

## INVESTMENT DECISION FACTORS OF NON-FUNGIBLE TOKENS IN THE CZECH REPUBLIC: SURVEY

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#### Abstract

Non-fungible Tokens (NFTs), represent a revolution in the digital ownership paradigm. NFTs are a kind of digital asset built on blockchain technology, most commonly the Ethereum blockchain, that validate the uniqueness and ownership of a unique digital item in question. Each NFT carries specific information or attributes that make it original and non-fungible. Unlike cryptocurrencies like Bitcoin or Ethereum, which are identical to each other, nonfungible tokens cannot be exchanged on a like-for-like basis making them non-fungible. NFTs are traded for cryptocurrencies via online trading platforms. Investment in NFTs can present a risky situation due to the large volatility of the assets in a quite short time. This article focuses on identification of key aspects that influence decision making process of potential investors who are considering buying non-fungible tokens as an investment tool in the Czech Republic. From the point of view of investment decision-making, the primary factors appear to be the expected income from the investment, its payback period, and the risk that the investor undertakes. It has been proven that there is a degree of dependence between gender and the mentioned decision-making factors. The research showed that men are more inclined to make decisions based on expected returns, while women are more likely to make decisions based on perceived risk.

### Keywords

Non-fungible tokens; Intangible assets; Crypto assets; Investment; Investment decision process.

#### Introduction

NFTs and cryptocurrencies are both digital assets that operate on a blockchain, but they differ in several ways. The main difference is their fungibility. Non-fungible tokens are a type of cryptocurrency that represent exclusive digital assets or unique artworks. Cryptocurrencies are mutually interchangeable and share a uniform value (Almeida & Gonçalves, 2024). A digital artwork's worth can fluctuate once it is sold, while 1 BTC exchanged for another 1 BTC retains the same value. The cost of a digital artwork can change as the original purchase price changes, unlike Bitcoin, which keeps its value constant when traded for an equivalent sum. Price-determining elements include market demand, trends, the reputation of the artist, and the artwork's perceived value. As a result, the artwork may increase in value and become more costly than when it was first purchased, or it may decrease in value and become less valuable (Ananzeh & Al-Smadi, 2024).

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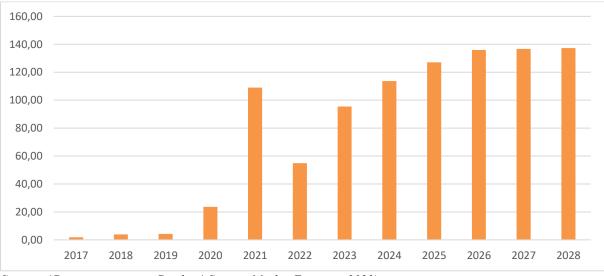
NFTs can also be used to streamline investing. Ernst & Young company developed an NFT solution for one of its fine wine investors by storing wine in a secure environment and using NFTs to protect provenance. NFTs can represent ownership in a business, much like shares in fact, share ownership is already tracked via ledgers that contain information such as the shareholder's name, date of issuance, certificate number, and the number of shares (Griffin, 2022).

The purpose of this article is to evaluate whether and to what extent decision-making factors defined by scientific literature, such as expected income, payback time, risk factor and asset awareness, influence investment decisions in the field of NFT. Additionally, it aims to explore how this decision-making process is related to investors' gender and the investment amounts they are willing to commit to NFTs. The research is based on a quantitative survey focused on investment decision factors and awareness of crypto assets.

## 1 Literature Review

Crypto assets are digital expressions of rights and value. Cryptocurrencies are still the most traded crypto assets in the world. There has been a lot of research on the efficiency of the cryptocurrency market (Mokni et al., 2024). The markets for cryptocurrencies are known for having a variety of traits, including high volatility, lax regulations, and relatively low liquidity, all of which can create unusual dynamics and hamper the efficiency of the market. Furthermore, it is challenging to make firm judgments about the efficiency of cryptocurrencies due to their short lifespans compared to traditional financial markets (Ananzeh & Al-Smadi, 2024). To fully comprehend the effectiveness of cryptocurrency markets and their implications for risk management and investment decisions, more investigation and analysis are required.

Cryptocurrencies are decentralized networks based on blockchain technology – a distributed ledger technology that autonomously records peer-to-peer transactions across decentralized computers without a central authority (Ananzeh & Al-Smadi, 2024). These assets are relatively vulnerable to "boom" events, which makes them significantly risky for investors when engaging with them. In a crypto market, investors interpret high volatility as an opportunity to achieve higher profits, unlike in traditional financial markets, where investors perceive volatility negatively (Griffin, 2022).

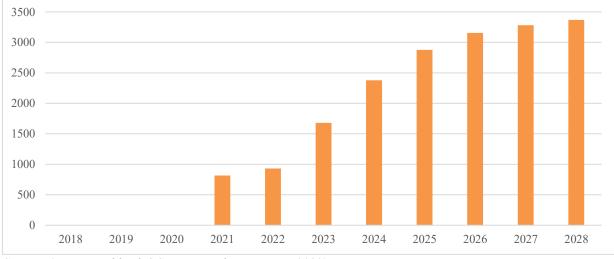


Source: (Cryptocurrencies - Czechia | Statista Market Forecast, 2023) Fig. 1: Cryptocurrency income development in the Czech Republic

Figure 1 shows the development of cryptocurrency income in the Czech Republic between 2017 and the projected year 2028. Incomes in the cryptocurrency market are projected to reach 137.3 million USD by the year 2028, so the expected compound annual growth rate CAGR between 2024 and 2028 should reach 4.83%, representing the mean annualized growth rate for compounding values over a given time period. Data reflects even the market impacts of the Russia-Ukraine war (Cryptocurrencies - Czechia | Statista Market Forecast, 2023).

Another kind of crypto asset that emerged in the last few years is non-fungible tokens ("NFT"). A non-fungible token is a digital token that is created and recorded on a public blockchain such as Ethereum. The token serves as an option to prove ownership of unique digital items. These are certain parts of computer codes carrying certain information, similar to, for example, cryptocurrencies. NFTs can be freely traded, and unlike cryptocurrencies, NFTs are characterized by their uniqueness, which consists in the fact that they cannot be freely exchanged for any other NFT, which, for example, allows the trading of cryptocurrencies. Currently, NFTs are still viewed as more of a risky investment. While some predict a bright future for NFTs, others urge more sober thinking and call NFTs more of a temporary trend with a not-so-bright future (Mercik et al., 2024). By their nature, NFTs are also close to investments in precious metals, art or collectibles, as digitized works and collectibles are a common object of exchange via trading platforms (Yousaf et al., 2023).

Figure 2 shows NFT income development worldwide between 2018 and the projected year 2028. Data shows the situation not only in the Czech Republic, but worldwide. That is due the lack of statistical information, academic studies and work in the field of non-fungible tokens. These assets are relatively a new trend that is finding its place it the Czech Republic slowly, therefore there are not any significant investment amounts like in the USA, Japan, Germany or Thailand.



Source: (NFT - Worldwide | Statista Market Forecast, 2023) Fig. 2: NFT income development worldwide

Incomes in the NFT market are projected to reach about 2,378 million USD in 2024 and are expected to grow between 2024 and 2028 by CAGR of 9.10% resulting in a projected total amount of 3,369 million USD in 2028 (NFT - Worldwide | Statista Market Forecast, 2023)

So, even though NFTs are just a small part of investment in crypto assets in comparison with classic cryptocurrency, its trend is expected to grow in the next few years. NFTs can be used as a potential investment tool that stores value for a couple of years. Decision-making factors play an important role in investing, according to which a potential investor concludes and reaches an opinion on whether to invest or not to invest in a given asset (Wang et al., 2024).

The main factors to consider in the investment decision-making process are financial, economic, market, behavioral, technological, legal, and social factors. The broader economic environment plays a significant role in shaping investment decisions, mainly macroeconomic indicators such as GDP growth, inflation rates, interest rates, and unemployment impact investment choices (Yousaf & Yarovaya, 2022). The state of financial markets and prevailing conditions influence investment decisions. Behavioral finance has gained prominence in understanding investment decisions, acknowledging the role of psychological factors. Researchers analyze how emotions, overconfidence, and herd behavior influence investment choices and market dynamics (Wang et al., 2024). Its importance also has technological factors that explore the impact of digitalization, algorithmic trading, and artificial intelligence on investment strategies. Literature in this area deals with the growing importance of Environmental, Social, and Governance (ESG) criteria. Examining how ethical, sustainable, and socially responsible investment practices influence decision-making and contribute to long-term value creation (Yousaf & Yarovaya, 2022).

This article deals mainly with financial factors. Financial considerations are fundamental to investment decision-making. Factors such as expected returns, risk assessment, liquidity, and cash flow analysis. In financial management, there is a "magic" triangle of investment decisions that are presented by three pillars – return, risk, and liquidity. It is true that the more return we want, the more risk we have to take. The risk decreases with a longer horizon (Vochozka & kol., 2021). The investment strategy seeks a compromise between maximization of return, maximization of risk, and maximum liquidity. It is impossible to find an investment that would simultaneously achieve all three peaks of the investment triangle (yield, risk, liquidity).

Risk factor measures the probability that the expected return will not be achieved. It consists in the fact that the investment fluctuates over time, is callable and can both rise and fall. The risk can be limited with a long-term investment horizon (time). There is no such thing as a risk-free investment. Bank deposits, for example, are also risky due to inflation. Liquidity is the ability to convert an investment instrument into cash at minimal cost. High liquidity means quick and easy conversion of investments into cash. Low liquidity is when the conversion of the investment into cash is not possible immediately or only at the cost of higher costs (term deposits, closed funds, building savings) (Zhang et al., 2024). Income is the appreciation of assets such as securities. The expected return can change at any time, as the situation in the capital markets changes every second. It can be measured by the rate of return, which is given as a percentage for a certain period and tells how the investment has appreciated over time compared to the initial cost. Such values are subject to discounting, i.e., recalculation of future values to present values using current interest rates offered by commercial banks, rates of long-term bonds, or values of weighted average cost of capital (Vochozka & kol., 2021).

### 2 Methodology and Data

The analysis of this article is based on data obtained from a quantitative survey about investment intentions in NFT areas. The respondents were residents of the Czech Republic from a total of 14 regions according to CZ NUTS 3 – regions (administrative units). The questionnaire survey was divided into three parts. The first part was to find out whether the respondent was aware of what the acronym NFT means in the field of finance, whether he could explain the meaning of these assets to others, and whether he currently invests in NFT assets or is thinking about it. The second part was to obtain information about whether the respondent is currently investing and to which assets, what amount of money the respondent would be willing to invest in NFT in the current situation, and what factor primarily

influences the respondent in making investment decisions. The last part was obtaining classification data about the respondents.

The quantitative study was created by the author of the article using questionnaire software. The questionnaire was distributed online in electronic form within the Czech Republic. The contact details of the respondents were obtained from the author's previously created and obtained databases. These are members of the public with permanent residence in the territory of the Czech Republic who have given their consent to the sending of questionnaires through online communication channels, this stands for the base set of around 500 respondents. A multi-stage random sampling was used to select respondents in order to ensure that responses were obtained proportionally according to NUTS 3 from each of the 14 regions of the Czech Republic. After dividing the respondents by region, they were further selected on the basis of probability sampling using numerical generation software from the available contact database. The survey was sent by e-mail to a total of 300 potential respondents from the sample set, which was considered by the author of the article to be a sufficiently representative sample. Out of the total number of questionnaires sent out, a total of 103 responses were returned. which was a low response rate than the author of the article originally expected. However, due to the absence of any similar study on the subject of NFT in the Czech Republic, these data were used and subjected to a statistical investigation. On the basis of these data, a general conclusion valid for the Czech Republic cannot be objectively drawn, it is rather a matter of recording a certain trend towards which the public in the field of NFT in the Czech Republic is reaching. And further research in this direction is desirable for the possible generalization of the results found. The article should answer the research questions (RQ) presented in the following subsections.

## 2.1 RQ1: What is the rate of investment of interviewed respondents for NFTs?

For the first research question a graphical representation of the response was used to show which specific assets respondents were currently investing in. Thus, the absolute and relative number of responses was determined. The first question examines whether and to what extent the respondents invest in various assets and to what extent specifically in NFTs. Finding out this information can also have an effect on the factors according to which the respondents decide whether or not to invest in the given asset. Whether the level of investment is subsequently related to insufficient confidence in the asset, low awareness or volatility of the asset.

# 2.2 RQ2: Is there a significant difference in the aspects on the basis of which women and men make investment decisions? What are the decision-making factors?

For the answer to this research question the number of chi-square tests in the contingency table have been done for meeting the condition for use where the chi-square can be used if at most 20% of the expected frequencies are less than 5 and none are less than 2. The test statistics (1) were used for this calculation.

$$\chi^{2} = \sum_{i=1}^{r} \sum_{j=1}^{s} \frac{(O_{i} - E_{i})^{2}}{E_{ij}}$$
(1)

The estimate calculation for the value in the *i*-th column and *j*-th row is determined by multiplying the sum of the values in the *i*-th column by the sum of the values in the *j*-th row and dividing by the number of all elements in the table. The observed frequencies of occurrence are usually denoted by  $O_{ij}$ , where *i* is the corresponding row and *j* is the corresponding column of the contingency table. Frequencies estimated under the assumption of character independence are usually denoted  $E_{ij}$ .

The test was made at the significance level of 5% and following hypotheses. So when the significance would result in less than 0.05 the null hypothesis would be rejected in the favor of the alternate one.

# H0: There is no significant difference in the analyzed aspects on the basis of which women and men make investment decisions.

#### H1: Non H0

The decision-making factors in the field of investments were chosen for this article - expected return, payback period, investment risk and knowledge of the given type of asset. The first three factors are basic approaches to evaluating the profitability of investments in the field of financial management. The only thing missing here is the representation of the area of investment liquidity, which was not used for the needs of this work and the appropriate interpretation of the results. The last chosen factor was knowledge of the asset, which was chosen due to the fact that NFTs, especially in the Czech Republic, are still a relatively new type of investment asset. The use of this last factor was thus mainly investigative and could also help to determine the idea for a possible improvement of communication about NFT within the general public, i.e. increasing awareness of these assets, which could lead to higher investments in this area.

# **2.3 RQ3:** *Is there some degree of dependence between the respondent's status and the amount he is willing to invest?*

To answer the last research question the data was statistically tested. First of all there had to be investigated whether the analyzed data had normal distribution according to normality tests by Kolmogorov-Smirnov and Shapiro-Wilk with the following hypotheses.

H0: Data have a normal distribution.

#### H1: Non H0

On the significance level of 5% and the test's significance result of 0.001, the null hypothesis was rejected, and therefore, the data do not have a normal distribution. So for answering RQ3 nonparametric test Kruskal-Wallis 1-way ANOVA was used which operates on test criterion (2).

$$H = \frac{12}{N(N+1)} \sum_{i=1}^{C} \frac{R_i^2}{n_i} - 3(N+1),$$
(2)

where

N stands for a number of observations in all groups,

 $n_i$  is a number of observations in the *i*-th group,

*C* is the number of groups, and

 $R_i$  is the sum of ranks in the *i*-th group.

The Kruskal-Wallis test is based on the following hypotheses:

# H0: *There is no significant degree of dependence between the respondent's status and the amount they are willing to invest.*

#### H1: *Non H0*

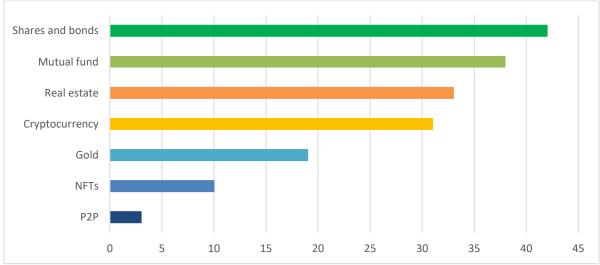
The status was divided into 4 samples according to the status of the respondent – employed, entrepreneur, student and unemployed. The respondents chose in such a way that the choice of status was guided by income, and thus the status with a regular or higher income took precedence over the other answers, i.e. if the respondent was, for example, both a student and

an entrepreneur at the same time, he chose the status of entrepreneur. The aim of the question was to find out whether there can be a correlation between the status variables and the one-time amount that the respondents are willing to invest in NFTs within their status, and therefore whether the status and the expected regular or irregular income with it can influence this decision.

# 3 Results of Research

# 3.1 RQ1

The first part of the research examined whether respondents invest in any kind of assets and in what assets specifically. More answers could have been chosen. The results are shown in Figure 3.



Source: Own

Fig. 3: Respondents investing activity

Figure 3 shows that the assets to which respondents invest the most can be considered shares and bonds (40.78%). Mutual funds (36.89%) and real estate (32.04%) are also widely used assets for investment. Cryptocurrencies turned out to be an equally important investment tool, reaching a share of 30.10%. The least used instruments for investing turned out to be gold (18.45%), NFTs (9.71%), P2P collective loans (2.91%).

Cryptocurrencies are proving to be a full-fledged investment asset in terms of their resistance to more traditional forms of investment (real estate, mutual funds, shares). This fact also corresponds to their development, as was shown in chapter 1 within the framework of the development of cryptocurrencies in the Czech Republic. On the other hand, NFTs are still more in their "development" phase when they do not penetrate much into the investment environment in the Czech Republic. It seems that these digital assets do not have much trust here, also due to their relatively high volatility and the lack of information that would be given to potential investors in the Czech Republic. To answer RQ1, it can be said that the rate of investment rate in cryptocurrencies seems to be fairly high. The fact that NFTs are traded for cryptocurrency and, therefore, have a close connection with each other, might result in the growing trend of NFT investments. Of course, the number of investors is not the only measure for the development of the market for a given asset. An important question is the invested volumes, frequency of investments, development of investments in terms of distribution (Gaussian function) and others (Almeida & Gonçalves, 2023). The risks associated with low

confidence in NFT assets are also confirmed by the J&T Banka Art Report 2023 survey, which involved 766 respondents from the field of art collectors, dealers and experts in the art market. The survey showed that only 14% of respondents had purchased NFTs or were considering purchasing them, and that a full 42% of respondents considered NFTs to be only a short-term trend, when it is not an interesting investment asset. Moreover only 7% of dealers in the art market would recommend buying NFTs (Stuchlík et al., 2023).

# 3.2 RQ2

To answer RQ2 the contingency table was constructed. The following factors have been chosen for the analysis:

- *expected income and payback time* the total income investment would bring during its lifetime and how long does it take when the accumulated income exceeds the original deposit, the aspects which can be measured in finances by NPV (Net Present Value), profitability indexes and ROI (Return on Investment),
- *risk* all risk factors that could influence the decision-making process in investment, such as volatility of the assets, the current situation of the financial market, fraudulent transactions, stability of the currency, macroeconomic indicators, or, for example, wash trading,
- *asset awareness* how the respondent is familiar with the assets, recommendations, general opinions and trends, and marketing communication.

Table 1 shows the investment decision factors and the total number of responses for both gender groups.

Gender	Expected income, payback time	Risk	Asset awareness	Total
Male	24	15	11	50
Female	11	27	15	53
Total	35	42	26	103

 Tab. 1: Investment decision factors responses [absolute frequency]

Source: Own

Table 1 demonstrates that, in total, the most significant factor in the investment decision process can be considered risk 42 responses (41%), and the second is expected income and payback time 35 responses (34%). The least significant factor for both groups was the asset awareness 26 responses (25%). It is clear that for men, the most important factor is expected income and payback time, which account for 48% of all men's responses. On the other hand, for women, this factor reached just a level of nearly 21%. The most relevant factor that influences women in the investment decision-making process was the risk 27 responses (51%).

 Tab. 2: Pearson chi-square test and correlation coefficients results

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	Value	Significance			
Pearson chi-square	8.793	0.012			
Phi	0.292	0.012			
Contingency coefficient	0.280	0.012			

#### Source: Own

Table 2 shows the result of the chi-square test based on significance levels of Pearson Chi-Square, Phi and Contingency correlation coefficients that examine whether the variables are independent in influencing the test statistic. The chi-square test was made at the significance level of 5%. The result of the test shows a significance of 0.012, which means a lower significance than at which the test was performed. Therefore, at the significance level of 5%, the null hypothesis can be rejected in favor of the alternate one, i.e., To answer the RQ2 Chi-Square test proved that there is a statistically significant difference in the analyzed aspects on the basis of which women and men make investment decisions. So that men tend to make decisions based more on money aspects (expected returns, payback time), while women tend to think more about the risk associated with the potential investment they might make. Contingency correlation coefficients stands for 0.280, which indicates a moderately strong dependence between gender and investment determinants.

## 3.3 RQ3

The last RQ3 tried to find out whether there is any certain dependence between the respondent's status and the amount he/she would be willing to invest in NFTs. Status was divided into 4 groups – employed, entrepreneur, student, and unemployed. All respondents had to choose from amounts around 5,000 CZK, 10,000 CZK, 50,000 CZK, or 100,000 CZK. This would be a one-time investment amount. The distribution is shown in Table 3.

Status	5,000	10,000	50,000	100,000	Total
Employed	30	8	15	8	61
Entrepreneur	7	2	2	4	15
Student	15	3	3	1	22
Unemployed	4	1	0	0	5
Total	56	14	20	13	103

Tab. 3: Respondents' status and investment values

Source: Own

The majority of respondents were employed people, followed by students, entrepreneurs, and the unemployed. The status was then analyzed according to the amount that the respondent would be willing to invest in NFTs. The largest number of respondents would be willing to invest only around 5,000 CZK, which is a really low amount through which nobody could gain any significant amount in terms of crypto assets. The result of the test answering RQ3 is shown in Table 4.

Tab. 4: Kruskal-Wallis 1-way ANOVA test result

Test	Value
Significance	0.138
Test statistics	5.505
Degree of freedom	3

Source: Own

With the test significance result of 0.138 tested at the significance level of 5%, the null hypothesis cannot be rejected. Therefore, to answer RQ3, there is no statistically significant dependence between the respondent's status and the amount he/she is willing to invest in NFTs. The main factors that made the difference could be monthly income, investment decision-making factors, or overall assessment of NFTs in the Czech Republic. For the needs of this question, it would be necessary to incorporate the variable of the respondents' monthly income which, however, due to the answers obtained, could not be used due to misleading responses caused by the question's position and due to the uneven distribution of response values.

#### Conclusion

NFTs are among the youngest investment instruments, and their position is far from fully developed. The main advantages of investing in NFTs are value preservation, investment tools, low barriers to entry, unique tools for content creators, removal of common restrictions, huge market, and use of tokens as principal. It also serves as a means of preserving value, both monetary and non-monetary, based on how people perceive the object associated with the token. At the same time, NFTs are not subject to exchange rates, and they are not always negatively affected by the unfavorable development of cryptocurrencies (Griffin, 2022). NFTs are still not in higher investment positions in the Czech Republic. They still lag behind proven and safe investment alternatives in the form of securities, real estate, or mutual funds. However, cryptocurrencies have found their place, the popularity and investment volumes of which have increased in recent years. From the point of view of investment decision-making, the primary factors appear to be the expected income from the investment, its payback period, and the risk that the investor undertakes. It has been proven that there is a degree of dependence between gender and the mentioned decision-making factors. The research showed that men are more inclined to make decisions based on expected returns, while women are more likely to make decisions based on perceived risk. Last, but not least, it was a question of whether a person's status in terms of employment or unemployment can have an effect on how much he will be willing to invest, specifically crypto assets. However, the dependence has not been confirmed, so the decision must be based on other factors, such as the size of the monthly income, knowledge of the asset or price volatility. In the Czech Republic, there is still an insufficient base of research and statistics dealing with NFT, although it is a relatively new trend that has found its place in the world. The topic is thus an interesting subject for further investigation.

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#### References

- Almeida, J., & Gonçalves, T. C. (2023). A systematic literature review of investor behavior in the cryptocurrency markets. *Journal of Behavioral and Experimental Finance*, 37, 100785. https://doi.org/10.1016/j.jbef.2022.100785
- Ananzeh, I. N., & Al-Smadi, M. O. (2024). Inspecting the efficiency of cryptocurrency markets: New evidence. *Asian Economic and Financial Review*, 14(1), Article 1. https://doi.org/10.55493/5002.v14i1.4941
- Cryptocurrencies—Czechia | Statista Market Forecast. (2023). Statista. https://www.statista.com/outlook/fmo/digital-assets/cryptocurrencies/czechia
- Griffin, C. (2022). Mastering NFT: Create, Sell and Invest in Non-Fungible Tokens and Digital Art. Top Notch International. ISBN 978-1915331229.
- Mercik, A., Słoński, T., & Karaś, M. (2024). Understanding crypto-asset exposure: An investigation of its impact on performance and stock sensitivity among listed companies. *International Review of Financial Analysis*, 92, 103070. https://doi.org/10.1016/j.irfa.2024.103070

- Mokni, K., El Montasser, G., Ajmi, A. N., & amp; Bouri, E. (2024). On the efficiency and its drivers in the cryptocurrency market: The case of Bitcoin and Ethereum. Financial Innovation, 10(1). Scopus. https://doi.org/10.1186/s40854-023-00566-3
- *NFT Worldwide* | *Statista Market Forecast.* (2023). Statista. https://www.statista.com/outlook/fmo/digital-assets/nft/worldwide
- Stuchlík, J., Dvořáková, V., & Veselská, Š. (2023). J&T Banka Art Report 2023. https://sberatele.artplus.cz/
- Vochozka, M., a kolektiv. (2021). *Finance podniku: Komplexní pojetí*. Grada Publishing a.s. ISBN 978-80-271-3267-6.
- Wang, H., Jiao, S., Ge, C., & Sun, G. (2024). Corporate ESG rating divergence and excess stock returns. *Energy Economics*, *129*, 107276. https://doi.org/10.1016/j.eneco.2023.107276
- Yousaf, I., & Yarovaya, L. (2022). Static and dynamic connectedness between NFTs, Defi and other assets: Portfolio implication. *Global Finance Journal*, 53, 100719. https://doi.org/10.1016/j.gfj.2022.100719
- Yousaf, I., Gubareva, M., & Teplova, T. (2023). Connectedness of non-fungible tokens and conventional cryptocurrencies with metals. The North American Journal of Economics and Finance, 68, 101995. https://doi.org/10.1016/j.najef.2023.101995
- Zhang, M., Zhu, B., Li, Z., Jin, S., & Xia, Y. (2024). Relationships among return and liquidity of cryptocurrencies. *Financial Innovation*, *10*(1), 3. https://doi.org/10.1186/s40854-023-00532-z

# Faktory investičního rozhodování u nezastupitelných tokenů v České republice: Průzkum

Nezastupitelné tokeny (non-fungible tokens, NFT) představují revoluci v paradigmatu digitálního vlastnictví. NFT jsou druhem digitálního aktiva postaveného na technologii blockchain, nejčastěji blockchainu Ethereum, které ověřuje jedinečnost a vlastnictví dotyčného jedinečného digitálního předmětu. Každý NFT nese specifické informace nebo atributy, díky kterým je originální a nezaměnitelný. Na rozdíl od kryptoměn, jako je Bitcoin nebo Ethereum, které jsou navzájem identické, nelze nezaměnitelné tokeny vyměňovat za stejné, což je činí nezaměnitelnými. NFT se obchodují za kryptoměny prostřednictvím online obchodních platforem. Investice do NFT může představovat rizikovou situaci kvůli velké volatilitě aktiv v poměrně krátké době. Tento článek se zaměřuje na identifikaci klíčových aspektů, které ovlivňují rozhodovací proces potenciálních investorů, kteří uvažují o nákupu nezastupitelných tokenů jako investičního nástroje v České republice. Z hlediska investičního rozhodování se jako hlavní faktory jeví očekávaný příjem z investice, doba její návratnosti a riziko, které investor podstupuje. Bylo prokázáno, že mezi pohlavím a uvedenými rozhodovacími faktory existuje určitá závislost. Výzkum ukázal, že muži se častěji rozhodují na základě očekávaných výnosů, zatímco ženy se častěji rozhodují na základě vnímaného rizika.

### INVESTITIONSENTSCHEIDUNGSFAKTOREN VON NICHT-FUNGIBLE TOKENS IN DER TSCHECHISCHEN REPUBLIK: UMFRAGE

Nicht-fungible Token (NFTs) stellen eine Revolution im Paradigma des digitalen Eigentums dar. NFTs sind eine Art digitales Asset, das auf der Blockchain-Technologie, am häufigsten der Ethereum-Blockchain, basiert und die Einzigartigkeit und den Besitz eines einzigartigen digitalen Gegenstands bestätigt. Jeder NFT trägt spezifische Informationen oder Attribute, die ihn originell und nicht fungibel machen. Im Gegensatz zu Kryptowährungen wie Bitcoin oder Ethereum, die untereinander identisch sind, können nicht-fungible Token nicht auf gleicher Basis ausgetauscht werden, was sie nicht-fungibel macht. NFTs werden über Online-Handelsplattformen gegen Kryptowährungen gehandelt. Investitionen in NFTs können aufgrund der großen Volatilität der Vermögenswerte in recht kurzer Zeit eine riskante Situation darstellen. Dieser Artikel konzentriert sich auf die Identifizierung von Schlüsselaspekten, die den Entscheidungsprozess potenzieller Investoren beeinflussen, die den Kauf nicht-fungibler Token als Anlageinstrument in der Tschechischen Republik in Betracht ziehen. Die Untersuchung ergab, dass Männer eher dazu neigen, Entscheidungen auf der Grundlage der erwarteten Erträge zu treffen, während Frauen eher Entscheidungen auf der Grundlage des wahrgenommenen Risikos treffen.

## CZYNNIKI DECYZJI INWESTYCYJNYCH W ZAKRESIE TOKENÓW NIEZAMIENNYCH W REPUBLICE CZESKIEJ: BADANIA

Tokeny niezamienne (non-fungible tokens, NFT) stanowią rewolucję w paradygmacie własności cyfrowej. NFT to rodzaj aktywa cyfrowego opartego na technologii blockchain, najczęściej blockchain Ethereum, które sprawdza unikalność i własność danego unikalnego elementu cyfrowego. Każdy NFT zawiera specyficzne informacje lub atrybuty, które sprawiają, że jest oryginalny i niezamienny. W przeciwieństwie do kryptowalut, takich jak Bitcoin czy Ethereum, które są ze sobą identyczne, tokenów niezamiennych nie można wymieniać na takie same, co czyni je niemożliwymi do zamiany. Transakcje NFT są przedmiotem obrotu na kryptowaluty za pośrednictwem internetowych platform

transakcyjnych. Inwestycja w NFT może stwarzać ryzykowną sytuację ze względu na dużą zmienność aktywów w dość krótkim czasie. W artykule skupiono się na identyfikacji kluczowych aspektów, które wpływają na proces decyzyjny potencjalnych inwestorów, którzy rozważają zakup tokenów niezamiennych jako narzędzia inwestycyjnego w Republice Czeskiej. Z punktu widzenia podejmowania decyzji inwestycyjnych głównymi czynnikami wydają się być oczekiwany dochód z inwestycji, jej okres zwrotu oraz ryzyko, jakie podejmuje inwestor. Udowodniono, że istnieje pewna zależność pomiędzy płcią a wymienionymi czynnikami decyzji w oparciu o oczekiwane zyski, podczas gdy kobiety częściej podejmują decyzje w oparciu o postrzegane ryzyko.