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The Impact of Cryptocurrency on Traditional Financial Market Practices

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ABSTRACT: In recent years, cryptocurrency—and in particular, Bitcoin—has demonstrated its value, now boasting 14 million Bitcoins in circulation. Investors speculating in the future possibilities of this new technology have driven most of the current market capitalization, and this is likely to remain the case until a certain measure of price stability and market acceptance is achieved. Apart from the declared price of cryptocurrency, those invested in it appear to be relying on a perceived “inherent value” of cryptocurrency. This includes the technology and network itself, the integrity of the cryptographic code and the decentralized network. The blockchain public ledger technology (which underlies cryptocurrency) has the potential to disrupt a wide variety of transactions, in addition to the traditional payments system. These include stocks, bonds and other financial assets for which records are stored digitally and for which currently there is a need for a trusted third party to provide verification of the transaction. In our view, the cryptocurrency market will develop at a pace set by the key participants, characterized by likely growth spurts of legitimacy from one or more of these participants in what we call “credentialising moments.” For the market to reach the next phase in its evolution toward mainstream acceptance and stable expansion, each of the five key market participants—merchants and consumers, tech developers, investors, financial institutions and regulators—will play a role.

KEYWORDS: cryptocurrency, impact, traditional, financial, market, practices, bitcoin

I. INTRODUCTION

A cryptocurrency is a monetary unit that has no physical form. Instead, it's stored electronically in the blockchain.



Cryptocurrency trading

Encryption methods are used to control and verify the transfer of funds and, unlike other currencies, the supply isn't determined by a bank. The most well-known example would be the original cryptocurrency, Bitcoin. “People who could not access trade and finance ten years ago can do so today. This will lift many out of poverty.” It's giving those that may not previously have been considered by traditional banks another financing option. And with cryptocurrencies, not only will people not need to interact with banks the same way they do now, they'll also be able to avoid bank fees. With cryptocurrencies giving people a new method of financing, many believe that banks are feeling threatened. Johann Palychata, Research Analyst at BNP Paribas, has suggested that banks will need to consider how to utilise the technology behind cryptocurrencies. If they don't, there's a possibility they will become out-dated and redundant.[1,2]



Despite general reservations within the industry when it comes to the effect of cryptocurrencies, six banks are working together to create their own. These include: HSBC, Barclays, State Street, Canadian Imperial Bank of Commerce, Credit Suisse, and MUFG. Perhaps they'll be able to harness the blockchain technology in such a way that cryptocurrencies are regulated, removing concerns about criminal activity. Cryptocurrencies continue to draw a lot of attention from investors, entrepreneurs, regulators and the general public. Much recent public discussions of cryptocurrencies have been triggered by the substantial changes in their prices, claims that the market for cryptocurrencies is a bubble without any fundamental value, and also concerns about evasion of regulatory and legal oversight. These concerns have led to calls for increased regulation or even a total ban. Further debates concern inter alia: the classification of cryptocurrencies as commodities, money or something else; the potential development of cryptocurrency derivatives and of credit contracts in cryptocurrency; the use of initial coin offerings (ICO) employing cryptocurrency technology to finance start-up initiatives; and the issue of digital currencies by central banks employing cryptocurrency technologies.[3,4]

II. OBSERVATIONS

Cryptocurrencies are digital financial assets, for which records and transfers of ownership are guaranteed by a cryptographic technology rather than a bank or other trusted third party. They can be viewed as financial assets because they bear some value (discussed below) for cryptocurrency holders, even though they represent no matching liability of any other party and are not backed by any physical asset of value (such as gold, for example, or the equipment stock of an enterprise). The applications of this technology are not necessarily finance-related; it can be applied to any form of record-keeping; however if the block refers to a financial transaction then each transaction in the blockchain, by definition, includes information about previous transactions, and thus verifies the ownership of the financial asset being transferred. Falsifying ownership, i.e. counterfeiting (which, one could imagine, is easy, as digital objects can be easily duplicated by copying), is impossible because one would have to alter preceding records in the whole chain. Since records are kept in the network of many users' computers, a "distributed ledger", this is rather unthinkable. [5,6]



Cryptocurrencies can be seen as part of a broader class of financial assets, “cryptoassets” with similar peer-to-peer digital transfers of value, without involving third party institutions for transaction certification purposes. This depends on their purpose, i.e. whether they are issued only for transfer or whether they also fulfil other functions. Within the overall category of cryptoassets, we can follow the distinctions drawn in recent regulatory reports, distinguishing two further sub-categories of cryptoassets, on top of cryptocurrencies.[7,8]

A further distinguishing feature of crypto securities and crypto utility assets is that they are issued through a public sale (in so called initial coin offerings or ICOs). ICOs have been a substantial source of funding for technology orientated start-up companies using blockchain based business models. These classifications of cryptoassets are critical for global regulators, since they need to determine whether a particular cryptoasset should be regulated as an e-money, as a security or as some other form of financial instrument, especially in relation to potential concerns about investor protection in ICOs[9,10]

III. DISCUSSION

Although the world of cryptocurrency is steadily expanding and gaining popularity, traditional banks are hesitant to adopt the use of these digital assets—believing that their inherent risks outweigh their potential benefits. However, regulatory agencies such as the Office of the Comptroller of the Currency (OCC) are working to change banks’ perception of digital currencies, believing that these assets could positively drive financial institutions to a new era of innovation and efficiency.[11,12]





Recently, the OCC issued several interpretive letters detailing how traditional financial institutions can enter into transactions (or develop services) involving digital currencies. This effort coincides with the OCC's hope that additional regulatory guidance will help banks become more comfortable with these digital assets. In early January, the OCC announced that national banks and federal savings associations can now use public blockchains and stablecoins to perform payment activities. This opens the door for banks to have the ability to process payments much quicker and without the need of a third-party agency. Essentially, this clarifying letter puts blockchain networks in the same category as SWIFT, ACH, and FedWire, paving the way for these networks to be part of the larger banking ecosystem.[13]

Banks may be wary of cryptocurrency, thinking that transactions involving these assets present heightened risk and require lengthy and expensive due diligence. But digital currencies can offer many benefits to financial institutions and their customers, they just need to take the leap.[14,15]

Why Banks are Cautious of Cryptocurrencies

According to a study conducted by the Association of Certified Anti-Money Laundering Specialists (ACAMS) and the U.K.'s Royal United Services Institute, nearly 63% of respondents who work in the banking industry perceive cryptocurrency as a risk rather than an opportunity.[16]

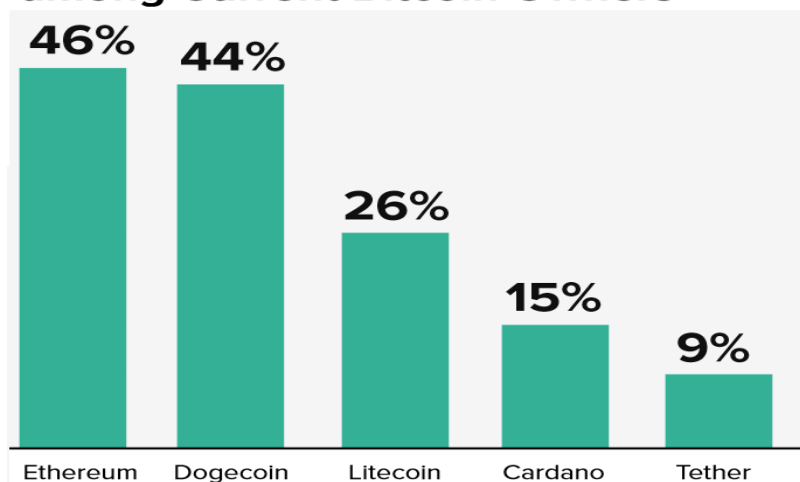
Decentralized Nature

Crypto assets were created as an alternative to traditional banking infrastructure that don't need an intermediary and aren't tethered to the capacity of a centralized government, bank, or agency. Instead of relying on centralized intermediaries in these transactions, the trust is placed in the blockchain code and the distributed nature of the blockchain.[17]

A cryptocurrency that's managed by a central bank diminishes the appeal of the asset in the first place, so some banks don't believe that they'll be able to enter this space successfully. The decentralized nature of the currency is seen to undermine the authority of central banks, leaving some to believe that they won't be needed anymore, or they'll be unable to control the money supply.

AML/KYC Concerns

Ownership of Other Cryptocurrencies among Current Bitcoin Owners



Cryptocurrencies allow for peer-to-peer transactions without a regulated intermediary, giving the user the ability to easily transfer funds quickly without having to pay transaction fees. Instead of identifying the transaction by an individual bank account



through a financial institution, transactions are simply linked to the transaction ID on the blockchain.[18]

This type of pseudonymity worries many banks who are concerned about the lack of anti-money laundering (AML) and know your customer (KYC) regulations surrounding digital currency transactions. Oftentimes, banks are under the impression that cryptocurrency transactions can't be tracked for AML and KYC considerations, which could lead to illegal activity and scams on the network.

Volatility

The price of cryptocurrencies (bitcoin specifically) have generally been volatile over their short life. There are many reasons for this including market size, liquidity, and the number of market participants. Banks see this as a risk because historically, the price hasn't been stable, so they believe the currency might not remain a stable investment vehicle over time.[19,20]

How Banks Can Get Involved in the Cryptocurrency Industry

To avoid being left behind, banks need to find a way to embrace this technology and treat it as a friend rather than an enemy. Cryptocurrency adoption could streamline, enhance, and upgrade financial services, and there are plenty of recent industry advancements that can ease banks' concerns around the risks and instead let them recognize the potential benefits.



100 dollar to put in crypto

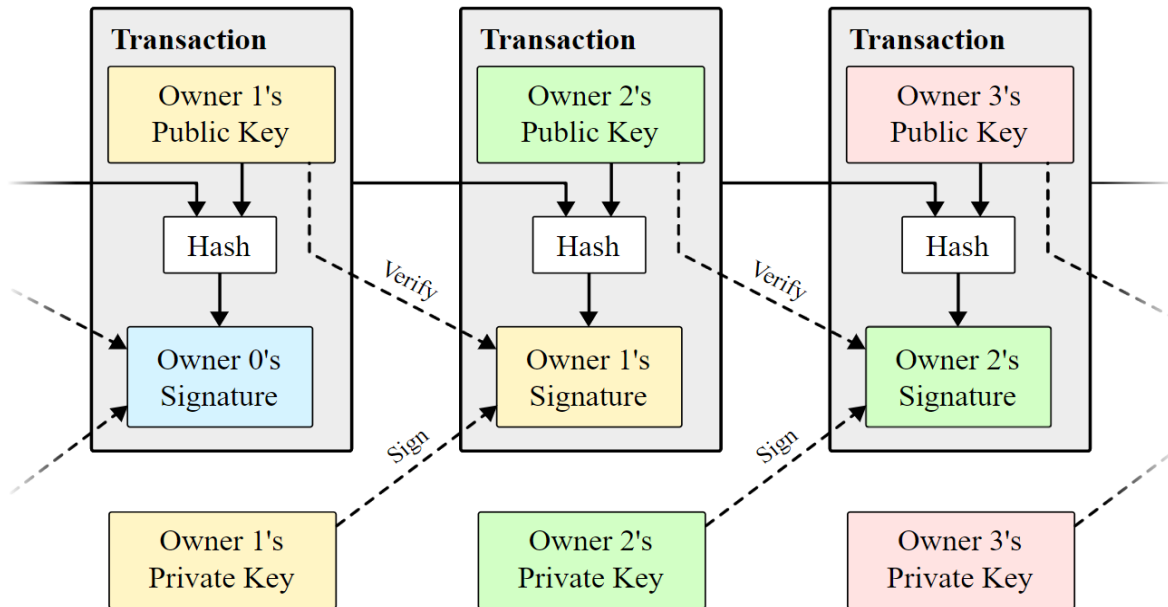
Custody Services

In July, the OCC stated that banks and savings associations could provide crypto custody services for customers, including holding unique cryptographic keys associated with accessing private wallets. This means that the OCC believes that banks could safely and effectively hold either the cryptocurrency itself, or the key to access crypto on a personal digital wallet for its customers.[21,22]

Easy Onboarding & Expert Assistance

Banks could help bring new, less experienced individual investors into the space by developing tools that would facilitate the adoption of crypto by their customers. For example, inexperienced cryptocurrency investors may not have the capabilities to set up their own wallet to custody their own cryptocurrency. Rather than leaving their

cryptocurrency “off exchange” or at an unregulated third party, they may find it easier and more secure to hold it within a trusted financial institution.



Cryptocurrency is fueling next generation of jobs

Banks could offer interest-bearing crypto accounts, where customers could invest the crypto on the back end or through other financial tools. Banks might relieve some of the stress of investors that aren't experts in the nuances of crypto by acting as a trusted third party that's well-respected in the finance industry and can keep investors' assets protected.[23]

AML/KYC Regulations Administered

In 2019, the Financial Crimes Enforcement Network's (FinCEN) determined that any cryptocurrency transactions and custody services conducted through crypto entities that are considered money service businesses must still abide by AML/KYC regulations. This will help avoid malicious transactions, illegal activity, or scams using these platforms. These regulations could help banks and larger financial institutions conduct due diligence on customers involved in crypto transactions, further diminishing their anxieties about the risks that these transactions pose.

There's even a possibility that blockchain technology could automate AML and KYC verifications. Blockchain could potentially allow for a streamlined view of shared data on individuals between banks, loan officers, and other institutions. In other words, there could eventually be one blockchain that stores all customer data. This blockchain data could then be utilized by all financial institutions, allowing for fast reviews of customers to quickly identify any red flags insinuating nefarious or illegal activity.[24,25]



Cryptocurrency is a form of currency that's only digital.
It can be exchanged online for goods and services.



How to own cryptocurrency?

You can get cryptocurrency through

Mining

- Cryptocurrency can be mined using your computer
- For this, you need to solve complex mathematical equations and update a crypto ledger called blockchain
- It may sound easy, but it's not
- Cryptocurrency mining these days requires super powerful machines

Buying

- Buying cryptocurrency is far easier than mining
- This can be done through any online crypto exchange
- The apps not only allow you to buy digital currency, but also sell
- You can also buy cryptocurrency in small batches



Security Concerns

Banks can help mitigate the security concerns of cryptocurrency holders. Hacking of personal wallets and exchanges is a concern for many holders. Well-established banks could help secure digital currencies from theft or hacks, putting clients' minds at ease. Bringing cryptocurrency under bank supervision could help diminish criminal activity or the appearance to outsiders that cryptocurrency transactions aren't secure.

Payments

As indicated in the most recent OCC letter, banks can utilize public blockchains, including stablecoins, to speed up their payment processes. Blockchain technology provides a faster and less expensive alternative to clearing houses when processing transactions. The clearing and settlements could occur at a much faster rate if banks utilized blockchain technology.

Smart Contracts

When entering into an agreement through a smart contract, there's a reduced level of trust needed among parties because the success of the transaction relies on computer code instead of an individual's behavior. Banks could reinforce that trust by becoming a reliable third party that utilizes these smart contracts for mortgages, commercial loans, letters of credit, or other transactions.

Industry Trends

Here are just a few examples of digital currency adoption recently seen in the industry:

- JP Morgan has taken on two cryptocurrency exchanges (Coinbase and Gemini) as banking customers
- Fidelity Digital Assets is creating a crypto fund
- PayPal is now allowing cryptocurrency transactions on their network

IV. RESULTS

Guidance and regulation surrounding digital assets is sparse, leaving many financial institutions wary of adoption. Concerns surrounding the security and stability of cryptocurrency also hold banks back from entering this space—but instead of fearing the risks of this technology, banks should be looking ahead to its potential benefits.[26]



India's cryptocurrency traders scramble after RBI crackdown

“Like other technology developments in the past, there was the potential for criminal activity,” said Brian Brooks, acting Comptroller of the Currency in a statement. “There’s also an enormous potential for economic growth. So we don’t want to throw out those advantages because there’s a chance for criminal activity. Instead, we want to give compliance guidance to help banks innovate.”

Financial institutions should also shift from thinking of crypto as a competitor to that of a partner. Banks can actually play a significant role in the crypto industry, adding some much needed assurance and security to the largely unregulated environment. Adopting cryptocurrencies and blockchain technology overall can streamline processes and take banking into the next generation of efficiency and innovation.

Bitcoin, as a relatively mature cryptocurrency, has aroused broad discussion in the academia. The paper “Dynamic spillovers between the term structure of interest rates, bitcoin, and safe-haven currencies” explores the connectedness between the US yield curve components (i.e., level, slope, and curvature), exchange rates, and the historical volatility of the exchange rates of the main safe-haven fiat currencies (Canada, Switzerland, EURO, Japan, and the UK) and the

leading cryptocurrency, the Bitcoin; the paper “On the Factors of Bitcoin’s Value at Risk” investigates the factors of Bitcoin’s tail risk, quantified by Value at Risk (VaR); the paper “The time-varying causal relationship between the Bitcoin market and internet attention” examines the time-varying Granger causality between the global Bitcoin market and internet attention; the paper “Implied Volatility Estimation of Bitcoin Options and the Stylized Facts of Option Pricing” aims to provide insights into the volatility smile in Bitcoin options and estimate the implied volatility of Bitcoin options through numerical approximation techniques, specifically the Newton Raphson and Bisection methods.[27]

V. CONCLUSION

Cryptocurrency is a currency and hence it is an asset. Therefore, cryptocurrency transactions are subject to tax like any other asset or currency. Cryptocurrency transaction may attract capital gain tax, income tax, transaction tax, and wealth tax. Even if cryptocurrency transaction is void and illegal, the tax law is empowered to charge taxes on such transactions. In March 2014, the Internal Revenue Service in the United States ruled that Bitcoin will be treated as property for tax purposes as opposed to currency. This means Bitcoin will be subject to capital gains tax. It makes the income generated through transaction using cryptocurrency taxable but it does not make income or transaction legal. Any illegal income equally attracts tax. Indian income tax and wealth tax definitions are wide and liberal when an income or asset is to be taxed, but the tax incidence does not give legality to that income or asset. The deal of cryptocurrency may be charged with transaction tax.[29]

Cryptocurrency may be considered as medium of exchange, negotiable instrument, property, and subject of the contract. Depending upon the transaction and power of legislation to tax such transaction, tax incidences are pertinent for cryptocurrency. Some of the taxes that can be charged include income tax, gift tax, wealth tax, value-added tax, service tax, inheritance tax, transaction tax, capital gain tax, property tax, and many more.[29]

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