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Impact of Globalization on Central Bank Digital Currencies

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Abstract:
Central Bank Digital Currencies or CBDCs are a recent development that has affected global financial systems and has led central banks worldwide to explore new options for monetary policy and payment framework. CBDCs are the digital versions of the physical fiat currency and have risen to tackle the challenges and opportunities of Globalization. This paper aims to determine the impact of the intricate relationship between CBDCs and Globalization and examines the cross-border movement of transactions, capital, etc. This research follows a multidisciplinary approach to the influence of CBDCs in assessing cross-border transactions, international trade, and monetary policy coordination, it also discusses the potential challenges of CBDCs and their regulatory and security standards that ensure the privacy and integrity of the currency while following international legal and regulatory norms.

1. Introduction

Throughout history, money has constantly changed hands and its nature is beyond national borders. It brought together societies, economies, and cultures on a whole new level and has redefined the world in the 21st century. Money since its inception always served as an asset that had its value and determined the value of goods and services and the debt value. In today's fast-paced world money has different forms i.e. physical currency produced by the central bank e.g. United States Dollar and commercial banks have their money deposited with the central bank and digital currencies like Cryptocurrencies, stablecoins and evolved towards the Central Bank Digital Currencies or commonly known as CBDCs. But one thing to note is that fiat money has a slight difference i.e. most people think that the central bank creates money, but that is not quite the case as commercial banks are the ones that generate money by providing credit. Central banks can only indirectly control what loan is given to individuals and institutions. Here the rise and evolution of CBDCs even though were not exclusively due to globalization impacted profoundly and need to be understood in depth. The peculiarity of Globalization includes trade liberalization and financial integration etc. the interconnection of money and disbursement of money. Globalisation is changing the way CBDCs are in many different ways.

- Integration of financial systems in the digital mode: As societies are getting more and more digitised there is an increased level of cross-border transactions thus there is an impending need for CBDCs in the ever-globalising world of commerce
- Increased level of cross-border transactions: triggering a change in international trade, investment, and migration; cross-border transactions have become easier with the advent of CBDCs and could address traditional international transactions' challenges.
- A Unique International Money Network: An interconnected international monetary network is essential for globalisation; let's take for example the U.S. dollar, it acts as the world's primary reserve

currency, along with other major currencies which can and will change the world economy as any other factor could. CBDCs brought by other countries could potentially disrupt the existing system and revolutionise the existing composition of the International monetary network, e.g., the Digital Yuan introduced by China aims to bring the yuan as the global reserve currency thus vying to replace the U.S. dollar.

- Financial interconnectedness and regulatory challenges: CBDCs aim to bring a low-cost alternative to payment services that traditional methods would have cost more and help people with low income worldwide. Moreover, given the international nature of CBDCs, there is an increasing need for regulations to be done by the central banks around the world to understand a vital interplay between CBDCs and international financial regulations which brings an intricate layer to the global financial systems.

2. Central Bank Digital Currencies:

A CBDC or Central Bank Digital Currency is a digitised version of domestic currency or fiat money i.e. money backed by a central bank. It is equivalent to physical currency. A CBDC is the central bank liability based on a technology like blockchain. A CBDC is a private blockchain permitted by the central bank to be accessed by the bank and the parties that it chooses. A CBDC can be classified into two types that are:
1) Wholesale CBDCs
2) Retail CBDC and
3) Hybrid CBDC[1]

1) A wholesale CBDC as the name suggests is a CBDC that deals between Central Bank and commercial banks. Here it is meant to be used between financial institutions and is not meant to be used or accessed by the general public and is used to settle interbank transfers etc.
2) Retail CBDCs are the ones that are used by the general public and a digital currency equivalent allowing everyday retail transactions. It is used through the way of digital wallets, or a dedicated app etc. e.g. Canara bank's Digi rupee
3) Hybrid CBDCs are the ones that have a blended feature of both retail and wholesale CBDCs. They have more utility as they can be used by the general public and financial institutions. Depending upon the level of transaction, it can be used for everyday purposes or large transactions.

When it comes to CBDCs there are many significant features that they carry and are essential like

- Enhanced usage of digital currencies will help governments around the world delve into the realm of automated taxation and the direct impact on the implementation of welfare schemes.
- It will help countries move ahead exponentially in terms of spending through the digital payment gateway.
- CBDCs will integrate aspects of law, tech, finance and public policy into implementation.
- CBDCs will help connect people reduce the rural-urban divide help people get into the larger banking framework work and bring new technologies into the rural and developing areas of the world.

The origins of CBDCs roots back to the year 1993 by the Bank of Finland in the form of the "Avant Smart Card" which was discontinued in the year 2000[2]. However, the modern CBDCs can be traced after

[1] 'Central Bank Digital Currencies: What Are The Three Types? - NTT Data Payment Services India' (10 July 2023) <https://www.nttdatapay.com/blog/types-of-central-bank-digital-currencies/> accessed 29 October 2023.
[2] https://www.imf.org/en/Publications/fandd/issues/2022/09/Picture-this-The-ascent-of-CBDCs#:~:text=Central%20bank%20digital%20currencies%20(CBDCs,been%20around%20for%20three%20decades.

Facebook Launched its Stablecoin 'Libra' which prompted Central Banks around the world to develop their currency and not let private players get into dealing with currencies. With the rapid development of digital currencies, there was the emergence of alternative coins popularly known as "alt-coins" e.g. Litecoin, ripple etc. has made lucrative chances for people to hold digital assets which made the central bank further explore the technology. There was also a discussion on CBDCs which grew in the academic circles exploring the challenges and merits of Central Bank Digital Currencies.

3. Effect Of Globalization and the key factors that it influences

Globalisation is a term that is used to describe the growing interconnection of the economies of the world, cultures and populations with the increasing trade in goods and services and the investment that it brings and makes the world into a village with people narrowly refers to the international trade and investment that flows among the countries[3]. Since time immemorial humans have travelled great distances to settle and actively trade with other countries with enhanced technology and logistics. But it was the 19th century that prompted globalisation on a whole new level where Europeans amidst the colonisation and its impact on the world with the colonisers which was led forward by ships, trains, telegraphs and increasing cooperation among the countries but on the broken backs of the colonised[4]. After World War I the trend of globalisation trend reduced and there was post-war protectionism, the great depression, and World War II. After WWII there was an effort to revive global trade and investment which renewed the efforts of globalisation and remains on a constant trajectory. Many key factors were influenced by globalisation such as trade in the form of the exchange of products and services between companies and individuals that span beyond borders with the development of roads, trains and airports with the synthesis of communication technologies and international conventions.[5] With the fast progress in the developments in technology especially in the areas of communication and transport which paved the way for exchanges of goods, information and cultures. Globalisation has also provided an increase in multi-country organisations such as BIMSTEC, BRICS, ASEAN, G-20 etc.[6] Such kind of organisations enables regional integration which helps countries access new markets, increase demand, provides employment and reduces cost due to various trade agreements e.g. NAFTA or the North American Free Trade Agreement, Double Tax Avoidance Agreements or DTAAs etc. which helps countries to reduce costs and thus increasing affordability. Also, Globalisation brought changes in the policies of Governments around the world which promote free trade and economic liberalization. It also brought reduced trade tariffs and protectionism along with it. Globalisation also brought the Rise of MNCs or Multinational Companies. Even though globalisation has brought many positives it has also brought in a lot of challenges like inequality, poverty and environmental degradation e.g. pollution global warming etc. that need to be proactively tackled to bring an equal future that makes the world develop in harmony.

[3] Melina Kolb and Trade and Investment Policy Watch Editor, 'What Is Globalization?' (29 October 2018) <https://www.piie.com/microsites/globalization/what-is-globalization> accessed 30 October 2023.
[4] 'Imperialism, Sovereignty and the Making of International Law: Colonialism and the Birth of International Institutions: The Mandate System of the League of Nations', 'Imperialism, Sovereignty and the Making of International Law: Colonialism and the Birth of International Institutions: The Mandate System of the League of Nations' (30 October 2005).
[5] '10 Types of Globalization' (Simplicable) <https://simplicable.com/economics/globalization> accessed 30 October 2023.
[6] Admin, '5 Drivers of Globalisation in International Business' (Indiaclass, 6 December 2022) <https://indiaclass.com/drivers-of-globalisation/> accessed 30 October 2023.

4. CBDCs 'Its Adoption and Implementation'

The globalisation of economic activity has given rise to an evolution in cross-border transactions which has been digitised. Due to rapid growth in trade, travel and remittances, there is an impending demand for cross-border retail payments some examples include tourism, and an increase in remittances which rose to 720$ billion dollars in 2019, but payment services don't work properly and are slow and costly. Here CBDCs could work as a solution that ensures a smooth path for international transactions. The retail users have direct claims on central bank fiat money which eases the monetary framework. [7] however, there needs to be a common consensus about their design so that there is ease concerning cross-border transactions and in the public interest. The cross-border usage of account-based CBDCs will need international support and understanding. A challenge that is there is the use of Digital ID for transactions outside the country. [8] the regulator or related authority may not entertain providing information to countries that may have different regulations and if a common international digital ID is thought of it would be not entertained by nations as it would need concentrated information of an individual. An international digital ID wouldn't be necessary for cross-border agreements between nations on CBDCs. G-20 here has developed a roadmap for cross-border transactions and has given addition to cooperative efforts in different areas one involves bringing KYC and mutual sharing of identity beyond borders another factor is to bring interaction between data frameworks and transactions to determine an international dimension into CBDCs. [9]Ultimately international Cooperation on CBDC designs will identify new ways for central banks to counter foreign currency replacements and bring monetary independence.

5. Challenges and Potential Risks

CBDCs even though they have their merits also have many issues and risks involved with it, such as e.g. if people withdraw money at a large scale then it would trigger a bank run. Also, a concerning factor is that of data privacy wherein the centralisation of a currency through governments would lead to the profiling of citizens. The current legal framework of countries isn't comprehensive enough to deal with new forms of currencies. Another challenge is that the central bank's currency production would cause commercial banks' potential collision. There is a risk of CBDCs impacting traditional banking services which is in the case of a retail CBDC if a digital wallet is introduced by a non-banking financial institution then banking deposits may face stiff competition. Some users may also choose to store their CBDCs in wallets offered by competitors which can cause banks to face pressure and banks may have to offer higher interest on deposits and adjust their fees to compete with other deposits of CBDCs. The ability to pay using digital wallets could cause potential harm to financial institutions to collect fees through wire transfers etc[10]. It would also accelerate the reduction of the use of ATMs and Physical Bank Branches which will reduce costs but will reduce market presence in cities with high density.

There is also a chance of identity theft and forced spending by the government which can affect the economy. Also, the seigniorage profit that the central banks earn through the printing of currencies will

[7] Auer R, Cornelli G and Frost J, 'Rise of the Central Bank Digital Currencies: Drivers, Approaches and Technologies' [2020] SSRN Electronic Journal

[8] 'III. CBDCs: An Opportunity for the Monetary System' (23 June 2021) <https://www.bis.org/publ/arpdf/ar2021e3.htm> accessed 30 October 2023.

[9] G20 Finance Ministers and Central Bank Governors, Communiqué, Riyadh, 23 February 2020

[10] PricewaterhouseCoopers, 'Central Bank Digital Currencies and the Future of Money - Part 1' (PwC) <https://www.pwc.com/m1/en/media-centre/articles/central-bank-digital-currencies-and-the-future-of-money-part1.html> accessed 24 October 2023. 7

not be there after the introduction of Central Bank Digital Currencies as there is minimal to no cost involved concerning CBDCs. "Seigniorage is the profit that is earned by a central bank by issuing and controlling its currency by the difference between the face value of the currency that exceeds the actual cost of production and distribution of such currency."

6. Conclusion

CBDCs even though at a nascent stage present many opportunities and benefits and provide for the future of money and its distribution. They provide a solution for the challenges involved with paper currency like counterfeiting, avoidance of tax etc. and are greatly influenced by the wave of globalisation which improves cross-border cooperation in the form of integrated payment systems that bring the world together as a "global village[11]". Globalisation at the forefront enables CBDCs to reach across borders and carry out swift payments and transactions that in turn solve the potential challenges posed by Globalisation like the promotion of international trade and influence global policies on a mass scale. It is far-reaching and poses a lot of research value and academic effort to delve more into CBDCs and their future uses so that one can understand its further potential benefits. It also tells us how globalisation has influenced money from the ancient civilisations in Egypt and the Indus Valley to the present-day modern fiat currencies like the U.S. dollar, Indian rupee etc. Money has been going through constant evolution which has led to the development of digital currencies like cryptocurrencies, stablecoins which led to the governments around the world to work on Central Bank Digital Currencies which have prompted efficient and effective cross border transactions, financial inclusion, thus making businesses and cultures reach across borders e.g. use of Digital Yuan which one of the countries out of the 86% per cent who have initiated pilot programs which have shown that more and more countries are interested in CBDCs. The impact of CBDCs will rely on the active participation of central banks, governments and supranational organisations to adjust to an ever-changing scenario of the advancement of globalisation, moulding a financial future that is inclusive and ensures a promising future. CBDCs are the way that brings the complexity of managing CBDCs in a global context in harmonious and chronological management and international collaboration which can make the integration of CBDCs in the global financial market and also address its challenges. The future holds more practical regulations and policy decisions thus ensuring an efficient global financial ecosystem. In the end, it can be said that Central Bank Digital Currencies are a dynamic force that aims to revolutionize the world of finance and provide insight and input for countries to understand and work on and play an important part in the change of traditional monetary framework, which ensures continuity in the interconnected economics.

[11](McLuhan & Fiore, War and peace in the Global Village 2003)