

CRYPTOCURRENCY: PERIOD AND FIELD OF FINANCIAL NOVELTIES

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ABSTRACT:

A cryptocurrency is a digital currency, secured by cryptography, which makes it nearly impossible to counterfeit or double-spend. Many cryptocurrencies are decentralized networks based on block chain technology—a distributed ledger enforced by a disparate network of computers. A defining feature of cryptocurrencies is that they are generally not issued by any central authority, rendering them theoretically immune to government interference or manipulation. Which is an alternative form of payment created using encryption algorithms. The use of encryption technologies means that crypto currencies function both as a currency and as a virtual accounting system. To use crypto currencies, you need a crypto currency wallet. These wallets can be software that is a cloud-based service or is stored on your computer or on your mobile device. The wallets are the tool through which you store your encryption keys that confirm your identity and link your crypto currency.

Keywords: cryptocurrency, digital currency, computers, technologies and wallets.

INTRODUCTION:

A **cryptocurrency**, **crypto-currency**, or **crypto** is a digital currency designed to work as a medium of exchange through a computer network that is not reliant on any central authority, such as a government or bank, to uphold or maintain it.^[2] It is a decentralized system for verifying that the parties to a transaction have the money they claim to have, eliminating the need for traditional intermediaries, such as banks, when funds are being transferred between two entities. Individual coin ownership records are stored in a digital ledger, which is a computerized database using strong cryptography to secure transaction records, control the creation of additional coins, and verify the transfer of coin ownership. Despite their name, cryptocurrencies are not considered to be currencies in the traditional sense, and while varying treatments have been applied to them, including classification as commodities, securities, and currencies, cryptocurrencies are generally viewed as a distinct asset class in practice.^{[7][8][9]} Some crypto schemes use validators to maintain the cryptocurrency. In a proof-of-stake model, owners put up their tokens as collateral. In return, they get authority over the token in proportion to the amount they stake. Generally, these token stakers get additional ownership in the token over time via network fees, newly minted tokens, or other such reward mechanisms.

Cryptocurrency does not exist in physical form (like paper money) and is typically not issued by a central authority. Cryptocurrencies typically use decentralized control as opposed to a central bank digital currency (CBDC). When a cryptocurrency is minted, or created prior to issuance, or issued by a single issuer, it is generally considered centralized. When implemented with decentralized control, each cryptocurrency works through distributed ledger technology, typically a blockchain that serves as a public financial transaction database. Traditional asset classes like currencies, commodities, and stocks, as well as macroeconomic factors, have modest exposures to cryptocurrency returns. The first decentralized cryptocurrency was Bitcoin, which was first released as open-source software in 2009.

WHAT IS BLOCKCHAIN?

Central to the appeal and functionality of Bit coin and other crypto currencies is block chain technology. As its name indicates, a block chain is essentially a set of connected blocks of information on an online ledger. Each block contains a set of transactions that have been independently verified by each validator on a network. Every new block generated must be verified by each node before being confirmed, making it almost

impossible to forge transaction histories. The contents of the online ledger must be agreed upon by a network of individual nodes, or computers that maintain the ledger.

Experts say that block chain technology can serve multiple industries, supply chains, and processes such as online voting and crowd funding. Financial institutions such as JPMorgan Chase & Co. (JPM) are testing the use of block chain technology to lower transaction costs by streamlining payment processing.

TYPES OF CRYPTOCURRENCY

Many crypto currencies were created to facilitate work done on the block chain they are built on. For example, Ethereum's ether was designed to be used as payment for validation work done on the block chain. Because there are so many crypto currencies on the market, it's important to understand the types of crypto currencies. Understanding if the coin you're looking at has a purpose can help you decide whether it is worth investing in—a crypto currency without a purpose is likely to be riskier than one with utility. Most of the time, when you hear about crypto currency types, you hear the coin's name. However, coin names differ from coin types. Here are some of the types you'll find with some of the names of tokens in that category:

- **Utility:** XRP and ETH are two examples of utility tokens. They serve specific functions on their respective blockchains.
- **Transactional:** Tokens designed to be used as a payment method. Bitcoin is the most well-known of these.
- **Governance:** These tokens represent voting or other rights on a blockchain, such as Uniswap.
- **Platform:** These tokens support applications built to use a blockchain, such as Solana.
- **Security tokens:** Tokens representing ownership of an asset, such as a stock that has been tokenized (value transferred to the blockchain). MS Token is an example of a securitized token. If you can find one of these for sale, you can gain partial ownership of the Millenium Sapphire.

If you find a crypto currency that doesn't fall into one of these categories, you've found a new category or something that needs to be investigated to be sure it's legitimate.

ARE CRYPTOCURRENCIES LEGAL?

Fiat currencies derive their authority from the government or monetary authorities. For example, each dollar bill is backstopped by the Federal Reserve.

But crypto currencies are not backed by any public or private entities. Therefore, it has been difficult to make a case for their legal status in different financial jurisdictions throughout the world. It doesn't help matters that crypto currencies have largely functioned outside most existing financial infrastructure. The legal status of crypto currencies has implications for their use in daily transactions and trading. In June 2019, the Financial Action Task Force (FATF) recommended that wire transfers of crypto currencies should be subject to the requirements of its Travel Rule, which requires AML compliance.

EVOLUTION OF CRYPTOCURRENCY

The idea for crypto currency first began in the late 1980's, the idea was for a currency that could be sent untraceably and in a manner that did not require centralized entities (i.e. Bank). In 1995, American cryptographer David Chaum implemented anonymous cryptographic electronic money called Digicash. It was an early form of cryptographic electronic payments which required user software to withdraw from a bank and required specific encrypted keys before it could be sent to a recipient.

KEY TAKEAWAYS

- A cryptocurrency is a form of digital asset based on a network that is distributed across a large number of computers. This decentralized structure allows them to exist outside the control of governments and central authorities.
- Some experts believe blockchain and related technologies will disrupt many industries, including finance and law.
- The advantages of cryptocurrencies include cheaper and faster money transfers and decentralized systems that do not collapse at a single point of failure.
- The disadvantages of cryptocurrencies include their price volatility, high energy consumption for mining activities, and use in criminal activities.

CRYPTOCURRENCY WORK PROCESS:

Crypto currencies are not controlled by the government or central regulatory authorities. As a concept, crypto currency work outside of the banking system using different brands or types of coins – Bit coin being the major player.

- 1) Mining:** Crypto currencies are generated through a process called “Mining”. This is a complex process. Basically, miners are the required to solve certain mathematics puzzles over specially equipped computer systems to be rewarded with bit coins in exchange. In an idea world, it would take a person just 10 minutes to mine one bit coin, but in reality, the process takes an estimation of 30 days.
- 2) Buying, Selling and Storing:** Users today can buy crypto currencies from central exchanges, brokers and individual currency owners or sell it to them. Platforms like coin base are the easiest ways to buy or sell crypto-currencies. Once bought crypto currencies can be stored in digital wallets. Digital wallets can be “hot” or “cold”. Hot means the wallet is connected to the internet. Which makes it easy to transact, but vulnerable to thefts and frauds? Cold storage, on the other hand, is safer but makes it harder to transact.
- 3) Transacting or Investing:** Crypto currencies like Bit coins can be easily transferred from one digital wallet to another, using only a smartphone. Once you own them your choices are to:
 - a) Use them to buy goods or services.
 - b) Trade in them.
 - c) Exchange them for cash.

Whether crypto currency is good for investment?

There are many advantages to dealing in crypto currencies and a fair share of disadvantages as well. Here are the top three reasons that work in favor of and against crypto currencies.

ADVANTAGES:

- 1) They are private and secure:** The block chain technology that fuels crypto currencies ensures user anonymity. It also assures high levels of security through cryptography.
- 2) They are decentralized, immutable and transparent:** The entire system functions on shared ownership, where data is available to all permissioned members and a tamper-proof.
- 3) They are a hedge against inflation:** Crypto currency makes for a great investment times of inflation. For example: investors often compare crypto currency to gold. One of the reasons behind this is that, just like gold, they are in limited supply, as there is a cap on mining on any type of crypto currency.

DISADVANTAGES:

- 1) **They are not widely understood:** They are a relatively new concept and the long-term sustainability of crypto currencies remains to be seen.
- 2) **They are prone to high risks:** Needless to say, crypto currencies bring in as many awards as risks. Their highly volatile and speculative nature makes them prone to sharp downward spirals. Investing in crypto currency can be risky for many reasons, in the absence of government regulations, the crypto currencies market could pose risks of virtual theft, financing terrorism, high volatility etc.
- 3) **Scalability is a problem:** This is a complex issue, which has more to do with the technology side of the block chain, simply put the sluggish nature of the block chain makes it prone to transactional delays. This as the tendency to make crypto payments inefficient when compared to modern day electronic payment techniques.

A CRUCIAL RELATIONSHIP BETWEEN GOVERNMENT AND CRYPTO CURRENCIES

Until the 2022 Union Budget announcement, the fate of crypto currency in India was largely undecided. In the budget, the Indian Finance Minister's announcement on levying a "30%" tax on gains on the transfer of virtual digital assets, which includes crypto currency was initially seen as an endorsement of crypto currencies. It set off the debate on whether or not the tax on crypto currency indicates the government has recognized it as a legitimate form of currency.

WHAT IS GOVERNMENT CRYPTOCURRENCY?

Unlike cryptocurrencies, a central bank digital currency [CBDC] is a digital currency issued directly by a central bank and as such is a direct liability to it. It is a form of public money similar to cash, the only difference is that it exists in a digital format. So if the UK were to adopt a CBDCs a £ 10 (10 pound) CBDC would be worth the same as a regular £ 10 pound note. Unlike cryptocurrencies, a CBDC would be stable in value and a safe form of money rather than a speculative asset. Another difference between cryptocurrencies and CBDC is that whereas the former are always run on block chain, or distributed ledger technology, the latter would not necessarily use it. This is because the central bank underpins the CBDC, providing a level of trust for users. The nature of cryptocurrencies means there is no central party overseeing the system, meaning a distributed ledger is needed to help maintain the security of assets.

WHY CRYPTOCURRENCIES NEED TO BE REGULATED?

- 1) **Prevent market manipulation and protect investors:** Market manipulation and price volatility are common in cryptocurrencies. For example: Bitcoin, the world's oldest and most popular cryptocurrency, which rose to all-time highs since its beginning, before plummeting and losing a huge amount of its value. So the lack of authorized information on these digital assets and the technological complexities associated with them is imperative to put regulation in place for safeguarding investors.
- 2) **Allow select crypto currencies:** Thousands of crypto currencies exist around the world. Most investors however are only familiar with a few of those, such as Bit coin, Ether, Ripple and Dogecoin among others. They hardly have knowledge about the thousands of other virtual assets. So to protect customers, a regulatory authority clearing crypto currency is required, which can disclose all information about performance of the digital assets, their risks and potential.
- 3) **Understanding risks associated with technology:** Technology is advancing at a breakneck pace. This carries a significant danger, as such changes have the potential to render technology, including block chain, outdated in this future. Given the rapid rate of technological change information infrastructure and professional financial advisors skilled in crypto currency are required. That way, investors can understand the technological risk of crypto currencies and make informed decisions.
- 4) **Online fraud and cyber security risks:** Investing in crypto currencies comes with another risk – online fraud. Hacking is a major threat worldwide and cyber-attacks have become common. One cyber-attacks could result in losses for investors who have put their savings in crypto currencies. Through regulations the authorities can

implement measures to help crypto currency investors protect their assets. Also, investors can address concerns or reclaim their investments in case they lose them.

- 5) **Money laundering:** Any unregulated system has the ability to fund criminal acts. As a result, a client due diligence process akin to that of a bank is required. This can help in keeping track of investors real identities and verifying their locations when they are buying or selling crypto currencies. Any infringement of such norms should be met with severe sanctions.

8. SURPRISING FACTS ABOUT CRYPTOCURRENCY

- 1) The first commercial bitcoin transaction was for pizza: On May 22, 2010, a man in Florida paid 10,000 bitcoin for two pizzas. That is generally recognized as the first commercial bitcoin transaction.
- 2) NFTs aren't currencies: Even though they are growing in popularity and are considered digital assets, NFTs aren't cryptocurrencies. They're tokens that are not used as a medium of exchange.
- 3) Some countries ban crypto currencies: Not every country allows the use of crypto currencies. Some countries like Turkey, don't allow crypto currency payments, while others, like Nigeria, ban cryptocurrency exchanges. One of the most significant recent bans, through is China's ban on financial institutions from providing services related to crypto transactions.

CONCLUSION:

Finally, the paper concludes that crypto-currency is frolicking one of the significant roles for business transaction in a very smooth way to make transactions in financial segments. In this research article the paper mainly focuses that to avoid fraud and hackers attacks with respect to safe guard and protection. Centralization is also one the security concern data management in financial sectors without being tax evasion, money laundering and other activities. In currency scenario the most popular crypto- currency that fall in between heavily regulated and fiat currencies which decided to intervene and warn that bit coin could be the next enable bubble. The government prohibited the trading of crypto-currency due to lack of control and market unpredictability. The centralization of hashing power in the hands of a few or in particular geographic areas which are facing main tasks and trails.

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