

Chapter 10

Cryptocurrency and Future of Money: Introduction to Cryptocurrency

Syeda Fizza Abbas

Kinnaird College for Women University, Pakistan

Aliza Sajjad

 <https://orcid.org/0009-0003-6574-5169>

Kinnaird College for Women University, Pakistan

Haider Rizavi

University of Central Punjab, Pakistan

Nadia Sadiq

 <https://orcid.org/0000-0002-6764-2513>

Government College University, Faisalabad, Pakistan

ABSTRACT

Cryptocurrency, emerging post-recession, has the potential to reshape the financial landscape. Since Bitcoin's debut in 2009, cryptocurrencies have evolved into advanced assets using blockchain technology. These decentralized digital currencies stand out from traditional money by expanding banking access, cutting transaction costs, and enhancing security. Beyond technology, they shift trust and control in finance away from centralized entities like banks and governments, leveraging blockchain and distributed systems to boost efficiency and promote financial inclusion, especially in developing countries.

DOI: 10.4018/979-8-3693-6386-7.ch010

INTRODUCTION TO CRYPTOCURRENCY

The rise of the digital age has brought about groundbreaking technological advancements (Ndung'u et al., 2016). The emergence of cryptocurrencies in the digital age marks a significant fusion of cryptography and digital assets (Milutinović, 2018). This convergence has led to the creation of decentralized financial systems made possible by blockchain technology. The interplay between cryptography, digital assets, and blockchain technology has the potential to revolutionize traditional finance and introduce new modes of transactions and economic models in the digital realm (Makarov & Schoar, 2022a).

Cryptocurrency is a digital money designed for conducting transactions over the internet. It uses cryptography to ensure the security of transactions and uphold the accuracy of records (Chuen et al., 2017). Cryptocurrency functions autonomously without the need for a central authority or traditional banking institutions.

It can be defined as a maturing subclass of digital or virtual currencies that employs the use of cryptographic techniques to facilitate secure transactions and verify the transfer of assets among the trading parties. Unlike other forms of money, it works on peer-to-peer networks built on principles of blockchain technology which implies that there is no central authority that governs the cryptocurrency network hence resulting in a decentralized operational nature of the network which not only enhances security but also ensures transparency (Nakamoto, 2008).

The term “*cryptocurrency*” is a combination of two words ‘*crypto-*’ which stands for the application of cryptography and ‘*-currency*’ which means it is a medium of exchange. The usufruct of these cryptographic algorithms ensures that the transactions from modifications or counterfeit the digital assets, to maintain the integrity and security. Bitcoin, established in 2009, was the inaugural cryptocurrency and its decentralized character stems from the absence of a centralized structure (Nakamoto, 2009).

Historical Overview

Since the emergence of the econo-physics around a quarter century ago, numerous studies have been carried out to observe the macro and micro financial phenomena ranging from the economic bubble formations, speculative market behaviors, efficacy of the investing strategies, portfolio evaluations and evolutions to the price formation of the assets. This exposed all types of financial markets, be it stock and commodity markets or real -estate and Forex markets under the scrutiny of research-

40 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/cryptocurrency-and-future-of-money/367902

Related Content

User-Based Load Visualization of Categorical Forecasted Smart Meter Data Using LSTM Network

Ajay Kumar, Parveen Poon Terangand Vikram Bali (2020). *International Journal of Multimedia Data Engineering and Management* (pp. 30-50).

www.irma-international.org/article/user-based-load-visualization-of-categorical-forecasted-smart-meter-data-using-lstm-network/247126

Archive Film Comparison

Maia Zaharieva, Matthias Zeppelzauer, Dalibor Mitrovicand Christian Breiteneder (2010). *International Journal of Multimedia Data Engineering and Management* (pp. 41-56).

www.irma-international.org/article/archive-film-comparison/45754

Multimedia Databases and Data Management: A Survey

Shu-Ching Chen (2010). *International Journal of Multimedia Data Engineering and Management* (pp. 1-11).

www.irma-international.org/article/multimedia-databases-data-management/40982

Enhancing Network Security on a Hybrid LSTM-Gradient Boosting Framework for Intrusion Detection

R. Saranyaand S. Silvia Priscila (2026). *Pioneering AI and Data Technologies for Next-Gen Security, IoT, and Smart Ecosystems* (pp. 107-126).

www.irma-international.org/chapter/enhancing-network-security-on-a-hybrid-lstm-gradient-boosting-framework-for-intrusion-detection/383975

3D Music Impact on Autonomic Nervous System Response and Its Potential Mechanism

Yi Qin, Huayu Zhang, Yuni Wang, Mei Maoand Fuguo Chen (2021). *International Journal of Multimedia Data Engineering and Management* (pp. 1-16).

www.irma-international.org/article/3d-music-impact-on-autonomic-nervous-system-response-and-its-potential-mechanism/271430