Problems and Opinions

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Who Invests in Cryptoassets? Demographics, Knowledge Sources, and Risk Perception in High-Risk Asset Markets

Abstract

The aim of this study is to identify behavioral and decision-making factors that determine interest in high-risk assets, with particular emphasis on cryptoassets. The analysis covers demographic variables (age, gender, education), prior investment experience, knowledge sources, and product comprehensibility. In February 2025, a two-stage CAWI survey was con-

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ducted: a random-quota poll (N = 3500) and a targeted study of investors and individuals interested in cryptoassets (N = 940). Regression and correlation analyses indicated that industry conferences and fintech events are significantly associated with investment interest, especially among older respondents and women. Gender differences were also observed in responses to webinars and online training. The results highlight the need to diversify financial education strategies. A limitation of the study is that all of the respondents came from a single country, which may restrict the generalizability of the results to populations in different cultural and social contexts. Furthermore, the data were collected over a relatively short period, which may limit the study's ability to capture dynamic changes in the phenomenon under investigation.

Keywords: cryptoassets, cryptocurrencies, behavioral finance, investment decision-making, financial literacy

JEL codes: G41, D14, A20

Introduction

Over the past decade, the cryptoasset market has evolved from a niche technological innovation into an integral part of the global financial system, with an estimated market capitalization of approximately USD 2.4 trillion. (CCAF 2024). A defining feature of cryptoassets is their exceptionally high price volatility (BIS 2023; Sergio & Wedemeier 2025), which is rarely observed in traditional stock markets and typically accompanies corrections or recessions. The scale of potential risks to retail investors is confirmed by a study of 128 regulatory authorities across 106 jurisdictions – 57% of respondents rated consumer risk in the cryptoasset segment as high (26%) or very high (31%). This is more than twice the level recorded for other areas of fintech, indicating serious threats that may lead to abrupt capital losses among individual investors (World Bank & CCAF 2022).

Existing literature suggests a discernible, though heterogeneous, profile of the cryptoasset investor. Hayashi & Routh (2025) found that cryptocurrency holders tend to exhibit higher risk tolerance, lower levels of objective financial literacy, and are more likely to come from socially disadvantaged groups. Other analyses based on transactional data indicate that while early adopters were typically from high-income brackets, today's investors span a wide range of income levels. Their investment decisions are driven by past gains, market volatility, and the desire to hedge against inflation (Aiello et al. 2023). Akana (2023) confirms this profile, highlighting the dominant role of speculative motives and curiosity.

However, the literature lacks studies that simultaneously consider demographic variables (particularly generational cohorts) and the knowledge acquisition channels used by investors. Most existing research has been conducted in the United States or Asia (Akana 2023; Hayashi & Routh 2025; Meyer et al. 2024; Sato 2024; Sharma et al. 2023). The present study aims to help fill this gap.

A structured questionnaire was administered to a randomly selected sample of 3,500 Polish residents. From this sample, 940 respondents who declared investment experience or interest in cryptoassets were selected for analysis. The study was conducted in February 2025.

The primary objective of this article is to identify behavioral patterns and decision-making factors that influence interest in high-risk assets, particularly cryptoassets. The analysis focuses on demographic variables (generational cohorts, gender) and the sources of financial knowledge used. In particular, the following research questions were posed: How does investor age (understood as generational cohort affiliation) influence the relationship between knowledge sources and interest in cryptoasset investments? To what extent does gender differentiate the strength of associations between forms of investment education and declared interest in the cryptoasset market? What role do social media play as a source of investment knowledge among the youngest investors, and are they a significant predictor of interest in cryptoassets?

The structure of the article is as follows: Section 2 presents a literature review on individual investor behavior in high-risk asset markets, with a focus on cryptoassets. Section 3 outlines the data sources and methodology. Section 4 presents the empirical findings, with particular emphasis on the relationship between demographic variables and information channels. The article concludes with a discussion of the results, practical implications, and recommendations for future research.

1. Literature Review

Many existing global studies have attempted to describe investors by analyzing them through the lens of generational cohorts. Their findings remain somewhat inconclusive. Behavioral theorists argue that the investment behavior of Generation Y significantly differs from that of earlier generations (Altaf & Jan 2023; Grinblatt & Keloharju 2009). Other analyses show that Generation Z's behavior closely mirrors that of Generation Y. A significant portion of this demographic group tends to invest primarily in cryptocurrencies and NFTs, driven by curiosity and fear of missing out – FOMO (CFA Institute 2022).A broader spectrum of investment intentions was explored by Altaf & Jan (2023), who confirmed the importance of FOMO as one of the investment drivers. They also pointed to other factors influencing investment decisions, such as socially responsible investing, overconfidence, and herd behavior.

Intergenerational studies conducted by Thomas et al. (2024) examined the investment behaviors of Generations X, Y, and Z in India. The results revealed that although there were no statistically significant differences in financial literacy across generations, Generation Z scored the highest on financial literacy tests. This underscores the importance of ongoing financial education initiatives targeting younger individuals. Additionally, the studies showed that risk tolerance decreases with age, with Generation Z showing the highest risk tolerance, followed by

Generations Y and X. This finding is supported by Bhuvaneswari & Mugesh (2023), who argue that age is significantly associated with risk appetite, meaning younger generations tend to favor more high-risk investment options. This aligns with research demonstrating that socioeconomic factors influence investment decisions through expected returns, perceived self-efficacy, and risk perception. However, risk perception does not directly affect millennials' decisions regarding equity investments (Ratnadi 2023).

Despite rapid technological advances, no statistically significant differences in technology dependence were observed across age cohorts, indicating that technology exerts a relatively uniform influence on investment behaviour regardless of age.

Gender constitutes another demographic lens through which to analyse investment behaviour. Nevertheless, empirical evidence remains mixed. Some studies find that gender exerts little influence on investment decision-making (Baruah & Parikh 2018; Senthil 2019). Others demonstrate that men display higher levels of self-confidence and a greater propensity toward risk-taking in investment decisions than women (Barber & Odean 2001; Bhandari & Deaves 2006; Kumar & Goyal 2015; Lutfi 2011). Psychological research corroborates these findings, indicating that men generally display greater overconfidence than women, especially in finance and investment contexts (Barber & Odean 2001).

Investment decisions may be influenced by a range of factors, including how information is presented (framing) (Barber & Odean 2001) the source of information on success probability (Hertwig et al. 2004), experience (Sekścińska 2015), and individual traits (Campbell et al. 2004). Risk-taking tendencies may also be explained using regulatory focus theory (Higgins 1998; Higgins et al. 2001). A promotion-oriented motivation system is associated with openness to riskier financial decisions and behaviors, while a prevention-oriented system is linked to risk avoidance. Given that investing may involve both relatively safe and aggressive financial instruments, it can fulfill both security and growth needs depending on the type of investment (Sekścińska et al. 2016).

One can hypothesize that crypto investors make decisions somewhat differently from those in traditional investment markets. Studies of cryptoasset investors show they tend to hold onto losing positions too long and exit winning investments too quickly (Ballis & Verousis 2022). This may stem from distinct information sources and learning processes specific to the cryptoasset market.

Both financial knowledge and interest in finance are generally associated with greater risk tolerance. However, individuals with financial knowledge – despite being more aware of cryptocurrencies – more often declare that they do not intend to hold them (Panos & Karkkainen 2019). At the same time, there is a positive correlation between crypto literacy and general financial knowledge. Better understanding of cryptocurrencies can lead to more informed financial decisions (Jones et al. 2024). Individuals with higher levels of subjective knowledge about cryptoassets more often seek professional advice and view it as complementary

to their own understanding of digital assets (Jones et al. 2024). This may help explain why awareness of risk and returns positively influences the intention to purchase cryptoassets (Chittineni 2022). A significant association exists between age and whether investors have ever attended a course or read a book on investing (Bhuvaneswari & Mugesh 2023). However, typical sources of knowledge about the cryptoasset market are the internet and social media. These not only influence the learning process but, as studies show, moods expressed on Facebook and Twitter can also affect financial decisions (Bollen et al. 2011; Siganos et al. 2014). This influence is not uniform across the investor community. Research shows that YouTube content affects the prices and trading volumes of low-cap cryptocurrencies (Moser & Brauneis 2023). This suggests that such content may reach and influence investors who could be categorized as occasional or novice participants.

Interestingly, there is no significant association between age and awareness of investment risk (Bhuvaneswari & Mugesh 2023), although – as previously indicated – generational groups differ in terms of risk tolerance. It can be assumed that the intentions guiding younger and older investors may vary significantly. Other demographic variables, such as gender, may also affect engagement in the cryptoasset market.

Financial knowledge can also play a pivotal role in investment decision-making. Drawing on a representative sample of U.S. residents (N = 6,000), Bannier et al. (2019) found that women possess lower levels of knowledge about the Bitcoin's features compared to men. The authors emphasise, however, that socio-demographic variables and personality traits explain only a small share of this gender gap. Instead, both objective and subjectively perceived financial knowledge constitute key determinants, accounting for roughly 40 per cent of the disparity in Bitcoin literacy.

Some studies indicate that crypto investors are predominantly young men with high self-reported risk tolerance (Hayashi & Routh 2025), who simultaneously exhibit a lack of objective financial knowledge (Mkrtchyan & Treiblmaier 2025). A study of business students (n=204) and professional financial advisors (n=174) found that male students chose riskier asset allocations than female students, providing evidence of gender differences in risk tolerance (Bollen & Posavac 2018). Confidence and access to information influence trading frequency. More frequent information exposure is associated with more frequent trading. However, overconfident investors tend to trade more often, sometimes excessively (Barber & Odean 2001), particularly when they believe they are using specialized information. Investors with lower confidence levels trade less frequently, especially when relying on bank advice (Abreu & Mendes 2012). Nevertheless, the literature lacks studies that combine demographics, investment experience, knowledge acquisition channels, and product comprehensibility in large, representative samples from Central and Eastern Europe.

As previously indicated, investor knowledge sources are diverse. Jones et al. (2024) showed that cryptocurrency holders are willing to learn from financial professionals (financial advisors). However, decisions are often shaped by a combination of

other factors, such as sentiment on social media. Research shows that sentiment on Facebook is positively associated with current stock returns (Siganos et al. 2014). Sentiment is also influenced by the activity of high-reach individuals online. An analysis of 4,607 videos and 7 crypto influencers, each with over 300,000 subscribers within one year, revealed that their messages impact the prices and trading volumes of low-cap cryptocurrencies (Moser & Brauneis 2023). At the same time, studies do not confirm that influencers are accurate in their market predictions. Numerous studies provide evidence that online discussion forums may be used by investors to promote or abandon sensitive stocks and manipulate the trading behavior of other investors (Agarwal et al. 2019; Sabherwal et al. 2011).

2. Research method

The findings presented in this article are part of a broader research project designed in accordance with the principles of theoretical, methodological, and researcher triangulation. The research process was divided into three main stages.

The first stage was an omnibus survey conducted in October 2024. This preliminary phase provided foundational insights into the population of investors interested in cryptoassets in Poland. The results of this stage informed the design of the research tools used in subsequent phases.

The second stage involved a qualitative study based on semi-structured interviews. The exploratory nature of this method allowed for a deeper understanding of respondents' motivations, experiences, and attitudes toward cryptoassets. Based on the collected empirical material, the following research hypotheses were formulated and subsequently tested:

Hypothesis 1 (H1): The strength of the relationship between the use of professional knowledge sources and interest in cryptoasset investment increases with the investor's age.

Hypothesis 2 (H2): Women exhibit a stronger association between participation in organized educational formats (e.g., webinars, fintech conferences) and interest in cryptoasset investment compared to men.

Hypothesis 3 (H3): Among members of Generation Z, informal sources of knowledge (e.g., social media, friends, influencers) are not significantly correlated with the level of interest in cryptoasset investment.

The third phase – the quantitative study – was conducted using the CAWI method (Computer Assisted Web Interview). Interviews were carried out via the ARIADNA online research panel between February 5 and 10, 2025. The sample selection process followed a two-stage procedure. In the first stage, a filtering question regarding investment experience or interest in cryptoassets was asked of respondents from a nationally representative random-quota sample of Polish residents aged 15 and older (N = 3500).

A total of 948 individuals who declared investment experience or interest in cryptoasset investment qualified for the main study. The demographic structure of this subsample was as follows: 48% women and 52% men; 10% aged 18–24, 18% aged 25–34, 21% aged 35–44, 17% aged 45–54, and 34% aged 55 and above. Regarding place of residence: 37% of respondents lived in rural areas, 32% in small or medium-sized towns, and 13% in cities with over 500,000 inhabitants.

3. Research Results and Discussion

Quantitative analysis revealed significant differences in the strength of associations between knowledge sources and interest in investing in cryptoassets. The study identified two key variables moderating these relationships: respondents' age and gender. Pearson correlation coefficient was used to analyze the connections between knowledge sources and interest in investing in cryptoassets. Before the analysis, it was checked whether the assumptions of normality of distributions, linearity and homoscedasticity of the analyzed variables were met. The results of the analyses and the sample size (N=948) allowed for the assumption of normality of distributions and other assumptions.

Table 1. Preferred Knowledge Sources by Age Cohort

	"Baby Boomers" (N = 55)	**"Generation X" (N = 122)**	**"Generation Y" (N = 163)**	**"Generation Z" (N = 83)**
Industry conferences	0.44*	0.48*	0.26*	0.09
Webinars or online training	0.35*	0.37*	0.17	0.19
Local community meetups	0.43*	0.35*	0.36*	-0.11
On-site workshops organized by crypto-sector companies	0.53*	0.35*	0.21	0.25
Fintech fairs and events	0.46*	0.42*	0.36*	-0.01
International conferences/forums on capital markets	0.35*	0.37*	0.33*	0.03
Conferences/meetings organized by regulators	0.44*	0,21	0.15	0.01
Academic events	0.29	0.35*	0.23*	0.02
Workplace-based thematic training	0.33	0.34*	0.17	0.05

* – statistically significant coefficient p <0,01

Source: own elaborations.

Table 1 presents correlation coefficients between interest in cryptoassets and specific knowledge sources across three generational cohorts. The highest correlation values are observed among Generation X respondents, particularly regarding participation in industry events (r = 0.482) and fintech conferences (r = 0.469). Professional financial advisors also appear as relevant sources for this group. In Generation Y, the strongest correlations are seen with webinars (r = 0.314) and industry events (r = 0.288). Generation Z exhibits generally lower correlation levels, which may suggest a different mode of information consumption – perhaps more fragmented and less oriented toward professional sources. The table also indicates that social media are not a strong predictor of investment interest, which challenges the often-repeated assumption about their dominant role among younger cohorts.

These findings are supported by the qualitative analysis. Younger investors, particularly those from Generation Z, tend to make investment decisions impulsively and under emotional influence (e.g., curiosity, FOMO), drawing information from informal sources such as social media, peers, online forums, or influencers. However, this does not imply a complete lack of critical thinking – some younger respondents voiced skepticism toward NFTs or so-called memecoins. Respondents from older age groups, who more frequently reported attending industry conferences and educational events, demonstrate a more structured decision-making style and a stronger need to verify sources. It is also important to consider that younger generations generally have lower incomes, which often translates into smaller, or even minimal, investment amounts. Spontaneous investment, not preceded by methodical information-seeking and analysis, may also be related to the relatively low value of such investments.

Table 2. Preferred Knowledge Sources by Gender

	Women (N= 232)	**Men (N=191)**
Industry conferences	0.40*	0.24
Webinars or online training	0.30	0.21
Local community meetups	0.28	0.31*
On-site workshops organized by crypto-sector companies	0.36*	0.26
Fintech fairs and events	0.40*	0.24
International conferences/forums on capital markets	0.39*	0.21
Conferences/meetings organized by regulators	0.26	0.11
Academic events	0.34*	0.10
Workplace-based thematic training	0.32*	0.16

* – statistically significant coefficient p <0,01

Source: own elaborations.

Table 2 shows the distribution of correlation coefficients by gender. Women exhibit stronger associations between interest in cryptoasset investment and participation in webinars (r = 0.387) as well as fintech events (r = 0.365), which may suggest a greater tendency to engage in organized forms of online education. Among men, traditional knowledge sources such as news portals and expert materials dominate, although the strength of these correlations is lower compared to women.

Qualitative data offer deeper insight into this interpretation. Women more frequently expressed the need to understand market mechanisms and to seek out sources that offer structured knowledge. Men, on the other hand, emphasized trust in intuition, personal or peer experience, and reliance on influencer analysis. Only a small number of female respondents mentioned consultations with professionals – possibly indicating more limited access or a lack of trust in financial advisors.

The observed differences can be interpreted in light of earlier literature. As shown by Bannier et al. (2019), women more often report lower confidence in financial investment contexts, which may lead them to seek structured knowledge. Meanwhile, the higher prevalence of men in self-directed knowledge acquisition channels may be associated with overconfidence and a tendency to act based on informal cues (Barber & Odean, 2001). Additionally, women statistically have higher levels of education than men, which may be linked to a stronger need for and ability to acquire and systematize knowledge.

Both the quantitative and qualitative findings point to the need for differentiated educational and communication strategies. Promoting investment education through industry events and fintech conferences may be particularly effective for Generation X and women. For Generation Z, more personalized and interactive formats that employ the language and communication environments familiar to younger individuals may be more successful. At the same time, it is crucial to strengthen critical thinking and risk awareness competencies – especially among those relying on social media and informal channels for information.

4. Conclusions

The study provides empirical evidence of differentiated investment patterns based on age, gender, and the use of financial knowledge sources. The findings confirm that interest in cryptoassets – as a class of high-risk assets – is not a homogeneous phenomenon and that its determinants depend on a variety of demographic and cognitive factors. In particular, the results confirm that individuals from Generation X and women show stronger associations between participation in educational events and investment interest, indicating greater responsiveness to professional knowledge distribution channels (H1, H2).

Additionally, the findings do not support the common assumption regarding the key role of social media as a source of investment knowledge among younger cohorts.

For Generation Z, these correlations were relatively weak, which may suggest that although young investors do use social media for information, it does not directly translate into their level of investment interest (H3).

From a theoretical perspective, the study expands our understanding of the role of information sources in decision-making processes related to high-risk investments and reveals the importance of intergenerational and gender differences. It contributes to the field of behavioral finance and financial education.

The practical implications primarily concern the design of effective educational programs and regulatory actions. The results indicate that educational campaigns should be better tailored to specific target groups – both in terms of format and content. Short, visual, and interactive formats may work well for Generation Z, while older cohorts and women are more responsive to industry events and structured training. From a public policy perspective, this implies the need to develop communication strategies that take into account not only knowledge levels but also learning styles.

The main limitations of the study include its restricted geographical scope (Poland) and one-time measurement. Future research should expand the analysis to other Central and Eastern European countries and incorporate psychological variables such as perceived control, impulsivity, or motivational regulatory styles. Another limitation of the study was that the information collected was declarative in nature and may differ from the actual behaviour of the respondents.

A promising direction for future research is to examine how different educational channels foster an informed and responsible approach to investing. Integrating insights from psychology, sociology, and finance could substantially advance strategies that support individual investors and inform the design of more targeted regulations to protect their interests in high-risk markets.

Summary

This article addresses the topic of interest in cryptoassets as a form of high-risk investment by analyzing the impact of demographic factors and knowledge sources on investment decisions. The study, based on a representative sample of Polish residents (N = 3500) and a group of individuals declaring experience or interest in cryptoassets (N = 948), reveals the complexity of investor behavior. Quantitative findings demonstrate substantial variation in the correlations between knowledge sources and declared interest – both by age cohort and gender.

The strongest associations with investment interest were observed among Generation X and women participating in fintech events and webinars. Younger cohorts, particularly Generation Z, showed weaker correlations with traditional educational channels, suggesting a different dynamic of learning and decision-making. The results imply a need to differentiate educational and regulatory

strategies – not only in content but also in delivery format – to more effectively address the needs of diverse investor groups. This article contributes to the literature on behavioral finance and financial education in the context of high-risk markets.

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