POLICY ON DIGITAL ASSET

Abstract

The transactions involving most of the digital assets do not require financial intermediaries and cannot be regulated. Further, the volatility of digital asset and risk exposure affects the growth of financial market. Hence, the regulatory authorities also regularly monitor and incorporate the necessary transformation and transmission of the respective monetary policies.

The impact of Digital Asset, either Private or Public, on the money flow is to be examined. Considering the above, this paper intends to examine the on monetary policy implications for digital assets in general and CBDCs in particular.

Keywords:

Bitcoin, Crypto Tax, Cryptocurrency, Digital Currency, Digital Asset, Monetary Policy

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1. Introduction

The monetary policy of any economy plays a decisive role in regulating currency and the governance of the entire nation. It is known that digital assets, a recently innovated financial product, influence fiat money flow. Transactions involving most of the digital assets do not require financial intermediaries, and they are highly volatile and influenced by monetary policy (Alam et al., 2024). The risk exposure caused by digital assets affects the growth of financial market.

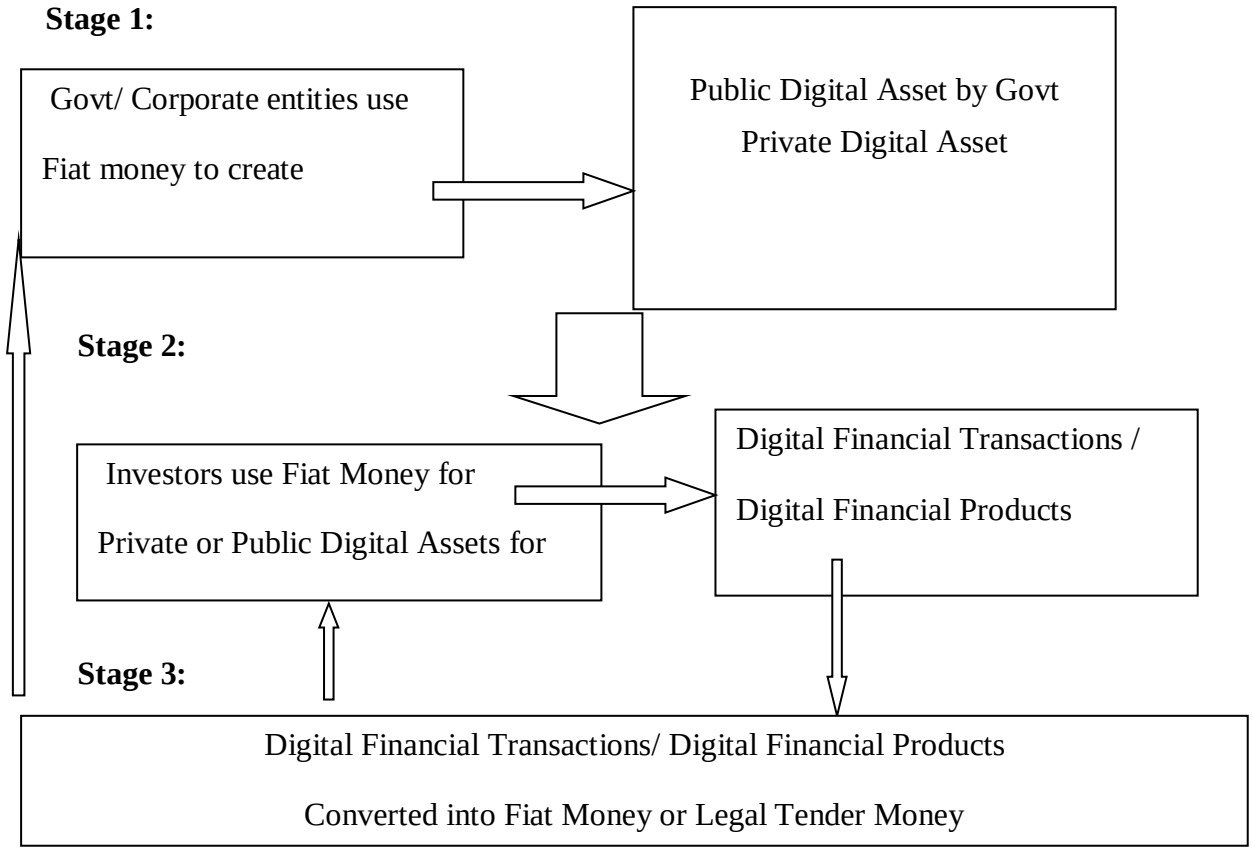
Every stakeholder must understand that digital assets are categorized into two main sectors: i) Private Sector, for instance Bitcoin, Ethereum, etc., and ii) Public Sector -Central Bank Digital Currencies (CBDC). Unregulated digital assets are posing potential monetary policy implications and hurdles for administrators. Investors are exploring the influence of these private digital assets on fiat cash issued through central banks. The absence of regulation could lead to a collapse in the value of cryptocurrencies, potentially resulting in substantial monetary losses for users.

CBDCs are introduced by most nations across the globe to facilitate digital transactions and safeguard the economy from private and unregulated digital assets like cryptocurrency. Given the dynamic nature of digital assets, their treatment for monetary policy varies according to the nature of transactions and the regulatory policies of each country. This necessitates the regular and vigilant monitoring by regulatory authorities, who strive to incorporate necessary enactments in the respective monetary policies. Some researchers state that digital-asset- have no direct implications for monetary policy. However, the dynamic nature of digital assets, including bitcoin and stable coins, deserves continuous monitoring (ECB –Occasional Paper No.223).

This paper intends to examines the implications of monetary policy for digital assets.

1.2. Digital Asset and Fiat Money

Figure 1: Interdependence of Digital Asset and Fiat Money



Source: prepared by the Author

2. **Review of Literature**

The effects on money management and financial safety often rely on the current state of the economy and how certain features are set up. Because of new technologies and innovations, the use of virtual money is growing quickly around the world. It is replacing not just cash and bank transfers, but also electronic cash payments (Cvetkova, 2018).

The crypto markets are affected by US monetary policy, with a tightening of money supply greatly reducing the crypto factor, similar to how global equities are affected (Natasha et al., 2023). The role of cryptocurrency in place of M5 as a money supply alongside the inclusion of other forex products is examined by Agarwal et al. (2018). If the interest rates of national currencies aren't equal, there's a risk of hitting the zero lower bound for interest rates or giving up the national currency, and is called 'Crypto-Enforced Monetary Policy Synchronization'. If the global currency is supported by interest-earning assets, there are even stricter rules for monetary policy (Pierpaolo et al., 2022).

Bitcoin challenged and actually threatened central bank money and its role in the financial system. At the same time, central banks have been looking into cryptocurrencies and have started their own pilot projects on digital currencies, known as Central Bank Digital Currencies (Bibi, 2023). The blockchain has had a huge effect on the environment. It was first noticed by people in some countries, but now it's affecting the global economy (Josias Dewey et al., 2019).

A public-private cooperation for issuing a CBDC may be more advantageous than issuing a "pure" CBDC. This would allow the central banks to achieve three policy objectives simultaneously: harnessing the innovativeness of big tech companies, creating a bearable regulatory environment for stable coins, and protecting the reputation (Kriwoluzky & Kim, 2019). Without the disruptive benefits that cryptocurrencies can offer, Marian (2015) suggested a strategy that uses the advantage of anonymity to lessen the possibility of illicit use of cryptocurrencies.

Cryptocurrency proprietors will participate as contributors to online trading. The utility tokens are issued to those participants via the platform. The virtual currency-related transaction takes place for most individuals in a simple manner. For this reason, the token's

fee is primarily based on the call for membership and the supply of software tokens (Michael et al., 2020).

It was found that the Bitcoin, Ethereum, Dash, CAD, JPY, and EUR contribute most in reducing the variance of a mixed portfolio. In a pure crypto-currency portfolio, Bitcoin and Ripple diversify most. The findings provide insights for Markowitz investors, monetary authorities, crypto-currency issuers, and providers of market infrastructure, such as crypto-currency exchanges or providers of eWallets (Ehlers et al., 2019). Angela et al. (2019) talk about how the government controls digital forex businesses.

The interrelation between cryptocurrencies and monetary policy is explained by Fernandes-Villaverde and Sanches (2018). The balance of advantages and disadvantages from issuing a CBDC is ambiguous, and central bankers either have the impression of a strong missing incentive or the fear of significant risks to financial stability (Katrin, 2020). There are several topics that need more study to better understand the choices available to those who make economic decisions (Ahnert et al., 2022).

Authorities would have to overcome a triple challenge in order for cryptocurrencies: First, the supply of cryptocurrencies would have to influence the economy as an instrument. Second, the supply would have to respond to liquidity crises and serve as a lender of last resort in order to protect financial stability if fractional reserve banking were in place. Third, because cryptocurrencies are issued automatically and secretly, there would need to be a system of checks and balances to hold the agent, responsible to the economy Gregory Claeys, 2018).

Ehlers and Gauer (2019) say that the European Central Bank saw the rise of cryptocurrencies in 2012 as a big change that could hurt the stability of money, financial systems, and payment systems. But the ECB didn't take action because there wasn't much connection between cryptocurrencies and the real economy.

Seyed (2022) looked at the best way to manage money when only cash is available. If using a Central Bank Digital Currency (CBDC) isn't too costly, people can use it like cash to make better financial decisions and reach their goals more easily. Using cash and CBDCs together can lead to fewer benefits than using just one or the other. The benefits of CBDCs

have been studied in the US and Canada. The Gulf Cooperation Council (GCC) countries may see their stock markets recover. The main differences between Islam and traditional businesses include how they handle money, how they use capital, the risks they take, and how they deal with the impact of cryptocurrency on these issues.

Mansour Nomran et al.'s (2024) study aimed to look at how returns from cryptocurrencies affect Islamic and equity returns in the Gulf Cooperation Council (GCC) countries.

The way asset holdings are shared and how asset prices change are the two main ways that a retail central bank digital currency rule under traditional monetary policy affects the overall economy. Using digital and traditional money policies together helps reduce economic ups and downs. Because of this, the real exchange rate, trade balances, and consumer spending become more stable when facing foreign shocks (Cheng Zhou, 2024). Participatory regulation tries to bring together the public and private sectors to find the right balance between being flexible and having clear rules, without stopping innovation (Marco Cappai, 2023).

Shehnaz Al-Helo and Florian Gerth (2025) state that "bitcoin has become a well-known household name, despite its high level of volatility, and it seems to fulfill some of the main functions of money, especially as a medium of exchange.

3**. Monetary Policy Implications:**

Any Central Bank takes necessary steps to regulate monetary flow viz., i) broadening the base of reserve requirements ii) changing reserve ratios, iii) raise demand for reserves through CBDCs. Pfisten (2017) categorizes three scenarios for monetary policy implications viz., (a) Internal use of Digital Currencies, (b) Convergence of Digital currencies and banking activities, and (c) Introduction of CBDC. The author mentions that there is possibility of loss in credibility of sovereign currencies.

If the retail CBDC is introduced, it might change how much money people keep in commercial bank accounts. This could then impact the amount of reserves the central bank

holds. Because of this, central banks may need to change how they manage their reserves and other parts of their monetary policy. For example, they might need to adjust their approach depending on whether they use a floor system or a corridor system for setting interest rates. In the case of the digital euro, the design features that have already been planned can help reduce the risk of problems for monetary policy (Enea Caccia et al, 2024).

According to Stevens (2017), the transfer to cryptocurrencies as a medium of exchange may be restricted as long as money produced by major banks continues to serve as a unit of account. As a result, the risk associated with monetary management may also be reduced.

Markus and Dirk (2019) establish a general money and liquidity model that pinpoints the origins of liquidity bubbles and seignorage rents in the context of the "Chicago Plan". It is suggested that CBDC in conjunction with central bank pass-through funding does not necessarily indicate a credit crisis or jeopardize financial stability.

Marjit and Gupta (2023) states that "if the share of cryptocurrency out of total money supply is high then it is bound to impact the efficacy of monetary policy."

3.1. Transformation and Transmission of Monetary Policy

Central bank could take specific action to prevent unwarranted impacts in order to maintain its desired monetary policy and a digital euro could support the economy (Ramon et al., 2024). Hence, there is a need for measuring stability of central bank using five factors viz., capital adequacy, profitability, asset quality, liquidity and efficiency. Transformation of monetary policy can be measured through CBDC Adoption Index (Gupta et al., 2025).

Transmission of monetary policy can be achieved through –i) strengthening the channels of economy i.e., interest rate, bank lending, asset price and exchange rate channels. ii) de-dollarization and iii) de-cryptoization (Fintech notes, 2023). There is need for modification to the definition of monetary aggregates and also to the ratios of reserve requirements (Pfister, 2017). Because the creation of digital assets and cash-based economy is restricted by –Zero Lower Bound (ZLB) and Negative Interest Rate (NIR) (Bagis, 2022).

The impact of the interest bearing CBDC on monetary policy issues like – bank reserves, deposits rates and lending policy through the four transmission channels (viz., interest rate

channel, credit channel, expectations channel, and exchange rate channel) is examined by Elyor and Judit (20203).

Digital assets returns are affected by changes in monetary policy, for instance lower borrowing interest rate shown positive influence and debt outstanding is negative influence (Kyriazis et al 2023). The nature of CBDC is to be examined to measure its impact on monetary policy transmission, even though there is positive opinion about strengthening economy (Meaning et al., 2018). In future, the help of quantum computing becomes vital for designing transformation mechanism of monetary policy (Wang, 2024).

4. CBDC- Adoption

Abad et al (2024) analyze the impact of digital assets in a model economy with a balance sheet comprising five components, viz. Firms, Banks, Households, Government, and Central Banks. It shows an inverse relationship between the flow of cash flows and CBDC in the economy.

CBDC adoption implies a roughly equivalent reduction in banks' deposit funding. However, this 'deposit crunch' has a negligible effect on bank lending to the real economy. This result reflects the parallel impact of CBDC on the operational framework of the central bank (Abdad et al., 2024). Introducing retail CBDCs changes the amount of commercial bank deposits customers hold, it could undermine monetary policy implementation, affecting central bank reserves (Enea Caccia et al., 2024). Furthermore, changes caused by CBDC emissions in a macroeconomic environment could strengthen the transmission channels of monetary policy (Das et al., 2023).

The invention of digital assets is treated in the form of currency or commodity according to the nature of the transaction involved. Hence, it is necessary to understand the tax implications of dealing with digital financial transactions. However, the legislations vary according to the rules and regulations of the respective policies of the countries concerned (Baer et al., 2023).

CBDC can strengthen monetary policy transmission if there is effective coordination between the monetary policy rate and the CBDC deposit rate. If done correctly, changes in the CBDC deposit rate will affect households and businesses and compel commercial banks to respond

by adjusting their deposit rates too, thereby enhancing the interest rate channel of monetary policy (Ozili, 2024).

5. Status of Digital Asset, Cryptocurrency and CBDC:

The global digital asset market size was valued at USD 4.22 billion in 2023 and is projected to grow at a CAGR of 16.2% from 2025 to 2030[1]. Table 1 depicts data by 'coinclub.com' on the top 5 countries providing stakeholders with digital asset service providers: Canada, Poland, the USA, Lithuania, and Australia.

Table 1: Top 5 countries – Digital Asset Service Providers as of 2024-25

S.No.	Country	VASP Registrations
1	Canada	1411
2	Poland	1407
3	USA	1110
4	Lithunia	537
5	Australia	400

Source: Coinclub.com

The global crypto adoption index ranking is depicted in the Table-2.

Table -2: Top 10- Global Crypto Adoption Ranking & Crypto Owners by Country-2024

[1] https://www.grandviewresearch.com/industry-analysis/digital-asset-management-market

Country	Global Crypto Adoption Ranking	No. of crypto owners Millions by 2023-24[i]
India	1	157.6
Nigeria	2	12.4
Indonesia	3	22.1
United States	4	44.3
Vietnam	5	25.9
Ukraine	6	4.1
Russia	7	24.6
Philippines	8	15.9
Pakistan	9	19.9
Brazil	10	17.8

It reveals that developing countries like India, Nigeria, and Indonesia stood in the top-3 across globe. Further, the impact of broad money focuses its impact on circulation of narrow money (Table-3).

Table-3: Narrow Money and Broad Money in Circulation: 2025

Country	% Narrow Money	% Broad Money
Argentina	73.8	54.8
India	57.3	14.8
Brazil	45.5	4.0
Mexico	34.9	14.7
Indonesia	21.8	12.2
Singapore	20.0	7.7
China	14.0	3.8
South Africa	13.8	7.3

Source: web resources

Table 4 depicts the status of CBDC in circulation across developing countries like the Bahamas, Nigeria, and India to understand its impact on monetary policy, as per Atlantic Council records.

Table 4: CBDC in Circulation- Bahamas, Nigeria, and India

Year	Bahamas (Millions) (Sanddollar)	Nigeria (eNaira)	India (eRupee)
Dec, 2022	B Dollar1	3 Billion	-
Dec, 2023	BDollar1.5	13 Billion	Rs. 1.64 million
Dec, 2024	BDollar2.0	14 Billion	Rs. 23.41 million

Source: https://www.atlanticcouncil.org/cbdctracker/

6. Conclusion

This paper shows that the monetary policy is marginally influenced by digital asset and CBDCs. The global digital asset management market size was valued at USD 4.22 billion in 2023 and is projected to grow at a CAGR of 16.2% from 2025 to 2030. Developing countries like India, Nigeria, and Indonesia stood in the top-3 in the global crypto adoption index ranking during the year 2025.

Alongside banks, non-banking institutions are increasingly conducting transactions, having accounted for more than 25% of the digital payments market. In addition to CBDCs, the advent of central bank digital payment platforms is likely to diminish the role of existing payment institutions.

CBDCs as the primary means of payment within a country may lead to a significant decrease in the role of traditional financial intermediaries, including banks. Moreover, the implementation of CBDCs has additional benefits, as the process of raising funds from businesses and households has become more convenient, with every market participant's digital wallet being advantageous. In future, the help of quantum computing becomes vital for designing transformation mechanism of monetary policy.

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