

Chapter 17

Blockchain Adoption in the Financial Sector: Challenges, Solutions, and Implementation Framework

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ABSTRACT

Blockchain technology can be easily considered one of the most revolutionary innovations of our times. The open ledger has proved enormously beneficial for the financial sector, and thanks to its characteristics like decentralized structure, high safety, and immutable traceability, its adoption has witnessed unprecedented growth in the financial sector. That said, there are many challenges that blockchain adoption in the financial domain faces, and this research takes a close look at all these issues that can potentially hamper its adoption in the sector. The research found that primary inhibitors in the growth of blockchain include cost factors, lack of regulations, rigid work culture, and inadequate infrastructure and offer solutions to tackle these issues. Further, the study also develops a conceptual model involving important stakeholders and interaction variables between them to facilitate the adoption of an open ledger in the sector.

INTRODUCTION

There is no doubt about the revolutionary potential of blockchain technology that it brings to the table across product categories and service domains. In the last half a decade, the open ledger has made significant progress in the financial sector and its wide range of applications in overseas remittances, fund transfers, maintaining records, and processing transactions have made the technology favourite among finance professionals. The origin of blockchain technology can be traced back to the launch of Bitcoin in the year 2008 following which the open ledger became synonymous with digital currencies. The majority of its applications remain restricted to the field of cryptocurrency although post-2015, other business verticals also start using the blockchain in a big manner (Accenture 2017). The decentralized structure of the blockchain coupled with its immutable characteristics has today opened new avenues of growth in the financial sector. Some of the most prominent applications of blockchain in the financial sector include transaction management, decentralized finance, non-fungible tokens, and customer dealing among others. The technology is also extensively used in back-end processing, handling intermediaries, and managing insurance claims in the allied sectors of finance. Further, blockchain use cases is growing in finance category which testifies to the relevance and importance of the technology and assures stakeholders that the technology is going to stay here for years to come. That said, the growing use of technology has also met with many challenges which, if left unaddressed, might hamper the blockchain adoption in the long run among financial professionals. There are many key challenges that industry professionals are facing and prominent among these are issues related to the cost of adoption of the technology, lack of standards and regulations, and rigid work culture (Andreas 2015). In addition, the issues related to the lack of knowledge, skills, and infrastructure to support the implementation of an open ledger are also acting as an impediment. All these challenges are very critical and in order to support the widespread adoption of blockchain in the financial sector, it is absolutely mandatory for the players in the financial ecosystem to come together and put collaborative effort into creating a win-win situation that will bring holistic benefits and advantages for the entire sector. It is only by creating an inclusive system for both companies and consumers, benefits of adopting blockchain in financial field can be realized fully.

KEY CHALLENGES AND SOLUTIONS

Combining the literature review (Chesbrough 2003; Chesbrough 2010; Cai 2018; Biswas and Gupta 2019) and real-world case studies of blockchain adoption, the study has been able to finalise the following key challenges that are inhibiting the growth of open ledger and its applications among the financial sector players. These challenges have been discussed below one by one and the study also offers detailed insights into the possible solutions that might help in solving these issues in a comprehensive manner:

High Cost: Both literature and our in-depth discussion with the industry experts and analysts point to the high cost that is keeping blockchain technology from realising its full potential in the financial sector (Accenture 2017). There is no doubt about the multiple benefits that the use of open ledger offers but it is equally important to understand that in today's business environment where all the financial resources are intensely contested, making a huge investment in blockchain could prove to be a tricky task. The gloomy outlook on global growth is weighing on prospects of blockchain adoption with the majority of shareholders not being very inclined to make new investments in the field of technology. The relatively unknown nature of blockchain technology is also creating confusion among financial institu-

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