Who arrives early and late to the crypto market party?*

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Abstract

We survey a representative sample of the Dutch population to investigate the characteristics distinguishing, particularly, early and late adopters of cryptocurrencies. We find that 12% of individuals have ever invested in cryptocurrencies. Late investors are more likely to be influenced by social media and word of mouth, have lower social preferences, and possess an economics degree. In contrast, early adopters tend to be more risk-loving and male. Trust does not play a role in the likelihood of adoption and its timing. Furthermore, we study the underlying reasons for investing in cryptocurrencies and the differences between investors in traditional and crypto markets. Our study has corporate finance implications to the extent that crypto markets crowd-out traditional sources of finance that are vital for firms' financing. Our study is also relevant for policymakers aiming to understand which type of individuals are exposed to the risks associated with the crypto market and financial bubbles.

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1. Introduction

The cryptocurrency market has attracted significant attention from institutional and retail investors, financial media and policymakers. This market experienced its glory moment in November 2021, with almost three trillion in market capitalization.[1] For some, this valuation could essentially be seen as an "opportunity cost" in the sense that funds flowing to the crypto market could have very well been invested in traditional financial markets to finance firms and ultimately benefit the real economy. Despite the growing interest in cryptocurrencies in recent years by investors, its volatile nature as well as being an "implicit" competitor to traditional financial markets, academic research on the drivers of cryptocurrency investing remains limited. This study aims to identify the characteristics of individuals who have invested in this asset class at an early, middle and later stage as financial regulators are particularly worried that inexperienced investors get lured to that market and a collapse may threaten the stability of the financial system. Furthermore, we investigate the underlying reasons for crypto investing and the main differences between investors in traditional financial markets and those in crypto.

Recent studies have identified several factors that influence investment in cryptocurrencies: being male and young (Bonaparte, 2022; Auer and Tercero-Lucas, 2022; Hackethal et al., 2022; Hoopes et al., 2022; Paaso et al., 2022; Pursiainen and Toczynski, 2022; Aiello et al., 2023; Weber et al., 2023), risk-loving (Bonaparte, 2022), investing in stocks (e.g., Bonaparte, 2022; Pursiainen and Toczynski, 2022; Hackethal et al., 2022), having right-wing political views (Paaso et al., 2022), being pessimistic and social (Bonaparte, 2022), living in an area with high levels of self-employment, low levels of volunteering (Pursiainen and Toczynski, 2022), and having high levels of individualism (Foley et al., 2022). The findings on income are mixed, with some studies that find a significant positive relationship and others insignificant. According to Hoopes et al. (2022), the average income of cryptocurrency sellers has declined over time, so the sample period considered in the

[1] https://coinmarketcap.com/charts/

study can be the reason for the contradictory results. The evidence relating crypto investing to self-reported financial knowledge is also inconclusive (Bonaparte, 2022; Paaso et al., 2022).

We survey a representative sample of the Dutch population using the LISS Panel. The LISS dataset is an ideal survey to investigate this topic, as it is one of the most representative and comprehensive data sets used in the household finance literature (Noussair et al., 2014; Dimmock et al., 2015; Parise and Peijenburg, 2019). Moreover, the Netherlands is one of the top five countries globally regarding crypto investments' absolute and per-capita value (Foley et al., 2022). Our survey reveals that around 12% of the Dutch population have invested at least once in crypto. The maximum percentage of crypto investors in the population obtained in previous studies was around 4% in 2019 from Paaso et al. (2022), also in the Netherlands, thus indicating new individuals' entry into the crypto market in recent years. The 12% of the Dutch population that has ever invested in cryptocurrencies is quite striking, as only 19% of respondents are investing in traditional financial markets. Therefore, given this recent drastic growth in the number of crypto investors as well as the high volatility of the crypto market, it is critical to study who those individuals are.

For this reason, we start our analysis by investigating what drives cryptocurrency investing with a focus on understanding the drivers for early, middle or late investors. We consider early adopters who invested for the first time in crypto in 2014-2017 (before the first crypto crisis, as it can be seen in Figure 1), the middle adopters in 2018-2019, and the later adopters in 2020-2022 (the last boom-and-bust cycle). The timing of investing is also important given that half of the crypto investors in our survey invested in cryptocurrencies in 2020 or after for the first time.

Our main findings are as follows. First, the late adopters seem to be a quite different group of investors compared to the early and middle-adopters. We show that individuals more prone to be influenced ("financially hyped") by word of mouth and (social) media are more likely to have invested in cryptocurrencies in particular at a later stage. This finding also sheds light on the impact of social media on cryptocurrency returns (Guégan and Renault, 2021; Nepp and Karpeko, 2022)

and the presence of pump and dump schemes (Li et al., 2022). Late investors are possibly hyped particularly by recent media coverage of crypto millionaires and widespread appearance of crypto influencers.[2] Another example of hype driving cryptocurrency investments is the surge in interest around meme coins, such as Dogecoin and Shiba Inu Coin. These coins were created as a joke but have gained a massive following on social media platforms like Twitter and Reddit, where users have promoted them, and the hype around these coins has significantly driven their value (Tandon et al., 2021). Our finding is also important because a characteristic of a financial market bubble is that it happens when investors are driven mainly by word of mouth and (social) media (Shiller, 2003).

We also find that individuals with higher social preferences are less likely to invest in cryptocurrencies in particular at a later stage. This finding suggests that ethical arguments to discourage crypto investing, for instance, by emphasizing the risk of money laundering or the substantial environmental footprint of cryptocurrencies, will likely no longer be successful to deter late crypto investors.

Next, we show that having studied economics plays a role in investing in crypto, particularly for late adopters. This could be possibly due to the overall increased knowledge produced on crypto investments so that it is no longer a black-box for households, as well as due to the perception of crypto arising as an alternative investment choice. Moreover, using bank advisors as a primary source of financial information while making investment decisions is negatively related to being a crypto investor, particularly at a later stage. This could be because individuals seeking information from their advisors are less likely to receive recommendations to invest in cryptocurrencies, especially in times when the caution regarding the volatility and thus riskiness of the crypto market has been widely communicated despite surging crypto prices.

[2] https://www.investopedia.com/crypto-influencers-you-should-follow-5224141

Furthermore, we find that being more risk-loving is positively associated with crypto investing for all adopters *except* for late adopters, indicating that crypto has recently attracted a wider range of investors beyond risk-seekers as it has become more mainstream.

Lastly, in contrast to participation in regular financial markets and contrary to expectations, trust does not seem to play a role when investing in cryptocurrencies, in any stages of the crypto "evolution".

As a second step in our analysis, we asked crypto investors the main reasons why they invested in crypto. The most popular reason was thinking it was a "profitable investments", which was chosen by almost half of crypto investors. The other two most popular reasons were "I wanted to experiment with my investments" and "believing in the technology and purpose of cryptocurrencies".

As a follow-up analysis, we analyze the factors associated with financial hype, given that this variable is particularly related to late-wave crypto investing and financial bubbles. The main positive drivers of financial hype are the feelings of envy of other people's fortune and having a university degree. The other positive drivers are having studied economics, trusting others, being risk-loving, and having right-wing political views. Overall, it is somewhat reassuring that having university education and an economics degree are positively related to financial hype, which suggests that the people who are more likely to be hyped about new investments (and ending up in financial bubbles) tend to have more sophisticated financial knowledge than the rest of the population (Christiansen et al., 2008; Lusardi and Mitchell, 2014).

As a third step in our analysis, we compare conventional investors in financial markets to crypto investors to investigate how they differ and what could drive the latter to invest in conventional investments since 6.27% of the population invest only in cryptocurrencies. The results show that investors in financial markets (versus the crypto market) are positively associated with using bank advisors when making financial decisions, having more trust in other people, and

being older. We conclude that conventional investors rely more on "classic" sources of financial information and that trust is a more critical driver for conventional investments than for cryptocurrencies. This result can be explained by the conventional financial system relying on trusted intermediaries for financial transactions. In contrast, Bitcoin network transactions are based on a decentralized consensus algorithm protocol known as the blockchain. Hence, this can explain why trust in other people is less relevant for crypto investments.

Overall, we contribute to various streams of the literature. First, we contribute to the cryptocurrencies literature (e.g., Bonaparte, 2022; Auer and Tercero-Lucas, 2022; Hackethal et al., 2022; Hoopes et al., 2022; Paaso et al., 2022; Pursiainen and Toczynski, 2022; Aiello et al., 2023; Weber et al., 2023; Divakaruni et al., 2023) by showing new variables associated with crypto investments, especially for individuals who have invested in crypto more recently, such as financial hype (a variable we introduce), social preferences, relying on bank advisors and economics degree. These results highlight that ethical concerns and doubts about the social and economic utility of cryptocurrencies may not effectively reduce demand for these assets. As long as word of mouth and (social) media continue to emphasize their positive returns, the demand for cryptocurrencies is likely to remain strong. Conversely, relying on a "traditional" source, such as bank advisors, for taking important financial decisions may deter investing in cryptocurrencies. Individuals with an economics degree seem to have been more appreciative of cryptocurrencies as an alternative investment choice in recent years.

Second, our study adds to the behavioral finance literature by studying the factors associated with the likelihood of individuals becoming hyped on investments, following recommendations from friends or (social) media. This helps identify the individuals who may be most susceptible to investing in financial bubbles (Shiller, 2003). Hirshleifer (2015) suggests that feelings of envy might attract people to investments with lottery payoffs since hearing about others' considerable gains can make them be envious and want to take similar risks. Our results provide

empirical evidence of this phenomenon, by showing that envy is positively associated with being hyped about an investment.

Finally, we contribute to the household finance literature focusing on investment decisions (Guiso and Sodini, 2013; Gomes et al., 2019). We do this by showing that, in contrast to participation in regular financial markets and contrary to expectations (e.g., Guiso et al., 2008; Georgarakos and Pasini, 2011), trust does not play a role when investing in cryptocurrencies. Moreover, we contribute to the literature stream on investment decisions by shedding light on the main differences between conventional and crypto investors, finding that the source of information used to make financial decisions and trust are the main characteristics distinguishing conventional investors from crypto investors.

2. Data and survey design

We conduct a survey about individuals' preferences and decision-making regarding crypto investments. We reach out to a representative sample of Dutch households using the LISS (Longitudinal Internet Studies for Social Sciences) panel, one of the most comprehensive and representative datasets used in household finance research (Noussair et al., 2014; Dimmock et al., 2015; Parise and Peijenburg, 2019). This panel is a probability-based selection of households drawn from the population register of the Netherlands, managed by CentERdata, a non-profit research institute focused on academic, social, and policy-related research. The LISS Data Archive provides longitudinal data on different topics, enabling researchers to connect their survey answers with previously gathered individual data. Our survey was sent to 2140 LISS Panel individuals aged 18 or over in October 2022, and 76.8% (1643) of those contacted responded to our survey, a remarkably high response rate in comparison to most finance surveys. Our respondents are older than the general population, but there are no statistically significant differences in gender, income, or university education level between participants and non-participants.

Our survey begins with individuals' general characteristics and preferences. We inquired about typical household finance variables, such as self-reported financial knowledge (financial literacy) as Van Rooij et al. (2011), the primary information sources used to make financial decisions (as in Van Ooijen and Van Rooij, 2016), and a validated measure of social preferences (Falk et al., 2018; Falk et al., 2022). We also introduced a new variable, "financial hype", to identify an individual's susceptibility to the hype from (social) media and word-of-mouth recommendations when it comes to investing in financial products.

We obtain information about crypto investments in the second part of the survey. First, we start by asking whether individuals have ever invested in cryptocurrencies. The possible answers are "Yes, I am an active investor", "Yes, but only a few times", and "No". If they answer yes, we ask them what cryptocurrencies they have invested in. Based on relative market shares and visibility when the survey was designed, the possible options were Bitcoin, Ethereum, XRP, Binance Coin, Dogecoin and Shiba Inu. Respondents can also insert text to add more cryptocurrencies. Then, we ask crypto investors the main reasons why they invested in crypto. The options are "I believed in their technology and purpose", "I thought it was a profitable speculative investment", "I wanted to diversify my portfolio", "Everyone was talking about it, and I was afraid to miss profit opportunities", "I wanted to experiment with my investments", "I lost my trust in banks" and "I lost my trust in central banks". In each case, crypto investors could select a number from 1 (totally disagree) to 7 (totally agree). Then, we ask them how much they have invested in cryptocurrencies (in euros). Furthermore, to respondents who have never invested in cryptocurrencies, we asked them the reasons why they have not invested in crypto assets. The options are "I think it's just a speculative bubble", "I've never heard of them", "I don't like their features", "I don't understand what they are", "I think the investment is too risky", "I prefer to invest in conventional financial instruments", "I don't have enough money to buy crypto", "I don't want to invest in anything", "I never thought about it", "I think there are security issues with it", "They use techniques that are not environmentally friendly" and "I don't believe in it".

We utilize the individuals' unique identifiers to collect additional relevant variables from the primary LISS Panel waves, including individual demographics, economic conditions, *trust*, *risk-loving*, to what extent one considers *freedom* as his/her guiding principle in life, personality traits, and binary variables indicating whether the individual has *right-wing* political views, has an *economics* degree and an *IT* degree. However, we have fewer observations than those directly collected in our survey due to the unavailability of these variables for some individuals.

3. Descriptive statistics

In this section, we analyze our survey results and provide a few key findings to serve as a basis for our subsequent analysis. We present the descriptive statistics of the main variables used in our multivariate analysis for the complete sample in Table 1, Panel A. To distinguish these variables, we display them in *italics* throughout the paper. In addition, we provide relevant results from subsample data and insights from questions that will not be used in the multivariate section. We provide detailed information about the variables in Appendix I. The complete survey can be found in Appendix II.

In our sample, more than 12% of the respondents have invested in *crypto* at least once. In previous studies, the population's maximum percentage of (present and past) crypto investors was around 4% in 2019 (Paaso et al., 2022). Hence, new individuals have likely entered the crypto market in recent years. Of the crypto investors, one quarter considers themselves active investors, and three quarters invested only a few times. Among the crypto investors, the most popular cryptocurrencies in which respondents have invested are Bitcoin (72%), Ethereum (62%), XRP (10%), Dogecoin (20%) and Shiba INU (16%) (Figure 2).

The most popular reasons why people invested in cryptocurrencies were thinking it was a *profitable investment* (45%), they wanted to *experiment* (30%), and they *believed in the technology and purpose* of cryptocurrencies (26%). Other reasons were that "Everyone was talking about it, and I was afraid

of missing out on winning opportunities" (*fear of missing out*) (18%), *diversification* reasons (14%), and lost their trust in banks (14%) and central banks (14%) (Figure 3).

The average amount invested in crypto is 2512 euros (stdev. 5416). Most people invested in crypto for the first time in 2017 (first peak), 2020 and 2021 (Figure 4). Overall, 52% invested after 2019.

The three most important reasons (Figure 5) why people have not invested in crypto are that they think it is too risky (80%), they feel it is a speculative bubble (74%), and they believe there are security issues with it (56%). 30% of people mention environmental concerns. Among conventional investors that do not invest in crypto, the three most common motives are that they think it is a speculative bubble (90%), they believe it is too risky (86%), and they prefer conventional investments (79%). In Table 1, Panel B, we calculate the differences in averages for each independent variable among *crypto investors*, *conventional investors* (the individuals owning conventional financial assets, such as stocks, bonds, ETFs, etc.), and *non-crypto investors*. The emerging results corroborate our findings in the subsequent sections, where we discuss the multivariate results.

4. Insights on crypto investors

4.1 What drives crypto investments?

In this section, we start with a baseline analysis where we present our findings on the factors that are associated with the decision to invest in cryptocurrencies. In the next section, we investigate what drives crypto investing by focusing on the timing of the investments.

Some of the determinants we investigate are new to the cryptocurrency literature but have been extensively used in the field of household finance. These include *social preferences*, reliance on a *bank advisor* for financial decision-making, general *trust*, and *freedom* as a guiding principle in life. We also consider previously studied variables such as gender, education, marital status, age, income, *risk-loving*, self-reported *financial literacy*, political views, other investments held, and the degree of urbanization of the area where the household lives.

Moreover, we introduce a new variable, *financial hype*, defined as the inclination to invest in a financial product based on recommendations from social media or friends. This variable aims to identify individuals who are most likely to become involved in financial bubbles, as outlined by Shiller (2003).

Table 2 shows the results of linear probability models with a binary dependent variable indicating if the individual has ever had cryptocurrencies (1) or not (0). The results do not qualitatively vary when we include big-5 *personality traits* (Column 3) and holding *conventional investments* (Column 4) in the regression.

The empirical results show that *financial hype* is positively related to having owned cryptocurrencies, while higher *social preferences* are negatively associated with it. Additionally, using a *bank advisor* as the primary source when making financial decisions is negatively related to crypto investments. On the other hand, having an *economics degree*, valuing *freedom* as a guiding principle in life, having *right-wing* political views, being more *risk-loving*, being male, and younger are all positively associated with having invested in cryptocurrencies.

The positive association of *financial hype* with cryptocurrency investments can be explained by theories focusing on market bubbles caused by investors who learn from their social networks. Studies such as Pedersen (2022) specifically mention the cryptocurrency market in this regard. In addition, the empirical evidence from Auer et al. (2022) shows that a rising Bitcoin price often results in the entry of new users into the market. Other studies also examine social media's role in Bitcoin returns (Guégan and Renault, 2021; Nepp and Karpeko, 2022). Hence, we add to these studies by showing that the hype generated by (social) media or word of mouth seems to be a primary driver of crypto investing. This finding is relevant for policymakers, as hype can create a sense of excitement and urgency that can drive people to make investment decisions without fully understanding the risks involved. An example of hype driving cryptocurrency investments is the surge in interest around meme coins like Dogecoin and Shiba Inu Coin. These coins were created

as a joke, but they have gained a massive following on social media platforms like Twitter and Reddit, where users have promoted them as a way to get rich quickly. The hype around these coins has significantly driven their value (Tandon et al., 2021).

The negative relationship between *social preferences* and crypto investing can be because cryptocurrencies have been associated with illegal activities (Foley et al., 2019) and environmental issues (Badea and Mungiu-Pupăzan, 2021). These traits may not be attractive to the most altruistic individuals. For instance, social preferences are found to be positively correlated with sustainable investments (Riedl and Smeets, 2017; Bauer et al., 2021), a type of asset that aims to have a positive societal impact. Moreover, previous literature finds that bitcoin is mainly a speculative asset whose fundamental value is close to zero (e.g., Cheah and Fry, 2015; Baur et al., 2019). Hence, an individual with high social preferences may not be attracted by an investment considered mostly speculative without any real economic impact and with doubtful societal implications. Our finding is new and can partly be attributed to the correlation between low levels of volunteering in a geographic area and higher cryptocurrency investments (Pursiainen and Toczynski, 2022), and between crypto investment and individualism (Foley et al., 2022). Hence, claims from policymakers that cryptocurrencies could drive financial instability, market manipulation, are widely used for criminal activities, and have a high environmental footprint[3] may not be effective in discouraging crypto investing, given that crypto investors are less likely to have high social preferences.

We find that individuals that rely on *bank advisors* are less likely to be associated with crypto investing. This is intuitive as banks are at the core of the "old traditional financial world". This result can be explained by the fact that cryptocurrencies are considered very risky, banks do not gain fees on their selling, and the general opinion of traditional finance actors on them is negative.[4]

[3] https://www.europarl.europa.eu/news/en/headlines/economy/20220324STO26154/cryptocurrency-dangers-and-the-benefits-of-eu-legislation
[4] https://www.nytimes.com/2021/11/01/business/banks-crypto-bitcoin.html

The positive relationship we identify between having an *economics* degree and crypto investing is new in the literature. It is counterintuitive since, due to the technicalities of cryptocurrencies, one could expect a positive relationship with more technical degrees, such as IT ones (*IT* degree is positively associated with crypto investing, although it is only weakly significant). Our finding related to having an *economics* degree can be due to the following factors: in recent years, crypto investments have become more accessible due to crypto exchanges, and it has been considered a more common investment by the "traditional" type of investors. Hence, this could have reassured people with an economics degree, who, on average, are not familiar with cryptography (the underlying technology of cryptocurrencies), but they are with financial investments (Christiansen et al., 2008). Furthermore, the proliferation of cryptocurrencies has led to the creation of many accessible informational materials, making these financial instruments more comprehensible for non-technical individuals who are accustomed to finance.

The positive relationship between *freedom* and crypto can be due to the initial libertarian ideology of cryptocurrencies (Bohr and Bashir, 2014), since crypto would have been supposed to "free individuals from any financial control from governments and central banks".

Similarly to Paaso et al. (2022), *right-wing* views positively relate to crypto investing. This finding can be interpreted with the premise that left-wing voters are usually characterized by an opinion favoring financial regulation and state economic intervention (Alesina et al., 2018), while right-wing parties are considered to be, on average, more conservative in their public finance choices (Pettersson-Lidbom, 2008). The widespread use of Bitcoin would undermine the possibility of implementing many policies favored by more left-wing voters, such as financial regulation, redistributive policies, taxing the wealthy, and using expansionary monetary policies to counter recessions (Golumbia, 2016).

We confirm the positive association between being more *risk-loving* and crypto investing found by Bonaparte (2022). This result is intuitive since cryptocurrency prices are very volatile, so risk-averse individuals are likely too afraid to invest in them.

Similar to all previous studies (Bonaparte, 2022; Auer and Tercero-Lucas, 2022; Hackethal et al., 2022; Hoopes et al., 2022; Paaso et al., 2022; Pursiainen and Toczynski, 2022; Aiello et al., 2023; Weber et al., 2023), we find a positive association between being male and investing in cryptocurrencies. According to Chen et al. (2023), this result can be partly explained by the significant gender differences in the willingness to use new financial technology. Moreover, consistent with previous studies, our results show that younger individuals are more likely to have invested in cryptocurrencies. This finding may be attributed to their greater familiarity with and trust in new technologies (Bonaparte, 2022).

An unexpected result is that *trust*, which has a crucial role for investing in general (e.g., Guiso et al., 2008; Georgarakos and Pasini, 2011), does not play a role for crypto investing. This result can appear somewhat counterintuitive since cryptocurrencies are related to hacking attacks, thefts, and other security-related issues (Sokolov, 2021). Even if previous studies find that distrust in traditional finance is not a driver of crypto investing (Auer and Tercero-Lucas, 2022; Paaso et al., 2022), one could still expect that people who trust others more would be more likely to invest in cryptocurrencies, but we show this is not the case. Section 4.5 further discusses the relationship between trust and cryptocurrencies.

In column 3 and 4 in Table 2, we control for big-5 personality traits, considering the potential influence of emotional stability, conscientiousness, and openness to experience on the decision to invest in cryptocurrencies due to the unique characteristics of this financial market. Those big-5 personality traits are not significant, and their inclusion does not alter our other results.

In column 4, we also show that crypto-investors are more likely to be *conventional investors* since there is a positive relationship between having conventional financial investments and investing in cryptocurrencies.

When we consider the *volume* invested in cryptocurrencies, we find that, when we include everyone in our regressions (Table 2.1), the determinants of the volume are the same as the determinant of crypto investing. The only change observed is that *income* becomes positively significant, which can be explained by the possibility that individuals with more disposable income every month can afford to take higher risks and subsequently invest larger amounts.

4.2 Time of the adoption

Our main focus is to investigate how the group of adopters has varied in order to understand whether the drivers of crypto investing have changed over time. We label *early adopters* as those who invested for the first time in crypto in the period 2014-2017, the *middle adopters* in 2018-2019, and the *late adopters* in 2020-2022. The *early adopters* are the ones who invested before the 2018 Bitcoin crash, which involved the sell-off of most cryptocurrencies in that year.[5] By September 2018, cryptocurrencies had collapsed 80% from their peak in January 2018. The *late adopters* are the ones who have invested in crypto from 2020, hence during the most recent cryptocurrency boom-and-bust cycle.[6] Half of our crypto investors are considered *late adopters*. Therefore, it is a substantial part of the crypto-investors sample, and since most studies were carried out before the Covid pandemic, some drivers for the new group may differ from the earliest one.

When we compare at the univariate level in untabulated results,[7] the only significant (at 5%) difference between early adopters and late adopters is that the former is more likely to be *risk-loving*

[5] https://www.nbcnews.com/tech/internet/bitcoin-loses-more-half-its-value-amid-crypto-crash-n844056
[6] https://www.imf.org/en/Blogs/Articles/2021/10/01/blog-gfsr-ch2-crypto-boom-poses-new-challenges-to-financial-stability
[7] The results are available upon request.

and have an *IT* degree. Nevertheless, the similarity between these two groups does not preclude the possibility that their driving factors of crypto investing across groups might differ.

Table 3 shows the results of linear probability models with a binary dependent variable indicating if the individual is an *early adopter* (Column 1), a *middle adopter* (Column 2), a *late adopter* (Column 3) or if he/she has never invested in cryptocurrencies (0).

Our findings indicate that *late adopters* are a quite different group of crypto investors compared to *early* and *middle adopters*. When we zoom in on *late adopters*, the most noteworthy results are that *financial hype*, *bank advisors*, *economics* degree and *freedom* play a role in *late adopters*' crypto investments. We interpret these findings below.

The positive association between *financial hype* and being a *late adopter* of crypto can be explained by the fact that after 2020 crypto was already quite mainstream. There were a lot of stories in the media about crypto millionaires,[8] and people were more likely to be tempted to invest in crypto by hearing about the returns in the crypto market made by friends or influencers. This hype could have brought the most sensitive people to peer comparisons and chasing easy gains to invest in the crypto market. When performing t-tests on the difference between the financial hype coefficients for different groups of adopters, the results are significant at 1% level.

Using *bank advisors* when making investment decisions is negatively associated with crypto investing for *late adopters*. This is likely because individuals have become more familiar with hearing about cryptocurrencies, thus they may have asked for information about them from their bank advisors, and their advisors likely did not recommend them to invest in crypto.

We show a positive relationship between having a degree in *economics* and being a crypto investor in the last wave. The information and transaction costs to invest in crypto in recent years have been much lower due to the growth of crypto exchanges.[9] Hence, this may have attracted

[8] https://cointelegraph.com/explained/the-number-of-crypto-billionaires-is-growing-fast-heres-why
[9] https://www.ft.com/content/d09adf75-9ee9-4c47-9595-69c02113febe

individuals with an economics degree to a market that was earlier perceived more as a black box due to the cryptography knowledge required to understand it correctly. Moreover, it was considered as an alternative asset predominantly in recent years (Bouri et al., 2020).

Having *freedom* as a guiding principle in life seems to drive crypto investments of *early adopters* (weakly significant) and *late adopters*. This could be due to the trend that crypto exchanges have emerged in recent years and often emphasize crypto as a means to achieve freedom in their marketing materials.[10]

We also find that *risk-loving* is positively associated with crypto investing for all types of adopters except the late ones. This result suggests that as cryptocurrencies have become more mainstream in recent years, they have begun to attract a broader public than just risk-seekers. This is likely because the perceived risk of investing in cryptocurrencies has decreased due to their increased adoption and the availability of more ways to buy and trade them (Aspris et al., 2021).

Owning *conventional investments* is a positive driver of crypto investing for all types of adopters. Moreover, we find a negative relationship between being *female* and *early adopter* in crypto investing. Furthermore, *income* drives crypto investing of only *early adopters*, which supports the finding by Hoopes et al. (2022) that the positive relationship between income and crypto investments has been decreasing over time. Also *urban* is only significant for *early adopters,* meaning that they were more likely to live in highly urbanized areas. The coefficient of *age* is always statistically significantly negative, regardless of the group of adopters.

Overall, the results from sections 4.1 and 4.2 emphasize the importance of *financial hype* to invest in cryptocurrencies, especially in the last wave of crypto investments. Given the relevance of this variable, in section 4.4, we will investigate the characteristics that primarily drive it.

4.3 Drivers of reasons to invest in cryptocurrencies

[10] https://www.coinbase.com/blog/how-crypto-enables-economic-freedom

As we document in section 3, the reasons why people have invested in cryptocurrencies are multiple and heterogeneous. In this section, we analyze what drives the most important reasons to invest in crypto: *believing in the technology and purpose of cryptocurrencies*, thinking it was *a profitable investment*, *diversification* reasons, *fear of missing out*, and *experimenting*.

Table 4 shows the results of a linear probability model. The binary dependent variables in each column indicate if the individual invested in crypto because of *believing in the technology and purpose* (column 1), thinking it was a *profitable investment* (column 2), *diversification* reasons (column 3), *fear of missing out* (column 4) and *experimenting* (column 5), while the dummy is equal to zero if the individual is not a crypto investor.

Financial hype has a positive association with *believing in the technology and its purpose*, thinking it was a *profitable investment* and *fear of missing out*. This result suggests that when cryptocurrencies are a hot topic and generate a lot of buzz, investors are more likely to see them as a good investment opportunity with promising technology and feel the fear of missing out if they do not invest.

Conversely, having *bank advisors* as a source of information used to make investment decisions is negatively associated with thinking it was a *profitable investment* and *fear of missing out*. This finding suggests that investors who rely on *bank advisors* for investment advice are less likely to see cryptocurrencies as a good investment opportunity, probably also due to the influence of the advisor, and may not feel the fear of missing out if they do not invest.

The results also show that *females* are negatively associated with all the reasons except *diversification* and *fear of missing out*. Hence, as discussed in section 4.1, women are less likely to invest in cryptocurrencies than men. Still, the ones that invest in cryptocurrencies mostly do for diversification or being afraid of missing profitable opportunities.

Age is also negatively associated with all the reasons, implying that younger investors are more likely to invest in cryptocurrencies, independently of the reasons.

Additionally, we find that higher-*income* individuals are associated with investing in cryptocurrencies for *fear of missing out*, indicating that wealthier investors may be the most influenced by the concern of missing profit opportunities.

Owning *conventional investments* is significantly associated with *profitability*, *diversification*, and *experimenting* reasons. Hence, investors already owning conventional assets may be more open to diversifying their portfolios and experimenting with new investment opportunities like cryptocurrencies.

Right-wing political views are positively associated with *believing in the technology and its purpose*, thinking it was a *profitable investment* and *diversification*, further supporting what we suggest in section 4.1, where we discuss how political ideology might influence an investor's perception of cryptocurrencies.

Furthermore, educational background may play a role in an investor's reasoning to invest in cryptocurrencies. We find that having an *economics* degree is positively associated with investing in crypto for *fear of missing out*, while an *IT* degree is negatively related to it.

Finally, *freedom* is associated with all the reasons except *diversification*, and living in a more urbanized area is associated with all the financial motivations (*thinking it was a profitable investment*, *diversification*, *fear of missing out*).

Overall, the table highlights the diverse range of factors that can influence an investor's reason to invest in cryptocurrencies, from preferences to sources of information used to make investment decisions, demographic factors, and political ideology. We do not find any significant differences across the time of adoption and reasons to invest.[11]

4.4 Financial hype

[11] The results are available upon request.

Given the significant association we find between *financial hype* and investing in cryptocurrencies, particularly in the recent wave, we analyze the determinants of the former to identify which characteristics of individuals are related to being more susceptible to the influence of (social) media and peers when considering a crypto investment. This analysis is relevant for both the behavioral finance literature and policymakers, as individuals who follow their social networks for their investment decisions are more likely to contribute to or generate financial bubbles (Shiller, 2003; Pedersen, 2022). Hence, it is essential to know who these people are and if they are more prone to be less financially informed and more naive types of investors.

Table 5 shows the results of regressions that have *financial hype* as a dependent variable. *Financial hype* is positively associated with *social preferences*, having a university *degree*, having *right-wing views*, *trust* other people, being *risk-loving*, having an *economics* degree, and *envy* ("there have been times when I was quite jealous of the good fortune of others"). It is instead significantly negatively associated with being *female*, *age*, and having *freedom* as a guiding principle in life.

We interpret the main drivers of financial hype. Apart from personal demographics and individual preferences, the feelings of envy may drive people to consider investing in an asset simply due to word of mouth and (social) media hype. Hirshleifer (2015) for example suggests that envy might attract people to investments with lottery payoffs. Hearing about others' significant gains can make them feel envious and want to take similar risks. Theoretically, Goel and Thakor (2010) show that envy can influence business managers to make takeover decisions and trigger a wave of mergers. Our results provide empirical evidence of a related phenomenon.

Notably, the individuals with higher values of *financial hype* have a university degree and an education in economics, so they are more informed about financial investments than most of the population since these variables are associated with more sophisticated financial knowledge (Christiansen et al., 2008; Lusardi and Mitchell, 2014). Hence, these individuals are expected to be more likely to be aware of the risks involved given their educational background.

4.5 How do conventional and crypto investors differ?

Since cryptocurrencies are primarily viewed as speculative assets without real economic value (e.g., Cheah and Fry, 2015; Baur et al., 2019), examining the differences between financial market investors and those solely investing in crypto is relevant. A related objective is to understand how crypto investors can be guided towards traditional, regulated financial markets, as increased liquidity in the stock market is associated with higher economic growth (Levine and Zervos, 1998). Given that the market capitalization of crypto as of the end of March 2023 is around 1.2 trillion dollars[12], a similar amount of capital may have otherwise been canalized to more economically impactful investments, thus benefiting the world's real economy. Remarkably, in our sample, 19.48% of respondents invest in conventional assets, 5.78% invest in both crypto and conventional investments and 6,27% have invested only in crypto. Hence, the number of individuals who only invest in cryptocurrencies is non-negligible, and it is the slight majority of the crypto investors.

Table 6 shows the results of a linear probability model with a binary dependent variable equal to one if the individual invests in *conventional* assets, and equal to zero if the individual only invests in crypto. Columns 1-3 include the sample of conventional and crypto investors. Columns 4-6 have investors that only have conventional investments or cryptocurrencies.

We present in columns 1-3 that investors in traditional financial markets (versus the crypto market) are associated with using *bank advisors* and *financial magazines* when making financial decisions, having more *trust*, and being older. *Freedom* has a negative coefficient. The results are qualitatively the same if, for conventional investors, we exclude crypto investors who also invest in the conventional financial market (columns 4-6), meaning we compare the only-conventional investors to only-crypto investors. Interestingly, in this specification, the *female* coefficient is always significantly positive.

[12] https://coinmarketcap.com/

Overall, we find that conventional investors rely more on "classic" sources of financial information, such as bank advisors. This result can be due to that when created, cryptocurrencies were considered orthogonal to the "old financial world".[13] Thus, they were possibly less appealing to investors mostly used to the "traditional" means for obtaining financial information.

The negative coefficient of *freedom* can be explained by crypto promising greater autonomy and privacy from centralized control compared to conventional investments.

Moreover, as also noticed in the first section, *trust* is more critical for conventional investments than for cryptocurrencies. This finding can be explained by the fact that transactions in the "traditional financial world" are typically established through trusted intermediaries, such as banks, governments, and regulatory bodies in the conventional financial system. These intermediaries provide oversight, accountability, and assurance that transactions are conducted fairly and securely. In contrast, Bitcoin (and other cryptocurrencies) is designed as a decentralized system that operates without the need for trusted intermediaries (particularly, when crypto exchanges are not used). Trust in the Bitcoin network is established through a consensus mechanism known as the blockchain, a public ledger that records and verifies all Bitcoin transactions. The blockchain is maintained by a network of computers, known as nodes, that validate transactions and ensure the integrity of the network. Hence, in the Bitcoin system, trust is not based on the reputation of a single institution but instead on the reliability and security of the underlying technology (Makarov and Schoar, 2022). According to the supporter of cryptocurrencies, this system makes Bitcoin more resilient to fraud and corruption, as there is no single point of failure or control. Additionally, the decentralized nature of the Bitcoin network means it should be less susceptible to political influence or other external pressures, making it more resistant to forms of interference. Thus, this is probably why trust in other people plays a minor role for crypto investors but a major one for conventional investors.

[13] https://www.ft.com/content/e9db5fda-9242-11e3-8018-00144feab7de

5. Conclusion

Our study sheds light on the characteristics of individuals who invest in the crypto market with a focus on the timing of their investments.

Financial hype, not using bank advisors as sources for financial decisions, having lower social preferences and an economics degree are relevant factors associated with crypto late adopters. On the other hand, early adopters were more likely to be more risk-loving and male. Trust does not play a role in the likelihood of adoption and its timing.

We also find that most people invested in crypto because they thought it was profitable, wanted to experiment, and believed in the technology and purpose of cryptocurrencies.

Key drivers of financial hype are envying other people's fortune and having a university degree, in particular in economics. Our finding on economics education suggests that people most likely to participate in the risky crypto market are the more financially educated ones.

Finally, we find that using bank advisors when making financial decisions and having more trust in other people and being older are positively associated with investing in conventional investments relative to crypto investments.

Our study has implications for corporate finance at large since households' choosing to invest in crypto rather than traditional financial markets essentially means that there is less financing for corporations (among other market participants that need financing). Specifically, with the increasing concern for financial stability due to the crypto market, our study provides valuable insights that policymakers can use to understand who these investors are and what drives them to invest in cryptocurrencies and when. The key conclusions are that a significant part of crypto investors is largely influenced by (social) media and word of mouth in their investment decisions, which is the typical situation of speculative financial bubbles (Shiller, 2003). Moreover, societal concerns about cryptocurrencies from policymakers are not likely to affect crypto investors' decisions since they tend to be individuals with lower social preferences.

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Figure 1: Global Cryptocurrency Market Cap Chart

This graph illustrates the global market capitalization of the cryptocurrency market from January 2014 to the end of October 2022, alongside the daily total trading volume for the same period. Source: https://coinmarketcap.com/.

Figure 2: Most popular crypto

This graph shows the percentage of crypto-investors in our sample who hold each cryptocurrency.

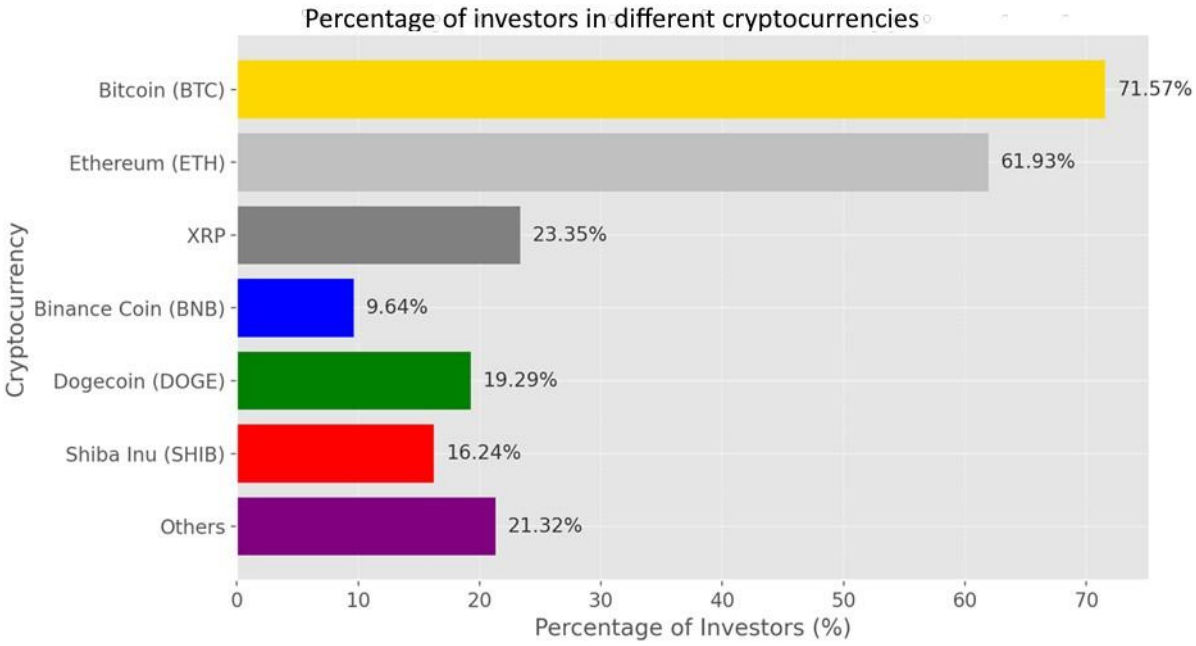

Figure 3: Reasons to invest in cryptocurrencies

This graph illustrates the primary motives that crypto-investors identified as the main reasons they decided to invest in cryptocurrencies.

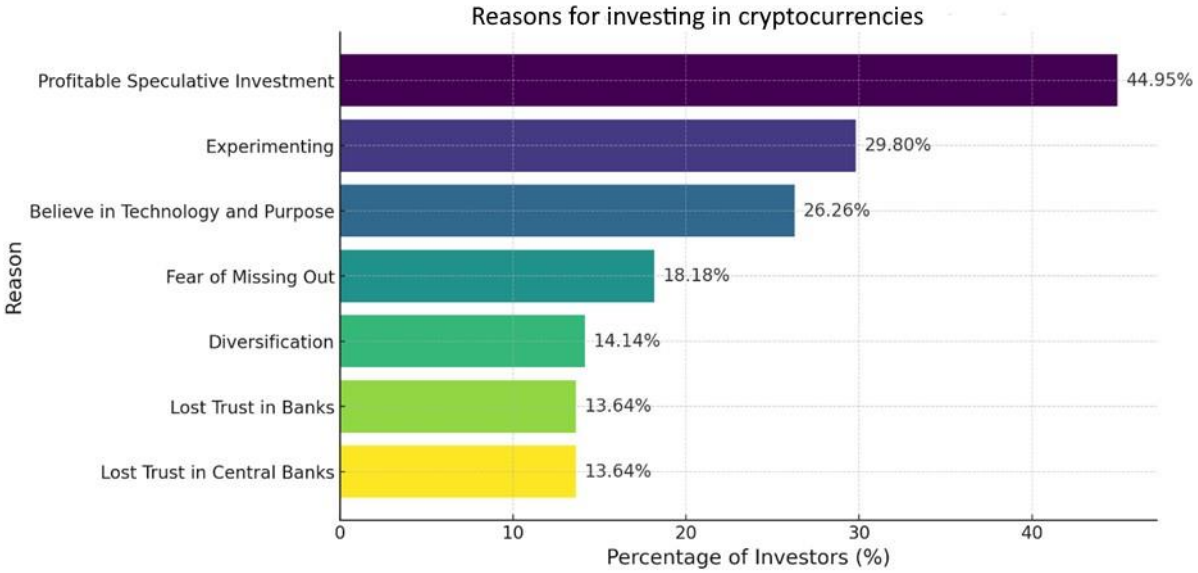

Figure 4: Year of the first crypto investment

This graph shows the percentage of crypto-investors in our sample who invested in crypto for the first time in each year.

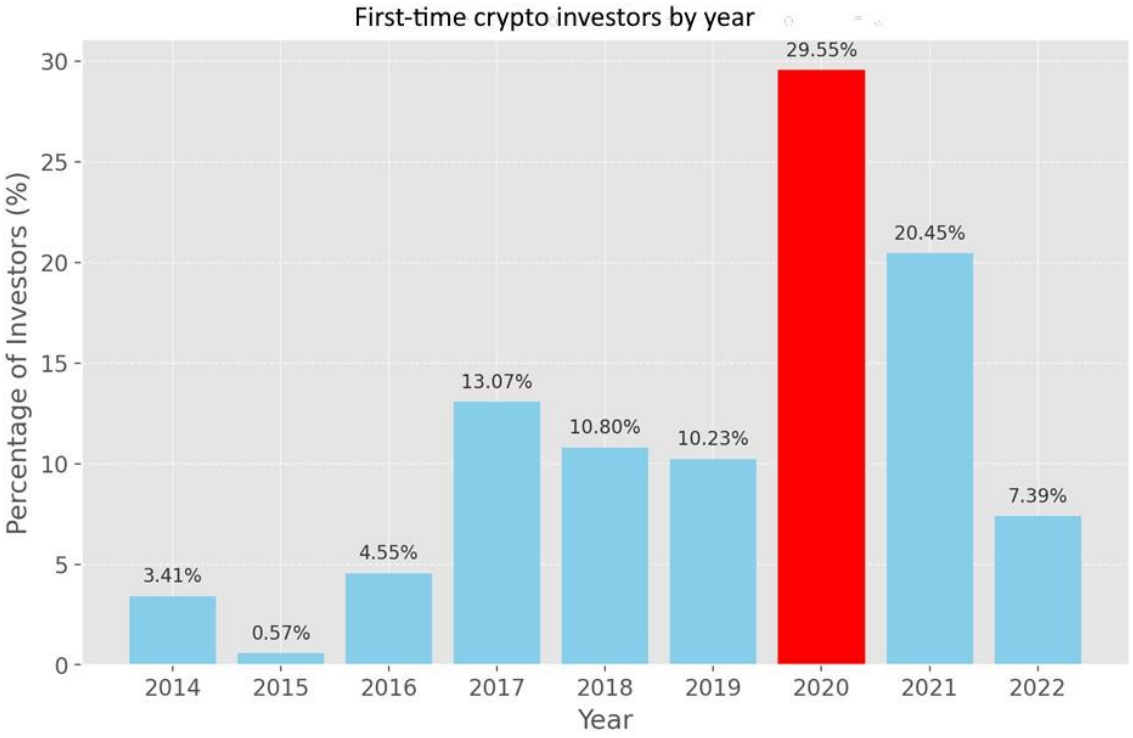

Figure 5: Reasons NOT to invest in cryptocurrencies

This graph illustrates the reasons stated by non-crypto investors for not investing in cryptocurrencies.

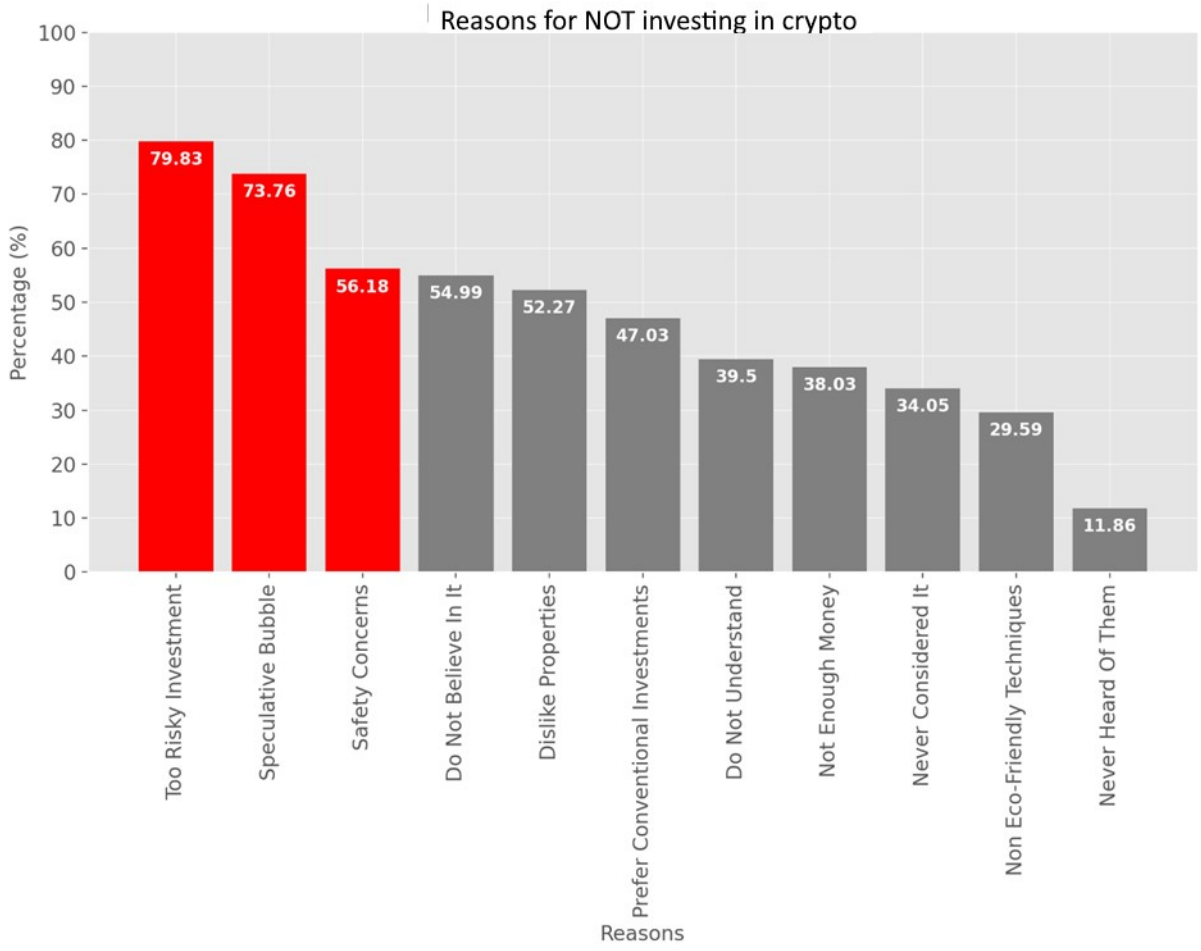

Table 1: Descriptive statistics

Panel A. This table reports summary statistics for the main variables we use in our analysis.

	N	Mean	Sd	Min	Max
Investment variables					
Crypto	1555	0.122	0.327	0	1
Crypto Volume (in Log)	1528	0.717	2.151	0	10.968
Early adopter	1555	0.024	0.152	0	1
Middle adopter	1555	0.023	0.148	0	1
Late adopter	1555	0.062	0.241	0	1
Believed in technology and purpose	1555	0.032	0.175	0	1
Profitable speculative investment	1555	0.056	0.230	0	1
Diversification	1555	0.018	0.133	0	1
Fear of missing out	1555	0.023	0.148	0	1
Experimenting	1555	0.037	0.190	0	1
Conventional investments	1555	0.196	0.397	0	1
Preferences and traits					
Financial hype	1555	2.370	1.448	1	7
Source - bank advisors	1555	2.393	1.461	1	7
Financial literacy	1555	4.486	1.351	1	7
Social preferences	1555	4.253	1.689	1	7
Preferences and traits (from LISS Panel)					
Right-wing views	1225	0.429	0.495	0	1
Trust	1501	6.038	2.271	0	10
Risk loving	1173	3.773	2.507	0	10
Freedom	1504	6.452	0.866	1	7
Economics degree	1372	0.160	0.366	0	1
IT degree	1372	0.052	0.222	0	1
Demographics (from LISS Panel)					
Female	1555	0.489	0.500	0	1
Age	1555	55.597	17.529	18	95
Urban	1555	2.754	1.341	1	5
Income	1555	7.020	1.989	0	11.864
Degree	1555	0.154	0.361	0	1
Married	1555	0.535	0.499	0	1

Panel B. This table reports the means for the main independent variables and groups we use in our analysis.

Variables	(1) Non-crypto investors	(2) Conventional investors	(3) Crypto investors	(1) - (3)	(2) - (3)
Preferences and traits					
Financial hype	2.215	2.958	3.492	-1.277***	-0.534***
Source - bank advisors	2.391	2.660	2.407	-0.017	0.253*
Financial literacy	4.427	4.888	4.915	-0.489***	-0.027
Social preferences	4.294	4.684	3.952	0.342***	0.731***
Preferences and traits (from LISS Panel)					
Right-wing views	0.411	0.476	0.567	-0.156***	-0.092
Trust	6.061	6.787	5.874	0.186	0.913***
Risk loving	3.622	4.180	5.056	-1.435***	-0.876***
Freedom	6.443	6.341	6.522	-0.0795	-0.181**
Economics degree	0.143	0.180	0.288	-0.145***	-0.108**
IT degree	0.039	0.062	0.154	-0.115***	-0.092***
Demographics (from LISS Panel)					
Female	0.521	0.428	0.259	0.262***	0.169***
Age	57.523	57.493	41.677	15.850***	15.820***
Urban	2.788	2.647	2.513	0.274***	0.133
Income	6.990	7.494	7.242	-0.252*	0.253
Degree	0.141	0.326	0.243	-0.102***	0.082*
Married	0.551	0.530	0.423	0.127***	0.107**
N	1366	215	189		

Table 2: What drives crypto investments?

This table reports OLS estimates. The table considers the full sample. The dependent variable, *Crypto*, is a dummy variable equal to one if the individual has invested in cryptocurrencies, zero otherwise. The independent variables are detailed in Appendix I. Standard errors are robust to heteroskedasticity and are reported below in parentheses. ***, **, and * refer to significance at the 1%, 5%, and 10% levels, respectively.

Variables	Crypto			
	(1)	(2)	(3)	(4)
Sample	Everyone			
Financial hype	0.038***	0.036***	0.037***	0.029***
	(0.007)	(0.009)	(0.009)	(0.009)
Source - bank advisors	-0.018***	-0.023***	-0.023***	-0.022***
	(0.006)	(0.007)	(0.007)	(0.007)
Financial literacy	0.020***	0.006	0.006	0.005
	(0.006)	(0.006)	(0.006)	(0.006)
Social preferences	-0.012***	-0.011**	-0.012**	-0.011**
	(0.004)	(0.005)	(0.005)	(0.005)
Female	-0.088***	-0.058***	-0.060***	-0.055***
	(0.016)	(0.018)	(0.019)	(0.019)
Age	-0.005***	-0.003***	-0.003***	-0.003***
	(0.001)	(0.001)	(0.001)	(0.001)
Urban	-0.003	-0.008	-0.008	-0.007
	(0.006)	(0.006)	(0.006)	(0.006)
Income	0.010***	0.006	0.006	0.006
	(0.004)	(0.005)	(0.005)	(0.005)
Degree	0.011	0.043	0.041	0.018
	(0.027)	(0.032)	(0.032)	(0.033)
Married	0.001	0.010	0.010	0.016
	(0.016)	(0.018)	(0.018)	(0.018)
Right-wing views		0.038**	0.039**	0.033**
		(0.017)	(0.017)	(0.017)
Trust		-0.003	-0.005	-0.006
		(0.004)	(0.004)	(0.004)
Risk loving		0.010***	0.010**	0.008**
		(0.004)	(0.004)	(0.004)
Freedom		0.034***	0.031***	0.031***
		(0.009)	(0.010)	(0.010)
Economics degree		0.067**	0.068**	0.063**
		(0.028)	(0.028)	(0.027)
IT degree		0.114*	0.110*	0.104
		(0.064)	(0.064)	(0.064)
Conventional investments				0.133***
				(0.031)
Constant	0.250***	-0.015	-0.034	-0.027
	(0.057)	(0.083)	(0.107)	(0.105)
Other sources	YES	YES	YES	YES
Personality	NO	NO	YES	YES
N	1555	1086	1086	1086
adj. R-sq	0.165	0.156	0.154	0.179

Table 2.1: What drives the volume invested in cryptocurrencies?

This table reports OLS estimates. The table considers the full sample. The dependent variable, *Crypto Volume*, indicates the logarithm of the volume invested in crypto by the individual. The independent variables are detailed in Appendix I. Standard errors are robust to heteroskedasticity and are reported below in parentheses. ***, **, and * refer to significance at the 1%, 5%, and 10% levels, respectively.

Variables	Crypto Volume			
	(1)	(2)	(3)	(4)
Sample	Everyone			
Financial hype	0.248***	0.221***	0.225***	0.178***
	(0.051)	(0.058)	(0.059)	(0.059)
Source - bank advisors	-0.090**	-0.134***	-0.146***	-0.138***
	(0.042)	(0.043)	(0.045)	(0.045)
Financial literacy	0.126***	0.078*	0.035	0.027
	(0.038)	(0.041)	(0.042)	(0.041)
Social preferences	-0.080***	-0.066**	-0.081**	-0.078**
	(0.029)	(0.033)	(0.033)	(0.032)
Female	-0.610***	-0.450***	-0.369***	-0.345***
	(0.104)	(0.116)	(0.124)	(0.123)
Age	-0.026***	-0.024***	-0.020***	-0.021***
	(0.004)	(0.004)	(0.004)	(0.004)
Urban	-0.016	-0.029	-0.043	-0.036
	(0.037)	(0.041)	(0.041)	(0.041)
Income	0.067***	0.060**	0.055*	0.050*
	(0.026)	(0.030)	(0.029)	(0.029)
Degree	0.005	0.104	0.124	-0.009
	(0.176)	(0.198)	(0.208)	(0.216)
Married	-0.056	0.022	0.082	0.114
	(0.108)	(0.121)	(0.125)	(0.124)
Right-wing views		0.302***	0.282**	0.250**
		(0.116)	(0.115)	(0.113)
Trust		-0.005	-0.011	-0.022
		(0.028)	(0.028)	(0.028)
Risk loving		0.048*	0.054**	0.047*
		(0.025)	(0.026)	(0.025)
Freedom		0.209***	0.204***	0.203***
		(0.062)	(0.066)	(0.065)
Economics degree			0.008	0.024
			(0.136)	(0.135)
IT degree			-0.104	-0.053
			(0.177)	(0.177)
Conventional investments				0.848***
				(0.215)
Constant	1.354***	-0.210	-0.294	-0.233
	(0.390)	(0.552)	(0.723)	(0.709)
Other sources	YES	YES	YES	YES
Personality	NO	NO	YES	YES
N	1528	1145	1071	1071
adj. R-sq	0.148	0.135	0.136	0.158

Table 3: Time of the adoption

This table reports OLS estimates. The sample considered is reported in every column. The dependent variables, *Early adopter* (Column 1), Middle adopter (Column 2) and *Late adopter* (Column 3), are dummy variables equal to one if the individual has invested in cryptocurrencies for the first time in 2014-2017, 2018-2019 and 2020-2022, respectively. The independent variables are detailed in Appendix I. Standard errors are robust to heteroskedasticity and are reported below in parentheses. ***, **, and * refer to significance at the 1%, 5%, and 10% levels, respectively.

Variables	Early adopter	Middle adopter	Late adopter
	(1)	(2)	(3)
Sample	Early adopter + non-crypto investors	Middle adopter + non-crypto investors	Late adopter + non-crypto investors
Financial hype	-0.000	0.005	0.029***
	(0.005)	(0.005)	(0.007)
Source - bank advisors	-0.005	-0.006	-0.012**
	(0.004)	(0.005)	(0.005)
Financial literacy	-0.003	0.005	0.004
	(0.003)	(0.004)	(0.005)
Social preferences	-0.002	-0.002	-0.008**
	(0.002)	(0.003)	(0.004)
Female	-0.026***	-0.010	-0.022
	(0.008)	(0.010)	(0.015)
Age	-0.001***	-0.001*	-0.002***
	(0.000)	(0.000)	(0.001)
Urban	-0.007***	-0.004	0.004
	(0.003)	(0.003)	(0.005)
Income	0.004***	-0.001	0.004
	(0.001)	(0.003)	(0.004)
Degree	-0.007	-0.025	0.013
	(0.019)	(0.017)	(0.028)
Married	-0.001	-0.013	0.021
	(0.009)	(0.009)	(0.015)
Right-wing views	0.009	0.014	0.015
	(0.009)	(0.009)	(0.013)
Trust	-0.001	-0.003	-0.000
	(0.002)	(0.002)	(0.003)
Risk-loving	0.005***	0.004**	0.002
	(0.002)	(0.002)	(0.003)
Freedom	0.009*	0.006	0.020***
	(0.005)	(0.006)	(0.007)
Economics degree	0.016	-0.006	0.054**
	(0.016)	(0.014)	(0.023)
IT degree	0.062	0.037	0.035
	(0.045)	(0.039)	(0.054)
Conventional investments	0.045**	0.058***	0.063**
	(0.020)	(0.020)	(0.026)
Constant	0.004	0.040	-0.052
	(0.049)	(0.063)	(0.081)
Other Sources	YES	YES	YES
Personality	YES	YES	YES
N	1009	1012	1043
adj. R-sq	0.062	0.054	0.099

Table 4: Reasons to invest in cryptocurrencies

This table reports OLS estimates. The sample considered in every column consists of the Investors in crypto for the motive indicated the column + non-crypto investors. The dependent variables, *Believed in technology and purpose* (Column 1), *Profitable speculative investment* (Column 2), *Diversification* (Column 3), *Fear of missing out* (Column 4) and *Experimenting* (5) are dummy variables equal to one if the individual has invested in cryptocurrencies for the reasons indicated. The independent variables are detailed in Appendix I. Standard errors are robust to heteroskedasticity and are reported below in parentheses. ***, **, and * refer to significance at the 1%, 5%, and 10% levels, respectively.

Variables	Believed in technology and purpose	Profitable speculative investment	Diversification	Fear of missing out	Experimenting
	(1)	(2)	(3)	(4)	(5)
Sample	Investors in crypto for the motive indicated the column + non-crypto investors				
Financial hype	0.012**	0.015**	0.002	0.010**	0.007
	(0.006)	(0.006)	(0.004)	(0.005)	(0.006)
Source – bank advisors	-0.009	-0.015**	-0.004	-0.013***	-0.008
	(0.006)	(0.006)	(0.005)	(0.004)	(0.005)
Financial literacy	0.003	0.003	0.002	-0.001	0.002
	(0.004)	(0.005)	(0.003)	(0.003)	(0.004)
Social preferences	-0.001	-0.004	-0.001	-0.003	-0.004
	(0.003)	(0.004)	(0.003)	(0.002)	(0.003)
Female	-0.029***	-0.049***	-0.013	-0.012	-0.018*
	(0.011)	(0.012)	(0.008)	(0.009)	(0.011)
Age	-0.001***	-0.002***	-0.001***	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Urban	-0.005	-0.010**	-0.007***	-0.006**	-0.006
	(0.004)	(0.004)	(0.003)	(0.003)	(0.004)
Income	0.001	0.005	0.001	0.005***	0.002
	(0.004)	(0.003)	(0.002)	(0.001)	(0.003)
Degree	0.008	0.004	0.012	0.021	0.018
	(0.023)	(0.026)	(0.018)	(0.019)	(0.025)
Married	0.000	-0.006	-0.004	0.006	-0.000
	(0.012)	(0.013)	(0.008)	(0.009)	(0.011)
Right-wing views	0.027**	0.026**	0.024***	-0.000	-0.005
	(0.011)	(0.012)	(0.009)	(0.009)	(0.011)
Trust	-0.005*	-0.002	-0.003	0.000	-0.004
	(0.003)	(0.003)	(0.002)	(0.002)	(0.003)
Risk-loving	0.005*	0.003	0.004*	0.001	0.004
	(0.003)	(0.003)	(0.002)	(0.002)	(0.003)
Freedom	0.016***	0.024***	0.008	0.007*	0.013**
	(0.006)	(0.007)	(0.005)	(0.004)	(0.006)
Economics degree	0.020	0.041*	0.023	0.039**	0.031
	(0.019)	(0.022)	(0.016)	(0.018)	(0.020)
IT degree	0.025	0.022	0.020	-0.040***	-0.006
	(0.045)	(0.048)	(0.039)	(0.012)	(0.041)
Conventional investments	0.032	0.050**	0.049**	0.014	0.066***
	(0.021)	(0.024)	(0.019)	(0.016)	(0.023)
Constant	-0.024	-0.038	0.048	0.011	0.000
	(0.050)	(0.057)	(0.048)	(0.031)	(0.053)
Other Sources	YES	YES	YES	YES	YES
N	1010	1022	996	995	1010
adj. R-sq	0.087	0.107	0.074	0.067	0.068

Table 5: What drives financial hype?

This table reports OLS estimates. The table considers the full sample. The dependent variable, *Financial hype*, measures how much the individual would consider investing in financial products because they are recommended by (social) media or friends, acquaintances or family. The independent variables are detailed in Appendix I. Standard errors are robust to heteroskedasticity and are reported below in parentheses. ***, **, and * refer to significance at the 1%, 5%, and 10% levels, respectively.

Variables	Financial hype	Financial hype	Financial hype
	(1)	(2)	(3)
Sample		Everyone	
Financial literacy	0.080***	0.033	0.046
	(0.025)	(0.031)	(0.032)
Social preferences	0.079***	0.075***	0.078***
	(0.020)	(0.024)	(0.024)
Female	-0.262***	-0.231***	-0.248***
	(0.067)	(0.079)	(0.085)
Age	-0.035***	-0.027***	-0.027***
	(0.002)	(0.003)	(0.003)
Urban	-0.043*	-0.046*	-0.049*
	(0.025)	(0.028)	(0.028)
Income	0.011	-0.022	-0.020
	(0.017)	(0.019)	(0.019)
Degree	0.313***	0.313***	0.351***
	(0.102)	(0.118)	(0.122)
Married	-0.130*	-0.106	-0.106
	(0.069)	(0.079)	(0.079)
Right-wing views		0.171**	0.188**
		(0.077)	(0.078)
Trust		0.044***	0.051***
		(0.017)	(0.017)
Risk-loving		0.065***	0.067***
		(0.016)	(0.016)
Freedom		-0.189***	-0.167***
		(0.050)	(0.051)
Economics degree		0.243**	0.237**
		(0.109)	(0.109)
IT degree		-0.017	0.001
		(0.172)	(0.170)
Envy		0.360***	0.326***
		(0.077)	(0.080)
Constant	3.827***	4.192***	4.854***
	(0.203)	(0.386)	(0.533)
N	1555	1054	1054
adj. R-sq	0.226	0.263	0.264

Table 6: How do conventional investors differ from crypto investors?

This table reports OLS estimates. The sample in Columns 1-3 comprises investors in cryptocurrencies, conventional investments, or both. In contrast, columns 4-6 have investors only in conventional investments or investors only in cryptocurrencies. The dependent variable, *Conventional investments*, is a dummy variable equal to one if the individual has conventional financial assets (e.g., stocks, bonds, ETFs, etc.). The independent variables are detailed in Appendix I. Standard errors are robust to heteroskedasticity and are reported below in parentheses. ***, **, and * refer to significance at the 1%, 5%, and 10% levels, respectively.

Variables	Conventional investments					
	(1)	(2)	(3)	(4)	(5)	(6)
Sample	Investors in conventional investments + Investors in cryptocurrencies			Investors only in conventional investments + Investors only in cryptocurrencies		
Financial hype	0.000	-0.005	-0.010	-0.006	-0.019	-0.023
	(0.017)	(0.021)	(0.022)	(0.020)	(0.025)	(0.027)
Source - bank advisors	0.022	0.044**	0.043**	0.032*	0.050**	0.049**
	(0.015)	(0.018)	(0.018)	(0.018)	(0.020)	(0.021)
Source - financial magazines	0.0387**	0.0368*	0.0384*	0.0339*	0.0296	0.0301
	(0.021)	(0.056)	(0.058)	(0.089)	(0.168)	(0.191)
Financial literacy	0.017	0.008	0.016	0.015	0.025	0.029
	(0.020)	(0.025)	(0.027)	(0.023)	(0.028)	(0.031)
Social preferences	0.001	0.000	0.001	0.014	0.014	0.016
	(0.013)	(0.015)	(0.016)	(0.015)	(0.019)	(0.020)
Female	0.104**	0.085	0.075	0.163***	0.132**	0.125*
	(0.044)	(0.056)	(0.061)	(0.051)	(0.063)	(0.068)
Age	0.007***	0.006***	0.006***	0.012***	0.009***	0.009***
	(0.001)	(0.002)	(0.002)	(0.001)	(0.002)	(0.002)
Urban	-0.013	-0.024	-0.022	-0.016	-0.022	-0.016
	(0.017)	(0.022)	(0.022)	(0.019)	(0.024)	(0.026)
Income	-0.013	-0.016	-0.016	-0.005	-0.010	-0.009
	(0.013)	(0.016)	(0.015)	(0.016)	(0.017)	(0.017)
Degree	0.120**	0.051	0.068	0.145***	0.046	0.063
	(0.047)	(0.060)	(0.061)	(0.055)	(0.066)	(0.067)
Married	-0.077*	-0.044	-0.045	-0.049	-0.045	-0.052
	(0.041)	(0.050)	(0.052)	(0.048)	(0.059)	(0.061)
Right-wing views		0.069	0.054		0.062	0.048
		(0.051)	(0.052)		(0.060)	(0.062)
Trust		0.027**	0.029**		0.030*	0.029*
		(0.013)	(0.013)		(0.015)	(0.016)
Risk-loving		-0.005	-0.001		-0.022*	-0.018
		(0.011)	(0.012)		(0.013)	(0.014)
Freedom		-0.059**	-0.054*		-0.092***	-0.088***
		(0.026)	(0.028)		(0.031)	(0.034)
Economics degree		-0.006	-0.010		-0.098	-0.102
		(0.057)	(0.059)		(0.071)	(0.073)
IT degree		-0.098	-0.087		-0.127	-0.111
		(0.101)	(0.103)		(0.112)	(0.112)
Constant	0.269*	0.742***	0.929**	-0.220	0.588**	0.572
	(0.160)	(0.250)	(0.386)	(0.186)	(0.287)	(0.481)
Other Sources	YES	YES	YES	YES	YES	YES
Personality	NO	NO	YES	NO	NO	YES
N	404	260	260	314	207	207
adj. R-sq	0.105	0.120	0.112	0.233	0.231	0.223

Appendix I. Variable definitions

Variable Name	Definition
Financial hype	Would you consider investing in financial products because they are recommended by (social) media or by your friends, acquaintances or family? (1-7)
Source - bank advisors	How often do you use the following sources of information when making important financial decisions? (1-7) - Bank advisors
Financial literacy	Self-assessed financial knowledge (1-7)
Social preferences	How much are you willing to give to good causes without expecting anything in return? (1-7)
Female	The gender of the individual is female - Binary variable
Age	Age of the individual (in years)
Urban	Degree of urbanization of the area where the individual lives (from 1, extremely urban, to 5, not urban)
Income (in Log)	Logarithm of the individual income
Degree	The individual has a degree - Binary variable
Married	The individual is married - Binary variable
Right-wing views	The individual has right-wing political views - Binary variable
Trust	Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people? (0-10)
Risk-loving	Generally speaking, are you the kind of person who is willing to take risks or who prefers to avoid risks? (0-10)
Freedom	Which values act as a guiding principle in your life and which values are less important to you? - Freedom (1-7)
Economics degree	The individual has an economics degree (0-1)-dummy
IT degree	The individual has an IT degree (0-1)-dummy
Conventional investments	The individual has conventional financial investments (e.g., stocks, bonds or ETFs etc.)
Source - financial magazines	How often do you use the following sources of information when making important financial decisions? (1-7) - Financial magazines
Source - financial advisors	How often do you use the following sources of information when making important financial decisions? (1-7) - Other financial advisors
Source - social media	How often do you use the following sources of information when making important financial decisions? (1-7) - Social media
Source - internet	How often do you use the following sources of information when making important financial decisions? (1-7) – Internet
Source – friends	How often do you use the following sources of information when making important financial decisions? (1-7) – Friends
Personality trait - openness	Individual's score in openness to experience (1-5) in the Big Five personality test
Personality trait - extraversion	Individual's score in extraversion (1-5) in the Big Five personality test
Personality trait - agreeableness	Individual's score in agreeableness (1-5) in the Big Five personality test
Personality trait - emotional stability	Individual's score in emotional stability (1-5) in the Big Five personality test
Personality trait - conscientiousness	Individual's score in conscientiousness (1-5) in the Big Five personality test
Believed in technology and purpose	Dummy= 1 if the if the individual invested in crypto because: "Believed in their technology and purpose"
Profitable speculative investment	Dummy= 1 if the if the individual invested in crypto because: "Profitable speculative investment"
Diversification	Dummy= 1 if the if the individual invested in crypto because: "Diversification"
Fear of missing out	Dummy= 1 if the if the individual invested in crypto because: "Fear of Missing out"
Experimenting	Dummy= 1 if the if the individual invested in crypto because: "Experimenting"
Early adopter	Dummy = 1 if the crypto investor is an early adopter (2014-2017)
Middle adopter	Dummy = 1 if the crypto investor is a middle adopter (2018-2019)
Late adopter	Dummy = 1 if the crypto investor is a late adopter (2020-2022)

Appendix II. Survey questions (translated from Dutch)

1.1. Subjective Financial Literacy

How would you rate your financial knowledge?

a. 1 (Very poor)

b. 2

c. 3

d. 4

e. 5

f. 6

g. 7 (Very good)

1.2. Financial Information Source

How often do you use the following sources of information when making important financial decisions?

a. Parents, friends, or acquaintances

b. Newspapers

c. Financial magazines, guides, books

d. Bank or mortgage adviser

e. Other financial advisers

f. TV or radio

g. Social media (Facebook, Twitter, Reddit, etc.)

h. Financial information on the Internet

Categories:

1. 1 Never

2. 2

3. 3 Sometimes

4. 4

5. 5 Often

6. 6

7. 7 Always

1.3. Financial Hype

Would you consider investing in financial products because they are recommended by (social) media or by your friends, acquaintances or family?

a. 1 (Absolutely not)

b. 2

c. 3

d. 4 (Maybe)

e. 5

f. 6

g. 7 (Absolutely yes)

1.4. Social Preferences

How much are you willing to give to good causes without expecting anything in return (on a scale of 1 to 7, where 1 means 'completely unwilling', and 7 means 'very willing')?

a. 1 (Not at all willing)

b. 2

c. 3

d. 4

e. 5

f. 6

g. 7 (Very willing)

1.5. Investments

Do you have investments (e.g., stocks, bonds or ETFs)?
a. Yes

b. No

1.6.1 Have you ever invested in cryptocurrencies?

a. Yes, I have been an active investor in cryptocurrencies.

b. Yes, but only a few times.

c. No.

→ Questions from 1.6.2. to 1.7.7. below are asked only to people who answered a. and b. to q.1.6.1.

1.6.2. In what cryptocurrencies have you invested? More than one answer is possible.

a. Bitcoin

b. Ethereum

c. Xrp

d. Binance Coin

e. Dogecoin

f. SHIBA INU

g. Other (text)

1.6.3. What were the main reasons you invested in cryptocurrencies? Please indicate whether you agree or disagree with the statements below.

a. I believed in their technology and purpose.

b. I thought it was a profitable speculative investment.

c. I wanted to diversify my portfolio.

d. Everyone was talking about it, and I was afraid to miss profit opportunities.

e. I wanted to experiment with my investments.

f. I lost my trust in banks.

g. I lost my trust in central banks.

1.6.4. How much in total did you approximately invest in cryptocurrencies? Please give your answer in euros.

…

1.6.5. In what year did you first invest in cryptocurrencies?

…

→ Question 1.6.6. below is asked only to people who answered c. to q.1.6.1

1.6.6. What are the reasons you have **not** invested in cryptocurrencies? Please indicate whether you agree or disagree with the statements below.

a. I think it's just a speculative bubble (v1_7_8a).

b. I've never heard of them (v1_7_8b).

c. I don't like their features (v1_7_8c).

d. I don't understand what they are (v1_7_8d).

e. I think the investment is too risky. (v1_7_8e).

f. I prefer to invest in conventional financial instruments (v1_7_8f).

g. I don't have enough money to buy crypto (v1_7_8g).

h. I don't want to invest in anything (v1_7_8h).

i. I never thought about it (v1_7_8i).

j. I think there are security issues with it (e.g., with the security of the crypto wallet) (v1_7_8j).

k. They use techniques that are not environmentally friendly (v1_7_8k).

l. I don't believe in it (v1_7_8l).