

# Cryptocurrencies And Central Bank Digital Currencies (CBDCs): Implications For Monetary Policy And Financial Stability

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**Abstract.** This study presents an in-depth investigation into cryptocurrencies and Central Bank digital currencies (CBDCs), focusing on implications for monetary policy and financial stability. An overview of CBDCs and cryptocurrency is evaluated by analysing their origins, significant characteristics, functionalities and roles in the economic ecosystem. A detailed assessment is carried out on the implication of cryptocurrency and CBDCs on monetary policy. The findings suggest that by facilitating decentralised and anonymous transactions, cryptocurrency deflates traditional monetary control and hence challenges the authority of central banks.

In contrast, CBDCs are a better economic policy tool for central banks, thus probably raising policy effectiveness. Researchers analysed the implications of both virtual currencies on financial stability. They found that cryptocurrency poses a severe risk to financial systems due to its inherent volatility and instability.

In contrast, they concluded that CBDCs offer a more viable alternative for enhancing financial stability by reducing the threat of financial disintermediation. The study concludes that cryptocurrency and CBDCs have the potential for transformation, but CBDCs align more with existing financial systems to support monetary policy and ensure financial stability. A comparative analysis was carried out to underline further that CBDCs provide, compared to cryptocurrencies, a more predictable and better-controlled environment for economic management, making them a more desirable option for central banks globally.

**Keywords:** Cryptocurrency; CBDCs; Monetary policy; Financial Stability; Bank.

## INTRODUCTION

The introduction of digital currencies has brought a radical change in the world of finance and opened immense opportunities and challenges for central banks, financial institutions, and policymakers [1]. Cryptocurrencies such as Bitcoin, Ethereum, and hundreds of other digital assets have emerged as decentralised alternatives to traditional currency, allowing for peer-to-peer transactions without intermediaries; this was matched by rapid proliferation and diffusion, which entailed intense debates on their implications for the future of finance and their potential implication for monetary policy and financial stability [1]. Alternatively, central banks worldwide are gradually developing or introducing digital currencies to retain control over the national economic systems.

By September 2021, over 11,819 different cryptocurrencies were in circulation. The market's total capitalisation exceeded \$2 trillion, while average 24-hour trade volumes reached \$107.2 billion [2]. Bitcoin dominated the market, commanding 41% of its capitalisation, while Ethereum comprised 18.8%, Cardano 3.97%, and Binance Coin 3.29% [2]. The crypto-currency revolution poses a severe challenge to the traditional frameworks underlying monetary policy. Because no central body oversees or regulates them, crypto-currencies are invisible to government intervention. This aspect of decentralisation may reduce central banks' capabilities to regulate money supply, control inflation, and provide balance to economies [3]. More importantly, many cryptocurrencies are volatile and speculative, potentially jeopardising financial

stability if people widely use them as a medium of exchange or store of value.

A CBDC is a form of electronic legal tender that personifies digital money. Centres of interest in CBDCs started to take off in 2017, which raised several debates on how they will change the notion of money and what will happen to physical cash. Since then, multiple debates have arisen on whether central banks should adopt CBDC and whether it is time to give up on the concept entirely [3]. Also, CBDCs represent the efforts of central banks to digitise without losing control and oversight of the monetary system and further provide a way where central banks could more efficiently use the facilitation of monetary policy tools, allow efficiency improvements in payment systems, and enable more financial inclusion through issuing digital currencies directly to the public [4].

The study reviews the implications of cryptocurrencies and CBDCs for monetary policy and financial stability. The study investigates how the development of digital currencies might change the range of tools and strategies available to central banks, the potential of cryptocurrencies to disrupt conventional financial systems, and the ways CBDCs may strengthen or complicate the ability of central banks' ability to maintain economic stability. By analysing these dynamics, this study tries to evaluate how digital currencies could shape the future of money and, by extension, the global financial landscape. As the digital economy continues to expand, much of the insight from this exploration will be instrumental in informing policy decisions toward stability and inclusiveness in the financial future.

## RESULTS AND DISCUSSION

*Overview of Cryptocurrency.* Cryptocurrencies are digital financial instruments traded and recorded on public ledgers, called blockchains, and do not rely on central intermediaries such as commercial banks and central banks for clearance and settlement [5]. The blockchain system makes users and their ultimate transactions publicly visible but allows persons and institutions behind them to remain pseudonymous, effectively hiding their identities. Invented as a means of payment, cryptocurrencies today are primarily used for investment [5]. Continuous rapid increases have characterised crypto and decreased its value. Until recently, after gaining dramatically to an all-

time high of nearly \$3 trillion in November 2021, its market capitalisation crashed to under \$800 billion in November 2022 amidst what pundits termed crypto winter [6].

As of May 2023, it is valued at approximately \$1.1 trillion [5]. Crypto aims to replace the current financial system's central tenet, trust, with one that doesn't require trust. Traditional banking and payment systems require many protective measures designed to foster confidence in those systems through systematic procedures, capital requirements, ongoing supervision, and deposit insurance [7]. The cryptocurrency system harnesses a series of separate but concurrent incentives for various participants in the system. Initially, cryptocurrency was at first accessible only through somewhat less user-friendly blockchains. However, Companies have created more user-friendly applications and systems that allow individuals and firms to hold their crypto in accounts or wallets [7].

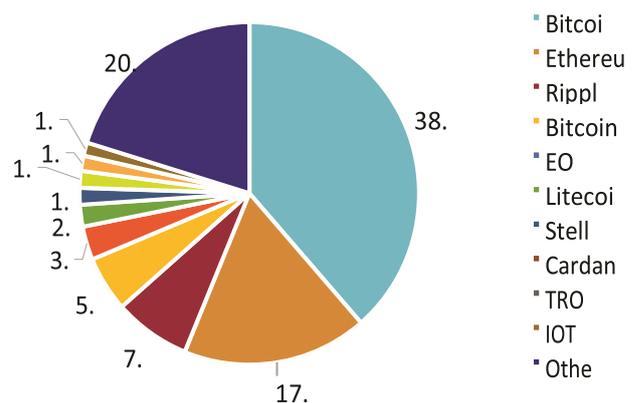


Figure 1 – Market share of cryptocurrencies [8]

*Transacting with Cryptocurrencies.* The blockchain directly processes on-chain transactions. A network of nodes maintains this system. These transactions occur between unhosted wallets and stored cryptographic keys, securing cryptocurrency ownership and enabling its transfer [8]. Asymmetric key cryptography protects blockchain assets, with a public key performing encryption and a private key handling decoding. Meanwhile, off-chain transactions are performed outside of the main blockchain. These are usually facilitated, processed, and recorded on online platforms, such as crypto exchanges like Binance or Coinbase, where people keep hosted wallets [7]. Such exchanges provide services for convert-

ing fiat into cryptocurrency and vice versa, trading digital assets and other financial services [7].

*Types of Cryptocurrencies.* As of May 2023, the two largest cryptocurrencies, Bitcoin and Ether, comprised a market capitalisation share of over 60% of the total cryptocurrency market [8]. Bitcoin is the first cryptocurrency that reached wide recognition. It is mainly used as a unit of account and medium of exchange. It operates on a decentralised consensus mechanism where miners secure the network to receive financial rewards. Bitcoin is a proof of work (Pow) system, again rewarding the more extraordinary computational powers, usually converted into higher energy consumption [9].

Ether is the cryptocurrency on the Ethereum network and uses the proof of stake (Pos) consensus mechanism [9]. PoS requires lesser power consumption than PoW since it substitutes the computational effort with collateral: one needs to stake at least 32 Ether to be one of the possible signers of the next block. Also, Ethereum natively supports smart contracts, or "If-then" applications, that self-execute when balance conditions are reached [10].

*Overview of Central Bank Digital Currencies.* CBDCs are the digital form of a nation's official currency, issued and legally regulated by the central bank [11]. In contrast to cryptocurrencies like Bitcoin or Ethereum, which are decentralised networks that do not belong individually to anyone, CBDCs are centralised and are under the direct control of central banks [11]. The development of CBDCs also presents various potential gains that it could offer, both in reducing reliance on fiat currency, dealing costs, and even better accrual of seigniorage [12]. These digital currencies also work in such a way that there would be a reduction of settlement risks. Furthermore, as a legal tender, the notes and digital currency can be exchanged at an equated ratio; this makes CBDCs more robust, efficient, trustworthy, and regulated [13]. With blockchain technology and a distributed ledger, another critical feature of CBDCs will be fast transaction processing, allowing for millions of transactions per second at a minimal cost [12].

Furthermore, the motivation to use or develop CBDCs has been influenced by central banks' need to retain monetary sovereignty in light of the fast development of digital payment technologies and private digital currencies such as cryp-

tocurrencies [13]. In many countries, as digital ways of paying for goods and services surge, physical cash is reducing, compelling central banks to think about digital alternatives that offer the same security, trust, and accessibility as cash [11].

CBDCs have several potential advantages, from better payment efficiency to lower transaction costs and greater financial inclusion through digital financial services for those currently bereft of banking infrastructure. Moreover, central banks can use CBDCs to implement monetary policy more effectively and efficiently, as these currencies provide real-time data on money flows with far greater precision over the money supply. [14].

There are two primary forms of CBDCs: retail and wholesale. Retail CBDCs are designed to be utilised by the general public, either as cash or via a digital app for payroll, to facilitate individuals and businesses in making electronic payments or holding value [12]. Wholesale CBDCs are for financial institutions that apply them to settle and make bank transactions. RETAIL CBDCs have, in particular, a unique appeal for promoting financial inclusion and retail payment efficiency. In contrast, wholesale CBDCs aim to increase the efficiency, speed, and security of large-value transactions in the economic system [13].

### **Impact of Cryptocurrencies on Monetary Policy**

*Removal of Monetary Sovereignty.* Cryptocurrencies, especially the currently decentralised ones like Bitcoin, seemingly oppose the elementary ideologies of monetary sovereignty, considering the powers of a state or central authority to have supreme control over its currency and monetary policy [15]. Whereas central banks issue traditional currencies, cryptocurrencies function on decentralised networks that are not controlled necessarily by any agency or entity. The nature of this decentralisation means that cryptocurrencies can operate independently of national governments and monetary authorities. It naturally follows that central banks find their roles in managing money supply, interest rates, and money flow within their economies increasingly impaired [15].

Consequently, the loss of monetary sovereignty deepens with the increased adoption of cryptocurrencies. Suppose a large part of the transac-

tions and savings of a country happens in cryptocurrencies. In that case, a central bank typically uses tools for economic management rates or open market operations cannot work [6]. Author [16] indicated that central banks can only control inflation by regulating the money supply, usually by setting interest rates that impact borrowing and spending.

Also, the peer-to-peer nature of cryptocurrencies bypasses traditional banking, undermining the central bank's control of money flows even further. Most financial transactions require some intermediary, which the conventional bank usually takes advantage of by imposing rules and policies set by the central bank, enabling them to monitor economic activity [6]. Cryptocurrencies bear no relation to intermediaries between individuals and businesses; this reduces oversight by the central bank and makes it difficult to conduct monetary policies that depend on indefinite banking systems to transfer changes in policy to the general economy [16].

*Impact on Inflation Control.* The supply cap feature is also included in the cryptocurrencies, bringing a whole different monetary framework than traditional fiat currencies. Whatever central bank works on keeping inflation under control, it gets highly affected since cryptocurrencies like Bitcoin have a fixed supply predetermined by their underlying protocols, not like fiat currencies that can be printed or issued as per the economic needs [6]. Author [15] indicated that the Bitcoin supply is capped at 21 million coins, which solves the problem of excessive supply; this will result in scarcity, which will cause deflationary tendencies that might go on over time, or when such cryptocurrencies increase adoption [16]. Since supply cannot change when demand rises, the value of one Bitcoin may theoretically go up further, forcing an upward deflationary effect due to increased purchasing power with the currency.

This deflationary aspect creates enormous problems for more traditional central bank policies. Traditionally, the central bank manages inflation through its manipulations of the interest rate and changes in the money supply [16]. These tools may be less effective for central banks in deflation because of the broadly adopted cryptocurrencies with fixed supplies. In situations where a large portion of the economy moves to cryptocurrencies from using fiat currencies, some influence the central banks would have through regu-

lating money supply and demand contracts would be lost, affecting their ability to control inflation; this could also lead to reduced consumption and investment since consumers and businesses might hold onto their appreciating cryptocurrencies rather than spend or invest in them, further exacerbating deflationary pressures [17].

Also, the deflationary properties of capped-supply cryptocurrencies might reward higher volatility in inflation rates. In a conventional fiat system, central banks can inject liquidity during economic downturns- the action that dampens and stabilises inflationary pressures [16]. However, if there is a significant transition to cryptocurrencies, this channel is likely less potent, with more robust business cycles and more difficult achievement of stable inflation. Therefore, incorporating a deflationary currency into an otherwise inflation-targeting economic regime introduces difficulties that could spill over and destabilise the broader economy [6].

*Cross-border capital flows.* Cryptocurrencies also significantly impact cross-border capital flows in terms of international transaction speed, low cost, and greater efficiency. Cross-border payment systems have several drawbacks, mainly in terms of multiple intermediaries, high fees, and elevated time because of differences in banking infrastructure, regulations, and various stages in currency conversions [17]. Cryptocurrencies utilise decentralised networks that enable people to make peer-to-peer transactions without intermediaries. This efficiency allows value to be transferred across borders almost instantly and, in most cases, at a small fraction of what it would otherwise cost through other traditional frameworks. Such an arrangement allows individuals and businesses to bypass traditional financial systems. It makes it easier to carry out cross-border transactions, and this is where the challenge lies for central banks in scrutinising and governing such flows [17].

One of the most profound effects of this transition has to do with its implications for capital controls. These are regulatory actions governments take to regulate foreign capital flow into or out of their economy [16]. Author [18] indicated that capital control is essential for those countries that need to stabilise their currency and shield their financial system from external shocks; this is, however, undermined by cryptocurrencies that utilise alternative ways of value

transfer across borders, with less vulnerability to the government's vigilance. With cryptocurrencies, individuals and firms in countries with strict capital controls can move assets out of the country without setting off traditional monitoring mechanisms [17]. In such a way, the ease of capital movement can guarantee unregulated capital outflows that could undermine national economic stability and complicate managing currency reserves.

Additionally, free cross-border transactions through cryptocurrencies make it difficult for central banks to control the fluctuation of exchange rates and bring about a reasonable balance of payments. Governments or central banks often exercise such control through supply and demand operations for foreign and domestic currencies, influencing it through capital flow regulations [19].

### **Financial Stability Implication of Cryptocurrencies**

*Market Volatility and Spillover Effects.* One of the significant concerns with cryptocurrencies is their predisposition to wild swings or volatility in price [19]. Unlike more traditional financial assets, cryptocurrencies - as represented by Bitcoin and Ethereum - are susceptible to swift and somewhat unpredictable changes in price. This volatility in cryptocurrency prices is influenced by the interplay of market sentiment, regulatory announcements, technological advancements, macroeconomic trends, and social media [19]. For instance, a tweet from an influential figure or some regulatory actions placed on the leading economy can alter the prices of cryptocurrencies; sometimes, this happens within mere minutes. Such extreme volatility carries enormous risks to financial stability, especially as cryptocurrencies become further integrated into the broader financial system.

Also, the more significant the investments by retail and institutional investors in such highly volatile assets, the bigger the risk to financial stability. When there are essential and abrupt falls in the prices of cryptocurrencies, substantial wealth losses among the investors ensue, reducing consumer confidence and spending [20]. This would tend to reduce expenditure when investor sentiment sours, consequently impacting the broader economy. Such spending reduction may slow economic growth, and pessimism in the market might lead to wider economic downturns [19].

*Impact on the Banking sector.* Authors [21] suggest that digital currencies have the potential to alter modern monetary systems. In addition to their use as a digital trading medium, it is also seen as a game-changing disruptor to effect paradigmatic changes in market mechanisms. Bitcoin, the first digital asset to challenge conventional notions of investment, is very prominent in disrupting this market mechanism. Author [22] describes bitcoin as an investment with diversification benefits; the research illustrates how incorporating cryptocurrencies into traditional portfolios has altered the risk profiles of various investment strategies. In addition, according to the author of [23], the emergence of cryptocurrencies as an asset has forced investors to rethink the concept of diversification.

From a historical perspective, cryptocurrencies are highly volatile and have followed characteristics of both speculative bubbles and transformative innovation. Cryptocurrency prices greatly depend on market sentiment and investor behaviour [22]. Furthermore, the increased adoption of cryptocurrencies adds another layer of complexity to the already existent risk management frameworks, adding potentially far-reaching implications to existing architectures of the global financial system.

Another implication that cryptocurrencies will likely have on the banking sector is decreased demand for banking institutions. Cryptocurrencies ensure efficient and fast payment systems, savings, and lending outside traditional banking systems. A good example includes how blockchain enables P2P transactions without intermediaries; thus, people can send money directly to each other rather than through banks [23]. It can dampen the demand for traditional banking, shifting increasingly to cryptocurrencies and using DeFi platforms to meet their needs. Correspondingly, banks likely face declining revenues from transaction fees, foreign exchange services, and other quintessential financial products [22].

*Increased Financial Inclusion and Innovation.* While cryptocurrencies create some risks to financial stability, they also provide considerable potential benefits regarding financial inclusion and technological innovation. Probably the most powerful rationale for people using cryptocurrencies is that they can offer financial services to those excluded from the conventional banking system [23]. According to the World Bank, it's estimated that about 1.7 billion adults, on an in-

ternational level, remain unbanked without access to essential financial services such as an account with a bank that would allow them to receive credit or save money [24]. Cryptocurrencies can easily sidestep this need for traditional banking infrastructure. The only requirements for cryptocurrency are access to the internet and digital wallet.

This access works particularly effectively in areas with a total lack of banking structure, where people either couldn't open accounts because they didn't have the proper documentation, were in a very remote area, or distrusted the system [25]. Indeed, allowing cryptocurrencies to extend direct, peer-to-peer transactions directly without intermediaries can enable people to save, invest, and move money securely and transparently, improving their financial and economic conditions.

Besides improving access to finance, cryptocurrencies also spur innovative development down the value chain of financial services. The development of blockchain technology on which cryptocurrencies operate further leads to the development of DeFi platforms [24]. Such platforms provide various financial services around lending and borrowing, trading, and investment through decentralised exchanges that operate without conventional intermediation using banks [25]. DeFi platforms are based on smart contracts, or self-executing contracts, in which the terms of an agreement are directly written into lines of code, enabling the automaton of a financial transaction.

*Cryptocurrency and Financial Fraud.* The increased adoption of cryptocurrency into the world's financial systems and its use by criminals has grown increasingly. The Federal Bureau Investigation (FBI) Internet Crime Complaints Centre (IC3) received complaints related to financial fraud in cryptocurrency reaching over 69,000, with losses amounting to over \$5.6 billion [26]. Although cryptocurrency-related complaints accounted for just 10 per cent of all financial fraud complaints, losses associated with these complaints represented nearly 50 per cent of all financial fraud losses [26].

Investment fraud ranked the highest at about 71% among the reported cases related to cryptocurrency, followed by call centre fraud with 10% representation [26]. Cryptocurrency benefits criminals because of its decentralised nature, speed, irreversibility, and global transferability. These aspects make the recovery of stolen funds

challenging as perpetrators generally transfer the funds to overseas accounts for immediate liquidation. Authors [27] emphasised the need for accurate reporting in disrupting these schemes, as timely reports would allow law enforcement to investigate cases, possibly mitigating losses associated with cryptocurrency fraud.

*CBDCs and Monetary Policy.* Monetary policy involves the central bank regulating and controlling the money supply to achieve low inflation and sustainable economic growth through the introduction of policies. Since CBDCs are a means of payment, their issuance might not fundamentally change existing monetary policy frameworks but could affect payment flows and monetary policy transmission [28]. When CBDCs are introduced, some households and businesses could shift their cash and deposits to digital currencies. Such a switch, when frequent and in large volumes, may undermine the effectiveness of monetary policy targets and the lending and interest rate channels of monetary policy transmission [14].

#### *Impact of CBDCs on Monetary Policy*

1) Enhanced control over the money supply; this could dramatically change the monetary policy framework as CBDCs would concentrate the power of the money supply in the hands of the central bank itself. In contrast to the conventional system, where the process of money creation relies strongly on the intermediary role of commercial banks through credit disbursements, the CBDC would place the central bank as the monopoly authority responsible for the supply of money; this would make the transition easier on the monetary policy framework as it would be less dependent upon commercial banks for the creation of money and avoid the many complications of operating the central bank's reserves and interest rates [29]. The CBDCs would give complete control of the supply and velocity of digital currency to the central bank and, hence, better positioning to make accurate and timely interventions in the economy. This direct management can make monetary policy more effective in reacting to economic fluctuations and help sustain financial stability [30].

This independence might also imply a smooth and easily predictable monetary policy since it would be unconstrained by traditional instruments such as varying interest rates or changing the statutory reserve requirements [31]. However, under CBDCs, the central bank bypasses all

that and operates directly on the money supply and liquidity in the economy. In this respect, it may be better in terms of efficiency in timing in response to changes in the economy and hence reduce the lag between policy decisions and when their effects will be felt within the economy [31].

2) *Interest Rate Management and Policy Transmission.* Interest-bearing CBDCs would enable central banks to set different interest rates for banks and non-financial institutions; this could directly affect the demand for CBDCs and thus strengthen monetary policy transmission throughout the economy [32]. With these rates, central banks would be more capable of regulating economic activities and liquidity, responding differently to various conditions of the economy. Author [33] indicated that interest-bearing CBDCs could also help central banks bypass the zero bound on interest rates, one of the more significant constraints in traditional monetary policy.

Central banks may apply more aggressive monetary policy measures in the event of a slowdown, such as offering positive or even negative interest rates on CBDCs, so that one could avoid deflationary spirals; this would give financial authorities more leeway in managing inflation and economic growth more effectively, even within difficult conditions, from a macroeconomic point of view [34].

3) *Economic Risk and Deflationary Pressures.* Widespread adoption of CBDCs could lead to deflationary bias, particularly when CBDCs start replacing traditional deposits of banks on a significant scale. If citizens and companies move their funds from commercial banks into CBDCs, the conventional banking sector may face a considerable decline in deposits, thereby restricting the banks from having the ability to lend and create money [34]. This contraction in the money supply could lead to deflation, making monetary policy efforts toward economic growth and business cycle stabilisation even more complicated. In countries where the credibility of sovereign currencies is already very unstable, deflation risks are significant since such a shift to CBDCs would further heighten apprehensions toward traditional currency value [35].

Central banks would need to balance the introduction of CBDCs carefully against the need for financial stability; this would mean the imposition of specific limits on the flow of funds be-

tween CBDCs and traditional deposits so as not to allow the digital currency to draw excessive deflationary pressures or destabilise the banking system [36]. In such a situation, the transition to digital currency would be more of a supportive mechanism to the traditional banking methods rather than undermining the objectives set within the broader economy.

### **Financial Stability Implication of CBDCs**

*Risk of Financial Stability due to widespread adoption.* The movement of money from traditional banks into CBDCs, especially under the impetus of higher interest generated from CBDCs, could thus have severe disintermediation effects on the banking system [37]. Authors [38] emphasised that the more money people and companies move funds into the CBDCs in cash and deposits, the more banks will have to face considerable reductions in their deposit bases. This disintermediation might enormously decrease the liquidity on which banks operate efficiently and amplify the risks to financial stability. Usually, banks depend on deposits to fund their lending activities. Since banks cannot afford to maintain enough liquidity, this would imply or lead to stringent credit conditions in the general economy [39].

The shift of deposits from banks into CBDCs may reduce the quantity of credit that banks can provide; this can elicit a response towards the loan demand and supply fall. With fewer deposits to give out as loans, banks may have to increase interest rates on loans due to reduced liquidity, which increases the cost of borrowing for households, businesses, and even governments [38].

*Comparative Analysis.* Cryptocurrencies, being decentralised and beyond central banks' control, defy conventional monetary policy through deflationary pressures, making it difficult for banks to utilise essential tools such as interest rates and money supply control [5]. They also operate outside of regulated financial systems, thereby undermining monetary policy transmission while giving rise to non-negligible financial stability risks through high volatility and capital flight [7].

In contrast, the central bank's digital currencies allow the central banks to exercise direct control over the digital money supply, and this improves monetary policy transmission and gives ways to manage inflation and stabilise the economy [14].

Large-scale use of CBDCs is likely to cause disintermediation, reducing bank liquidity and credit availability and thus creating instability in the banking system [12]. CBDCs could avoid these risks if appropriately regulated and become a stable, government-backed digital alternative to cryptocurrencies.

Table 1 – Comparison between cryptocurrencies and CBDCs

Aspects	Cryptocurrencies	CBDCs
Control and Centralisation	Decentralised, no central authority control.	Centralised, fully controlled by central banks
Impact on monetary policy	Undermines traditional monetary policy tools; promotes deflationary tendencies.	Enhances monetary policy transmission; offers new tools like interest-bearing accounts.
Volatility	Highly volatile, driven by market sentiment and speculation.	Stable, backed by central bank; less prone to market-driven volatility.
Regulation	Generally unregulated or lightly regulated, creating financial stability risks.	They are highly regulated by central banks, reducing financial stability risks.
Financial Stability Risks	High due to the potential for significant losses, capital flight, and market bubbles	Moderate, with risks primarily related to banking sector disintermediation.
Impact on Banking Sector	Can operate outside traditional banking, reducing bank roles and revenues.	Potential to disintermediate banks by reducing deposit bases, increasing liquidity risks.

Aspects	Cryptocurrencies	CBDCs
Potential Benefits	Promotes financial inclusion and innovation outside the traditional system	Supports financial stability and inclusion, with central bank oversight ensuring trust.

## CONCLUSIONS

Cryptocurrencies, and perhaps CBDCs, have led to various changes in the monetary policy landscape and financial stability. Given their decentralised nature, cryptocurrencies often undermine the traditional central bank control over the money supply and economic policy and are thus associated with increased volatility and financial instability. They, therefore, have a profound impact on monetary policy because they undermine the effectiveness of conventional tools such as interest rates and money supply management, making it difficult for central banks to achieve macroeconomic stability.

In contrast, CBDCs are a powerful means for central banks to maintain and expand their economic influence. Central banks could ensure a state-imposed digital currency to affect the money supply directly, set more efficient interest rates, and promote monetary policy transmission. However, some risks are associated with its usage, as it could result in the disintermediation of the banking sector, which might increase liquidity risks and destabilise financial institutions if not carefully managed and regulated.

However, while cryptocurrencies are a huge challenge for traditional monetary frameworks, CBDCs align more with existing financial systems to support monetary policy and ensure financial stability as they provide a more predictable and better-controlled environment for the conduct of economic management, which makes them a more desirable option for the central banks globally.

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