

INTEGRATION OF BANKS AND CRYPTOCURRENCY IN A DEMONETIZED WORLD

Dr. Debashree Souvik Jana
Assistant Professor
Dr. D. Y. Patil School of Management
Lohegaon, Pune
debashree.aims@gmail.com

ABSTRACT

This research paper explores the integration of banks and cryptocurrencies in a demonetized world and its implications for financial inclusion and efficiency. The study employed a mixed-methods approach, combining qualitative in-depth interviews and quantitative surveys to gather insights from a sample of cryptocurrency users. The objectives were to examine the relationship between the integration of banks and cryptocurrencies and the efficiency of financial transactions, as well as the impact on financial inclusion and access to financial services for underserved populations. Findings revealed a positive relationship between the integration of banks and cryptocurrencies and the perceived efficiency of financial transactions, with cryptocurrencies rated higher in efficiency compared to traditional banking services. Participants also expressed agreement that integrating banks and cryptocurrencies can improve financial inclusion by providing access to underserved populations and bridge the financial inclusion gap. However, it is important to note the limitations of self-reported data, the specific sample of cryptocurrency users, and the cross-sectional design. Future research should address these limitations and consider factors such as regulatory frameworks and technological advancements. Overall, this study provides valuable insights into the potential benefits of integrating banks and cryptocurrencies in a demonetized world, including increased efficiency, reduced transaction costs, and improved financial inclusion. The findings contribute to the understanding of the evolving landscape of digital finance and provide implications for policymakers, financial institutions, and individuals seeking to leverage the opportunities offered by the integration of banks and cryptocurrencies.

Keywords: Integration, Banks, Cryptocurrencies, Demonetized world, Financial inclusion, Efficiency.

Introduction

In recent years, the world has witnessed a rapid growth in the popularity and adoption of cryptocurrencies. Simultaneously, advancements in financial technology have disrupted traditional banking systems, challenging their established frameworks. As the global financial landscape continues to evolve, the integration of banks and cryptocurrencies emerges as a promising avenue to explore. This research aims to investigate the potential implications and benefits of such integration in a demonetized world.

Over the past decade, cryptocurrencies, with Bitcoin leading the way, have gained significant traction as an alternative form of digital currency. Built on blockchain technology, these decentralized digital assets offer the promise of secure, transparent, and efficient financial transactions. The decentralized nature of cryptocurrencies allows users to bypass traditional intermediaries, such as banks, enabling peer-to-peer transactions on a global scale. This disruptive technology has led to debates on the future role of banks in a world where digital currencies have become mainstream.

Simultaneously, several countries and regions have been contemplating the idea of demonetization – the phasing out of physical currency in favor of digital alternatives. Governments cite various reasons for pursuing this path, including curbing illegal activities, reducing costs associated with printing and circulation of cash, and fostering financial inclusion. As a result, a growing number of people worldwide are shifting towards digital transactions, and the need for seamless integration between cryptocurrencies and banking systems becomes increasingly relevant.

The integration of banks and cryptocurrencies holds the potential to bring about transformative changes in the financial industry. By leveraging the strengths of both traditional banking and decentralized cryptocurrencies, this integration can offer enhanced security, increased financial inclusion, reduced transaction costs, and improved efficiency. Furthermore, it could open up new avenues for innovation and foster economic growth in a globalized, digital economy.

One area of interest in this research is the role of central banks in the integration of cryptocurrencies. Central banks, as the custodians of national monetary policies, play a vital role in maintaining financial stability. The inclusion of cryptocurrencies in the banking system would require central banks to develop appropriate regulatory frameworks and mechanisms to monitor and control digital currencies. This research aims to analyze

the potential challenges and opportunities that central banks may face in integrating cryptocurrencies within their existing infrastructure.

Moreover, the research will explore the impact of this integration on financial institutions. Traditional banks would need to adapt their business models to accommodate cryptocurrencies, ensuring seamless integration with their existing services. This may involve incorporating cryptocurrency wallets, enabling cryptocurrency transactions, and providing custodial services for digital assets. Understanding the implications of these changes for banks and their customers is crucial for assessing the viability of integration in a demonetized world.

Thus, the world moves closer to a digital and demonetized future, the integration of banks and cryptocurrencies presents a fascinating area of research. Exploring the potential implications, challenges, and opportunities of this integration is essential to understanding the future of finance. By analyzing the roles of central banks, examining the impact on financial institutions, and considering the broader socio-economic implications, this research aims to shed light on the feasibility and potential benefits of integrating banks and cryptocurrencies in a demonetized world.

Literature Review

Nakamoto, S. (2008) outlined the principles and mechanisms behind Bitcoin's decentralized system, highlighting its potential to enable secure and efficient peer-to-peer transactions without the need for intermediaries. This paper serves as a foundational reference for understanding the origins and core concepts of cryptocurrencies. BIS (Bank for International Settlements) (2020) discussed the potential benefits, risks, and challenges associated with CBDC implementation, emphasizing the role of central banks in issuing and governing digital currencies. This reference offers valuable insights into the integration of cryptocurrencies within central banking systems. Böhme, Christin, Edelman & Moore (2015) explored the economic, technological, and governance aspects of Bitcoin. It discussed the challenges and opportunities presented by cryptocurrencies, such as scalability issues, regulatory concerns, and the potential impact on financial intermediaries. The article provides a comprehensive analysis of Bitcoin's implications for the banking industry and serves as a valuable resource for understanding the integration of cryptocurrencies within the broader financial ecosystem. Gavin & Marquardt (2012) delves into the technical aspects of Bitcoin, providing an in-depth explanation of the underlying mechanisms and cryptographic protocols employed in the cryptocurrency. It offers insights into the security and privacy features of Bitcoin, as well as the challenges associated with its implementation on a large scale. This reference is particularly useful for understanding the technological considerations and potential vulnerabilities of integrating cryptocurrencies within banking systems. World Economic Forum (2019) outlined various design choices, regulatory considerations, and implementation strategies for CBDCs, providing guidance to policymakers and central banks. The toolkit offers valuable insights into the integration of digital currencies within banking systems and provides a framework for assessing the potential benefits and risks involved.

Swan (2015) discussed the underlying principles of blockchain and its potential impact on various industries, including banking and finance. This reference provides a comprehensive overview of blockchain's transformative potential and its relevance to the integration of banks and cryptocurrencies in a demonetized world. Gomber, Koch & Siering (2018) provided an overview of the challenges and opportunities associated with digital finance, discussing potential research directions for understanding the integration of banks and cryptocurrencies in a rapidly evolving financial ecosystem. Chiu, Koepl & Wang (2019) analysed the potential roles of central banks in the integration of cryptocurrencies, discussing the challenges and benefits associated with such integration. The article provided valuable insights into the economic considerations surrounding the integration of banks and cryptocurrencies in a demonetized world. Yermack (2015) discussed how blockchain can enhance transparency, accountability, and efficiency in corporate settings, which has implications for the integration of banks and cryptocurrencies. This reference offers insights into the governance considerations of integrating cryptocurrencies within the banking sector. Bank of England (2020) discussed the opportunities and challenges associated with CBDCs, including the integration of digital currencies within the existing banking infrastructure. This reference provides a comprehensive analysis of CBDCs' potential impact on the financial system and offers insights into the design considerations for integrating banks and cryptocurrencies in a demonetized world. Brito & Castillo (2013) discussed the benefits and challenges of integrating cryptocurrencies into existing financial systems, offering policymakers insights into the regulatory considerations surrounding the integration of banks and cryptocurrencies in a demonetized world.

Dai (2020) examined the coexistence of cryptocurrencies and central banking from a legal perspective. It explored the regulatory challenges and opportunities associated with integrating cryptocurrencies into the traditional banking framework, considering the legal frameworks required to support such integration in a

demonetized world. Swerdel (2018) explored the potential for cryptocurrencies to democratize money and the role of central banks in this context. It examines the challenges and opportunities associated with integrating cryptocurrencies within banking systems, focusing on the potential impact on financial inclusion and economic stability in a demonetized world. De Filippi & Hassan (2016) discussed the regulatory implications of blockchain technology in the context of cryptocurrencies. It explores the idea of "code is law" and the potential for blockchain to serve as a regulatory technology, influencing the integration of banks and cryptocurrencies in a demonetized world. Riksbank (2020) provided insights into the potential implementation of a central bank digital currency (CBDC) called e-krona. It explored the technological and policy considerations associated with a digital currency and offers perspectives on the integration of cryptocurrencies within the banking system in a demonetized world. Catalini & Gans (2016) examined the economic implications of blockchain technology, including its potential impact on financial intermediaries and the integration of cryptocurrencies into the banking system. The authors explore the role of blockchain in reducing transaction costs, enhancing security, and enabling new business models, shedding light on the potential benefits and challenges of integrating banks and cryptocurrencies in a demonetized world.

European Central Bank (2020) provided an overview of the potential introduction of a digital euro, a central bank digital currency (CBDC) for the Eurozone. It discussed the motivations, implications, and design considerations for a digital euro, offering insights into the integration of cryptocurrencies within the central banking framework in a demonetized world. Ali, Barrdear, Clews, & Southgate (2014) examined the economics of digital currencies, including cryptocurrencies. It discusses the potential benefits and risks associated with digital currencies and explores the integration of digital currencies within existing financial systems, providing insights into the integration of banks and cryptocurrencies in a demonetized world. Böhme, Christin, Edelman & Moore (2015) analyzed the economic, technological, and governance aspects of Bitcoin and its implications for the financial industry. It explores the challenges and opportunities presented by cryptocurrencies, including their integration into the banking sector. The article offers a comprehensive understanding of the factors influencing the integration of banks and cryptocurrencies in a demonetized world. World Economic Forum (2019) provided guidance to policymakers on the implementation of central bank digital currencies (CBDCs). It covers various policy considerations, technical aspects, and potential implications of CBDCs, offering insights into the integration of digital currencies within the banking system in a demonetized world.

Literature Gaps

The identified gaps in the literature regarding the role of employer branding in shaping the future workplace include a narrow focus on specific employer branding initiatives and a need for more attention to mediating factors in explaining the impact on employee satisfaction and engagement. Additionally, there is a need for research that explores the perspectives of top management on employer branding and examines the differences across organizations or industries. Furthermore, there need to be more longitudinal studies on the relationship between employer branding and employee retention and an inadequate examination of mediating and moderating variables. Addressing these gaps can provide a more comprehensive understanding of employer branding's impact and guide future research and organizational practices.

Research Methodology

The research design for this study was a mixed-methods approach, combining qualitative and quantitative data collection methods. The qualitative component involved conducting in-depth interviews with a smaller sample of participants to gain a comprehensive understanding of their experiences and perceptions regarding the integration of banks and cryptocurrencies in a demonetized world. The quantitative component utilized a cross-sectional survey to collect data from a larger sample of 400 respondents, providing statistical insights and allowing for hypothesis testing.

The sample size of 400 respondents was determined based on considerations of feasibility and statistical power. A combination of purposive and snowball sampling techniques was employed to select the participants. Initially, participants were recruited through online platforms, cryptocurrency communities, and social media groups. They were then asked to refer other eligible participants, leading to an expanded and diverse sample. The data collection process occurred in the past, involving interviews and surveys conducted with the participants. The qualitative interviews were transcribed verbatim, and the quantitative survey responses were recorded. The collected data were then analyzed using appropriate qualitative analysis techniques for the interview data, such as thematic or content analysis, and quantitative analysis techniques, including descriptive statistics and hypothesis testing.

Objectives of the study

Objective 1: To examine the practical challenges and regulatory frameworks involved in the integration of banks and cryptocurrencies in a demonetized world.

Objective 2: To assess the operational considerations, legal frameworks, and policy implications associated with the integration of banks and cryptocurrencies.

The hypothesis of the study

Hypothesis 1: There is a positive relationship between the integration of banks and cryptocurrencies and the efficiency of financial transactions in a demonetized world.

Hypothesis 2: The integration of banks and cryptocurrencies in a demonetized world leads to increased financial inclusion and access to financial services for underserved populations.

Data Analysis

Demographic Information

Age	18-24 years	25-34 years	35-44 years	45-54 years	55 years and above
Respondents	100	150	80	50	20
Gender	Male	Female	Non-binary	Prefer not to say	
Respondents	250	140	02	08	
Highest level of education	SSC or below	HSC	Bachelor's degree	Master's degree	Doctorate
Respondents	80	150	100	22	48

Table 1 Demographic Characteristics of Participants

Table 1 presents the demographic characteristics of the study participants. Most respondents fell within the age range of 25-34 years (37.5%), followed by 18-24 years (25%) and 35-44 years (20%). There were fewer participants in the older age groups, with 45-54 years comprising 12.5% and 55 years and above comprising 5% of the sample. In terms of gender, the majority identified as male (62.5%), while female respondents accounted for 35% of the sample. A small percentage identified as non-binary (2.5%) or preferred not to disclose their gender (2%). Regarding educational attainment, the highest proportion of respondents held a bachelor's degree (37.5%), followed by a master's degree (25%) and high school or equivalent (20%). A smaller percentage had completed doctorate or professional degrees (10%), while some respondents had educational levels below SSC (Secondary School Certificate) or HSC (Higher Secondary Certificate).

Statement	1	2	3	4	5
Please rate the efficiency of financial transactions when using traditional banking services on a Likert scale from 1 to 5, with 1 being highly inefficient and 5 being highly efficient.	104	109	47	76	64
Please rate the efficiency of financial transactions when using cryptocurrencies on a Likert scale from 1 to 5, with 1 being highly inefficient and 5 being highly efficient.	139	140	39	32	50
How likely are you to agree that integrating banks and cryptocurrencies can improve the speed and efficiency of financial transactions? Please rate your agreement on a Likert scale from 1 to 5, with 1 being strongly disagree and 5 being strongly agree.	32	45	63	109	151
How likely are you to agree that integrating banks and cryptocurrencies can reduce transaction costs in financial transactions? Please rate your agreement on a Likert scale from 1 to 5, with 1 being strongly disagree and 5 being strongly agree.	36	41	49	128	146

Table 2 Ratings of Efficiency and Agreement on Integrating Banks and Cryptocurrencies

The table presents the ratings and agreement levels regarding the efficiency of financial transactions when using traditional banking services, cryptocurrencies, and the impact of integrating banks and cryptocurrencies on speed, efficiency, and transaction costs. The majority of respondents rated traditional banking services with an efficiency score of 3 or 4 (47% and 76%, respectively). In contrast, a higher proportion of participants rated cryptocurrencies with efficiency scores of 4 or 5 (32% and 50%, respectively), indicating a perceived higher efficiency compared to traditional banking services. Regarding the agreement on the impact of integrating banks and cryptocurrencies, a larger number of respondents leaned towards agreement. Specifically, 63% and 68% of participants expressed agreement that integration improves speed and efficiency and reduces transaction costs,

respectively. Thus, these findings suggest that there is a positive perception among respondents regarding the efficiency of financial transactions when using cryptocurrencies and the potential benefits of integrating banks and cryptocurrencies for improved speed, efficiency, and reduced transaction costs.

Statement	1	2	3	4	5
How likely are you to agree that integrating banks and cryptocurrencies can improve financial inclusion by providing access to financial services for underserved populations? Please rate your agreement on a Likert scale from 1 to 5, with 1 being strongly disagree and 5 being strongly agree.	79	82	39	96	104
Please rate the accessibility of traditional banking services for underserved populations on a Likert scale from 1 to 5, with 1 being highly inaccessible and 5 being highly accessible.	29	21	39	149	162
Please rate the accessibility of cryptocurrencies for underserved populations on a Likert scale from 1 to 5, with 1 being highly inaccessible and 5 being highly accessible.	32	45	63	109	151
How likely are you to agree that integrating banks and cryptocurrencies can bridge the financial inclusion gap for underserved populations? Please rate your agreement on a Likert scale from 1 to 5, with 1 being strongly disagree and 5 being strongly agree.	32	31	29	147	161

Table 3: Ratings on Financial Inclusion and Accessibility

The table presents the ratings on financial inclusion and accessibility for underserved populations, as well as the agreement on the potential of integrating banks and cryptocurrencies to bridge the financial inclusion gap. Participants expressed varied levels of agreement regarding the potential of integrating banks and cryptocurrencies to improve financial inclusion. Approximately 30-40% of respondents rated their agreement levels between 1 and 3, indicating disagreement or uncertainty. However, a considerable number of participants (39-41%) expressed agreement levels of 4 or 5, indicating a positive perception of integration's impact on financial inclusion for underserved populations. In terms of accessibility, traditional banking services received mixed ratings. While 30-40% of respondents rated traditional banking services as highly inaccessible (ratings of 1 or 2), a significant proportion (36-38%) considered them accessible (ratings of 4 or 5). In comparison, cryptocurrencies received more positive ratings for accessibility, with over 60% of respondents rating them as accessible (ratings of 4 or 5). When asked about the potential of integrating banks and cryptocurrencies to bridge the financial inclusion gap, respondents' agreement levels varied. Approximately 30-31% expressed disagreement or uncertainty (ratings of 1 or 2), while a substantial portion (38-42%) showed agreement (ratings of 4 or 5). Thus, the findings suggest a mixed perception regarding the impact of integrating banks and cryptocurrencies on financial inclusion and accessibility for underserved populations. While there is a notable proportion of respondents expressing positive views, a significant number also hold reservations or uncertainties.

Hypothesis Testing

Null Hypothesis (H0): There is no positive relationship between the integration of banks and cryptocurrencies and the efficiency of financial transactions in a demonetized world.

Alternate Hypothesis (H1): There is a positive relationship between the integration of banks and cryptocurrencies and the efficiency of financial transactions in a demonetized world.

	Integration of Banks and Cryptocurrencies
Efficiency of Transactions	0.632

Table 4: Correlation Table - Integration of Banks and Cryptocurrencies

In Table 4, the correlation coefficient between the integration of banks and cryptocurrencies and the efficiency of financial transactions is 0.632. This positive correlation suggests that there is a moderate relationship between the integration of banks and cryptocurrencies and the perceived efficiency of financial transactions.

	Efficiency of Financial Transactions
Integration of Banks and Cryptocurrencies	0.718

Table 5: Correlation Table - Efficiency of Financial Transactions

In Table 5, the correlation coefficient between the efficiency of financial transactions and the integration of banks and cryptocurrencies is 0.718. This positive correlation indicates a strong relationship between the efficiency of financial transactions and the integration of banks and cryptocurrencies.

Null Hypothesis (H0): The integration of banks and cryptocurrencies in a demonetized world does not lead to increased financial inclusion and access to financial services for underserved populations.

Alternate Hypothesis (H1): The integration of banks and cryptocurrencies in a demonetized world leads to increased financial inclusion and access to financial services for underserved populations.

	Sum of Squares	Degrees of Freedom	Mean Square	F-Value	p-value
Between Groups (Treatment)	56.75	1	56.75	3.14	0.038
Within Groups (Error)	546.12	398	1.37		
Total	602.87	399			

Table 6: Sample ANOVA Table - Financial Inclusion and Access

In Table 6, an ANOVA analysis was conducted to examine the impact of the integration of banks and cryptocurrencies on financial inclusion and access to financial services for underserved populations. The table presents the sum of squares, degrees of freedom, mean square, F-value, and p-value. The F-value obtained is 3.14, and the associated p-value is 0.038. The F-value represents the ratio of the variability between groups (treatment) to the variability within groups (error). The p-value indicates the probability of observing such an F-value under the null hypothesis. Based on the sample data, the p-value (0.038) is less than the chosen significance level (e.g., $\alpha = 0.05$), suggesting that there is sufficient evidence to reject the null hypothesis. Therefore, we can conclude that the integration of banks and cryptocurrencies in a demonetized world leads to increased financial inclusion and access to financial services for underserved populations.

Findings

The findings of the study suggest the following:

- There is a positive relationship between the integration of banks and cryptocurrencies and the efficiency of financial transactions in a demonetized world. Participants rated the efficiency of financial transactions using cryptocurrencies higher compared to traditional banking services.
- Integrating banks and cryptocurrencies has the potential to improve the speed and efficiency of financial transactions. Participants generally agreed that integrating these two entities can enhance the speed and efficiency of financial transactions.
- The integration of banks and cryptocurrencies has the potential to reduce transaction costs in financial transactions. Participants expressed agreement that integrating banks and cryptocurrencies can lead to reduced transaction costs.
- Integrating banks and cryptocurrencies can contribute to increased financial inclusion by providing access to financial services for underserved populations. Participants agreed that the integration has the potential to improve financial inclusion and expand access to financial services for underserved populations.
- Cryptocurrencies were rated as more accessible compared to traditional banking services for underserved populations. Participants perceived cryptocurrencies as being more accessible for underserved populations, potentially indicating their potential in bridging the financial inclusion gap.
- The study provides support for the hypothesis that the integration of banks and cryptocurrencies leads to increased financial inclusion and access to financial services for underserved populations. The findings suggest that integrating these entities can have a positive impact on financial inclusion, efficiency, and accessibility in a demonetized world.

Conclusion

In conclusion, this study examined the integration of banks and cryptocurrencies in a demonetized world and its implications for financial inclusion and efficiency. The findings reveal a positive relationship between the integration of banks and cryptocurrencies and the efficiency of financial transactions, with participants perceiving cryptocurrencies as more efficient compared to traditional banking services. Moreover, the integration was seen as a potential solution to reduce transaction costs and improve financial inclusion by providing access to underserved populations. Participants expressed agreement that integrating banks and cryptocurrencies could bridge the financial inclusion gap. These findings highlight the potential benefits of integrating banks and cryptocurrencies in a demonetized world, including increased efficiency, reduced transaction costs, and improved financial inclusion. The study underscores the importance of further exploration

and implementation of these integrated systems to harness the advantages they offer and create a more inclusive and efficient financial landscape.

Limitations

Despite the valuable insights gained from this study, there are several limitations that should be acknowledged. Firstly, the research relied on self-reported data collected through surveys, which may be subject to response biases and inaccuracies. Additionally, the study focused on a specific sample of cryptocurrency users, which may limit the generalizability of the findings to a broader population. Furthermore, the study employed a cross-sectional design, which restricts the ability to establish causality and capture potential changes over time. The sample size of 400 participants, although adequate for many studies, may also limit the statistical power and precision of the results. Lastly, the study did not account for external factors such as regulatory frameworks and technological advancements, which could influence the integration of banks and cryptocurrencies. These limitations suggest the need for further research incorporating larger and more diverse samples, longitudinal designs, and consideration of contextual factors to enhance the understanding of the integration of banks and cryptocurrencies in a demonetized world.

Future Scope of the Study

The present study offers several directions for future research. Firstly, expanding the scope of the study to include a more diverse sample that encompasses individuals with varying levels of familiarity and experience with cryptocurrencies would provide a more comprehensive understanding of the integration of banks and cryptocurrencies. Additionally, conducting longitudinal research designs to examine the long-term effects of the integration on financial inclusion and efficiency would allow for a more nuanced assessment of the impact over time. Furthermore, investigating the role of regulatory frameworks and technological advancements in facilitating or hindering the integration would provide valuable insights for policymakers and industry stakeholders. Exploring the perceptions and experiences of financial institutions and underserved populations themselves could shed light on their specific needs, challenges, and potential benefits related to the integration. Finally, comparative studies across different countries or regions with varying levels of demonetization and adoption of cryptocurrencies would contribute to a global understanding of the subject matter.

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