

# CRYPTOCURRENCY AS AN EMERGING ASSET CLASS IN GLOBAL FINANCE

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## ABSTRACT

*Global financial systems are experiencing significant disruption as a result of the rise of cryptocurrencies as a digital form of money. Because of its decentralized structure and the ground-breaking blockchain technology, cryptocurrencies provide a wide range of advantages and disadvantages to people, companies, and governments around the globe. The analysis of cryptocurrencies as investment instruments is done in this study. The purpose of the study is to confirm if they fall under the category of an asset class and what sort of advantages they could have for an investor's portfolio. In the nexus of technology and money, cryptocurrencies represent a novel and uncategorized phenomenon. Therefore, the question of whether cryptocurrencies may create a new asset class for investing purposes is very interesting. Based on significant internal correlation, lack of association with any traditional asset class, and adequate market liquidity, we determine that cryptocurrencies exhibit the traits of a unique asset class, however market stability might use some work. The study's focus is on cryptocurrencies from the standpoint of their potential use as a payment method in the context of the digitization of the economy. The work's objective is to evaluate potential negative effects of cryptocurrency's further growth within the global financial system and identify mitigating measures. We will talk about in this essay. In global finance, cryptocurrencies are an emerging asset class.*

**Keywords:** *Cryptocurrency; Asset Class; Global Finance; Blockchain; Market Liquidity; Payment; Economy Digitalization; Decentralized Finance; Financial Stability; Supply and Demand; Crypto Market; Stabilizing Volatility*

## INTRODUCTION

Economic turbulences such as the Subprime Crisis have served to highlight the fragility of our monetary and financial system. As a reaction to what has become one of the most severe crises in history, Bitcoin was launched in 2009 setting the stage for a multitude of further projects which led to the development of a new bridge between technology and finance: cryptocurrency. Increasing investment continues to flow into the sector amounting to a total market capitalization of over US\$ 400bn by December 2017. However, it remains an essential question whether cryptocurrencies can qualify as a distinct asset class in their own right, enabling diversification and outperformance compared to portfolios comprising only traditional asset classes. If cryptocurrencies were to constitute a distinct asset class, this would carry significant implications for fund managers, regulators and policy makers alike. Extant literature has so far been lacking such a comprehensive analysis, which we aim to provide.

Under the umbrella term cryptocurrencies, we differentiate between cryptographic coins, which use their own blockchains, and tokens, which operate atop a third party's blockchain architecture. The 10 largest coins and tokens by market capitalization as of mid-December 2017 with at least a price history of 3 months are selected. First, we are interested whether either coins or tokens or both can qualify as asset classes in their own right. We evaluate cryptocurrencies on the basis of parametric and non-parametric correlation measures, market liquidity and market stability against Market Wide Circuit Breaks and Limit Up-Limit Down triggers. Second, we are interested whether adding cryptocurrencies to traditional portfolios will lead to superior results regarding the Sharpe ratio for quarterly rebalancing intervals via ex-post optimizations. Third, we use the results of previous ex-post optimizations for ex-ante portfolio calibration. Three different weighting approaches are applied. Dynamic weighting uses the dynamic quarter-by-quarter allocations of the ex-post optimization to rebalance portfolios. Average weighting employs the average weights for the respective asset classes over all optimized quarters with rebalancing to initial weights at the end of each quarter. Conservative weighting utilizes traditionally defensive portfolio allocations vs. such allocations plus the addition of 1% of the asset class cryptocurrencies. Thereby, we test for risk-adjusted outperformance of portfolios containing cryptocurrencies versus portfolios that only contain traditional asset classes via three different weighting rules. [1]

There is now a lot of discussion on policy regarding crypto-assets. Stablecoins, decentralized finance (DeFi), and unbacked cryptoassets (like Bitcoin) are some of the several categories of the crypto-asset markets. Cryptocurrency assets are very risky investments due to their high volatility, high energy consumption, and frequent use as speculative instruments. They also lack intrinsic economic value or reference assets. This could have an impact on financial stability and poses issues with money laundering, consumer protection, and market integrity.

Such a technology is not factored into the current legal and financial structures. The foundation of financial institutions is made of much older money. It is comparable to the computer industry in certain aspects. Computing's foundation still uses 1s and 0s for transmission and processing, which only allows for two dimensions of input. However, due to adoption, nurturing, and a lack of need for more modern systems, all of our contemporary technology operates on this technologically antiquated framework. In order to handle this kind of competition, established trading platforms would need to be totally redesigned if cryptocurrencies were to take the lead in transactions worldwide. Because of this, cryptocurrency may be the technology that disrupts financial and economic systems around the world the most. [2]

## **CRYPTOCURRENCY AND THE GLOBAL FINANCIAL SYSTEM**

### **The Rise of Digital Assets**

The emergence of digital assets, specifically cryptocurrencies, signifies a noteworthy transformation in the financial domain, akin to the progression of the internet from a technological marvel to an indispensable aspect of everyday existence. From their beginnings as an experimental

digital currency, cryptocurrencies have grown to become a significant financial phenomenon that has a significant impact on the world economy.

Examining potential repercussions of cryptocurrency's further growth within the global financial system and devising strategies to mitigate them are the goals of this research. Naturally, defining the limits of use and gaining control over the flow of digital currency require a grasp of its nature and possible applications. Assessing and integrating the legal status of cryptocurrency as well as creating a functional system for governmental control over their circulation require a thorough grasp of the basic distinctions between fiduciary and virtual money. [3]

### **The Global Landscape: A Look at Regulatory Frameworks**

The regulatory environment surrounding cryptocurrencies differs greatly between nations. Here's a look at a few of the recent methods:

- **North America:** The US has adopted a more cautious stance, with several regulatory agencies in charge of different facets of cryptocurrencies. The Commodities Futures Trading Commission (CFTC) oversees cryptocurrency futures contracts, whereas the Securities and Exchange Commission (SEC) is primarily concerned with security tokens.
- **Europe:** A comprehensive regulatory framework for cryptocurrencies is being developed by the European Union (EU). Anticipated for implementation in 2024, the Markets in Crypto Assets (MiCA) rule seeks to give more clarity and uniformity to cryptocurrency companies doing business in the European Union.
- **Asia:** Some Asian nations, like as China, have adopted a more stringent stance, outlawing or restricting the mining and trading of cryptocurrencies. Others, like Singapore, on the other hand, have embraced the innovation of cryptocurrencies and are actively creating regulatory frameworks to encourage responsible usage.

The growth and development of the sector will be greatly impacted by the regulations governing cryptocurrencies in the future. As legislation in their own countries and in possible investment locations change, investors should keep up to date on these developments. [4]

### **REVIEW OF LITERATURE**

One of the first wave of blockchain-based applications to emerge are cryptocurrencies. In his 2008 paper "Bitcoin: A Peer-to-Peer Electronic Cash System," Satoshi Nakamoto presented the technology for the first time, stating that "an electronic payment system based on cryptographic proof instead of trust, allowing any two willing parties to transact directly with each other without the need for a trusted third party" is what is needed (Nakamoto, 2008). In other words, records are maintained across multiple nodes linked in a chain, making blockchain a decentralized, tamper-resistant transaction system and data management solution. Blockchain can also be viewed as a distributed ledger that is dispersed among a network of various holders, places, or devices. [5]

The increasing demand for bitcoin leads to several challenges. For instance, notable increases in value have been seen in digital currencies in recent years, even if no benefits are offered. In this sense, hackers started to express a strong desire to acquire cryptocurrencies. It was not difficult for them to steal the Bitcoin currency since all transactions involving cryptocurrencies were conducted in total anonymity. In June 2011, the following happened: utilizing the account of one of the system administrators, an unidentified hacker gained access to the Mt-Gox system. He then used a series of steps to purchase 2000 bitcoins at a discounted rate. The exchange's functioning was forced to be suspended for a week, during which time all completed operations were deemed invalid, since the system administrators acknowledged that they were unprepared for the circumstance (L. Singh, 2018). [6]

Merkle's (1990) seminal work has tied together essential strands of research on protocols for public key crypto systems, forming a vital foundation for the future development of cryptocurrency. Merkle reviews both conventional and digital cryptographic protocols and concludes that centralized key distribution for some use cases is inferior to public key distribution, due to vulnerabilities regarding loss of security and function as well as proneness to destruction. He provides the key building blocks for future development of decentralized cryptocurrencies by outlining Authenticated Public Key Distribution, a Basic Digital Signature Protocol, Time Stamping and Witnessed Digital Signatures. Authenticated Public Key Distribution establishes a system in which each participant holds a randomly computed public enciphering key as well as a private deciphering key. Encrypted information is signed with the sender's private key and encrypted with the recipients public key. This way, information transmitted can be authenticated as sent by the sender while only being decipherable by the recipient. To implement a full fledged cryptocurrency, a consensus mechanism, generating consensus about the legitimate state of a system, is needed in addition to a general encryption mechanism. Such consensus mechanisms are used to record valid transactions by implementing Time Stamping and Witnessed Digital Signatures. Time stamps provide a proof of existence for each transaction at or before a certain point in time, while Witnessed Digital Signatures serve as proof of validity. The combination of an encryption protocol together with a consensus mechanism enables the maintenance of a public ledger of transactions. [7]

## **OBJECTIVES**

- Cryptocurrency as an Emerging Asset Class in Global Finance
- Bitcoin as a store of value
- Rapid rise of crypto activity around the world
- The Future of Cryptocurrencies in the Global Economy

## **RESEARCH METHODOLOGY**

This effort will be based on the evaluation of secondary data through reviews of recent studies. To comprehend the function of blockchain in cross-border businesses, dependable data from online

journals and papers, government websites, international trade organization websites, and expert commentary on economics will be evaluated, among other sources.

## **RESULT AND DISCUSSION**

### **Crypto analysis: Supply and demand**

Thousands of crypto assets exist today on a global scale. In recent years, a wide range of institutional and ordinary investors have shown a tremendous surge in interest in these assets. Here, we concentrate on bitcoin, the most popular cryptocurrency, which at the moment has 40% of the US\$2.2 trillion cryptocurrency market.

Importantly, with a limited number of 21 million coins, bitcoin was the first rare digital asset ever produced. Through a process known as "halving," the new supply is reduced by half every four years until all 21 million coins have been produced. Up till now, some 19 million coins have been produced; 5 million are thought to have been lost, 10 million are kept in cold storage for a long time, and about 3 million are traded. The potential of bitcoin as an asset class depends on its scarcity. [8, 9]

### **Bitcoin as a store of value (and other asset class characteristics)**

Considering bitcoin's function and track record as a store of value is important when assessing it as an asset class. Since the onset of quantitative easing in 2008, asset prices have increased globally. However, if we compare asset performance to the balance sheets of the G4 central banks, we find that equity markets have been sideways since 2008. In contrast, the value of gold, real estate, and world currencies has decreased in terms of balance sheets. Since 2008, the only asset that has outperformed the balance sheets of the G4 central banks is bitcoin.

Interestingly, during the past ten years, bitcoin's weekly returns have skewed slightly positive and averaged slightly positive. Since 2014, its volatility has likewise been under a more stable regime, gradually declining and ranging between 50% and 100%. Crucially, Figure 1 shows that bitcoin has very modest correlations (average of about 0.1) with other major asset classes, which lessens the impact of its increased volatility in a larger portfolio.

	Bitcoin	US equity	DM equity	EM equity	Global HY	Global I/L	Int Corp IG	Int Trsy	US Corp IG	US Trsy	Gold	Oil
Bitcoin	1.00											
US equity	0.16	1.00										
DM equity	0.20	0.98	1.00									
EM equity	0.24	0.77	0.81	1.00								
Global HY	0.15	0.83	0.85	0.74	1.00							
Global I/L	0.08	0.47	0.52	0.44	0.67	1.00						
Int Corp IG	0.07	0.39	0.43	0.38	0.67	0.87	1.00					
Int Treasury	0.09	0.35	0.40	0.37	0.58	0.82	0.95	1.00				
US Corp IG	0.03	0.52	0.53	0.41	0.78	0.76	0.84	0.66	1.00			
US Treasury	-0.06	-0.24	-0.21	-0.25	-0.02	0.48	0.63	0.53	0.53	1.00		
Gold	0.15	0.39	0.42	0.34	0.45	0.69	0.65	0.64	0.53	0.40	1.00	
Oil	0.17	0.42	0.43	0.43	0.46	0.20	0.12	0.08	0.23	-0.21	0.03	1.00

**Figure 1: Bitcoin as a store of value (and other asset class characteristics)** (Source: <https://www.wellington.com/>)

This track record of success, its leveling volatility, and its lack of association with other assets, in our opinion, strongly support bitcoin's function as a store of value and cryptocurrency as a stand-alone asset class.

### Valuing the crypto asset class

How to value assets like bitcoin may potentially be a concern for institutional investors. Since bitcoin does not produce cash flows, its possible future prices can be estimated using a variety of techniques. Forecasted valuations range from US\$100,000 to more than US\$500,000 by 2026 using four popular methodologies for valuation: the gold valuation method, stock-to-flow method, institutional participation method, and high-net-worth participation method. Notably, the stock-to-flow model has not been able to monitor the price of bitcoin accurately as of late.

Since this is a relatively new asset class, we think that in order to estimate its future potential, investors should take into account a variety of valuation metrics, such as these. [10,11]

### Assessing the role of leverage in crypto-asset markets

Financial stability risks could be amplified by the growing options offered by crypto exchanges for investors to increase their exposure through leverage. Products such as leveraged tokens, futures contracts and options can allow investors to synthetically increase their exposure to crypto-asset returns (and risk). Some crypto exchanges offer ways to increase exposures by as much as 125 times the initial investment (Table 1). However, the total volumes of leveraged contracts in crypto-asset markets and the extent to which leverage is actually used on these trading platforms are generally not reported. Furthermore, some investors use borrowed funds to purchase their exposure (margin trading), thus increasing the risks to financial stability. [12]

**Table 1: Leverage amount offered by major crypto-asset exchanges**

Exchange	Maximum amount of leverage offered	Products used to provide leverage
BitMEX	100x	Perpetual swaps
Kraken	5x	Crypto-assets
FTX	20x	Futures, leveraged tokens
eToro	2x	Contracts for differences
BitLeverex	100x	Options
Bybit	100x	Perpetual swaps and futures
Binance	125x	Leveraged tokens

Source: Exchange websites.

### Competitive Landscape and Crypto Asset Management Market Share Analysis

The crypto asset management market competitive landscape provides details by competitor. Details included are company overview, company financials, revenue generated, market potential, investment in research and development, new market initiatives, global presence, production sites and facilities, production capacities, company strengths and weaknesses, product launch, product width and breadth, application dominance. The above data points provided are only related to the companies' focus related to crypto asset management market.

Some of the major players operating in the crypto asset management market are

- Coinbase (U.S.)
- Gemini Trust Company, LLC. (U.S.)
- Crypto Finance Group (Germany)
- Volt Ltd (U.K.)
- Bakkt (U.S.)
- BitGo (U.S.)

- Ledger SAS (France)
- METACO (Switzerland)
- ICONOMI Limited (U.K.)
- Exodus Movement, Inc. (U.S.)
- Xapo Holdings Limited (Switzerland)
- Paxos Trust Company, LLC. (U.S.)
- TheBanks.eu (England)
- Amberdata (U.S.)
- Genesis Global Trading, Inc. (U.S.)
- CRYPTOSLATE (U.S.)
- Opus Labs CVBA (Belgium)
- Kryptographe Inc (U.K.) [13]

## CHALLENGES

- Regulatory Frameworks: Handling Decentralization's Complexities

The decentralized structure of cryptocurrencies presents regulatory authorities with global difficulties. It is the responsibility of governments to provide thorough and flexible regulatory frameworks that safeguard citizens, stop money laundering, and lessen the hazards connected to virtual currencies.

In the regulatory landscape, finding the ideal balance between supporting innovation and guaranteeing financial stability continues to be a major problem.

- Riding the Waves of Price Fluctuations: Volatility

The markets for cryptocurrencies are infamous for their extreme volatility, which causes large price swings. Businesses and people looking for consistency in their financial transactions and investments face difficulties as a result of this volatility.

The effective handling and reduction of price volatility concerns is essential to the general acceptance of cryptocurrencies as a trustworthy form of payment.

- Scalability: Fulfilling the Increasing Need for Quick Transactions

Scalability is a critical issue as cryptocurrency usage soars in popularity. The adoption of existing blockchain networks is hampered by issues such as high transaction fees and slow processing times.

In order to meet the increasing demand for quicker and more effective transactions and guarantee the smooth integration of cryptocurrencies into international financial institutions, scalability challenges must be resolved.



- **Security and Privacy: Protecting Information and Digital Assets**

Despite the inherent security offered by blockchain technology, hacking and breaches of privacy are still a possibility.

Robust security measures and user education are necessary to protect digital wallets and guarantee the privacy of transactions. Establishing trust in cryptocurrencies and the technology that underpin them requires finding a balance between transparency and privacy. [14]

## **THE FUTURE OF CRYPTOCURRENCIES IN THE GLOBAL ECONOMY**

- **Innovations and Emerging Trends**

As the cryptocurrency market develops, two major trends that are starting to emerge are stablecoins and Central Bank Digital Currencies (CBDCs). These innovations have the potential to revolutionize global trade and payment systems by fusing the advantages of cryptocurrencies with the constancy and dependability of conventional currencies.

- **Economic Implications**

The broad use of cryptocurrencies has the potential to change the balance of power in the world economy. Cryptocurrencies have the potential to shift the balance of economic power by providing an alternative to the US dollar in international trade. But incorporating digital currencies into the current financial system is a difficult task that calls for cautiously navigating legal, technological, and financial obstacles. [15]

## **CONCLUSION**

The literature on the function and difficulties of cryptocurrencies in contemporary financial and corporate systems has been compiled in this study. Because the economic functions and dangers associated with various types of crypto assets (such as unbacked crypto assets, stablecoins, and decentralized finance) vary, crypto assets are becoming more and more recognized as an emerging and diversified asset class. Global financial systems are upended by cryptocurrencies, which present both opportunities and difficulties. It promotes innovation, increases transparency, facilitates cross-border transactions, and allows financial inclusion.

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