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Abstract

Purpose: The aim of the study is to examine the potential problems with the new proposed Central Bank Digital Currency (CBDC) known as the digital dollar.

Methodology: Qualitative research design examining pertinent and timely studies and articles about several aspects of the CBDC. Kuznichenko's study used the Vector Autoregressive model to examine volatility spillover to the CBDC from equity markets. Most studies researched on the subject were Qualitative as well.

Findings: The CBDC, although providing benefits like payment efficiency, cross-border transactions, and less illegal activity than a cryptocurrency, also has potential downsides. During periods of financial panic, people can run from banks to the digital dollar. These bank runs could be even worse because whereas normal bank runs cause deposits to be moved from one bank to another, in this case, deposits would be moved out of the banking system entirely, into the digital dollar. Another theoretical problem with the digital dollar is a potential lack of individual privacy. Because the government would have a permanent blockchain record of all transactions and access to a person's finances, this could cause potential government overreach. Lastly, although unlikely, if the Federal Reserve does not regulate the CBDC to the extent that it needs to be, volatility spillover from equity and forex markets could problematic to the stability of the digital dollar.

Recommendations: Theoretically, policymakers can manage risk using the knowledge that the CBDC can exacerbate financial panics and instability. Increased regulation would be necessary to avoid potential volatility and bank runs during financial panics.

Keywords: *Digital Dollar, CBDC, Federal Reserve, Blockchain*

1.0 INTRODUCTION

Recent news indicates that the United States is considering the implementation of a new digital dollar known as Central Bank Digital Currency (CBDC) for an expansion of "safe payment options" according to the Federal Reserve. Reuters reported that the Federal Government, on November 15, 2022, is testing the digital dollar in 12-week pilots in New York with Citigroup, HSBC, Mastercard, and Wells Fargo participating (Nguyen, 2022). A common misconception is that the CBDC would be in the same vein as cryptocurrencies such as Bitcoin, but whereas cryptocurrencies run on a decentralized system, administered by participants known as miners, the CBDC would be centralized, administered by Central Banks (Federal Reserve, 2023). Similar to cryptocurrencies, however, the CBDC electronically records transactions immutably and permanently in electronic "blocks" that are added together as a "chain", giving this technology the name "Blockchain". While cryptocurrency blockchain transactions are recorded publicly and the identity of the users making the transactions is hidden, CBDC blockchain transactions would be only government accessible, authorized, and controlled (Cheng, 2022).

The digital dollar (CBDC) has been said to simplify and greatly speed up transactions while permanently keeping the blockchain record of all transactions. The CBDC also allows for much easier cross-border transactions (Auer et al., 2021) which aren't as readily available with paper money. This increased efficiency and expansion of a person's access to the financial system are the most notable upsides of the CBDC (Cheng, 2022)., as well as likely less illegal activity, compared to a cryptocurrency which has been suspected of allowing for possible money laundering and tax evasion (Wang *et al*., 2022).

Objective of the Study

The objective of this study is to examine the potential problems with the proposed digital dollar, i.e. government overreach, bank runs, and volatility. There are some research gaps, especially pertaining to the CBDC's volatility.

2.0 LITERATURE REVIEW

The CBDC does come with downsides, however. Increased government surveillance over an individual's money (Wang *et al*., 2022), interference with the banking system, and possible day-to-day volatility if not implemented correctly, could be possible reasons to not implement the digital dollar.

Because the federal government would have direct control over the CBDC and also a record of transactions with the digital dollar, this could be seen as both a breach of individual privacy and substantial government overreach (Wang *et al*., 2022). In America, where freedom is often defined as freedom from government, the digital dollar could be an extremely divisive issue and therefore, a risk not worth taking. These perceptions, however, may not be correct. It is likely the digital dollar may not totally replace cash, but only be a supplement to it which makes the fear of complete government control less valid (Bank of Canada, 2023).

The CBDC could also pose a huge threat to banking by sparking "bank runs" (Keister & Monnet, 2022) which happen when large amounts of people simultaneously withdraw their money from banks. The banks then need to use up their reserves in order to replace withdrawals and end up insolvent. This situation could very well occur if people decide to flock in high numbers to exchange their cash for CBDC. Such a run recently occurred at the Silicon Valley Bank, causing it to collapse after a snowball effect that started from investment losses in U.S. Treasury Securities.

One of the main functions of the Federal Reserve is to promote stability in the financial system and avoid bank runs; on its website pertaining to the newly proposed digital dollar, the Federal Reserve has called for public commentary ranging from whether the digital dollar should be considered legal tender to questions about the risks of volatility and bank runs in the digital dollar, including commentary on the closely related cryptocurrency, Stablecoin, that can be pegged to the dollar.

3.0 METHODOLOGY

Academic literature about the CBDC recognizes there is still a lot to grapple with when it comes to the CBDC. Most academic literature on the subject is qualitative research, however, Kuznichenko and Wang used a Vector Autoregressive (VAR) model to examine the interconnectedness between different financial markets. In the case of Kuznichenko's study, it was between equity markets and the CBDC. This model is the most relevant when estimating volatility spillover. This study used a Qualitative research design through an examination of significant and up-to-date studies on the CBDC.

4.0 FINDINGS

While the CBDC is meant to be a stable currency backed by the Federal Reserve, if regulated too loosely, volatility could be a large issue (Kuznichenko, 2022). The best example of the problem of volatility is the Waves stablecoin, which is a somewhat hybrid between a digital dollar and cryptocurrency. As the name implies, Stablecoin was meant to be a stable currency, pegged to the dollar, but in actuality, the stablecoin was just as volatile as many cryptocurrencies. Although highly unlikely, if the CBDC is not practically tested and not heavily regulated by the Federal Reserve, it could fall into the same trap as the Waves stablecoin. Speculation in the Forex market could also potentially cause volatility and destabilize a CBDC, as well as volatility reception from equity markets (Kuznichenko, 2022).

Although blockchain may be virtually impossible to hack, cybersecurity could still be an issue for the CBDC because if hacked, the entire CBDC system would be under severe threat. (Mookerjee, 2022). This can add to the potential problems of instability of the digital dollar.

5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATION

This review reveals that the digital dollar is potentially unstable and volatile and may precipitate bank runs. Overall, the digital dollar is a significant innovation for the financial sector, and could possibly be the future payment in not just the United States, but the entire world. China and India have already rolled out their own digital dollars and Sweden and Japan are preparing for possible rollouts as well. Only time will tell whether the CBDC is a success or failure. It is recommended that accountants be encouraged to participate in the commentaries requested by the Federal Reserve.

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