

## Digital Money Is Here: G20 ('s Thinking) Has To Go Digital, Too

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***This Policy Brief is offered to the Saudi T20 process, as a recommendation to the G20 in 2020.***

**A systemic agenda is needed to steer a risky transition process and reap the long-term benefits.**

### Challenge

Digitalization is reshaping society: the way we work and produce, relate with others, exchange information and entertain ourselves. Change is non-linear, proceeds with unexpected breakthroughs that create net economic value and social plot but also disruption, divides and potential instability. For digital transformation to enhance well-being, it is crucial to support a sustainable and inclusive digital society.

Money is a social convention. We accept it because we think others will do so. Payments are a social experience linking people. With vertiginous digitalization, money is changing *pari passu*. Nowadays, conventional monies (cash, central bank reserves, commercial bank deposits) coexist with a growing array of private sector issued digital monies: electronic money and cryptocurrencies (especially, stablecoins). Still, most of these are prefunded or backed up by conventional monies. That could change also.

In parallel, Big Tech is entering finance. The Libra Project was a wake-up call: Facebook's user base equals close to 40% of the world population. A global currency is no longer a far-fetched idea even if its domain remains within the limits of a single global corporation's digital ecosystem. Giant platforms like Amazon, Google, Alibaba or Facebook could develop their own digital currencies and tie them to the multiple data, trade and social services they provide in an integrated client package. Peer to peer transactions would be boosted by the great convenience of using built-in payment services to complete customer experiences. Network owners would like to create non-compatible protocols, or impose "exit costs", that will make switching to other platforms difficult or expensive. Digital fragmentation would emerge as a new risk. Assuring interoperability among platforms would be needed for economic efficiency and consumers' choice and welfare.

Given powerful network effects, a fierce competition among monies is to come. Payment instruments might disappear when utilization drops below a critical threshold. Shops might refuse to accept physical cash if its usage declines significantly. Commercial banks might respond cutting back on ATMs. So, a reduction in payment instruments is one possible welfare diminishing outcome.

Libra might never fly due to poor design and regulatory zeal, but the underlying idea is out of the Pandora box now. Central Banks might jump with their own digital cash (CBDC) if they feel threatened or, to seize an opportunity. They will, according to a recent BIS report. Indeed, China is close to doing so. CBDC could be created simply by widening access to central bank reserves. Admission could be granted at the wholesale level (letting in specialized financial players) or become universal, allowing individuals to hold accounts in the Central Bank.

Digitalization will drive different money, credit and banking models. Commercial bank deposits will face increasing competition from electronic money and CBDC. That implies a less stable funding structure, the possibility of deposit substitution and runs on banks, and credit disintermediation, with uncertain impacts on investment and output. Currency substitution, increased fragility, loss of regulatory capacities and a potential upsurge in illicit transactions are perils to be considered in advance.

### Proposal

We urge the G20 to develop a comprehensive agenda with a systemic vision on digital money and finance that could guide a resilient financial system through a prudent transition process, keep pace with technology and deliver the long term benefits promised by innovation. This agenda should be part of a broader agenda on the development of a sustainable and inclusive digital society.

We recommend the setup of a Digital Money & Finance Working Group (DMF-WG) at the G20 level to (a) perform the analysis of new digital and alternative instruments and procedures, and (b) recommend the framework(s) for their integration in order to improve the existing financial architecture within both a national and international perspectives.

It is crucial to establish correct design principles from an early stage of the digitalization process and to craft a careful transition course to address a new set of financial stability risks and economic policy trade-offs, which require international cooperation to function properly.

In the short term some lower hanging fruit could be collected by taming the two mayor flaws current payment systems have: lack of universal access to financial services for a large share of the world's population and inefficient cross-border retail payments.

Given time and the appropriate architecture in place, digital money could improve payment infrastructure, financial inclusion and stability, market integrity, monetary policy effectiveness, and, if the political will is there, help mitigate failings in the international monetary system.

#### General principles, rules and basic ideas

Digitalization imposes formidable challenges across a broad range of policy domains. The DMF-WG should provide a thorough revision before any change is to be proposed. But digitalization is not driven by Governments, and change might occur without their blessings. Second best solutions could be forced if reaction comes late and non-optimal standards gain widespread usage.

The DMF-WG must evaluate the very distinct micro-aspects of the digitalization process: safety, efficiency and integrity of payment systems; new instruments' and procedures' legal entity and governance; market integrity and competition; cyber security and operational resilience; consumer and investor protection; data privacy, protection and portability; environmental and social impact and governance (ESG); tax compliance and compliance with norms against illicit finance (anti-money laundering, countering the financing of terrorism and countering the financing of proliferation of weapons of mass destruction).

Recommendations, based upon the solid foundation of granular assessment, have to be made with a systemic vision for financial stability but flexible enough to accommodate idiosyncratic features.

**The DMF-WG should follow the principle of "same business, same risks, same rules"**It should have no digital bias, but be technology-neutral. Its purpose is to level the playing field.

**Competition (among currencies, procedures and entities) should channel most of the benefits of innovation towards consumers** Strong network effects require paying attention to potential harmful concentration and other types of market failure, and to address them through regulation.

**Transition to digital implies the possibility of a period of higher financial stability risks. So, its timing and implementation should be carefully handled** Innovations need to be well understood – many of them, untested in a real-world context on the scale required – which demand previous empirical research and local pilot projects.

**Competition among more currency choices favors stronger substitutability effects permitting a higher order of instability under conditions of stress** New currencies – such as an interest rate yielding CBDC – could be designed to control – or counteract – these unwanted effects. Monetary policy could improve alongside intelligent plumbing.

**Embracing smart design principles and a thorough comprehension of the nature of technological changes are essential to let innovation flourish without damaging the system resilience or the efficacy of existing prudential risk policies.** Technological leaps could increase systemic risk exposure inadvertently, especially concerning tail risks, and place it out of the scope of conventional regulation and surveillance.

**Financial market infrastructure has to ensure resilience and trust** New instruments and procedures could be tailored made to exploit regulatory arbitrage exposing to the type of risks that regulation was to avoid.

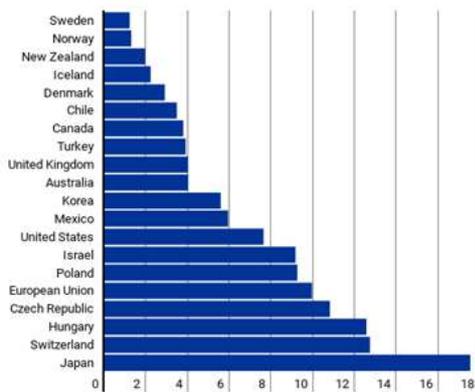
**Different technologies will coexist, not necessarily only digital.** Several countries are working on improving existing payment systems (real-time retail settlement systems) to match the speed and convenience of digital currencies. Fast payments like the ECB’s “TIPS” or the Federal Reserve’s “FedNow” initiatives allow nearly instantaneous and low-cost settlement of inter-bank retail payments. Revolut, N26, Transferwire, and other companies already let users make immediate and frictionless cross-border transactions, in different currencies, at almost no cost.

**Payments systems could further improve if paired with other reforms** such as public digital identities [1], common communication standards, open application programming interfaces (“APIs,” which allow banking applications to interoperate and to be extended by third-party developers), and data portability and protection standards. Letting payment providers hold accounts at the central bank with a direct interface would cut transaction times.

**Different monies will coexist in a competitive economic setting, though some might disappear if critical usage thresholds are breached** Regulation should take notice that a reduction in payments instruments availability could diminish welfare.

**An ESG approach is needed for a comprehensive vision.** Drastic changes in payments have significant social impact. Environmental costs could be prohibitive for certain technologies (bitcoin & blockchain) at great scale. Governance becomes more decisive as Big Tech enters finance. ESG considerations could favor alternative means to achieve same goals.

**Utilization of payments systems differ greatly in different jurisdictions.**



Source: National central banks.

Cash in circulation, as percentage of GDP

**Consumer and business preferences (dependent on local institutions, social networks and cultural identities) dictate so** Societies might go “less cash” if they want. But there is a legitimate right to privacy that could be endangered if digitalization leads to personal data abuse.

**Big Tech is the new elephant in the room. And the proper global regulatory framework, dealing with concepts such as interoperability, data protection, and digital fragmentation, has yet to be designed.**

The DMF-WG should elaborate a view on areas of special interest to accomplish a comprehensive agenda.

#### CBDC: A forced option for central banks?

CBDC could be created by widening access to CB reserves; either, at the wholesale level letting in players such as broker-dealers and central counterparties but also non-bank intermediaries and payment services providers. Alternatively, individuals could hold accounts at the CB, but that would require the CB to create additional infrastructure that will be associated with additional costs and risks.

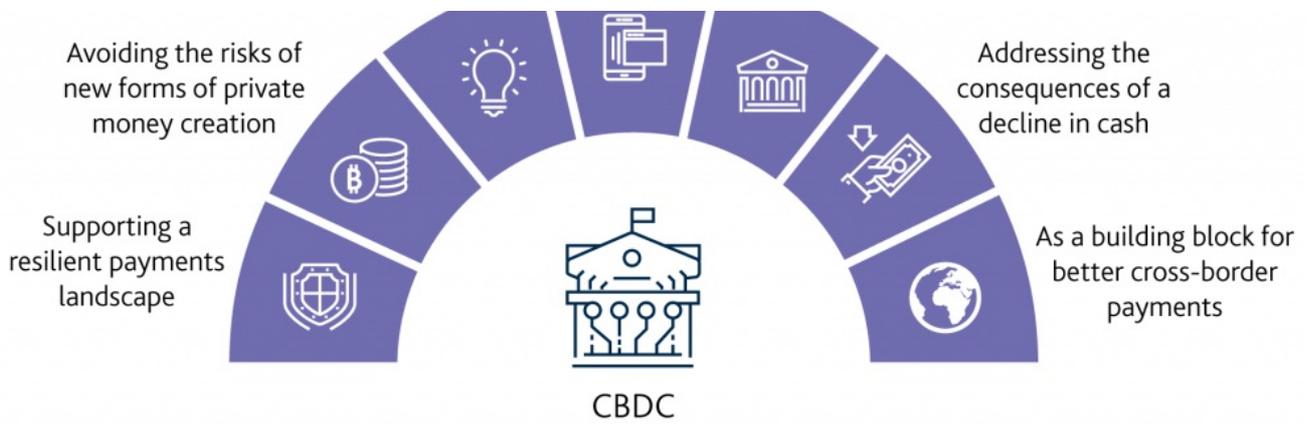
Wholesale CBDC hold promise for wholesale payments, clearing and settlements. A general purpose CBDC is more debatable. Managing it will be daunting in terms of telecommunications, software, cyber-security, operational risk mitigation and reputational risks. A synthetic CBDC could be more efficient. The CB might issue it at the wholesale level through banks and payment services providers and the latter could redistribute it to end-users across their retail channels.

A similar idea of private-public partnerships between central banks and private banks was advocated by Lagarde (2018): “Individuals could hold regular deposits with financial firms, but transactions would ultimately get settled in digital currency between firms... Similar to what happens today, but in a split second.” The advantage of this procedure is that payments “would be immediate, safe, cheap, and potentially semi-anonymous”.

Finally, it is not clear that Central Banks have legally the right to issue digital money, questioning the legitimacy of the CBDC as a means of payment (legal tender). According to a BIS survey (Barontini and Holden, 2019), almost 25% of central banks have, or will soon have, authority to issue a CBDC while a third does not, and about 40% remain unsure.

#### Opportunities for the Bank of England’s objectives





Central Bank Digital Currency: Opportunities, challenges and design, Discussion Paper, Bank of England, March 2020

While CBs are analyzing the feasibility of CBDC, they may be forced into the game by the popularity of the Big Tech stablecoins, to preserve monetary policy traction. A world with multiple digital currencies may also lead to currency instability and capital flow restrictions.

**The dawn of a new banking model**

Transition to digital will require a prudent approach as stability risks involved are huge. Commercial bank money (deposits) will face increasing competition from e-money and CBDC. That implies the possibility of deposit substitution and runs on banks, a change in funding sources, availability and costs, a less stable funding structure, changes in market discipline (depending on the new weights of insured or uninsured deposits), disintermediation and, conditional on the role played by banks within each national economy, an eventual reduction of credit to firms and households with negative impact on investment and output.

Legacy banks should accommodate, but will require time and capital to restructure their businesses under increasing competition from Big Tech and fintech.

**Digital Currency and Monetary Policy**

Digital cash could enhance financial stability if aptly designed. CBDC could be considered a risk-free asset similar in nature to short maturity government bills. Paying an interest rate on CBDC could serve as the primary tool of monetary policy, facilitating an improved framework if substitution from cash and deposits to CBDC is made imperfect. In a financial crisis, the supply of CBDC could be expanded by the central bank acting as lender of last resort, while its interest rate could be reduced to discourage runs from other financial assets into CBDC. That could eliminate the Effective Lower Bound (ELB) problem in case of negative interest rates on CBDCs. Negative interest rates stimulate economic agents to use cash. So, low or zero demand for cash is required to achieve negative rates.

In effect, the CB would ensure that the widening of risk spreads was offset by a corresponding drop in the risk-free interest rate, keeping the cost of credit close to normal levels and helping to insulate the real economy from the financial crisis. Moreover, this approach would generate a relatively steep yield curve that would facilitate the expansion of bank credit and foster prudent risk-taking behaviour – precisely the opposite of QE programs and “lower for longer” forms of forward guidance.

**International Monetary System Reform: Approaching a new Bretton Woods moment?**

Digitalization might foster new international monies: global private stablecoins and/or a synthetic digital currency provided by the public sector, perhaps through a network of CBDC. A digital SDR could also be launched. Mark Carney proposed IMS reform in Jackson Hole along these lines. Could US dollar influence be tarnished? An international currency based on multiple reserves will resemble the multipolar status of the world. And technology can unsettle the network externalities that prevent the incumbent global reserve currency from being displaced. Nonetheless, the answer is not anytime soon. The dollar’s dominance in credit and trade markets needs to be challenged first by a whole new financial and trade invoicing architecture built around any new international currency.

Given the well-known flaws the IMS has the DMF-WG could provide a forum for useful discussions. Reducing USD supremacy in trade in finance would tame spillovers from shocks in the US, smooth the global financial cycle, cut down volatility of capital flows to emerging markets, increase the supply of reliable reserve assets facilitating EMEs to diversify their forex reserves. This would lessen the downward pressure on equilibrium interest rates and help alleviate the global liquidity trap.

**Payments and Covid-19**

Coronavirus outbreak highlights the convenience of digital means of payment and their great flexibility to respond to new unexpected challenges. Electronic payments will increase during this crisis as people fear cash could spread the virus. In addition, most orders will be placed from home given social distancing measures. In that context, cash logistics (transportation, replenishing of ATMs, etc.) become a serious problem that can be easily solved by going digital. Most social and aid programs launched to cushion the virus’ negative economic impact will also be disbursed digitally.

CBDC could very well fit in this new environment given the changing social preferences and the decline of usage of cash but also due to potential requirements for monetary policy such as getting into (deeper) negative rates or providing helicopter money. China’s CB is said to be considering an earlier launch of its CBDC because of the pandemic.

**Appendix: Working Groups and Studies**

- G7 Working Group on Stablecoins, G7, IMF, BIS, “Investigating the impact of global stablecoins”, October 2019
- Saudi G20 Presidency has requested the FSB to coordinate the development of a roadmap for improving cross-border payment systems. The Committee on Payments and Market Infrastructures (CPMI) will describe existing arrangements and challenges and how to improve the current global cross-border arrangements.
- The IMF is working on CBDCs and Fintech and produced the “Bali Fintech Agenda” (together with WB), the working paper “Designing Central Bank Digital Currencies”, the note on “Institutional Arrangements for Fintech Regulation and Supervision”, and on “Regulation of Crypto-Assets.”
- The IMF and the WB have jointly launched a private blockchain and a so-called quasi-cryptocurrency (“Learning Coin”). The coin has no money value and thus is not a real cryptocurrency. It was launched to better understand the technologies that underly crypto assets.
- The Bank of Canada, the Bank of England, the Bank of Japan, the European Central Bank, the Sveriges Riksbank and the Swiss National Bank, together with the Bank for International Settlements (BIS) have created a group to share and assess CBDC use cases, economic, functional and technical design choices, including cross-border interoperability, and the sharing of knowledge on emerging technologies. It will coordinate with relevant institutions and forums – in particular, the Financial Stability Board and the CPMI.
- The CPMI cooperates with other standard setters (in particular the International Organization of Securities Commissions (IOSCO) and the Basel Committee on Banking Supervision (BCBS)), other central bank bodies (such as the Committee on the Global Financial System
- The European System of Central Banks (ESCB) has established a proof of concept for anonymity in digital cash in December 2019. The ESCB’s EUROchain research network seeks to foster a common understanding of DLT and gain practical experience of such technology.
- MIT Digital Currency Initiative (DCI) conducts research to support the development of digital currency and blockchain technology, software and infrastructure that addresses questions about security, stability, scalability,

privacy, and the internal economics of these systems.

- Alliance for Financial Inclusion: The Digital Financial Services (DFS) Working Group provides a platform for policymaker discussion concerning regulatory issues over digital financial services (DFS), including mobile financial services (MFS), branchless banking, electronic money, digital payment solutions and other new technologies being introduced to promote DFS as a major driver of greater financial inclusion in emerging and developing countries.
  - International Telecommunications Union (ITU-T) Focus Group on Digital Currency including Digital Fiat Currency (FG DFC) studies the economic benefit and impact of introducing DFC over mobile money maps the functional network reference architecture and process components required to implement digital fiat currency, and the integration with existing payment systems for interoperability. Security, regulatory implications, consumer protection, fraud prevention and counterfeiting issues of DFS and identify new areas for standardization in ITU-T study groups.
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## Existing Initiatives & Analysis