ABSTRACT

Cryptocurrency at the crossroads: navigating regulation, cybercrime, and market dynamics in the digital age

Shobhit Navani

This dissertation explores the intricate intersection of cryptocurrency regulation and cybercrime, addressing the challenges and opportunities presented by digital currencies within an interconnected global financial system. Structured into three chapters, it investigates cryptocurrency's darker dimensions, analyzes the notorious collapse of FTX, and examines the impact of social media sentiment on cryptocurrency market trends.

Chapter 1 provides a thorough literature review, highlighting cryptocurrency's dual role as a groundbreaking financial tool and an enabler of illicit activities like money laundering, terrorism financing, and ransomware attacks. It delves into the darknet's significance in facilitating illegal transactions and evaluates global regulatory approaches across nations such as the United States, China, Poland, and Switzerland. The chapter underscores the challenges of international cooperation in crafting adaptive regulatory frameworks and concludes with insights into emerging threats and strategies to balance innovation with security.

Chapter 2 examines the meteoric rise and dramatic fall of FTX, a once-leading cryptocurrency exchange, through the lens of its founder, Sam Bankman-Fried. It explores FTX's growth, high-profile marketing campaigns, systemic governance failures, and eventual collapse amid allegations of fraud and mismanagement. Broader implications for the cryptocurrency industry are discussed, highlighting vulnerabilities and the pressing need for stricter oversight and accountability.

Chapter 3 investigates the interplay between social media sentiment and cryptocurrency market behavior, focusing on major currencies like Bitcoin, Ethereum, and Monero. It also analyzes public reactions to the FTX scandal, highlighting ethical and regulatory deficiencies. Using advanced sentiment analysis, including a Bidirectional Encoder Representations from Transformers model, the chapter demonstrates how events such as hacks and regulatory announcements influence short-term market trends. Limitations such as simplified sentiment categorization and data access restrictions are acknowledged, with recommendations for future research into cross-platform analysis and integration with financial metrics.

This dissertation significantly contributes to cryptocurrency scholarship by addressing regulatory challenges, systemic vulnerabilities, and market dynamics. It calls for coordinated global efforts to establish robust, adaptive frameworks that safeguard financial security while fostering innovation in the digital age.