

Central Bank Digital Currencies and International Payments

Research paper by:

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**What is the nature of the
CBDC opportunity in
international payments?
Incremental technology
improvement or
transformative change?**

Overview

Interest in financial technologies has exploded in recent years, driven by the emergence of private digital currencies (cryptocurrencies and stablecoins) and perceived potential from employing new technologies in payments.

Central banks worldwide are examining closely the new digital monetary technologies with many of them considering launching their own central bank digital currencies (CBDC). A few have already implemented forms of CBDC, whilst many others have initiated projects assessing the feasibility of creating their own digital currency and are publishing interim research and policy papers on what this would entail.

This SWIFT Institute commissioned research paper, authored by Chusu He, Alistair Milne and Markos Zachariadis reports an investigation into the business processes employed in the execution of international payments. It also looks at how international payments might be improved through the adoption of CBDC.

For the purposes of this research:

- CBDC is defined as any widely held electronically recorded central bank liability available for transfer, whether recorded on a distributed ledger or on a more conventional database.
- It could be a 'retail CBDC' held by citizens and domestic companies and potentially others.
- Or it could be a 'wholesale CBDC', used in larger value transactions, held by banks or non-bank financial institutions and possibly some large non-financial corporations.

- The impact of CBDC on international payments must be based on understanding the current arrangements for the execution of both domestic and international payments and the central role of settlement in central bank money in payments processing.
- The nature of the CBDC opportunity in international payments is assessed either as one of several current incremental technology developments, supporting gradual improvement in arrangements for making international payments or, as an opportunity for fundamental and transformative improvement in the way international payments are handled.

Beginning with a discussion on the business and policy context to include CBDC design choices, the paper gives a summary on the processes involved in international payments and reviews concerns over frictions. The emphasis on national versus international held CBDC highlights the central challenges of trust and regulation, which lie behind the costs and complexities of international payments operations.

The paper further explores the impact of CBDC on four different international payment scenarios: small business payments, larger corporate transactions, international retail purchases, and remittances, before examining the use of CBDC to redesign international payments architecture.

Key takeaways

1. The creation of the CBDC is most obviously an opportunity for incremental improvements for international payments, rather than a fundamental transformation.
2. The introduction of CBDC, along with other accompanying technological innovations, can promote greater efficiency across many aspects of domestic and international payments. Not necessarily disrupting, but rather, co-existing with existing payments architecture.
3. A widespread adoption of CBDC could be a transformative change to the existing architecture, but this requires substantial and costly changes in order to support institutional arrangements along with new financial infrastructures for direct exchange of CBDC.
4. The launch of a retail CBDC brings with it commercial risks, especially in advanced countries where most domestic payment needs are already met. A retail CBDC may fail to attract a sufficient critical mass of domestic users, especially when alternative, adequate arrangements for executing domestic payments already exist.
5. A future of radical change in international payments based on direct exchange of CBDC is conceivable, but appears highly uncertain for two reasons:
 - first it requires world-wide adoption of domestic retail CBDC which may not be easily achieved
 - even where retail CBDC is used on both sides of the payment transaction, new arrangements for the foreign exchange of retail CBDC will be needed with uncertain overall economic benefits.
6. In the foreseeable future, supporting the direct real-time exchange of wholesale CBDC by financial intermediaries and larger non-financial companies can reduce entry barriers and promote competition in both the foreign exchange and final settlement of international payments.

Conclusion

- International payments processes are complex
- The introduction of CBDC, particularly wholesale CBDC, can support continuing gradual improvement in international payments
- Radical change is possible but not inevitable.

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