International Journal of Engineering Research and Science & Technology

ISSN 2319-5991 www.ijerst.com
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Peer Reviewed, Referred & Indexed Journal

Research Paper

A STUDY ON BLOCKCHAIN IN FINANCIAL TRANSACTIONS

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ABSTRACT

Blockchain technology is transforming financial transactions by providing a secure, transparent, decentralized, and efficient platform for recording and verifying financial data. Unlike traditional banking systems that rely on intermediaries, blockchain enables peer-to-peer transactions, reducing processing time, operational costs, and the risk of fraud. This study examines the role of blockchain in enhancing the speed, accuracy, security, and transparency of financial transactions across banking, payments, trade finance, and digital asset management. It also explores the benefits of smart contracts, real-time settlements, and improved data integrity while highlighting challenges such as regulatory uncertainty, scalability, cybersecurity concerns, and implementation costs. The study concludes that blockchain has significant potential to reshape the financial sector by improving trust, operational efficiency, and financial inclusion, making it one of the most promising technologies for the future of digital finance.

1.1 INTRODUCTION OF THE STUDY

Modern banks play an important role in promoting economic development of a country. They collect savings of large masses of people scattered throughout the country. Which in the absence of banks would have remained ideal and unproductive? These scattered amounts are collected, pooled together and made available to commerce and industry for meeting the requirements. Banks provide necessary funds for executing various programs underway in the process of economic development.

As a servicing industry banks are customer oriented. Customers are the driven power of the bank and it earns profit by providing services to customers. Customers are the persons or institutions that deal with the bank. In general, he who has an account in a bank will be treated as a customer of that particular bank.

To fulfill the demand and impress the customers most of the banks are trying to make their whole banking operation through online platform.

Blockchain in Financial Transactions is the demand of the time. It is no longer a “nice to have” but an “impossible to survive with” for all banks. Electronic banking is critical in the transformation drive of banks in areas such as products and services and how they are delivered to customers. Thus, it is seen as a valuable and powerful tool in the development, growth, promotion of innovation and enhancing competitiveness of banks. Given the significant role of electronic banking in the developmental drive of banks, information technology has been found to lead to improvement in business efficiency and service quality and hence attract customers as well as retain them.

Electronic banking contributes significantly to the distribution channels of banks such as automated teller machine (ATM), Phone –banking, Tele- banking, PC-banking and now Blockchain. In addition, transfer of funds, viewing and checking savings account balances, paying mortgages, paying bills and purchasing financial instruments and certificates of deposits processes have improved significantly as a result of Blockchain. This implies that, electronic banking has resulted in efficiency in service delivery in the banking sector because customers can transact business from one side of the country to another and from both long and short distance.

Electronic banking has transformed traditional banking practices to the extent that it has been found to create a paradigm shift in marketing practices resulting in positive performance in the banking sector.

1.2 NEED OF THE STUDY

All banks compete with each other to attract their customers in different ways through providing convenient, accessible and acceptable services or/and products to their customers. One of the most important of these services is the electronic services that have contributed significantly to increase the distance between costumers and the bank.

Blockchain in Financial Transactions was adopted by banks so as to improve their service delivery, decongest queues in the banking hall, enable customers withdraw cash 24/7, aid international payment and remittance, track personal banking transaction, request for online statement, or even transfer deposit to a third-party account. Despite the effort of banks to ensure that customers reap the benefits of Blockchain in Financial Transactions, the banks are met with complaints from customers as regards, malfunctioning Automated Teller Machines (ATMs), network downtime, online theft and fraud, non-availability of financial service, payment of hidden cost of electronic banking like Short Message Services (SMS).

1.3 SCOPE OF STUDY

Banking sector is large and difficult area. A bank has different products, Services and customers. This study gives the perception of different class of customers of different age group towards Blockchain.

The outcome of this study will help the management of banks to know about the satisfaction levels of the customers using Blockchain service and the areas in which they are lagging their customer service.

1.4 OBJECTIVES OF THE STUDY

Main objective

The general purpose of the study is to investigate the customer trust in Blockchain in Financial Transactions.

Sub objectives

1) Identify the Electronic banking services offered by banks and its usage by customer
2) Identify customers‟ level of satisfaction with service delivery given the introduction of electronic banking services

3) Identify the satisfaction to customers for using Blockchain in Financial Transactions services.

1.5 RESEARCH METHODLOGY

Nature of study

This is descriptive study and analytical study

Nature of data

Primary data and secondary data

Sources of data

This study uses data collected through questionnaire method and data available from google on Blockchain **Sample design**

2.REVIEW OF LITRETURE

INTRODUCTION

This chapter seeks to analyze relevant research documentation and findings essential to improve this research and its capacity to analyze the concerns it seeks to accomplish. Several researches have been carried out on Blockchain in Financial Transactions and it is important to examine them in relation to this research topic. This will enhance effectiveness and stimulate an all-inclusive analysis and discussions of critical issue in relation to the topic under consideration.

CONCEPTUAL REVIEW

A conceptual framework is an analytic tool with several variations and contexts. It can be applied in different categories of work where an overall picture is needed. It is used to make conceptual distinctions and organize ideas.

Blockchain in Financial Transactions

Blockchain in Financial Transactions is the practice of making bank transactions via the Internet. Blockchain in Financial Transactions allows us to make deposits, withdrawals, pay bills etc all with the click of a mouse. Blockchain in Financial Transactions is one of the few web applications where benefits to customers and banks are already widely proven. It is now no longer a “nice to have” but an “impossible to survive without” for all banks. Blockchain in Financial Transactions means a kind of self-help financial services provided by the bank for its clients by the medium of Internet, including account information inquiry, account transfer & payment, online payment, agency services, etc.

The benefits are many.

For the Blockchain in Financial Transactions customer, the convenience factor rates high. No longer does a person have to wait for the bank statement to arrive in the mail to check account balances. One can check the balance every day just by logging onto one's account. In addition to checking balances and transactions, one can catch discrepancies in the account right away and

deal with them swiftly. The best part is that this can be done anywhere! As long as one has Internet access, one can practice Blockchain in Financial Transactions.

Since bills are paid online, the necessity of writing checks, affixing postage and posting the payment in the mail is eliminated. Once the amount is entered and the payee is checked off, the funds are automatically deducted from the payer's choice of account. Since the cost to the bank is minimal, the cost to the consumer, in many cases, is also minimal. While there is usually a fee for Blockchain in Financial Transactions, it can be extremely low. Those who partake in Blockchain in Financial Transactions all agree it's worth every penny. Blockchain in Financial Transactions also eliminates paper waste, which is a plus not only for those who have to handle all the paper work, but also for the environment.

3.1 INDUSTRIAL PROFILE

As per the Reserve Bank of India (RBI), India’s banking sector is sufficiently capitalised and well-regulated. The financial and economic conditions in the country are far superior to any other country in the world. Credit, market and liquidity risk studies suggest that Indian banks are generally resilient and have withstood the global downturn well.
Indian banking industry has recently witnessed the roll out of innovative banking models like payments and small finance banks. RBI‟s new measures may go a long way in helping the restructuring of the domestic banking industry.
The digital payments system in India has evolved the most among 25 countries with India’s Immediate Payment Service (IMPS) being the only system at level five in the Faster Payments Innovation Index (FPII).

Market Size

The Indian banking system consists of 12 public sector banks, 22 private sector banks, 46 foreign banks, 56 regional rural banks, 1485 urban cooperative banks and 96,000 rural cooperative banks in addition to cooperative credit institutions. As of July 2024, the total number of ATMs in India increased to 209,989 and is further expected to increase to 407,000 by 2025.
Public sector banks‟ assets stood at Rs. 72.59 lakh crore (US$ 1,038.76 billion) in FY24.
During FY21-FY23, credit off-take grew at a CAGR of 13.93%. As of FY24, total credit extended surged to US$ 1,936.29 billion.
During FY13-FY24, deposits grew at a CAGR of 6.81% and reached US$ 1.90 trillion by FY25. Credit to non-food industries increased 3.3% y-o-y, reaching US$ 1.26 trillion on February 28, 2024 and US$ 1.42 trillion on March 13, 2025.

Investments/Developments

Key investments and developments in India’s banking industry include:

- In October 2020, HDFC Bank and Apollo Hospitals partnered to launch the „Healthy Life Programme‟, a holistic healthcare solution that makes healthy living accessible and affordable on Apollo‟s digital platform.

- In 2019, banking and financial services witnessed 32 M&A (merger and acquisition) activities worth US4 1.72 billion.
- In March 2020, State Bank of India (SBI), India‟s largest lender, raised US$ 100 million in green bonds through private placement.
- In February 2020, the Cabinet Committee on Economic Affairs gave its approval for continuation of the process of recapitalization of Regional Rural Banks (RRBs) by providing minimum regulatory capital to RRBs for another year beyond 2019-20 - till 2020-21 to those RRBs which are unable to maintain minimum Capital to Risk weighted Assets Ratio (CRAR) of 9% as per the regulatory norms prescribed by RBI.
- In October 2019, Department of Post launched the mobile banking facility for all post office savings account holders of CBS (core banking solutions) post office.
- Deposits under Pradhan Mantri Jan DhanYojana (PMJDY) stood at Rs. 1.06 lakh crore (US$ 15.17 billion.

3.2 COMPANY PROFILE

Company Overview

HDFC Bank Limited is an Indian banking and financial services company headquartered in Mumbai. Following its historic reverse merger with its parent company (HDFC Ltd.) in July 2023, it cemented its position as India’s largest private-sector bank by assets and the world's second-largest bank by market capitalization outside of the US and China.

- **Founded:** August 1994
- **Headquarters:** Mumbai, Maharashtra, India
- **Industry:** Banking and Financial Services
- **Company Type:** Public (Listed on BSE, NSE, and NYSE)
- **Employee Count:** Approximately **2.11 Lakh** (~211,000+ as of March 2026)
- **Website:** www.hdfcbank.com

Key Executives

- **Atanu Chakraborty:** Part-Time Non-Executive Chairman
- **Sashidhar Jagdishan:** Managing Director & Chief Executive Officer (CEO)

History & Milestones

- **1994:** HDFC Bank was incorporated as a subsidiary of the Housing Development Finance Corporation (HDFC Ltd.), receiving an 'in principle' approval from the RBI to set up a private sector bank as part of India's economic liberalization.
- **2000s:** Grew rapidly through strategic acquisitions, notably acquiring Times Bank in 2000 (the first merger of two new-generation private banks in India) and Centurion Bank of Punjab (CBoP) in 2008 to expand its geographical footprint.
- **2023:** In a monumental move for the Indian corporate sector, HDFC Bank completed a $40 Billion reverse merger with its parent housing finance giant, HDFC Ltd. This consolidation created a financial behemoth with a massive customer base, instantly making HDFC Bank a top 10 global bank by valuation.
- **2026:** Expanding its global and domestic reach, the bank's distribution network crossed over 9,600 branches and 21,100 ATMs spread across more than 4,100 cities and towns.

Core Business Segments

HDFC Bank operates across comprehensive banking pillars, servicing retail, wholesale, and rural markets:

4.DATA ANALYSIS AND INTERPRETATION

Introduction

This chapter deals with the data analysis and interpretation. Data had been collected using questionnaire. Questionnaire had been distributed to random people. Sample had been collected using convenient sampling technique. All the 50 respondents are selected at random.
This chapter is an attempt to analyze the response of people using Blockchain. This study also helps to find out the perception of customers towards Blockchain.

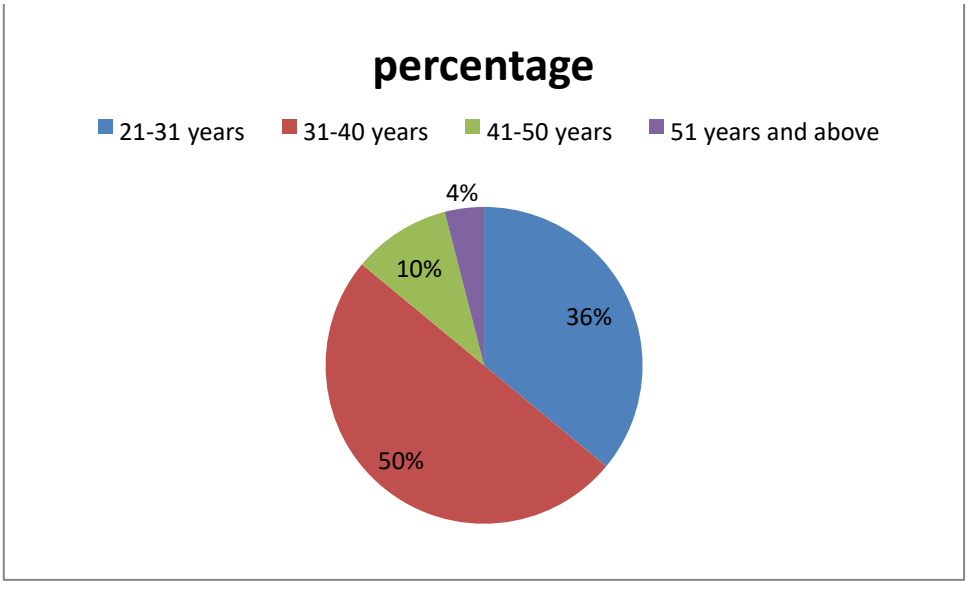
4.1: age wise classification

Age	percentage	Count
21-31 years	36	18
31-40 years	50	25
41-50 years	10	5
51 years and above	4	2

Source: primary data

The above table shows 36% of the respondents are from the age group 21 -31 years, 50% of them are between 31-40 years, 10% are in between 41-50 years category and only 4% of them are included in the 51 years and above category

Fig 4.1 Showing age wise classification



5.1 Findings

1. 100% of the respondents are Blockchain users.
2. Majority of the users selected their bank based on their excellent service.

3. Majority of the customers were aware of the Blockchain in Financial Transactions services offered by their bank
4. Most of the customers have opened only savings account for their banking needs
5. Half of the respondents are not regular users of Blockchain and use it monthly or in a period which extends to more than a month.
6. Most Customers prefer good risk-free service while using Blockchain.
7. The most frequently used Blockchain in Financial Transactions service by customers is online purchase and payment involved risk.
8. The most important reason for choosing Blockchain by majority of the customers was for better convenience.
9. 60% of the customers think online transactions are safe.
10. Majority of the customers feels Blockchain is easier than manual banking.
11. 58% of the respondents think human contact is somewhat important for banking relations, online traction involves risk.
12. It is found out that clearer simpler service will perceive customers to do more Blockchain in Financial Transactions.
13. Most of the respondents have difficulty in understanding Blockchain sites.

5.2 Suggestions

- Risk proof websites are to be created so that the customers will be able to navigate easily through the website because some of the respondents found Blockchain in Financial Transactions to be complicated.
- The bank cant ensure the security of Blockchain in Financial Transactions by building strong firewalls to protect from hackers and viruses.
- More promotional strategies can be adopted by the bank to make the customers aware of the online services offered by banks because not all the respondents had full awareness.
- Server crashes and slow speed in working was the main problem faced by the respondents; banks can use adaptive technologies to create better servers which won't crash during heavy server traffic.
- Most of the respondents preferred clearer/simpler service instead of rewards so it is better to keep on improving service to provide them hassle free banking experience for more convenient banking.

5.3 Conclusion

This study was conducted to know about the customer trust of Blockchain in Financial Transactions services on customers and their satisfaction towards the services offered with reference to Thrissur town. It is clear from this study that all the respondents are users of Blockchain services. There are a wide variety of banking services offered online and all the respondents are users of one or the other service.

Majority of the respondents uses Blockchain service for online purchase and payment. People prefer Blockchain for better convenience and to make banking a hassle-free process. Clearer service has made an impact on users to promote Blockchain compared to manual banking. So, we can clearly understand that Blockchain plays a tremendous and very important role for the growth of the banking sector.

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