



Central Bank Digital Currencies

**The rise of digital currency
and the future of money**

February 2021



Central bank digital currencies (CBDCs) have taken center stage amongst conversations between central banks, governments and private industry. The future of money is uncertain, but we are certain that it will involve significant change as blockchain and distributed ledgers achieve adoption and production deployments at an increasingly frequent rate with China leading the way. To provide clarity, we've framed a few questions and responses in light of the research KPMG has sponsored.

“ The future of money is uncertain, but we are certain that it will involve significant change. ”

What is Central Bank Digital Currency?



A CBDC is a digital version of a fiat currency which can be deployed in wholesale and retail models. CBDC systems vary significantly in their design and implementation based on the central bank and monetary policy of the currency system, but largely aligned to either a wholesale or retail model. In many current and planned implementations, central banks are utilizing blockchain technology at the core of their system design. CBDC's have been researched by international banks and central banks with a significant body of research being published over the past 24 months.

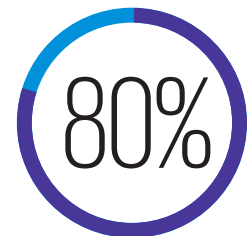
“
A CBDC is a digital version of a fiat currency which can be deployed in wholesale and retail models.
”

Wholesale CBDCs are a digital evolution, enabled through digital ledger technology, of traditional reserves held at central banks by financial institutions. They are used only to transfer value between central banks and licensed participants with accounts at the central bank.

Retail CBDCs bring the settlement and transparency advantages of digital ledger technology to everyone. Individuals and businesses will be able to hold and interact with CBDCs independently of financial services institutions.

Why care now?

The rise of Central Bank Digital currencies has been accelerated by the onset of Covid-19 and a global need to transparently distribute and track economic stimulus funding efficiently to individuals. This need is driving CBDCs into legislative propositions in the United States and globally. "A 2019 Bank for International Settlements (BIS) survey found that nearly 80% of central banks polled were engaged in full CBDC research efforts and various levels of experimentation, up from about 50% in 2017." China is at the forefront of digital currency development and will likely be one of the first countries to issue a CBDC. This will leverage a two-tier system.



of central banks
polled were engaged
in full CBDC
research efforts and
various levels of
experimentation.

Who will be impacted by CBDCs?

CBDC adoption will have significant implications for commercial and retail banks that are directly participating in monetary systems through accounts at central banks. These implications will vary based on CBDC implementations and regulatory environment of the issuing central bank.

Retail CBDC systems will have broader impacts in a given economy as non-bank participants will have direct interactions with central banks. This is in contrast to wholesale systems where only chartered institutions will continue to interact with the central bank.

In a wholesale CBDC model, which may see earlier adoption than retail, the underpinnings of existing currency transfer between the central bank and entities with accounts in their system are transformed to use a distributed ledger. For banks with central bank accounts, this shift poses significant implications on how they engage and transact with the central bank and their peers.

//

The underpinnings of existing currency transfer between the central bank and entities with accounts in their system are transformed to use a distributed ledger.

//

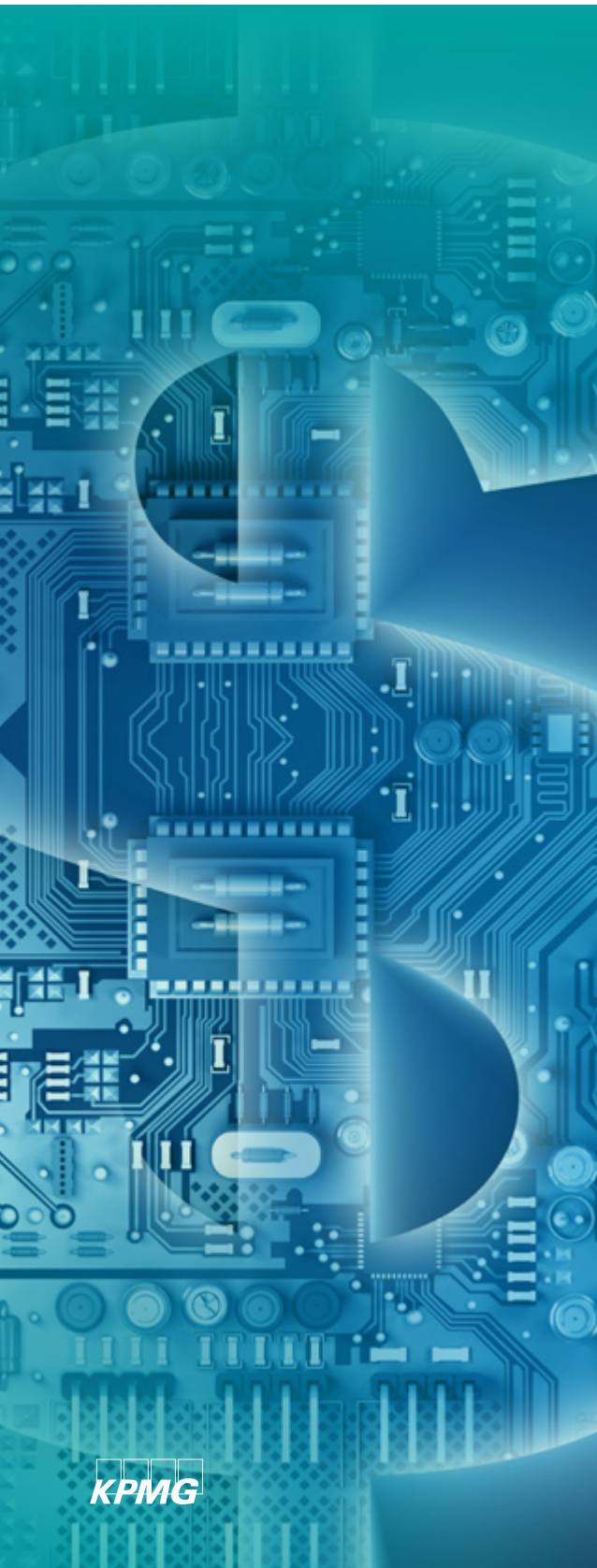
What is the value of CBDC for central banks and the banking system?

Early pilots for CBDC systems have shown potential to optimize the transparency and efficiency of central banks to distribute capital based on monetary policy decisions. This need has proven to be a key driver in the wave of COVID-19 where the need to distribute economic stimulus efficiently. In addition, CBDC systems offer the potential for central banks to utilize near realtime data over capital flows within a monetary system to drive better policy decisioning.



© 2021 KPMG, a Hong Kong partnership and a member firm of the KPMG global organisation of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee. All rights reserved. The KPMG name and logo are registered trademarks or trademarks of KPMG International.

What are the competitive pressures?



The progress that China has made in development of its national digital currency has raised the economic implications of broad adoption of more efficient currency systems. These pressures, alongside impending launches from private sector projects like Libra, have driven the US to rapidly mobilize efforts in the CBDC space to drive private – public coordination. These dynamics formed the foundation for the creation of The Digital Dollar Project, an industry group designed to support public/private sector collaboration, chaired by former CFTC commissioner Chris Giancarlo. The US Federal Reserve has also expanded research through direct engagement and technical collaboration with MIT on CBDC system design.

The threat of economic competition based on progress in CBDC development is being covered in the press with ‘Currency Cold War’ a common title and theme. The implications of these emerging systems are profound for our clients across economic systems and will present dynamic changes and adaptation to overcome.

“
These pressures, alongside impending launches from private sector projects like Libra, have driven the US to rapidly mobilize efforts in the CBDC space to drive private – public coordination.

”

What is KPMG's role in the CBDC discussion?




In an effort to advance the global CBDC discussion, KPMG US collaborated with The Block Research to assess the state of CBDCs by analyzing existing secondary research and performing extensive primary market research through interviews with various stakeholders. The resulting publication, “A Global Look at Central Bank Digital Currencies”, provides a holistic snapshot of the state of CBDCs in 2020 and has been recognized by multiple Central Banks, intergovernmental organizations and think tanks including the World Economic Forum (WEF) and the Atlantic Council.

The research effort and resulting analysis across central banks globally, confirmed that CBDCs are moving past the hype and into production. Over the next 6-12 months we expect to see these events occur slowly, with quick acceleration through competitive pressures and maturation of the CBDC technology ecosystem. 1st movers including the Bahamas, China, Cambodia, and Sweden and leading central bank researchers in the Bank of England, Bank of International Settlements, and International Monetary Fund have paved the way laying a foundation of experience and technological progress for fast followers to emulate and enhance design to better suit the requirements of their monetary system. While the implications of CBDCs on Central Banks themselves are significant, CBDC systems will have major impacts across all participants in a given monetary system, especially those within Banking, Capital Markets and FinTech.

“
The research effort and resulting analysis across central banks globally, confirmed that CBDCs are moving past the hype and into production.
”


► 2020 has seen unprecedented approaches to economic and monetary policy establishing the need for more efficient systems to use and exchange money and value, setting the stage for accelerating adoption of CBDCs. In anticipation of the multi-faceted transformations that CBDCs present, KPMG is working to help support our clients to:



1 Understand the implications, risks and opportunities that CBDCs present



2 Design effective strategies for adoption across business and technology



3 Assess, configure and deploy core technology infrastructure for central bank digital currency systems



4 Harden CBDC systems for security and resiliency against leading standards

Contacts

Local contacts

James Harte

Director
Financial Services Strategy
james.harte@kpmg.com

Benjamin Usinger

Associate Director
Virtual Asset Services
benjamin.usinger@kpmg.com

Paul McSheaffrey

Partner
Head of Banking and Capital Markets, Hong Kong
paul.mcsheaffrey@kpmg.com

Tom Jenkins

Partner
Head of Financial Risk Management
tom.jenkins@kpmg.com

Jianing Song

Partner
Head of Banking Advisory, Hong Kong
jianing.n.song@kpmg.com

James O'Callaghan

Partner
Regulatory Technology Advisory
james.ocallaghan@kpmg.com

Nigel Hobler

Partner
Tax Advisory
nigel.hobler@kpmg.com



kpmg.com/cn/socialmedia



Authors

Arun Ghosh

Principal, US National Blockchain Leader
arunghosh@kpmg.com

Salvatore Ternullo

Director, Cryptoasset Services Co-Lead
sternullo@kpmg.com

Sam Wyner

Director, Cryptoasset Services Co-Lead
swyner@kpmg.com

© 2021 KPMG, a Hong Kong partnership and a member firm of the KPMG global organisation of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee. All rights reserved.

The KPMG name and logo are trademarks used under license by the independent member firms of the KPMG global organisation.

The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act upon such information without appropriate professional advice after a thorough examination of the particular situation.