Impact of Tokenisation on Economics Demographics and Economics of Selected Crowdfunding Investments

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Abstract
The text analyzed data from two German crowdfunding investments issued by one initiator in the real estate industry, involving a total of 1,692 investors. One fund has a classical investment structure while the initiator used an innovative approach with a tokenised investment product based on the Ethereum blockchain technology in the second one. This paper tries to find the impact on the demographics of the funds and the profitability for the initiator when making a structural change from a classical investment with a minimum investment size of EUR 1,000 to a tokenised investment structure with a minimum investment of EUR 1. The results show no impact from tokenisation on the structure of the investors´ gender and only minor impact on the age of the investors. But the findings highlight that lowering the minimum investment to EUR 1 via tokenisation to attract more investors, diminishes the profit margin for the initiator substantially. Because every investor comes at an acquisition cost, only a certain number of loss-making small investments in relation to profitable high investments can be compensated. Since it is not possible to precisely determine the density distribution of investment sizes in advance to placing a new investment, it is recommended to give up the minimum investment size of EUR 1 to avoid the risk of attracting too many investors at a deficit, hence diminishing the profit margin of the funds.

Keywords
Tokenisation, Crowdfunding, Real Estate Crowdfunding, Asset Tokenisation

JEL Codes
F6, G23, O16

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Introduction

The introduction of blockchain, tokenisation and other related distributed ledger technologies (DLTs) into the financial markets has enabled investors to exchange value without requiring the involvement of any trusted intermediary or central authority such as a bank or government (Stefanoski et al., 2020). In this context, the financial industry currently encounters the combination of two phenomena, each having the potential to change the way money is invested. One is crowdfunding, which gives retail investors access

to asset classes that were predominantly reserved for institutional and quasi-institutional investors and the second one is tokenisation which can, in principle, be used to digitize any real-world asset.

The idea of crowdfunding is simple and compelling: To fund a project or a venture, someone seeking funding, raises money from a larger number of predominantly private investors or companies instead of using traditional money sources like banks (J. Lee & Parlour, 2019). Today, these projects are always funded through internet platforms in order to manage the high numbers of participations in an efficient way. The platforms essentially act as intermediaries between the money source and the project and typically collect a fee for the service. Since the early 2000s, when internet-based crowdfunding started with an altruistic approach and was needed to finance charity projects, it has become a proliferating form for financing projects and assets, especially in recent years (Cai et al., 2021). In 2018, about 632 crowdfunding platforms collected a volume of EUR 6.5 billion. In 2020, crowdfunding platforms in Germany collected more than 1.25 billion of which the segment of real-estate crowdfunding was responsible for a volume of EUR 238.9 million (Kleverlaan et al., 2021).

One advantage of crowdfunding for investment purposes is the efficient access for retail investors to certain asset classes which commonly have a high entrance barrier due to the necessity of a minimum investment size and which are therefore dominated by institutional or quasi-institutional investors. Being able to participate in larger investments, e. g., in real estate transactions, with amounts as low as EUR 100 or even lower, can lead to higher diversification and a better risk/reward ratio for private investors. During the investment process, the investors' money will be invested in the equity or the debt position of a project, giving them some sort of share of the outcome in return (Sauermann et al., 2019). But these models come with a downside for the investors: Like most of the underlying assets, they are typically not liquid. The recent approach to tokenize investment opportunities enables a secondary market and the possibility to transfer investments among users at a low cost (James, 2019; Nassr, 2020).

The whole structure of crowdfunding combined with asset-tokenisation has striking advantages compared to conventional forms of investments. It is efficient and allows asset fractionality in a transparent and secure process (Adhami et al., 2018; Blemus & Guégan, 2020).

One of the first companies that issued such a tokenised investment via crowdfunding was the Exporo AG,[1] which is based in Hamburg, Germany. The market leader in Germany for real estate crowd funding started in 2014 as one of the first platforms in Europe to finance real estate developments through crowd investors. Until May 1st of 2023, Exporo has raised more than EUR 1 billion in equity from more than 34.500 investors across 566 Projects. In mid-2019, Exporo issued the first token-based bond on the Ethereum blockchain technology with real estate as the underlying asset in Europe. A volume of EUR 3 million was placed among private investors within a few hours (Finanzen.net, 2020).

Until today there is very little research about the effect of tokenisation on the demographics of investments. Also, despite the obvious advantages for tokenising real-world investments, there is a lack of investigations on how the investment behaviour is being influenced by the implementation of the technological innovation and its impact on the economics of an initiator when moving from a classical investment product to a tokenised investment.

1 Please see www.exporo.com for further information

This paper utilizes available data from two funds and tries to measure the effect of asset tokenisation and lowering the entrance barrier for a real estate related investment from EUR 1,000 to EUR 1 on the demographics and tries to find the impact on the profitability for the issuer. The underlying assets for both funds are similar ground up real estate developments, located in urban areas of northern Germany. The proposed yield for both investments on an annual basis was 5.5%, while the runtime was 36 months (with the possibility to extend for 6 months). The product with the classical investment structure was marketed and closed in Q1 of 2020 while the tokenised product was marketed and closed in Q2 of 2020. The motivation for the initiator to move from a classical investment structure of a direct investment in subordinated loans in the real estate developments to a tokenised product, was the opportunity to attract more investors by lowering the entrance barrier to only EUR 1, the increased fungibility for the investors due to secondary market options and the lower administrative costs to manage the investors and their investments.[2]

This paper aims to examine the provided data for the two investments before and after tokenisation and evaluate the impact on the profitability for the initiator. It is anticipated that decreasing the entrance barrier to EUR 1 will attract more investors overall. On the other hand, the novelty of the investment form might lead to reservations regarding the tokenised product, especially among older investors. Since there is a large gender gap between male and female investors when it comes to financial innovations like e. g. cryptocurrencies (Bannier et al., 2019; I. Lee, 2021; Smutny et al., 2021), it can be anticipated, that the percentage of female investors will decline when tokenising the investment.

Overall, it is suggested that tokenisation will lead to a noticeable difference in the composition of the group of investors in both funds regarding sex, investment size, and age of the investors.

The following hypotheses are proposed:

H1: Investment amounts in the tokenised investment are in average significantly lower than in the classic investment due to a lower entrance barrier.

H2: The age of the investors of the tokenised investment is significantly lower than the age of investors of a standard investment product with a similar underlying investment.

H3: The percentage of female investors in the tokenised fund will be lower than in the classic fund.

H4: Older investors tend to invest larger amounts than younger investors, hence, a strong correlation between age and investment amount can be anticipated.

A potential change in the demographics and investment sizes has an impact on the economics. Every investor comes at a cost for acquisition and management of the investment. Hence, it is important to evaluate the change in the key performance data of the fund after tokenisation to ensure profitability for the issues as well as the investor.

The contribution of this paper is to give insights into the changing demographics and investment behaviour when significantly lowering the minimum investment amount through tokenisation and to highlight the impact on the economics for the initiator.

2 This information is based on correspondence with the initiator in April 2021.

This paper is organized as follows: Firstly, it is important to understand the key components of the underlying technology. Therefore, the crucial components of the ecosystem like distributed ledger technology (DLT), blockchain, and tokenisation will be explained in the first chapter. In the second part, the available data and the assumptions will be described in detail. After that, the methods for the analysis will be explained, and the available data will be analyzed with the methods of descriptive statistics in the third chapter. The results will be presented in the fourth chapter before the discussion and conclusion of the research and its limitations in the remaining chapters.

1 Tokenisation of assets

The underlying technologies for tokenisation are DLT and the blockchain. DLT is defined as a digital ledger that allows users in a particular community to document transactions in a ledger accessible by the community in a way that cannot be altered once the transaction has been published, (Yaga et al., 2018). DLTs must have the ability to ensure multiple properties within its present system, or with very minor changes. These properties include joint recordkeeping (giving several parties the ability to collate and update verifiable records), shared-party consensus (multiple parties must be able to form agreements on the shared information to be approved), and the ability of parties to independently validate their transactional information and the integrity of the platform. Also, to provide parties with evidence (allowing individuals to discover if non-consensual adjustments have been made), and resistant to changes to the transaction history. All these properties allow a DLT system to be robust and provide a multitude of benefits to the digital currency and cryptocurrency industry (Rauchs et al., 2018). In addition, the total transaction history can be recorded in a chain, which users refer to as Blockchain (Glaser et al., 2014).

The Blockchain technology is an example of an all-purpose technology. It allows detailed and immutable tracking of transactions at low costs over a broad array of digital assets. Transactional data is stored in a sequential form across several computers simultaneously, allowing the data to be resistant to manipulation (Vagadia, 2020).

Tokenisation is a form of digitizing ownership rights over an asset using DLT, typically on a blockchain like Ethereum. All tangible and intangible goods can be tokenised by converting the value into a token. Tokens are specific objects that represent the real value of real estates, stocks, art, metals, goods and financial instruments, as well as patents and ownership rights (Kharitonova, 2021). However, a token usually does not reflect the value of the whole asset, it can be broken up and fractionalized (Stefanoski et al., 2020). The most common assets that are being tokenised are digital currencies, gold, energy commodities, securities and real estates (Forkast, 2021). Traditionally, the market for securities (equity and debt) has faced lengthy delays, excessive manual processes, and long settlement time. However, tokenisation of financial instruments can eliminate the occurrence of such issues (Heinzle, 2020; Stefanoski et al., 2020).

Tokenisation of real estate assets e. g., allows investors to obtain greater market participation as well as providing the issuers of tokens with additional capital (Laurent et al., 2018). Eventually, this can grow real estate investment markets tremendously and decrease the cost associated with the acquisition of real estate assets (Kelley, 2020).

One form of token is the security token. Security tokens, also known as asset tokens, represent assets such as debt or equity claims against the issuer as they promise the owner a share in the future profits or capital flows of the underlying corporate structure, such as dividends or interest. Security tokens are offered via so called Security Token Offerings (STO) and usually fall under regulatory compliance in their jurisdiction (Kharitonova, 2021). Because the issuer in an STO must prove ownership of the underlying asset and undergo a formal process, an STO can be compared to an Initial Public Offering (IPO) or the issuing of an asset backed security (ABS). Security tokens are expected to become the largest token market because of the benefits of fractional ownership and increased liquidity (Nassr, 2021; OECD, 2020a). One of the analyzed funds (Fund B) was issued via such an STO, and its token is based on the Ethereum blockchain according to the ERC-20 standard.

2 Data and Assumptions

The available data comprise two crowdfunding investor groups A and B which invested in different fund-like structures. Group A and group B both comprise male and female investors above the legally required minimum age of 18, who are domiciled in Germany. There were no further criteria for investors to fulfil to engage in the investments. Both groups invested in fractionalized unsecured real estate construction loans with a proposed interest rate of 5.5% p. a. and a lifespan of 3 years. Both investments were funded through the internet-based crowdfunding platform www.Exporo.de with a comparable real estate as the underlying asset. Only the age, sex and investment amount were available. Due to data protection laws in Germany, other data like income and free liquidity of the investors was not available for the analysis. The data for fund A was collected in Q1 while the data for fund B was aggregated in Q2 of 2020. The difference between both groups is that group A invested via a classical structure by buying shared interests with a minimum investment of EUR 1,000 while group B invested in a tokenised investment via a STO with a minimum investment of EUR 1. The data labelled as representative and non-confidential was kindly provided by Exporo in March of 2021 via an Excel Sheet and then imported by the author into R Studio for analysis.

Table 1: Summary of the available Data

	Number of investors	Total fund volume (in Euro)	Number of male investors	Number of female investors
Fund A	743	1,802,000	636 (85.6%)	107 (14.4%)
Fund B	949	2,107,320	780 (82.2%)	169 (17.8%)

To later interpret the data, we need to look at some of the Key Performance Indicators (KPIs) of the funds on the income as well as the expense side and put them into perspective with the received data.

On the income side, the gross profit margin (GPM) for the initiator is roughly 5% of the total fund volume.[3] The GPM can be used to cover costs connected to the emissi-

3 The GPM of 5% is based on the analyzed information of the legally mandatory public information for both funds, the WIB (Wertpapier-Informationsblatt).

on of the funds, e. g. for setup and legal expenses. On the expense side, an initiator has Customer Acquisition Costs (CAC, for marketing, buying leads etc.), which in case of these crowdfunding products is close to EUR 350 per investor.[4] The CAC is unrelated to the investment amount and whether the investor chooses the standard or the tokenised product. Since an investor can make multiple investments, the average CAC per fund will go down as the number of investments increase. In average an investor invests approximately 5 times into different funds of the initiator.5[5] This multiple applies to all investors in Funds A and B. Thus, the average CAC per investor per fund is EUR 70.

Obviously, with a fixed income (of 5% of the fund volume) on one side and the variable costs depending on the number of investors in relation to the fund volume on the other side, the goal is to fully place a fund with the fewest number of investors, hence, with investors investing amounts as high as possible.

The data comprised two funds, each with a significant number of investors. Still, the underlying data can be considered limited in relation to the whole industry.

3 Methods

The data were analyzed via descriptive statistical methods in R Studio (R Studio Team, 2015) using the tidyverse package ver. 2.0.0 (Wickham et al., 2019). The data were not altered in any way and all data were used to create data-frames for the analysis.

For the analysis the 3 variables age, gender, and *investment amount* for each fund were taken and the data were compared to evaluate whether there is a change from the classical product to the tokenised investment which could have an impact on demographics and the economics. The following descriptive statistical methods (Benninghaus, 2007) were used for the analysis:

1. Summary function to get the highest and lowest amount invested, median, mean, and first and third quartile of both funds separately.
2. Violin function to get a compact image of the continuous density distribution of the investment amounts of both funds.
3. Histogram to get an illustration of the age distribution of both funds in comparison.
4. Boxplot to get an image of the density distribution and the median of the amounts invested separated by gender for both funds.
5. Simple regression to see a possible correlation between age and the invested amounts for both funds.

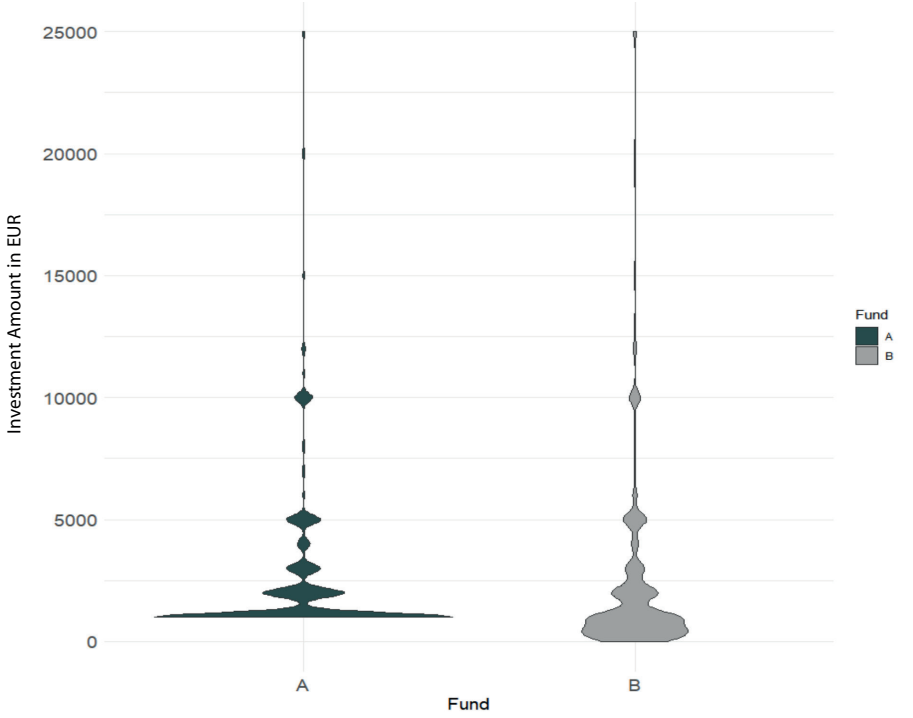
4 A total CAC of EUR 350 is - for confidentiality reasons - not the exact number for these two funds but an approximation based on email correspondence with the initiator in April 2021.
5 This number is based on correspondence with the initiator in April 2021.

4 Results

The summary function shows a mean of EUR 2,425 for fund A and EUR 2,221 for fund B. The median, which cuts the number of datasets in each data frame in half, shows the same median of EUR 1,000 while the first quartile for fund A is EUR 1,000, opposed to EUR 500 of the second fund, showing a lower amount for 25% of the data. The third quartile is the same for both funds, at EUR 2,000.

A visualization with the violin function (Figure 1) shows a more detailed picture. The mirrored density functions for the *investment amounts* for Fund A and Fund B show a clear difference in the distribution of individual *investment amounts*. The violin function also confirms the above results, that the overall shape above the third quartile is similar, while the lower part of the violin is shifted towards the 1 EUR mark.

Figure 1: Violin Diagram of the Investment Amount Distribution of Fund A and B

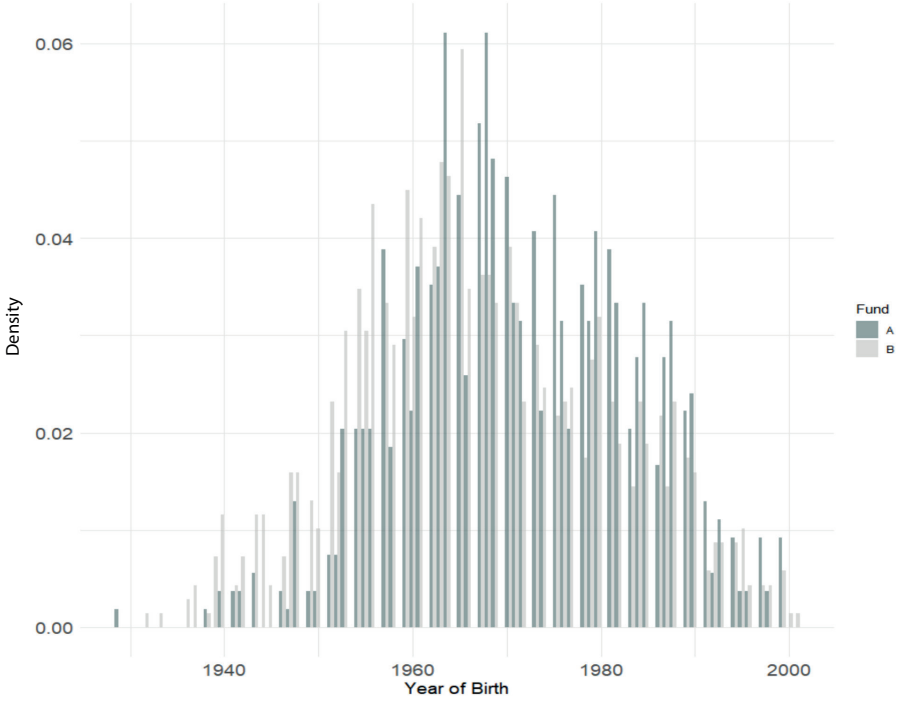


Fund A has the largest number of investments on and above the minimum *investment amount* of EUR 1,000. Fund B shows a different picture, showing a larger amount of investments below the EUR 1,000 mark, as the minimum investment for Fund B was set to EUR 1. Hence, the analysis of the data so far shows that the average amount invested in the tokenised product is lower than in the classic product. Thus, the first Hypothesis (H1) that *investment amounts* in tokenised investments are in average significantly lower than in classic investments due to a lower entrance barrier can – in the case of the analyzed projects – be confirmed.

Analysis of the Age Distribution

The analysis of the age structure in both funds highlights that the investors in the tokenised fund tend to be slightly older than those in the standard investment. A histogram (Figure 2) shows a good picture of the age distribution in Fund A versus Fund B. The histogram displays that the investors in Fund A were born later than those in Fund B. The summary function of the histogram shows that the mean of the investors in Fund A was born in 1971, while the mean in Fund B was born in 1967.

Figure 2: Histogram of the Age Distribution of Fund A and B

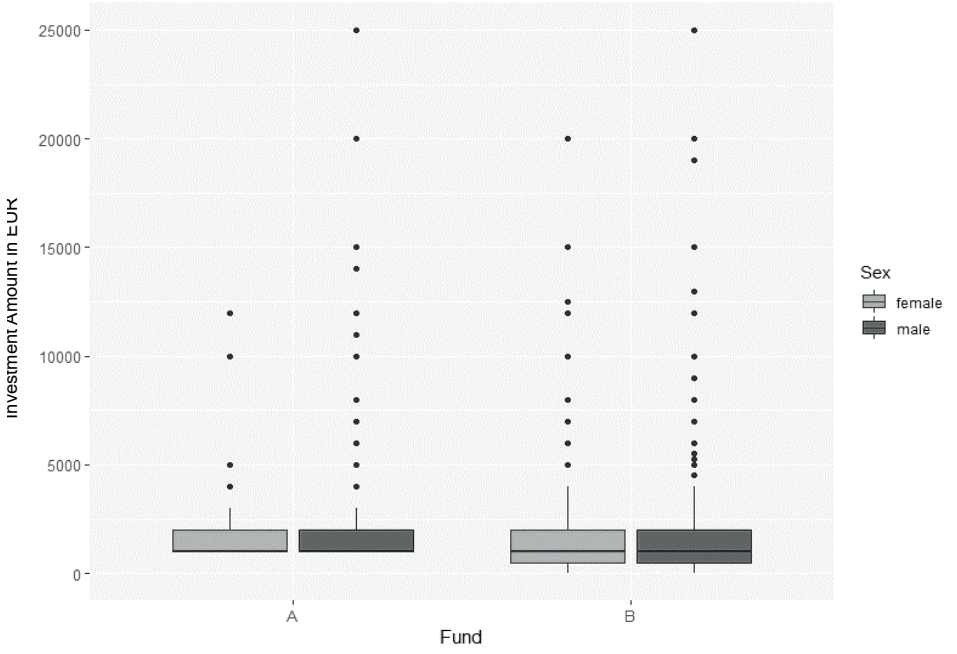


The second hypothesis (H2) suggests that the tokenised product will most likely attract younger investors due to the novelty of the investment form. However, as we can see from the analysis of the age distribution, the tokenised product has slightly older investors compared to the standard fund, so the second hypothesis – which assumes that tokenisation attracts younger investors than the standard product – could not be validated.

Boxplot of the investment amounts depending on gender

The analysis of the distribution in *investment amounts* of both funds depending on gender shows an evenly distributed picture. H3 assumes that the percentage of female investors might decline after tokenisation, but no relevant impact of the tokenisation on either gender could be found. Thus, the third hypothesis could not be supported by the data and can be stated as false.

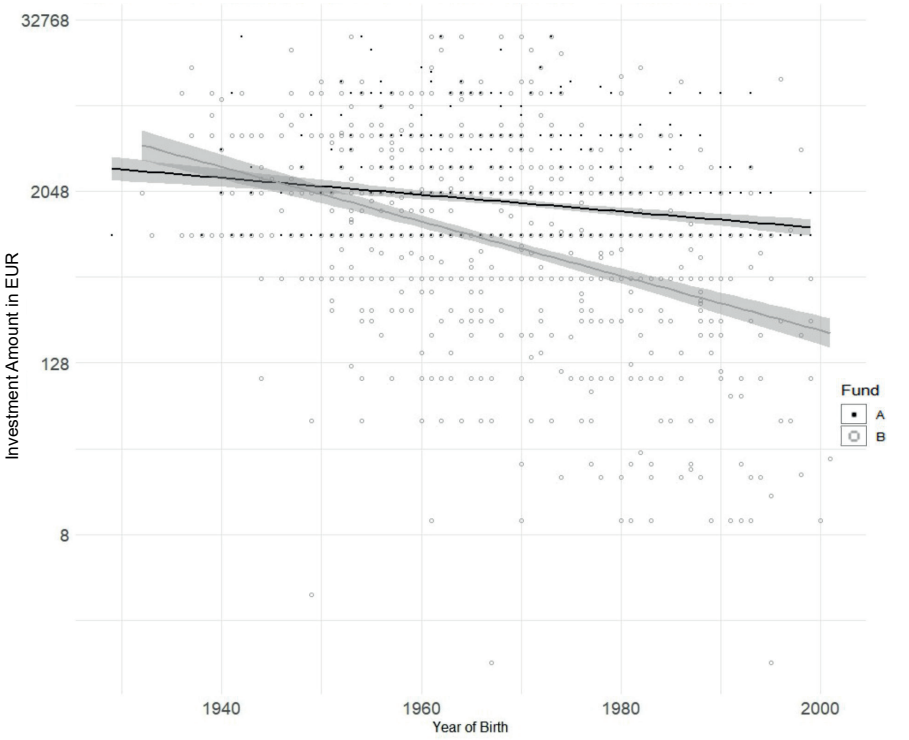
Figure 3: Boxplot of Investment Amounts on Gender for Fund A and B



Regression of investment sizes depending on the age of investors

The simple regressions with the variable *investment amount* depending on the independent variable *age*, show that the older investors in both funds tend to invest significantly more than the younger investors (Figure 4; for better visibility the investment amount is on a logarithmic scale). The low *p-values* of 4.71^{-11} for Fund A and 4.885^{-11} for Fund B show that the null-hypothesis should be rejected. The test with the Spearman´s rank correlation coefficient shows results of -0.22 for Fund A and -0.38 for Fund B with *p-values* of 2.8^{-16} for Fund A and 2.2^{-16} for Fund B, confirming the significance of the results. The fourth hypothesis (H4) suggests that older investors tend to invest larger amounts than younger investors. The data clearly supports this hypothesis. Thus, H4 could be validated.

Figure 4: Simple Regression of Investment Sizes depending on Age on a logarithmic scale



5 Discussion

Modern technologies can increase access of investors to forms of investments that were not available in previous times. It becomes imperative for scientific research to understand the demographics of the individuals utilizing these investment forms. A nuanced understanding of their distribution across age, gender, and other demographic factors can shed light on the influences driving people towards specific investments. Furthermore, an exploration of the profitability for the issuer of the investments as well as the investors is necessary.

The differences and unique characteristics of the different investment forms like cryptocurrencies make it challenging to establish direct comparisons to the tokenised investment which we can find in the preceding analysis.

However, due to the novelty of this field, data availability is sparse, which limits our capacity to draw concrete conclusions at this time. Consequently, there are only a limited number of studies that align closely with our research focus. Nevertheless, we will briefly discuss a few that bear relevance to our topic, providing a broader context and framework for our investigation.

In this study, we assessed the differences between investments in two distinct funds: a traditional product (Fund A) and a tokenised product (Fund B). The results provide insight into the impact of tokenisation on investment behaviours, age distribution and the gender balance of the investors.

The first hypothesis (H1), which assumes that investment amounts in the tokenised product are on average significantly lower than in classic investments due to a lower entrance barrier, was validated. We found that the mean of the investment size of the tokenised product was much lower than the ones of the traditional product. This is consistent with conclusion of the OECD, which found that tokenisation enables fractional ownership, which permits lower investment amounts and thus increases accessibility (OECD, 2020b, 2020a). These finding aligns with the results from other researchers, which conclude that tokenisation allows smaller investment sizes, thus lowering entry barriers (Barnes, 2020; Chang, 2020; Smith et al., 2019; Tian et al., 2020).

Contrary to our expectations, the second hypothesis (H2), which suggests that younger investors would be more attracted to tokenised investments, was not supported. The mean of investors in the tokenised fund was born in 1967 while the mean of the investors in the classic investment was born in 1971, so the investors in the tokenised product were older. This seems to contradict the popular belief, which was also supported by various researchers, that younger investors are more inclined towards novel and digital investment forms. A survey by Bohr showed an average age of the Bitcoin user of 33 years (Bohr & Bashir, 2014) while a different survey in 2016 showed an average age of 38, with the youngest being 19 while the oldest Bitcoin user was 66 (Presthus & O'Malley, 2017).

A possible explanation for this surprising result can be deducted from the research by Arli et al. The researchers showed that trust in the issuer of an investment can lead to a higher trust in the investment itself and can positively influence the investment decision (Arli et al., 2021). Though the underlying technology is very similar, the nature of investing into cryptocurrencies significantly differs from an investment into a tokenised real estate investment. The results suggest, that in the case of the analyzed funds, investors rather concentrate on the underlying asset than on the underlying technology.

The third hypothesis (H3) proposes that the gender distribution between the traditional and the tokenised investment, might be skewed further towards male investors in the tokenised product. But no significant difference could be found between the classic and the tokenised product. In a related research regarding barriers of investing into cryptocurrencies, the researchers found, that the attitude of men and woman are very similar when it comes to investments where investors have a lack of information or experience with the investment (Smutny et al., 2021). In general, it is worth pointing out that there is still a large gender gap when it comes to investing in nascent asset classes like cryptocurrencies. A study from Bannier et al. assesses the financial literacy of women, especially for financial innovations like Bitcoin. They point out, that women in general have a much lower fintech knowledge (Bannier et al., 2019). Smutny et. al conclude, that women are discouraged by investment barriers more frequently than men (Smutny et al., 2021). A research from Presthus and O´Malley showed the percentage of female investors in Bitcoin to be around 24% (Presthus & O'Malley, 2017). A research from Sukumaran et al in 2022 among the Malaysian retail investors showed a similar result (Sukumaran et al., 2022).

The lack of significant change in gender distribution when moving from the classical product to the tokenised investment indicates that tokenisation alone may not be enough to further address gender imbalance in investing.

Lastly, the fourth hypothesis (H4) suggests that older investors in the funds tend to invest larger amounts than younger investors. A hypothesis that was supported by the results. This aligns with the lifecycle hypothesis of saving, which was formulated in 1954 by Modi-

gliani and his student Brumberg. It suggests that individuals tend to save and invest more as they age and as their income rises (Deaton, 2005). It could be assumed that the tendency to invest higher amounts with increasing age would be softened by the deterring effect on elder people of implementing a novel technology like tokenisation. But this does not seem to be the case. This interesting result was also concluded by researchers such as Smutny et al. who found, that older generations like the generation x (born 1965–1979) are also open to use new technologies like younger generations such as the millennials which were born between the early 1980s and the late 1990s (Smutny et al., 2021).

Overall, the above results suggest that, in alignment with the findings of Arli et al. (Arli et al., 2021), the trust of the investor in the underlying asset and the issuer seems to be more important in the researched case of tokenising a classical investment with a real estate development as the underlying asset, than the deterring effect of the novelty and potential risks of a tokenised product. So, the process of tokenisation alone does not seem to drastically influence the demographics of the funds as it could be shown by various research regarding investments in other asset classes with a common technological background such as cryptocurrencies. Still, future research should delve deeper into the motivations and deterrents for different demographic groups in relation to tokenised investments.

The demographics are also relevant for the economics of the funds. It is the intent of an initiator to maximize the profits generated from each fund. In our simplified model, the set gross margin (GPM) of 5% on the overall fund volume is EUR 90,100 for Fund A and EUR 105,366 for the slightly larger Fund B. With a set customer acquisition cost (CAC) of EUR 70 per investor for each fund, the maximum number of investors allowed was 1,287 for Fund A (while the actual number is 743) and 1,505 for Fund B (while the actual number is 949) before generating a loss. With the GPM and the CAC being the same for both funds, the average investment per investor to break-even is the same for both funds at EUR 1,400 (*CAC / GPM* = EUR 70 / 5% = EUR 1,400).

Our analysis showed that a significant number of investors took advantage of the possibility to invest a rather small amount, as low as EUR 1, in the tokenised product. There is a high density of investors in Fund B investing below the minimum investment of Fund A. The analysis also showed that while the minimum investment amount of EUR 1,000 is closer to break-even in Fund A, it is way off in Fund B with a minimum investment of EUR 1. The mean for the standard product is also higher at EUR 2,425 for Fund A vs. EUR 2,221 for Fund B, thus generating a lower margin in the tokenised product overall. Because of these findings, it is recommended to abandon the minimum investment of EUR 1 because it attracts too many investors which leads to a loss per investor. Increasing the minimum investment to the break-even point of EUR 1,400 instead, could lead to a barrier which is too high for most investors, scaring investors away that might increase investment amounts in future funds. The right number for a minimum investment cannot be determined with the available data because changing the eligibility criteria for investors would also lead to a shift of the other parameter and change in the investment size density function of the funds. But still, the analysis could show a distinct negative impact on the economics of a fund when using the possibilities of tokenisation and lowering the minimum investment amount to EUR 1. As the CAC stays the same when tokenizing an investment, and too many investors seem to invest significantly below break-even, the minimum investment needs to be increased to lower the risk of initiating funds at a loss for the initiator.

Conclusion

Over the course of this paper, two funds were analyzed, and the results were put in context with findings of existing research. Fund A had a classic structure with a minimum investment of EUR 1,000 while Fund B was a tokenised product with a minimum investment of EUR 1. Fund A has 743 investors while Fund B contains 949 investors. The tokenised product was based on the distributed ledger technology, with a security token according to the ERC-20 standard on the Ethereum blockchain representing the value. Despite this difference, the number of investors, the fund size as well as the underlying asset were comparable. The purpose of analysing the data of both funds was to get a better understanding of the demographics of both funds and insights into the economics of the difference between un-tokenised and tokenised investment vehicles.

The results of the analysis showed that older investors tend to invest more than younger investors, as it could be anticipated, due to various research regarding this topic. Also, it can be inferred that the act of tokenisation does not seem to have a huge impact on the age of the investors, though it could be concluded that the mean age of the investors in Fund B is slightly higher. Furthermore, due to the large gender gap in fintech investment, which some researchers attribute to the lack of literacy of women regarding financial innovations, the hypothesis was made ahead of the analysis that tokenisation would lead to an even lower percentage of women in Fund B. This hypothesis could not be verified. Together with the interesting result of the slightly higher mean age of the investors in the tokenised investment, it can be assumed, that tokenisation alone does not drastically influence the demographics of the funds. It can be suggested that the investors rather assess the underlying asset and the initiator than the underlying technology for the investment.

The results could also show that lowering the entrance barrier as low as EUR 1 lead to a high volume of investing amounts significantly beneath the break-even point for an initiator, which in the analyzed funds is an average investment of EUR 1,400 per investor. Since every investor comes at a certain acquisition and ongoing management cost, a fund can only accept a limited number of investors before turning into the red for the initiator. Also, the distribution of the investment amounts cannot be precisely predicted, making a high number of investors with a negative customer-lifetime-value for the initiator likely. Therefore, it is highly recommended for an initiator to increase the minimum investment amount of EUR 1 and move the entrance barrier closer to the break-even point, which in the portrayed case is EUR 1,400.

In summary, our research contributes to the understanding of the impact of tokenisation on investment behaviour, providing insights for both academics, and practitioners in the finance industry. But despite the interesting findings, this study was subject to certain limitations. The data was sourced from only two funds, which might not be representative of the broader landscape of traditional and tokenised investment products. Thus, the results cannot be generalized. Also, due to the lack of available data, other potentially important factors that might influence investment behaviours, such as investors' income level, occupation, or education, could not be considered. Thus, this study provides interesting insights into the emerging field of tokenised investments and underscores the importance of further research. Therefore, it is recommended that future research should conduct more comprehensive analyses by including a wider range of funds from different market participants and considering additional factors.

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List of abbreviations:

STO - Security Token Offering

KPI - Key Performance Indicator

CAC - Customer Acquisition Costs

CLV - Customer Lifetime Value

GPM - Gross Profit Margin

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