

# Chapter 16

## A Study on the Application of Blockchain Technology in the Banking and Financial Sector in India

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### ABSTRACT

*Modern technology is influencing our daily lives, from using a remote to control equipment to utilizing voice notes to give orders. Because of its properties of decentralization, enforceability, and sharing, blockchain technology is frequently used in banking, digital asset trade, and other sectors. Blockchain has emerged as a popular issue in fintech research, influencing the evolution of traditional financial forms. It is regarded as the foundation of the digital economy. Blockchain technology may be defined as a data structure that keeps transactional records and, by ensuring security, transparency, and decentralization, eliminates the possibility of fraudulent behaviour or transaction repetition without the use of a third party. This study examines the characteristics and challenges of blockchain technology, the impact of blockchain technology on the operation and administration of the banking and financial sector and the possibilities for blockchain technology implementation in banking and financial sector in India.*

### INTRODUCTION

Blockchain technology is now widely employed in digital asset trade, finance, banking, and other industries. Blockchain has emerged as a hot topic in fintech research, with implications for the future of outdated monetary forms. It is identified as the digital financial system's foundation. The once-common paper money transaction is on the wane as electronic payments take over the mainstream. Central bank

DOI: 10.4018/978-1-6684-8624-5.ch016

digital currency application scenarios will be “practiced” for future official issue by the end of April 2020. Satoshi Nakamoto, an unidentified entity, formed the idea of “Bitcoin”. He also issued a white paper on Bitcoin in May 2008. He didn’t say anything about himself. He explained how the money would function. “Bitcoin”, a virtual cash test, turned into the first large blockchain breakthrough. The second one invention became known as “Blockchain”, and it turned into created with the idea that the technology that powered “Bitcoin” should be eliminated from the cash and applied for a variety of different inter-organizational collaboration. Since, its introduction in 2008, blockchain era has been one of the hottest problems in fintech studies, infiltrating all factors of the conventional economic market, altering the operation mode of the economic industry’s operation gadget and even the complete social and commercial gadget.

## **REVIEW OF LITERATURE**

The relevant literature review for the study is as follows:

- Ramchandra et al. (2022) aimed to evaluate the influence of blockchain technology on the banking sector. Blockchain technology is considered one of the most promising technologies for the banking industry. Infrastructure, channels, platforms and scenarios are considered to be the four years that Internet finance has been successful. Blockchain is known as a growing technology that attracts energy service providers, startups and tech developers. Technology provides many benefits for creating new processes by reducing financial constraints. Blockchain technology confirms the transparency & security of business solutions. It also works for the energy sector and the state of the energy sector by analyzing current market conditions and information. However, when it comes to blockchain scalability, the system is essential to update and improve the process. Also, cryptocurrencies like Bitcoin have become an important concept in the current business world. These issues include the time it takes to put a transaction on a block and the time it takes to get approval.
- Jena (2022) in this research paper researcher examine the “Factors Affecting the Adoption of Blockchain Technology in the Banking Sector: An Extended UTAUT Model”. Over time, technological innovation has significantly revolutionized banking. In the financial industry, digital innovation began with the introduction of money to replace barter systems, and subsequently eventually replaced wax seals with digital signatures. As a result, this study extended “the unified theory of acceptance and use of technology” (UTAUT) in order to identify the major determinants of bankers’ desire to employ blockchain technology. The findings of this study will assist government officials, decision-makers, and economists in improving banking instructions for the rapid and easy deployment of blockchain technology.
- Kumari and Devi (2022) in this research researcher examined the “Impact of FinTech and Blockchain Technologies on Banking and Financial Services”. Banks and financial institutions around the world are taking advantage of the introduction of new technology. This article undertook a survey of the literature on FinTech and blockchain in the banking and financial sector. It discovered that banks and financial institutions are going through major transformations in order to stay up with digital technology revolution. The research proposed that FinTech will bring about extensive improvements in making an investment standard that provide advanced customer

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