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Evaluating the viability of cryptocurrencies: Insights from the financial services industry in New York City

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Abstract
Cryptocurrencies have yet to see widespread adoption, and their potential to replace national currencies like the U.S. dollar remains uncertain. This study examined adoption trends among financial institutions in the New York City Metropolitan Area through interviews with cryptocurrency professionals and a literature review. A multiple-case study approach focused on banks, asset managers, and exchanges. Encouraging factors included fast transactions, low costs, security, and innovative technology. However, adoption is hindered by unclear regulations, volatility, user education costs, and service and usability issues. Although replacing the U.S. dollar is unlikely, cryptocurrencies still offer benefits. Financial institutions could leverage them to create simple, secure, and cost-effective financial products and services.

Keywords: Cryptocurrency adoption, bitcoin, ethereum, national currency alternative, financial practice

Introduction

This article explores the complex issue of cryptocurrency adoption within the financial services industry of the New York City Metropolitan Area, a crucial sector in the national financial landscape. The research investigated the potential of cryptocurrencies to serve as an alternative to traditional national currencies, such as the U.S. dollar, and the uncertainties surrounding their widespread acceptance. The study employed a multiple-case study method, using in-depth interviews with professionals across various segments of the financial industry. This approach allowed for a comprehensive examination of the factors that both promote and hinder the integration of cryptocurrencies into mainstream financial practices.

Key findings of the research highlighted several factors that encouraged the adoption of cryptocurrencies. These included the promise of faster transaction speeds, lower transaction costs, enhanced user independence, robust security features, and the attraction of cutting-edge technological innovation. These advantages suggest that cryptocurrencies could offer significant improvements over existing financial systems, potentially increasing efficiency and reducing costs. Conversely, the study also identified significant barriers to cryptocurrency adoption. These included regulatory uncertainty, price volatility, the high cost of user education, and concerns related to service reliability, usability, and security. These challenges underscore the complexities of integrating a novel technology into a highly regulated and traditional industry.

The research further delved into the debate on whether cryptocurrencies can realistically replace the U.S. dollar as a primary currency. While the findings suggested that a complete replacement is unlikely, the study acknowledged the substantial benefits that cryptocurrencies can bring to the financial services industry and its users. These benefits included the potential for lower costs, faster transactions, and the creation of new investment opportunities. The study emphasized that increasing user trust and establishing clear regulatory frameworks are essential for the broader adoption of cryptocurrencies. The development of user-friendly applications and the tokenization of assets were identified as key areas that could drive further integration of cryptocurrencies into the financial sector. This research contributes valuable insights to the ongoing discussion about the future of finance and the role of cryptocurrencies within it. By examining the perspectives of financial professionals in one of the world's leading financial centers, the study provided a nuanced understanding of the opportunities and challenges associated with cryptocurrency adoption.

Literature Review

This review is structured to highlight core business practices, functional classifications, regulatory considerations, technological innovations, and real-world applications, all of which shape the discourse on cryptocurrencies. The review begins by identifying cryptocurrencies as decentralized payment systems powered by blockchain, where value depends on user adoption and willingness to transact (Pernice & Scott, 2021; Lansky, 2020) [28, 35]. Blockchain technology's immutability, distributed architecture, and trustless environment remove intermediaries like banks (Navamani, 2023; Wonglimpiyarat, 2017) [33, 39]. This decentralization enables security and censorship resistance (Aste & Goodell, 2019) [3], although anonymity comes with potential for misuse (Cao & Kethineni, 2019) [12].

Bitcoin, the pioneer cryptocurrency, operates on a proof-of-work protocol, where miners validate transactions by solving cryptographic puzzles (Li *et al*., 2018; Busnel *et al*., 2021) [9, 29]. This process is energy-intensive and has raised concerns over sustainability and cost-efficiency (Lipton, 2021) [3]. The system, while transparent and decentralized, has limited scalability with only a few transactions per second (Fama *et al*., 2019) [19]. The literature classifies cryptocurrencies based on their use cases. Bitcoin is often viewed as "digital gold," a store of value (Badea & Mungiu-Pupazan, 2022; Kyriazis, 2021) [4, 27], while Ethereum supports smart contracts and decentralized applications. Utility tokens grant access to products or services, whereas security tokens represent ownership in assets (Gordon & Marthinsen, 2021) [20]. Stablecoins, such as Tether, peg their

value to fiat currencies, reducing volatility and enhancing use as a medium of exchange (Koutsoupakis, 2021; Cheuk *et al*., 2023) [15, 26].

The potential of cryptocurrencies to replace fiat currencies hinges on their ability to meet the three classical functions of money: medium of exchange, unit of account, and store of value (Treiblmaier, 2022; Calomiris, 2021) [10, 37]. However, extreme price volatility, lack of legal tender status, and usability limitations make this a complex goal (Cassidy *et al*., 2020; Hart, 2021) [13, 22]. Adoption remains limited due to technical complexity, user mistrust, and infrastructure gaps (Green *et al*., 2023; Dmitrieva *et al*., 2021) [18, 21]. User segmentation helps illustrate this issue—some users desire privacy and low fees for high-volume, low-value transactions, while others prioritize security and stability for high-value operations (Gordon & Marthinsen, 2021; Hendrickson & Luther, 2021) [20, 23].

Regulatory uncertainty is among the most discussed barriers to cryptocurrency adoption (Chaffee, 2019; Allen *et al*., 2022) [1, 14]. The SEC's debate over whether cryptocurrencies are securities or commodities causes confusion and deters institutional investment (Hart, 2021; Kalmykova *et al*., 2021) [22, 24]. Jurisdictions differ widely in their approach, and regulatory arbitrage occurs as businesses relocate to more favorable environments (Nabilou, 2019) [34]. Despite the hurdles, cryptocurrencies offer opportunities for financial inclusion, particularly among the underbanked populations (Brostrom *et al*., 2021; Chuen *et al*., 2018) [8, 17]. They enable low-cost remittances, cross-border transactions, and access to decentralized financial services (DeFi) such as lending, insurance, and trading, without traditional intermediaries (Camara *et al*., 2021; Meijer, 2022) [11, 31]. Real-world applications include El Salvador's adoption of Bitcoin as legal tender in 2021. Despite technological readiness and infrastructure, challenges such as price volatility and low public understanding hindered success (Merwe, 2021) [32]. Similar issues were observed in the Central African Republic (Willms, 2022) [38]. These cases suggest that while government support is essential, market readiness and user trust are equally crucial.

From a theoretical standpoint, the adoption of cryptocurrencies is mapped against the Product Life Cycle and Technology Adoption Life Cycle theories (Bezhovski *et al*., 2021; Kalthaus, 2020) [5, 25]. Cryptocurrencies are still in the early adoption or growth stages, with the absence of a dominant design indicating continued experimentation and instability. The literature also explores the role of financial institutions. While some banks invest in blockchain and tokenization (Wonglimpiyarat, 2017) [39], others remain cautious. Nonetheless, institutions recognize the transformative potential of decentralized technology in increasing efficiency and reducing costs (Phillips, 2022) [36].

Methodology

The research methodology employed in this study was designed to thoroughly investigate the potential adoption of cryptocurrencies within the financial services industry. The study utilized a flexible qualitative design, which is deemed most appropriate for exploring the complex and evolving nature of cryptocurrency adoption. This design allows for in-depth exploration of the factors influencing adoption, capturing the nuances and complexities of the phenomenon. A multiple-case study method was employed, focusing on three distinct cases: banks, asset managers/financial advisors, and brokers/exchanges. This approach enables a comparative analysis of cryptocurrency adoption across different segments of the financial industry, providing a more comprehensive understanding of the phenomenon. The selection of participants was crucial for the study's validity. A purposive sampling method was used to ensure that participants have relevant experience and knowledge of cryptocurrencies within the financial services sector. The sample frame includes professionals in the New York City Metropolitan Area who have been working with cryptocurrencies for at least six months.

Data collection involved in-depth interviews with 20 selected participants. The interviews were semi-structured and open-ended, allowing for flexibility and exploration of relevant issues. An interview guide with specific questions was used to ensure consistency while also allowing for follow-up questions and deeper probing. The collected data was organized and analyzed using qualitative data analysis software (MAXQDA). The analysis involved coding, identifying emerging themes, and interpreting the findings in the context of the research questions. To ensure the rigor and trustworthiness of the research, several measures were taken to enhance reliability and validity. This included triangulation, which involved using multiple sources of data and methods to validate the findings. The researcher also employed bracketing, a technique used to mitigate personal bias and preconceptions. Overall, the methodology was designed to provide a robust and rigorous investigation into the factors influencing cryptocurrency adoption within the financial services industry, ensuring the credibility and validity of the research findings.

Limitations

This research was limited to one area (NYC Metro) and one industry (financial services. Also, the cryptocurrency industry is changing fast (Liu *et al*., 2022). Thus, the research can become quickly outdated.

Codes and Themes

The research used a qualitative method to explore the factors influencing cryptocurrency adoption among financial institutions in the New York City Metropolitan Area. Data was gathered through in-depth interviews with 20 cryptocurrency professionals and analyzed using MAXQDA software to identify key codes and themes. The initial coding process involved categorizing responses into five top-level codes: ENCOURAGING, DISCOURAGING, CURRENCY, BENEFITS, and PRACTICES. The ENCOURAGING code highlighted factors that promote cryptocurrency adoption, such as transaction speed, low costs, user independence, security benefits, utility, privacy, technological quality, reliability, and immutability.

Conversely, the DISCOURAGING code identified obstacles to adoption, including regulatory uncertainty, price volatility, fraud and crime, the high cost of user education, lack of trust, usability issues, security concerns, service problems, liability risks, and the potential for project failures. The CURRENCY code focused on views about cryptocurrencies' potential to serve as a currency, with sub-codes like Bitcoin, Ethereum, stablecoins, and government policy influences. The BENEFITS code captured the advantages of cryptocurrency adoption for consumers, the financial industry, and financial inclusion, along with considerations of sustainability. Lastly, the PRACTICES

code covered cryptocurrency practices within New York area financial institutions, including risk assessment, revenue potential, blockchain technology applications, and asset tokenization. The analysis revealed that interviewees discussed more factors that discourage cryptocurrency adoption than factors that encourage it.

Overall, 378 segments from the interviews were highlighted (see Table 1). A segment, as used in MAXQDA, is a highlighted phrase, sentence, or several related sentences.

Table 1: Top-level Code Distribution

Top-level codes	Segments	Percentage
Discouraging	116	31
Practices	82	22
Currency	70	19
Benefits	59	16
Encouraging	51	13
Total	378	100

Fig 1: portrays a code cloud created with MAXQDA. The most outstanding code is DISCOURAGING

The process of deriving themes from codes in the research involved several steps, utilizing MAXQDA qualitative data analysis software.

1. **Initial Coding:** After thoroughly reviewing the interview transcripts, initial codes were created based on the researcher's understanding of the data clusters. These codes were closely aligned with the research questions.

2. **Top-Level Codes:** The answers to the interview questions were organized under each research question. For each research question, a top-level code was assigned. For example, the code "ENCOURAGING" was used for answers related to factors encouraging cryptocurrency adoption, and "DISCOURAGING" for factors discouraging it.

3. **Sub-Coding:** The top-level codes were further analyzed to create sub-codes. These sub-codes were based on related clusters within each top-level code, allowing for a more granular analysis of the data. For instance, the "ENCOURAGING" code was sub-coded into categories like "Fast," "Low-cost," and "Independence".

Three main themes emerged from the data:

1. Cryptocurrencies offer benefits not available in traditional financial services, such as fast and low-cost transactions, user independence and security, and innovative technology applications.
2. There is a lack of trust in cryptocurrencies due to regulatory uncertainty, price volatility, user education challenges, and concerns about service, usability, and security.
3. Private cryptocurrencies are unlikely to replace the U.S. dollar but can complement it in specific areas, with potential benefits for consumers and the financial industry, including increased financial inclusion and easier asset movement.

These findings indicated that while cryptocurrencies offer advantages like efficiency and accessibility, widespread adoption is hindered by trust and regulatory issues. This systematic approach facilitated the identification of key themes and patterns in the data, which were then used to address the research questions.

Research Questions

The research was guided by four main questions:

1. **What Are the Factors Encouraging Adoption:** This question explored the positive factors that could drive the wider acceptance and use of cryptocurrencies as a national currency alternative within the financial services industry?

2. **What Are the Factors Preventing Adoption**: In contrast to the first question, this one investigated the negative factors that hinder the adoption of cryptocurrencies in the same context?

3. **Which Cryptocurrencies Are Distinguishing**: This question sought to identify if certain cryptocurrencies have characteristics that make them more likely to be adopted than others.

4. **What is the Significance of Increased Acceptance**: The final question addresses the potential impacts and benefits of greater trust, usage, and acceptance of cryptocurrencies.

The interviewees were asked 20 open-ended interview questions to answer the four research questions.

Discussion of Findings

The findings of this research provide valuable insights into the factors influencing the adoption of cryptocurrencies within the financial services industry in the New York City Metropolitan Area. The data collected from in-depth interviews with industry professionals was analyzed and presented, offering a rich understanding of the perspectives and experiences of those working with cryptocurrencies. Several key themes emerge from the data analysis. One prominent theme is that cryptocurrencies offer distinct advantages over traditional financial services, such as lower costs and faster transaction speeds. This finding supports the idea that cryptocurrencies have the potential to disrupt existing financial systems by providing more efficient and cost-effective solutions.

However, the research also highlighted significant challenges and obstacles to cryptocurrency adoption. These include regulatory uncertainty, price volatility, security concerns, and the complexity of using cryptocurrencies. These factors contributed to hesitancy among both institutions and individuals to fully embrace

cryptocurrencies. The findings also shed light on the specific characteristics of cryptocurrencies that are perceived as important for their potential adoption as a national currency alternative. Factors such as stability, scalability, and widespread acceptance were identified as crucial for cryptocurrencies to be considered viable alternatives to traditional currencies. Furthermore, the research explored the potential benefits of increased trust, usage, and acceptance of cryptocurrencies. These benefits included greater financial inclusion, reduced transaction costs, and new opportunities for innovation in the financial sector. Overall, the findings highlighted both the potential and the challenges associated with integrating cryptocurrencies into mainstream finance.

Several participants highlighted the robust use cases supporting the continued relevance of Bitcoin and Ethereum. MG20 emphasized Bitcoin's potential to serve as a "true store of value," noting that it allows individuals to secure assets in a trustless, decentralized manner outside governmental control. Echoing this sentiment, LH17 remarked that Bitcoin, often considered the "grandfather" of cryptocurrencies, exhibits characteristics akin to gold—such as scarcity and difficulty of acquisition—positioning it as a legitimate long-term store of value. DP13 also endorsed Bitcoin's utility, particularly its proof-of-work mechanism, which he argued grounds its value in physical energy expenditure, thus offering a more objective foundation for digital assets. WF12 attributed Bitcoin's dominance to its widespread recognition, suggesting that public familiarity often supersedes technical robustness in adoption decisions.

Participants further emphasized the importance of network effects and market maturity. KK11 pointed to Bitcoin and Ethereum's longevity, large user base, and high visibility as key drivers of their market viability, noting that these factors influence investor confidence and demand. RB7 recommended Bitcoin for general consideration but expressed a preference for Ethereum due to its extensive developer ecosystem and the prominence of smart contract functionality, which he viewed as a significant competitive edge. Overall, Bitcoin and Ethereum were listed by the research participants as the top two cryptocurrencies.

Multiple-Case Study

The study used a multiple-case study approach, examining cryptocurrency adoption across three distinct segments of the financial services industry:

Case 1: Banking

This case focused on traditional banking institutions in the New York City Metropolitan Area. The research explored how banks are responding to the emergence of cryptocurrencies, whether they are considering integrating these digital assets into their services, and what challenges and opportunities they foresee. The findings revealed that banks are particularly concerned with regulatory uncertainty, liability issues, and the potential for fraud. Many institutions were hesitant to fully embrace cryptocurrencies due to these factors, despite recognizing the potential benefits of blockchain technology.

Banks, being highly regulated entities, must carefully evaluate the potential impact of cryptocurrencies on their capital reserves, anti-money laundering (AML) protocols, and overall financial stability. However, the research also notes that banks are actively exploring the underlying blockchain technology and its potential applications beyond cryptocurrencies, such as for improving payment systems and enhancing operational efficiency.

Case 2: Asset Management and Financial Advisory

For this case, the researcher investigated how asset management firms and financial advisors in the NYC area are approaching cryptocurrencies. The study examined the interest in offering cryptocurrency investment products to clients, the challenges in assessing and managing the risks associated with these volatile assets, and the educational needs of both advisors and clients. The research indicated a growing recognition of cryptocurrencies as a potential store of value and a tool for portfolio diversification.

Some asset managers and financial advisors are exploring the possibility of allocating a small portion of client portfolios to cryptocurrencies to enhance returns and reduce overall portfolio risk. However, this approach is often tempered by a cautious stance due to the inherent volatility and speculative nature of the cryptocurrency market. The concerns about volatility, security, and the lack of clear regulatory guidelines remained as significant barriers to wider adoption in this sector.

Case 3: Brokers and Exchanges

For this case, the researcher analyzed brokers and exchanges in the New York City Metropolitan Area. The findings suggest that brokers and exchanges are at the forefront of cryptocurrency adoption, driven by the demand for trading these assets. They are focused on enhancing user experience, security, and regulatory compliance to foster greater trust and broader participation in the cryptocurrency market.

The study highlighted the technological innovations that brokers and exchanges are implementing to enhance the security, efficiency, and user experience of cryptocurrency trading. This includes advancements in blockchain technology, cybersecurity measures, and trading algorithms.

Significance

The significance of this research is underscored by the rapidly evolving nature of the cryptocurrency space and the persistent gaps in understanding its adoption dynamics. By examining the perspectives of financial institutions in a major financial hub, the study provides valuable insights into the practical considerations influencing cryptocurrency integration. The study's findings contribute to a deeper understanding of the factors that promote cryptocurrency adoption, such as transaction speed, low costs, user independence, security benefits, and technological innovation.

Simultaneously, this research highlights the obstacles hindering adoption, including regulatory uncertainty, price volatility, fraud risks, high user education costs, and trust issues. Ultimately, this research informs strategies for developing cryptocurrency-based financial products and services that align with user needs and mitigate potential risks, fostering greater acceptance and utilization within the financial industry.

Conclusion

The study examined the uncertainty surrounding the adoption of cryptocurrencies as an alternative to national currencies, particularly in the financial services sector of the New York City Metropolitan Area. Using a multiple-case

qualitative approach, the research identified both encouraging factors, such as transaction speed, lower costs, user independence, and security, and discouraging factors, including regulatory uncertainty, volatility, and high user education costs. Despite the unlikely replacement of the U.S. dollar by private cryptocurrencies, the findings highlighted their potential for financial inclusion, asset tokenization, and innovative financial services.

The analysis has drawn on Product Life Cycle and Technology Adoption Life Cycle theories, emphasizing the early stage of cryptocurrency adoption. The study underscored the role of improved regulation and user trust in fostering adoption while noting emerging trends such as the development of blockchain solutions and tokenized financial products. It concluded that while cryptocurrencies face significant challenges, their integration into financial practices holds promise for enhancing efficiency and financial inclusivity.

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