blind risk avoidance.

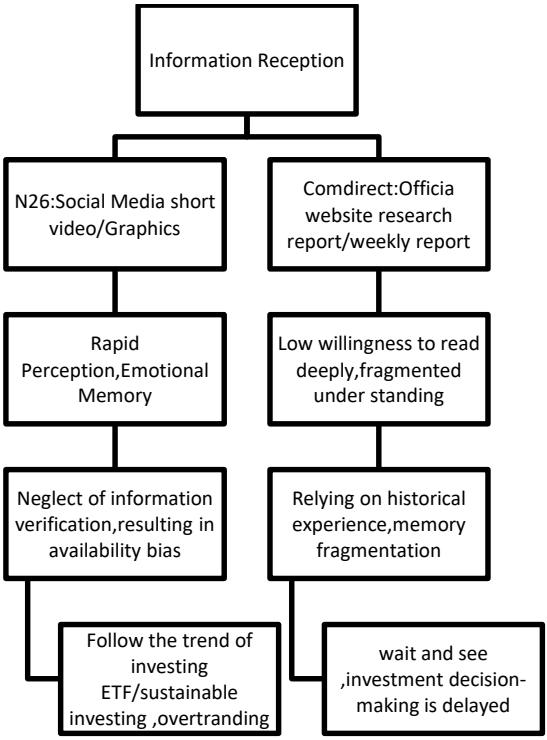


Fig. 2. Information reception difference between N26 and Comdirect (Picture credit:Original)

5 Suggestions

5.1 Financial Intermediation Level

Optimize Information Presentation and Risk Warning. Financial institutions should embed key risk warnings in lightweight content and relevant institutions mark information sources and reliability through third-party data certification or risk warning labels to reduce external cognitive load;For fragmented information scenarios, relevant institutions can design structured summaries that include core conclusions, main risk factors, and key data indicators, and can be matched with lightweight visual charts such as trend line charts, risk radar charts, and data comparison histograms. It complements the structured summary and helps investors quickly grasp the core logic. For example, add mandatory scrolling subtitles such as "historical performance does not represent the future" to short social media videos, or mark information sources and risk levels with eye-catching color blocks at the top of graphic content.

Technology-Driven Personalized Services. Relevant institutions use the algorithm recommendation system to differentiate content distribution according to users' risk

tolerance, investment experience and historical behavior, and automatically push corresponding risk disclosure intensity, information granularity and decision-oriented content to users with different risk levels and investment cognition levels. Avoid homogeneous income-oriented information bombardment and improper guidance from the source;At the same time, AI technology is used to model global data on user transaction behavior, browsing trajectory, and decision-making points, generate personalized investment review reports, restore the entire investment process through objective data, quantify returns and risk exposures, and compare market benchmarks with presets Strategies guide investors to rationally review decision-making logic, and correct profit memory deviations and loss attribution deviations. For example, when the system detects that users have frequently viewed sustainable investment targets recently, it can automatically push the historical fluctuation data and risk cases of such assets, rather than simply promoting returns.

Strengthening of Investor Companionship. Relevant institutions popularize rational investment concepts through interactive educational content such as short videos and simulated transactions, and push risk warnings at key decision-making nodes such as investor transaction confirmation, asset allocation adjustment, or high-risk product browsing to avoid emotional decision-making.

5.2 Regulatory Authority Level

Formulation of Differentiated Information Disclosure Rules. Regulators need to clarify the information disclosure boundaries between digital banks and traditional banks, require digital platforms to mark potential conflicts of interest in investment advice, and strengthen compliance review of social media financial information. For example, Key Opinion Leaders (KOLs) are required to disclose their cooperative relationship with relevant financial institutions when publishing investment-related content [9,10].

Improvement of the Investor Protection Mechanism. Regulators need to establish an investor education system for Generation Z and develop educational tools suitable for digital natives; Promote financial institutions to establish an information disclosure and correction mechanism, such as adopting a closed-loop operation mode of pre-review, interception during the event, and error correction and publicity after the event. After discovering false information, the institution is required to correct it at the top of the original channel, and simultaneously inform investors that they have reached, Incorporate violations and rectifications into compliance records for disclosure, and timely correct and publicize misleading information. For example, set up a special online complaint and information correction channel, punish institutions that spread false information and publicly report it.

5.3 Investor level

Individual investors should improve their information screening capabilities and avoid over-reliance on a single information channel; Regularly review investment decisions, identify their own memory deviations, and form rational investment habits.

6 Conclusion

This article takes German Generation Z investors as the research object, focuses on the core logic of "financial intermediary-information transmission-investment memory shaping-behavioral bias", uses mixed research methods and case comparative analysis, and compares the differentiated information strategies of digital bank N26 and traditional bank Comdirect, revealing the driving mechanism of information transmission on investment memory and behavioral bias. The study found that the advantage of the information strategy of digital banks represented by N26 is that it caters to the information receiving habits of Generation Z and improves the efficiency of information dissemination. However, the disadvantage is that digital banks rely on lightweight content such as social media short videos and graphics, and through rapid perception and emotional information transmission, they have shaped the emotional memory of Generation Z investors, making them ignore information verification and form availability deviations. Ultimately drive follow-up investment in ETFs, sustainable targets, and excessive trading. The advantage of the information strategy of traditional banks represented by Comdirect is to convey professional and systematic investment knowledge, which helps investors form a more comprehensive investment memory. But the disadvantage is that it fails to adapt to the digital native attributes of Generation Z, and the information transmission effect is limited. The in-depth reports it provides fail to attract strong reading interest from Generation Z investors, resulting in their dependence on historical experience and fragmented memory, manifested as cautious observation and decision-making delays.

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