

ULST Timisoara

Multidisciplinary Conference on Sustainable Development



15-16 May 2025

CRYPTOCURRENCIES AND THEIR MACROECONOMIC IMPLICATIONS: OPPORTUNITY OR THREAT TO MONETARY STABILITY?

Florentina Cristina BÂLDAN, Marinela BĂRBULESCU, Alina HAGIU National University of Science and Technology Politehnica Bucharest

Abstract: In this paper we aim to analyze the macroeconomic effects of cryptocurrencies on monetary stability, monetary policy and the functions of traditional central banks.

Introduction

 The emergence and spread of cryptocurrencies has led to a profound transformation of the global financial structure over the last decade. When launched Bitcoin was by pseudonymous entity Satoshi Nakamoto in 2009, both a technological revolution and a conceptual challenge conventional monetary systems began. Started as a minor experiment, Bitcoin has transformed into a financial asset worth hundreds of billions of dollars, spurring the development of a fully decentralized digital ecosystem.

Material and method

The present study uses a qualitative, theoretico-exploratory method. It focuses on critical analysis of relevant literature, institutional reports and secondary data. The main objective of the research is to understand the macroeconomic effects of cryptocurrencies on monetary stability, monetary policy and financial system functioning.

Results and discussions

Systemic risks associated with cryptocurrencies and implications for financial stability

Risk category	Implications for stability	
	Exposing investors to rapid and massive	
Extreme price volatility	losses	
Lack of financial protection	Absence of lifelines and systemic	
mechanisms	guarantees	
Interconnection with the	Contagion between crypto and	
traditional financial system	regulated markets	
Cyber risks and money	Undermining financial integrity and	
laundering	public trust	
False decentralization and	Decision concentration and risk of	
weak governance	uncontrolled collapse	

Comparison between CBDCs and private cryptocurrencies

Feature	CBDC (central bank digital	Private cryptocurrencies (e.g.
	currencies)	Bitcoin, Ethereum)
		Private entities or decentralized
Issuer	Central bank (state)	communities
Value stability	Raised (state-backed)	Low (high volatility)
Legal backing	Officially recognized	No legal status in most countries
Integration into the		Partial, mostly through crypto
financial system	Fully integrated	platforms
	Payments, financial inclusion,	
Predominant use	monetary transmission	Speculation, store of value, DeFi
Volatility	Low	Very high
Transparency and		
regulation	Regulated and audited	Partially regulated, lack of audits
		Innovation, decentralization,
Main objective	Monetary stability and control	autonomy
Examples	e-CNY, e-krona, e-euro	Bitcoin, Ethereum, Solana

Conclusions

The analysis highlighted the effects of cryptocurrencies on monetary stability and monetary policy, especially as the public, companies and even financial institutions are increasingly interested in digital assets.

Acknowledgement: Special thanks to the organizers of the conference