



# An Investigation into Investor Behaviour, Market Efficiency, and Regulatory Difficulties in Digital Currency Investments

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## Abstract

The rapid growth of digital currency has transformed the financial domain, posing a significant challenge to conventional concepts of worth, transaction, and capital allocation. The allure of possible attractive profits, technical advancement, and decentralized financial system has attracted considerable interest from investors, governments, and researchers. As the digital currency market progresses, it raises numerous inquiries and intricacies, encompassing investor behavioural patterns and regulatory framework. This paper offers a thorough and organized review that explores the complex field of digital currency investment, specifically examining investor behaviour and the regulatory consequences. The purpose of the study is to provide a thorough summary of the main discoveries, emerging patterns, and unsettled difficulties in this rapidly developing field by examining a diverse range of scholarly articles and research papers published in the last five years. This literature study seeks to enhance the ongoing discussion on investments in digital currency by offering a thorough comprehension of the primary elements that impact investor behavior. The variables encompass market dynamics, investor psychology, regulatory factors, economic indicators, societal concerns, technological adoption, and financial knowledge.

The study's findings indicate that digital currencies offer potential for diversification and potential for generating profit. However, they are also characterized by significant instability, ambiguous laws, and potential security risks. Cognitive finance theories illustrate that investor behaviour in the digital currency market is influenced by a blend of psychological biases and rational thinking. This abundance of knowledge assists investors, scholars, and regulators in navigating the constantly evolving realm of digital currencies.

**Key words:** *Investor Behaviour, Market Efficiency, Digital Currency, Investments, Regulatory Framework*



## 1. Introduction

Digital currency has made a significant impact on the financial environment, altering traditional values and investment conceptions. Investors, legislators, and scholars have all expressed an interest in the market's potential for large returns, technical innovation, and decentralization. However, the digital currency market is fraught with difficulties, such as investor behaviour and regulatory frameworks. To comprehend the market dynamics and to generate the price forecast, the knowledge of investor behaviour is essential. Herd mentality in the digital currency and digital currency markets has been the subject of research by Choi, Kang, and Yoon (2022), who have shed light on how the psychological tendencies of sizable collectives can induce artificial price inflation or even market collapses. Research has also shed light on the intricate interplay between rational decision-making, information asymmetry, and emotions as it relates to the determinants of investor choices and adoption trends among diverse demographic groups. (Sukumaran, and Wasiuzzaman ,2022; Kumar,2021).

This paper intends to contribute to the extending discussion on investing in digital currency by examining the main elements that influence the decisions of investors and the regulatory issues that arise in this dynamic ecosystem.

Through the compilation of ideas from a wide spectrum of academics, the study aims to provide insightful information to investors, researchers, and policymakers negotiating the ever-changing world of digital currencies. Many issues and difficulties connected to this developing financial environment have been brought to light by the literature evaluations on digital currency investments. These challenges include the general systemic concerns and those pertaining to investors.

Despite the industry's rapid evolution, the literature highlights the challenges faced by investors, legislators, and the financial ecosystem in relation to digital currencies. The most important things to worry about include cognitive biases, vulnerability to security breaches, unclear regulatory framework, and the high market volatility. The lack of comprehensive regulations in various jurisdictions worsens the uncertainty surrounding regulations and the risks they pose. Digital currency's reliability as a medium of exchange and value preservation is called into question by the large price swings. Investor trust and the digital currency ecosystem's stability are threatened by the pervasiveness of fraud, misleading schemes, and cybersecurity threats.

## 2. Methodology

### a. The Review Protocol – PRISMA

The research followed the standards laid out by PRISMA, a set of guidelines for doing meta-analyses and systematic reviews (Moher et al., 2009). As mentioned by Kintz and Correa (2015) the approach aims to achieve verification, creates criteria for inclusion and exclusion, and establishes a well-defined research subject that allows thematic inquiry. These three benefits are independent from one another. Following the PRISMA guidelines, the first step in conducting a Systematic Literature Review (SLR) is to develop relevant research questions for the review. Next, a three-step process for document searching is to be established and carried out, i.e., identification, screening, and eligibility assessment. Further the conclusion is made by outlining the steps to retrieve data for the review and to check and double-check that information.

We utilized Web of Science (WOS), a widely recognized indexed database, to acquire papers pertaining to behavioural investment within the scope of this evaluation. The Web of Science database was chosen for document collection because of its extensive bibliographic data coverage and its reputation as the most trustworthy global source for publications and citations. According to Bui et al. (2020), WOS covers a broad spectrum of disciplines that include, health, arts, and humanities,



**b. Formulation of Research Questions**

The research topic for this study was formulated by considering the population, interest, context, and outcomes. This tool facilitates authors in formulating pertinent research inquiries for a review. The main elements included in the analysis are investors (population), factors influencing investor behaviour, regulatory implications (interest), and digital currency market (context). Based on these three considerations, two core research questions are formulated. These are as follows:

- (i) What are the various elements that impact the way investors behave in the digital currency market? and
- (ii) How will the financial markets and investors be impacted by regulations regarding digital currency investments?

**c. Systematic Searching Strategy**

Methods for conducting systematic searches often include the following three stages: identification, screening, and eligibility.

**(i) Identification**

Identification refers to the methodical investigation of synonyms, analogous terms, and other variations of the main keywords used in the research. This includes examining concepts such as investment intention, individual investors, market efficiency, regulatory framework, and digital currency market. It expands the range of database choices for searching pertinent new articles for evaluation. The keywords were obtained via (Okoli's, 2015) research inquiry and were collected from many sources, including an online thesaurus, keywords used in previous studies, keywords suggested by web of science, and keywords proposed by domain experts. Prior to generating a search string, the existing keywords are enhanced for web of science by employing "Boolean operators, phrase searching, truncation, wild card, and field code operations" (Che Hassan et al., 2023).

Table 1. Database and Search strings.

Database	Search Strings
Web of Science	TS = (("investment intention" OR "investment behaviour") AND ("investors" OR "individual investors") AND ("market efficiency") AND ("regulatory framework") AND ("digital currency" OR "crypto currency"))

Initially, a grand total of 3612 publications were acquired from the WOS database, covering the period from 2019 to March 2024. The documents from the archives were selected and organized in an Excel file to identify any duplicated information. Afterwards, they were sent to the "Mendeley" software for the aim of categorizing the articles.

**ii. Screening**

An automated criterion selection process was used according to the database's sorting algorithm to screen all 3612 articles. Zhu, and Liu, (2020) proposed the implementation of a review period due to the impracticality of thoroughly reviewing all previously published publications. The database search disclosed a notable increase in many research studies pertaining to investors behaviour that relates to the digital currency market after the year 2010. Digital currency and investor behaviour study gained popularity in WOS databases from 2019 onwards. As a criterion for inclusion, the time frame from 2019 to 2024 was chosen. The search was restricted to the past decade to encompass the latest research and ascertain the most up-to-date advancements in this field. Regarding the timeframe, a period of 5 years is adequate for observing the pattern of research and its associated publications (Handranata et al.,2022). Further the phrase "digital currency" was included in the search query. In order to eliminate any uncertainties, the review exclusively incorporated studies that utilized factual data and was published in the English language. During



the screening procedure, a total of 45 duplicate items and 2546 articles that did not meet the inclusion criteria were excluded (Table 2). Post screening, the remaining 1021 articles were proceeded through the third stage of evaluating their suitability and gathering relevant information.

Table 2. The inclusion and exclusion criteria.

Criteria	Eligibility	Exclusion
Literature type	Academic publication that contains research articles presenting systematic analysis using empirical data.	Non indexed journals, book chapters, conference proceedings.
Language	English	Non- English
Timeline	2019-2024	Not before 2019
Unit of analysis	Digital currency	

### iii. Eligibility and Extraction

During the eligibility step, the gathered articles underwent a meticulous examination to ensure that all the surviving articles, after the review procedure, satisfied the required requirements. The manual inspection was performed by carefully examining the titles and abstracts of the articles. A total of 120 articles were excluded due to their emphasis on digital currency performance rather than the factors that impact investor behavior and the regulatory challenges faced in the digital currency market. Consequently, publications that did not include statistical data, such as theoretical or review articles, were excluded. Ultimately, a mere 70 objects were utilized in this rese.

## IV. Data Included

Figure 1 was used as the basis for identification, screening and including data from the 70 finalized publications. We conducted a thorough examination of all 70 papers, with particular focus on the abstracts, findings, and commentaries. The publications that dealt with the study subjects were selected and arranged in a table so that pertinent material could be retrieved. This includes topics like regulatory frameworks, technological consequences, market effectiveness, investor behaviour structure, and investment decision-making considerations. A theme analysis was employed to go through the literature review for patterns, insights, and commonalities. In order to arrive at meaningful themes from the data, one must first compare the results, then look for areas of agreement or disagreement.

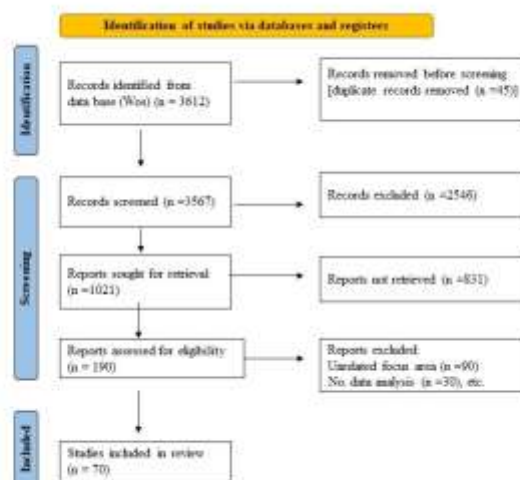


Figure -1 PRISMA flow diagram.



### 3. Discussion

#### I. Patterns and Trends in the Market

Based on big data research, Jin and Huang (2023) looked into Chinese investors' preferences for private digital currencies. Based on the study's results on investment trends, researchers found out what drives people to provide evidence to support their claims. Kyriazis, Papadamou, and Tzeremes (2023) did a study to investigate the impact of social media attitude on the stability and recovery of digital currency during the COVID-19 outbreak. Improving our understanding of market fluctuations during the periods of increased uncertainty, Askarzadeh and Roohi (2023) conducted a study on herd behaviour in the digital currency market. They focused on the influence of public opinion and interpersonal dynamics on market volatility. Almeida and Gonçalves (2023) conducted an extensive literature review to consolidate the current understanding of participant behaviour in the digital currency market. Their investigation provided a thorough and inclusive summary of the several elements that impact the decisions made by digital asset investors. Badlani, Yadav, and Kumar (2023) conducted a study to investigate how the volatility of digital currency affects investors. They specifically explored the emotional reactions and decision-making approaches that are influenced by changes in the value of digital currencies. Sukumaran and Bee (2022) conducted a study to investigate the adoption of digital currency by Malaysian investors and determine the elements that motivate investors to participate in digital currency transactions. Manahov, (2022) investigated the problem of digital currency liquidity during severe price swings, aiming to determine whether virtual currencies encountered liquidity issues during periods of extreme price volatility.

#### II. Investors behavior and Sentiments

Investor behaviour is significantly influenced by psychological and emotional factors, which shape decision-making patterns in financial markets (Dash and Mishra 2024). By weighing the pros and cons, Unni (2022) determined whether digital currencies are a good investment. In a literature review to fill in information gaps about investor behaviour in the digital currency market, Bhuvana, and Aithal (2022) compiled previous studies and extracted important topics. Researchers Chen, Lepori, Tai, and Sung (2022) used salience theory to investigate how digital currency market figures were invested. Contributing to the continuing discussion concerning the function of digital money in risk management frameworks, Su, Xi, Tao, and Umar (2022) investigated whether Digital currency may alleviate anxiety. Using natural language processing, Coulter (2022) investigated data-driven discourses in the crypto-economy, with a focus on how the media affects digital currency values.

Using structural equation model, Warasatepongsa and Deesukanan (2022) investigated the factors that encourage millennials in Thailand to save and invest. To fill a vacuum in the understanding of how market sentiments affects the decision to invest in digital currencies, Biju, Mathew, Krishna, and Akhil (2022) utilized triangulation to evaluate the future security of digital currency. Ballis and Verousis (2022) focused on the psychological aspects that impact digital currency investors' choices as part of their research into the relationship between behavioural finance and digital currency. Omane-Adjepong and Alagidede's (2021) studied digital currency and the expanding financial markets to shed light on the herd mentality of investors in various marketplaces.

#### III. Regulatory and Legal Aspects

An investigation into the variables that impact individuals' choices to invest in digital assets was carried out by Veerasingam and Teoh (2023) in the context of Islamic emerging countries and digital currencies. In order to better comprehend the connection between digital currency and Forex markets, Nekhili, Sultan, and Bouri (2023) looked into the possibility of liquidity spillovers. Using Russia's current regulatory system as a lens, Goncharov, and Sadkov, (2023) investigated the monetary and legal effects of digital currencies. Sanusi (2022) conducted a study that analyzed the relationship between the returns of digital currencies, cybercrime, and stock market volatility. The study utilized GAS and regime-switching approaches to evaluate this interplay. The findings of the study provide valuable insights into the wide-ranging impacts of events related to digital currencies.



In an effort to show how challenging it is to achieve an industry-wide agreement and execute self-regulation, Alston (2022) zeroed in on the efforts inside the digital currency industry. Ernandes (2022) conducted research on the impact of the Russia-Ukraine crisis on public attitude and the valuation of digital currencies to illuminate the complex network of relationships between geopolitical events and market valuations for these assets.

Additional information regarding cultural and legislative elements impacting the adoption of digital currency was added to by Sukumaran, Bee, and Wasiuzzaman's (2022) study of Malaysian investors' decision to invest in digital currency. Sharma and Tyagi (2022) examined the benefits and drawbacks of integrating digital currency into national development goals, encompassing policy and ideological viewpoints. Ullah, Attah-Boakye, and Adams (2022) investigated the influence of celebrity and political endorsements on the worth and longevity of digital currency. Mukherjee, Larkin, and Corbet (2021) provide significant insights into the problem of digital currency fraud and emphasize the crucial necessity of regulatory intervention, specifically with digital currency Ponzi schemes.

Corbet (2021a) emphasized the significance of effective risk management and regulation when considering the potential reputation and operational difficulties that may arise from companies implementing digital currency. Leitch and Mainelli (2021) conducted a study on various types of digital currency, emphasizing the difficulty of regulating and supervising an industry that is always evolving.

The detrimental effects of pump-and-dump schemes on the digital currency market were examined by Corbet (2021b), who stressed the need for stringent regulation to reduce these dangers. Digital currency anomalies can be better understood by looking at the market and legal concerns that underpin them. (Bhatia and Jain, 2021).

#### **IV. Economics and Financial Indicators**

Naveenraj and Ramya (2023) uncovered the complex interplay between digital currency and other facets of the economy. To be more precise, the study looked into how digital currency development relates to economic stability, volatility, and instability overall.

Nurbarani and Soepriyanto (2022) explored factors influencing Indonesian investors' decisions to invest in digital currency, enhancing our understanding of the economic and behavioural factors influencing digital currency investment choices. Gottschalk (2022) explored the impact of production costs on digital currency prices, adding to the ongoing discussion on underlying factors affecting digital currency prices. Gupta (2022) examined the link between stock market values and digital currency prices, examining the impact of traditional equities market moves on digital currency pricing. Menakadev and Prabha, (2021) examined complex investment behaviour with paper, physical, and digital gold, revealing investors' perspectives and strategies. Kyriazis (2021) examined the relationship between complex digital assets and economic policy uncertainty, focusing on the fluctuation patterns of decentralized digital currency financial assets. These research endeavours to provide crucial insights on the attributes of risk in the digital currency market and the determinants that impact investment decisions.

#### **V. Socioeconomic Factors**

An examination of several factors and characteristics was conducted by Balaji, Karim, and Naidu, (2023) to evaluate the viability of digital money as an investment class. Piñeiro-Chousa, Šević, and González-López (2023) conducted a study that investigated the impact of social metrics on decentralized finance. Their research shed light on how social dynamics affect the adoption and effectiveness of these systems. Ramachandran and Stella (2022) presented fresh insights into the attitudes of different generations towards financial technology. Their study focused specifically on students' inclinations towards embracing digital currencies. In their study, Choi, Kang, and Yoon (2022) examined the Korean digital currency market and observed that investors were exhibiting herd behavior, potentially resulting in market inefficiencies. Demiralay and Bayrac (2021) investigated the advantages of incorporating digital currency into the investment portfolios of stock market participants, providing a comprehensive analysis of the impact of diversification. A study conducted by Ayedh, Echchabi, and Battour, (2021) analyzed the involvement of participants in the Malaysian Islamic financial sector in the Digital currency market, specifically focusing on the blockchain-based digital currency.



Alaoui, Dchieche, and Asutay (2021) conducted a study on the expanding investment market for digital currencies and its potential to enhance the variety of Islamic equity portfolios. Arli, Esch, and Bakpayev, (2021) conducted a study on the dynamics of trust in the changing financial system and discovered various factors that influence customer attitudes and trust. Senkardes and Akadur (2021) conducted a study examining the determinants that drive individuals to engage in digital currency investments. Gender was regarded as a contextual factor and was discovered to have an impact on individuals' decision-making processes while buying and selling digital currency.

## VI. Technological Acceptance

Technology acceptance plays a crucial role in shaping investment behaviour, as the adoption of digital financial tools enhances accessibility, confidence, and informed decision-making among investors (Dash, 2026). Buranasujja and Kraiwanit (2023) investigated the usage of digital currencies as a payment method in Thailand's steel industry, focusing on the dynamics specific to this sector. Oza, Malik, and Chirumamilla (2023) in their study on investor awareness and perception of digital currency identified factors impacting investment behaviour in the industry. Rejeb, Alnabulsi, and Zailani (2023) conducted a study on the spread of knowledge about digital money and uncovered its academic discourse. In their publication, Akbarnavasi and Ledari (2023) presented an optimization technique aimed at enhancing the energy efficiency of buildings that accommodate miners, as a contribution to the ongoing sustainability discourse within the digital currency sector. Yaakob, Nawi, and Iskandar (2022) conducted a study to examine the suitability of digital money for zakat transactions, with a specific focus on expert evaluations on its preparedness. In their study, Sagheer, Khan, Fahd, and Mahmood (2022) employed the technological acceptance model to investigate the factors that contribute to the adaptability of digital currency. Their research provided insights into the reasons and outcomes of its extensive adoption. Al JoJo (2022) using deep learning techniques to approximate the investment risk associated with digital money, whereas Chen (2022) utilized deep learning to evaluate the risk associated with digital currency.

Sittivangkul and Arreeras (2022) utilized machine learning methods to investigate the perception and grouping of investing choices in digital currency. Their study expands upon prior studies that specifically examined the utilization of technology to evaluate investment patterns. Rowland and Suler, (2021) undertook a study to evaluate the role of digital currency as a substitute for transactions and investments. Kyriazis (2021) conducted a distinct investigation to explore the possible correlation between cannabis digital currency and mainstream digital currencies in relation to hedging or diversification. Bharadwaj and Deka (2021) utilized Rogers' diffusion of innovation theory along with the technology adoption model to investigate individuals' behavioural intentions toward investing in digital currency. Tachscherer and Benedek (2021) provide valuable insights on the transformative potential of digital currencies, contributing to the ongoing discussion about the revolution of digital currency.

## VII. Impact of Covid-19 Pandemic

The post-pandemic period has significantly reshaped women's investment behaviour, with increased financial awareness and a shift toward more cautious and informed decision-making driven by heightened economic uncertainty (Dash & Mishra, 2025). Saumendra (2022) examined the state of digital currency extensively during the COVID-19 pandemic. Academics were able to better comprehend the market's reaction by analyzing the increase of digital currency investments during the epidemic. During the COVID-19 epidemic, Salisu and Ogbonna (2022) looked at how news affected the volatility of digital money. The study found that returns in digital currencies were more volatile after hearing about pandemics. The study shed light on how the market responds to news that is not generated internally. Research by Ashish and Fazalbhoy (2022) looked at the trade habits and knowledge of the COVID-19 epidemic among Indian undergraduates. By contrasting investor actions prior to and following the start of the COVID-19 pandemic, Narula and Dhingra (2021) sought to evaluate the impact of digital investments. Finding out how the pandemic affected investors' attitudes and actions towards digital investment instruments was the primary motivation for the research.



During the COVID-19 pandemic, Caferra and Vidal-Tomás (2021) examined the effects of digital currency and the stock market. Their investigation revealed a striking difference in the two banking industries' reactions to the pandemic. By examining market indices, oil prices, and Twitter mood, Kyriazis (2021) looked at how the first COVID-19 wave affected major digital currencies. According to these studies, the efficiency of digital currency exchanges during crises is affected by a number of external factors that are interrelated with one another. The widespread impact of the COVID-19 pandemic on international financial markets was the subject of an in-depth investigation by Corbet, Hou, Hu, Oxley, and Xu (2021b). In times of crisis, their findings shed light on how shocks can spread swiftly across the financial markets.

#### **4. Findings**

Research on digital currencies and investments in these assets reveals that public opinion on news significantly influences the prices of digital currency and digital credit. Market sentiment and macroeconomic variables also play a role in influencing investor behaviour and decisions. Investment decisions are influenced by various elements, including perceived usefulness, convenience of use, trust, risk, return possibilities, regulatory concerns, and socioeconomic characteristics such as income, education level, and age.

To encourage investors to invest in digital currencies, clear regulations and solid legal structures are necessary. Problems such as pump-and-dump schemes and fraudulent activity can only be solved through strict control. Innovation in blockchain technology has a positive effect on productivity in companies listed in China, according to economic and financial indicators.

The COVID-19 pandemic has significantly impacted digital currency and digital currency liquidity, with severe price fluctuations worsening the situation. Education and investment behaviour in stock markets and digital currency were affected by the pandemic.

Education and financial literacy are crucial for understanding and managing one's own money, which impacts both ownership of digital currency and trading history. Market manipulation and fraud are also a cause of concern, necessitating regulation.

Various nations are investigating digital currencies issued by central banks, potentially altering the international financing scene. Research from various fields covers topics such as economics, regulation, technology, market dynamics, behavioural finance, and digital currency ecosystems. An in-depth analysis is necessary to understand the intricate relationships among digital currencies, conventional financial assets, and economic indicators.

#### **5. Suggestion**

A few recommendations that can help different stakeholders to navigate this changing landscape could be considered from the above literature research on Digital Currency investments.

The existing studies highlight the significance of enhancing capitalist awareness and comprehension, establishing well-defined legal frameworks, fostering ethical conduct, and teaching investors about digital currency. These studies recommend to diversify existing portfolios with traditional assets and digital currency to manage risk effectively. Honesty and openness in advertising are also another crucial factor in the digital currency sector. Open reporting and disclosure systems are needed to boost investor confidence and transparency. However further research is needed to understand the psychological factors that influence investor's choice in the digital currency market. Technological literacy programs should be implemented by various agencies to help investors to become proficient in using digital wallets, exchanges, and security standards. It is essential to consider the long-term rewards of investing in digital currencies, rather than just short-term price changes.

To close the knowledge gap and encourage the adoption of digital currency, peoples of different generations should be engaged to discuss on it. Researchers from various fields should collaborate to fully understand the ecosystem of digital currencies.

Enhanced cybersecurity protocols must be established to safeguard investors' digital assets against potential cyber threats and hacking occurrences. When formulating strategies for digital currency investments, it is important to take into account demographic, social, and cultural factors.



Being adequately prepared for crises is crucial for comprehending their potential utility as safe-haven assets during economic and pandemic crises. By implementing these suggestions, individuals or groups with an interest in digital currency investments can establish a safer, transparent, and sustainable ecosystem. The outcomes of these studies will have substantial ramifications for society, application, and other investigations on digital currencies and investments in digital currency.

## 6. Conclusion

The analysis on investments in digital currency uncovers an intricate and unpredictable environment that presents both prospects and difficulties for investors, politicians, and scholars. The results from diverse studies illuminate different facets of this developing discipline and offer vital understandings into investor conduct, market operations, regulatory structures, and technology progress. The preliminary results suggest that cryptocurrencies offer unique prospects for diversification and possible gains. On the other hand, they are characterized by huge swings in value, unclear regulations, and security lags. By applying behavioural finance theories to the digital currency market, it was found that investor behaviour is affected by both psychological biases and rational decision-making.

The topic of regulatory frameworks has been a matter of discussion, since there is a requirement for regulations to strike a balance between promoting innovation and protecting the interests of investors. Effective cooperation and standardization of legislation have become essential elements in establishing a favourable environment for further expansion of the digital currency ecosystem. In this context, it is imperative for all parties involved to collaborate to achieve a harmonious equilibrium between innovation and investor protection, resulting in the optimization of the advantages of digital currencies while mitigating potential hazards.

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