

## Digital Currencies and Cross-border Policy Cooperation and Coordination

Competitive pressure from cryptoassets has jolted policy makers to focus on improving cross-border payments systems and to consider issuing central bank digital currencies (CBDC). Cryptoassets such as global stablecoins have the potential to play a useful role in enhancing cross-border payments, provided the systemic risks posed by them are kept in check. Since cryptoassets typically transcend national borders, the goal should be to take a holistic approach to their regulation and supervision. For this, there has to be effective cross-border cooperation, coordination and information sharing amongst the relevant authorities. International agencies, global standard-setting bodies, and national authorities under the guidance of the G20 are in the process of developing a global roadmap for enhancing cross-border payments and addressing the existing and new systemic risks posed by cryptoassets. Cross-border and financial integrity issues are also relevant in the issuance of CBDCs and go beyond those applicable for private cryptocurrencies. Given the cross-border and geopolitical implications of CBDCs, collaboration between central banks and government agencies in establishing global standards for design and operation of CBDCs would be important.

### I. Introduction

Innovation and change are likely to transform the landscape of banking and money as we know it. The emergence of cryptoassets (especially cryptocurrencies and stablecoins)<sup>1</sup> was initially treated with skepticism and suspicion by central banks and policymakers. These asset classes were equated more with speculation and conduct of illicit activities than with being a means to make payments. As such, they were not considered to be a threat to global financial stability and effectiveness of monetary policy. Therefore, since cryptoassets are designed to transcend national borders, the focus was on implementation of internationally-coordinated regulatory measures aimed at preventing money laundering and financing of terrorism. However, following the

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<sup>1</sup> A cryptoasset is an umbrella term, though it is often used interchangeably with the term cryptocurrency. A cryptoasset is a digital asset that utilizes cryptography, peer-to-peer networking, and a public ledger to regulate the creation of new units, verify transactions, and secure the transactions without the intervention of any intermediary. Cryptoassets include cryptocurrencies, stablecoins, platform tokens, utility tokens and transactional tokens. The term stablecoin commonly refers to a cryptoasset that aims to maintain a stable value relative to a specified asset or a basket of assets. See <https://medium.com/babb/what-is-a-crypto-asset-1f0fcc517887>; <https://www.bankofengland.co.uk/knowledgebank/what-are-cryptocurrencies>.

unveiling of Facebook's Libra digital currency proposal in June 2019,<sup>2</sup> there has been a change in stance towards cryptoassets. There is growing recognition that stablecoins are here to stay. While it is assessed that widespread use of global stablecoins could undermine international financial stability and monetary sovereignty<sup>3</sup>, it is also acknowledged that, if systemic risks are kept in check, global stablecoins have the potential to play a useful role in enhancing cross-border payments.

A push towards improving cross-border payments and putting in place regulatory and oversight frameworks that address the systemic risks posed by cryptoassets is being spearheaded by the G20 in close cooperation with the Bank for International Settlements, Financial Action Task Force (FATF), Financial Stability Board (FSB) and the national financial authorities. The G20 has made improving cross-border payments a priority during the 2020 Saudi Arabian Presidency,<sup>4</sup> and a three-stage process has been initiated to develop a global roadmap for enhancing cross-border payments and addressing the systemic risks posed by global stablecoins.<sup>5</sup>

The unveiling of Facebook's Libra proposal also has forced central banks to fast-track their consideration of issuing their own digital currency. Besides helping to counter the growth of private digital currencies, the introduction of central bank digital currency (CBDC) would facilitate more rapid and secure settlement of international transactions. Central banks in emerging market economies have progressed at a faster pace than central banks in advanced economies from conceptual research to development or pilot project (Boar et al., 2020). Cross-border and financial integrity issues are also relevant in the issuance of CBDC and go beyond those applicable for private digital currencies. An important geopolitical ramification of CBDC is that it could enable countries to create payment systems independent of the current global system and make transfers without international oversight (Kumar and Rosenbach, 2020; and Raghuvveera, 2020). Thus, cross-border collaboration across central banks and governments agencies in establishing global standards for design and operation of CBDCs would be important.

This note looks at the challenges posed by cryptoassets and issuance of CBDC and the current state of play in addressing these challenges, including improving cross-border cooperation and coordination.

## II. Cryptoassets and implications for cross-border cooperation and coordination

The legal characterization of cryptoassets differs across jurisdictions. Governments around the world have responded differently to the proliferation of cryptoassets, and government approaches in some cases are still evolving (Nelson, 2018). The government responses can be classified into two broad groups:

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<sup>2</sup> [https://libra.org/en-US/wp-content/uploads/sites/23/2019/06/LibraWhitePaper\\_en\\_US.pdf](https://libra.org/en-US/wp-content/uploads/sites/23/2019/06/LibraWhitePaper_en_US.pdf)

<sup>3</sup> [https://www.mof.go.jp/english/international\\_policy/convention/g20/huzoku191018\\_01.pdf](https://www.mof.go.jp/english/international_policy/convention/g20/huzoku191018_01.pdf);  
<https://www.fsb.org/wp-content/uploads/P140420-1.pdf>

<sup>4</sup> Communiqué, G20 Finance Ministers & Central Bank Governors Meeting, 22–23 February 2020, Riyadh, Saudi Arabia. <https://g20.org/en/g20/Documents/Communique%CC%81%20Final%2022-23%20February%202020.pdf>

Communiqué, Virtual meeting of the G20 finance ministers and central bank governors, July18, 2020. <http://www.g20.utoronto.ca/2020/2020-g20-finance-0718.html>

<sup>5</sup> Bank for International Settlements (2020b) and Financial Stability Board (2020b).

- (i) encouraging financial innovation and development of cryptoassets within the jurisdiction while having regulations in place to minimize potential risks (e.g., Malta, Singapore, Switzerland, UK, USA); and
- (ii) banning or restricting the use of cryptoassets or specific activities associated with cryptoassets within the jurisdiction (e.g., China, India <sup>6</sup>, South Korea).

Since cryptoassets typically transcend national borders and are international in nature, there are inherent cross-border challenges. Differences in jurisdictional approaches can undermine effective application and enforcement of a jurisdiction's rules, given the ability of cryptoassets to operate across borders and to reorganize and relocate its activities with ease. The risk of regulatory arbitrage can be addressed by ensuring sufficient cross-border supervision and oversight of cryptoassets, for which there has to be effective cross-border cooperation, coordination and information sharing amongst the relevant authorities. Implementing effective cooperation requires an understanding of how a specific cryptoasset arrangement is organized and operates, and how the individual activities are connected and generate contagion channels. If there are gaps in the existing regulatory and supervisory frameworks to adequately address the risks emanating from cryptocurrencies with the potential to reach global scale, there may be a need to amend and adapt the existing frameworks (Financial Stability Board, 2019 and 2020b).

The G20, the premier forum for international economic cooperation, is the main coordinator of the work being done by the national financial authorities, international financial institutions and international standard-setting bodies to build a sound and efficient domestic and global financial system in the digital era. The G20 first included cryptoassets on the agenda at the 2018 Buenos Aires summit. The G20 Leaders' declaration at the 2018 summit devoted only one sentence to coordinated global regulatory action on cryptoassets, and this pertained to preventing money laundering and countering the financing of terrorism.<sup>7</sup> However, in subsequent meetings, the G20 has expanded its focus to vulnerabilities and emerging risks to financial stability, consumer and investor protection, and monetary policy associated with the growing entry of BigTech in finance.

### Financial stability risks

At the Osaka Summit in June 2019, the declaration of the G20 leaders noted that cryptoassets did not as of then pose a threat to global financial stability, but that their developments should be monitored closely and vigilance exercised for existing and emerging risks. The G20 leaders asked the Financial Stability Board (FSB) and other standard-setting bodies to advise on additional multilateral responses to cryptoassets as needed. The G20 also tasked the FSB to work on the policy implications of decentralized financial technologies and how regulators can engage other stakeholders.<sup>8</sup>

The assessment that cryptoassets did not pose a material risk to global financial stability changed following the unveiling of Facebook's Libra digital currency proposal in June 2019. Whereas the pre-Libra stablecoin arrangements were relatively small in scale, Facebook's huge userbase, around 2.4 billion worldwide, would give Libra instant worldwide reach. The proposed project

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<sup>6</sup> On March 5, 2020, the Supreme Court of India struck down an earlier Reserve Bank of India ban imposed on April 6, 2018 on banks doing business with crypto exchanges. Following the Supreme Court decision, these exchanges resumed rupee transactions, allowing their customers to convert rupees to cryptocurrencies and vice versa.

<sup>7</sup> <http://www.g20.utoronto.ca/2018/2018-leaders-declaration.html>

<sup>8</sup> [https://www.consilium.europa.eu/media/40124/final\\_g20\\_osaka\\_leaders\\_declaration.pdf](https://www.consilium.europa.eu/media/40124/final_g20_osaka_leaders_declaration.pdf)

envisioned that the Libra would operate across multiple jurisdictions, have money-like features with linkages to the existing financial system, and be used for domestic and cross-border payments. There was almost immediate pushback to the Libra proposal from national financial authorities and regulators. It was feared that because of their large size, wide reach and multifunctional activities, global stablecoins like the Libra could potentially become a source of systemic risk and pose a host of challenges to the regulatory, supervisory, oversight and enforcement authorities (Financial Stability Board, 2019). Accordingly, finance ministers and central bank governors of the G7 and G20 countries have declared that global stablecoins should not commence operations until all concerns about systemic risks have been evaluated and appropriately addressed.<sup>9</sup>

In April 2020, the Libra Association brought out a second white paper containing modifications to the initial June 2019 proposal, and announced that it had formally applied for a payment system license under the Swiss Financial Market Infrastructure Act.<sup>10</sup> The modified Libra proposal removes key features of the initial proposal that had the potential to turn the digital coin into a global currency to rival the dollar, but other risks associated with global stablecoins that warrant regulatory oversight remain.

Global stablecoins can amplify the risks typically associated with cryptocurrencies<sup>11</sup> as well as generate new risks and challenges to financial stability, monetary policy, and the international monetary system (Bank for International Settlements, 2019; Financial Stability Board, 2019). The key channels through which the use of global stablecoins may affect financial stability pertain to wealth effect, confidence effect, exchange rate, and interlinkages to financial institutions. Variations in the value of global stablecoins may cause significant fluctuations in users' wealth and have consequent impact on spending decisions and economic activity in multiple countries. Large-scale substitution of domestic currency by global stablecoins would reduce seigniorage revenue and possibly undermine monetary sovereignty of central banks. If people lose confidence in a country's currency, global stablecoins could become a vehicle for capital flight and contribute to exchange rate volatility. Exposure of financial institutions to stablecoin arrangements may be a source of market, credit and operational risks to those institutions. Large usage of global stablecoins could potentially affect bank funding mechanism. If users hold global stablecoins as a store of value instead of bank deposits, the dependence of banks on alternative and more costly sources of funding would increase. Lower profitability could potentially lead banks to take on more risks. Easy availability of global stablecoins may exacerbate bank runs in times when confidence in one or more banks erodes. Loss of credibility in a global stablecoin also might induce a global bank run if there are huge redemptions of the stablecoin by users and this causes the stablecoin to withdraw on a large scale its reserve assets held with the banking system. Besides

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<sup>9</sup> See Chair's summary: G7 Finance Ministers and Central Bank Governors Meeting, Chantilly (July 17–18, 2019),

[https://www.gouvernement.fr/sites/default/files/locale/piece-jointe/2019/07/g7\\_chairs\\_summary.pdf](https://www.gouvernement.fr/sites/default/files/locale/piece-jointe/2019/07/g7_chairs_summary.pdf)

G20 Press Release on Global Stablecoins, G20 Finance Ministers and Central Bank Governors Meeting, Washington DC, (October 17–18, 2019),

[https://www.mof.go.jp/english/international\\_policy/convention/g20/g20\\_191018sc.htm](https://www.mof.go.jp/english/international_policy/convention/g20/g20_191018sc.htm);

Communiqué, G20 Finance Ministers and Central Bank Governors Meeting, Riyadh. (February 22-23, 2020),

[https://www.mof.go.jp/english/international\\_policy/convention/g20/communique200223.htm](https://www.mof.go.jp/english/international_policy/convention/g20/communique200223.htm)

<sup>10</sup> <https://libra.org/en-US/white-paper/#cover-letter>

<sup>11</sup> These risks relate to money laundering and financing of terrorism, safety and efficiency of payments systems, cyber security, data privacy and protection, and consumer/investor protection.

these risks, global stablecoins can also pose unforeseen operational risks arising from the use of yet untested technology.

Following up on the request of the G20 and G7 Working Group on Stablecoins, the FSB has carried out a review of the existing regulatory, supervisory and oversight regimes in a broad mix of jurisdictions, and issued a consultative document in April 2020 setting out ten high-level recommendations to address the challenges raised by global stablecoin arrangements (Financial Stability Board, 2020b).<sup>12</sup> An important finding of the FSB's review is that in most jurisdictions the existing regimes applied in whole or in part to stablecoin arrangements and addressed at least some of the potential risks. Since global stablecoin arrangements have multifunctional activities, the FSB recommended that country authorities should apply regulatory requirements on a functional basis and proportionate to their risks. The FSB observed that in this regard existing approaches in some jurisdictions might need clarification, adjustment, or new regulation. Moreover, because some functions of global stablecoins may have significant cross-border effects, the goal should be to take a holistic approach to regulation and supervision of global stablecoin arrangements, and reduce opportunities for cross-sectoral and cross-border regulatory arbitrage. The FSB has therefore emphasized the importance of addressing potential gaps in domestic regulatory frameworks, strengthening international cooperation and information sharing between jurisdictions, and applying the principle of "same business, same risk, same rules" to address the emerging business models and technologies employed by global stablecoins.

### Money laundering and terrorist financing risks

In line with the G20 Leaders' declaration at the 2018 Buenos Aires Summit, the Financial Action Task Force (FATF) issued new guidelines in June 2019 requiring virtual asset service providers (VASPs) to implement preventive measures against money laundering and terrorist financing risks of virtual assets (i.e., cryptoassets) and be supervised by the competent national authorities.<sup>13</sup> Under these new guidelines, VASPs would be required to implement the same preventive measures as traditional financial institutions. In particular, VASPs would have to verify their customers' identities, identify the recipients of their customers' transfers, and share that information with other providers of virtual assets and law enforcement. This so-called "FATF Travel Rule" would be applicable to all transactions above a USD or EUR 1,000 threshold. National authorities would have to impose sanctions or other enforcement measures if VASPs failed to comply with their AML/CFT obligations. The FATF further specified in October 2019 that, as part of its mutual evaluations, it would assess how well countries were meeting the new guidelines. Countries that had already undergone their mutual evaluation would be required to report back on follow-up actions as necessary.<sup>14</sup> Countries that seriously diverged or did not adopt recommendations faced being blacklisted, potentially cutting them off from crucial investment

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<sup>12</sup> The final recommendations, taking on board feedback from public consultation, will be published in October 2020. The recommendations focus on financial regulatory and supervisory issues relating to privately-issued global stablecoins intended for retail use. The recommendations do not cover aspects of global stablecoin arrangements that do not fall in the mandate of the FSB.

<sup>13</sup> FATF, Public Statement on Virtual Assets and Related Providers, 21 June 2019.

<https://www.fatf-gafi.org/publications/fatfrecommendations/documents/public-statement-virtual-assets.html>

<sup>14</sup> FATF, Money laundering risks from "stablecoins" and other emerging assets, October 2019

<http://www.fatf-gafi.org/publications/fatfgeneral/documents/statement-virtual-assets-global-stablecoins.html>

and global trade. The G20 has expressed support for the FATF's new guidelines on the AML/CFT obligations of VASPs, and has urged countries implement them as a matter of priority.<sup>15</sup>

Some VASPs have argued that application of the so-called "FATF Travel Rule" rule could have unintended consequences. Specifically, it would likely drive more people to conduct person-to-person transactions, thereby resulting in less transparency for law enforcement. Moreover, meeting the new FATF guidelines would require a fundamental restructuring of blockchain technology or setting up a global parallel system among the 200 or so cryptocurrency exchanges in the world.<sup>16</sup> Nevertheless, all parties support continued dialogue. The VASPs are interested in ensuring that regulations impacting on blockchain technology are both effective and balanced,<sup>17</sup> while the FATF and its members are interested in ensuring an effective response to the money laundering and terrorist financing risks.

Stablecoins, regardless of size, carry money laundering and terrorist financing risks. In the FATF's view, stablecoins of all types should never be outside the scope of anti-money laundering controls.<sup>18</sup> In its report to the G20 in July 2020 (FATF, 2020), the FATF has confirmed that global stablecoins would be subject to its revised standards either as a virtual asset or a traditional financial asset, depending on its exact nature.

The FATF has cautioned that ML/FT risks can heighten in the case of global stablecoins with the potential for mass adoption. These risks could arise if the stablecoin: (i) enables anonymous peer-to-peer transactions via unhosted wallets; (ii) is located in jurisdictions with weak or non-existent AML/CFT frameworks; and (iii) has a decentralized governance structure. In such instances, the authorities had the option of banning or denying licensing of platforms, introducing volume limits on transactions, or mandating that transactions occur via a registered VASP or financial institution. However, these tools are not explicitly included in the revised FATF standards.

Based on known models of stablecoins arrangements, the FATF did not deem that its revised standards needed amendments at this juncture. However, given the technological dynamism of the virtual assets sector, FATF has noted that forward-looking analysis of ML/FT risks of proposed and future global stablecoins is essential and these risks should be addressed before the new stablecoin arrangements are launched. To ensure that the ML/TF risks are appropriately mitigated, the FATF will be conducting another review of the impact of its standards by June 2021.

The FATF considers international cooperation between jurisdictions to be critical for effective mitigation of ML/TF risks for stablecoins. If stablecoins have potential for mass adoption, multiple jurisdictions may have interests in the licensing and registration of proposed stablecoins. In a cross-jurisdictional context, there could be issues in determining which national law applies to individual elements. In such instances, information sharing and coordinated supervisory and law

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<sup>15</sup> [https://www.consilium.europa.eu/media/40124/final\\_g20\\_osaka\\_leaders\\_declaration.pdf](https://www.consilium.europa.eu/media/40124/final_g20_osaka_leaders_declaration.pdf) and Communiqué, G20 Finance Ministers and Central Bank Governors Meeting, Riyadh. (February 22-23, 2020). [https://www.mof.go.jp/english/international\\_policy/convention/g20/communique200223.htm](https://www.mof.go.jp/english/international_policy/convention/g20/communique200223.htm)

<sup>16</sup> <https://cointelegraph.com/news/fatf-to-release-new-rules-for-global-crypto-sector-impacting-exchanges-funds-custodians>

<sup>17</sup> Press release, 18 June 2019, <https://news.bitcoin.com/pr-legislators-support-v20-summit-in-response-to-new-fatf-rules/>

<sup>18</sup> FATF, Money laundering risks from "stablecoins" and other emerging assets, October 2019 <http://www.fatf-gafi.org/publications/fatfgeneral/documents/statement-virtual-assets-global-stablecoins.html>

enforcement arrangements may be necessary. The FATF has consequently established a work program focused on enhancing international cooperation in the supervision of VASPs.

### Enhancing cross-border payments systems

Facebook's Libra proposal has thrust into the open the shortcomings in the existing cross-border payments systems and underscored the contributions that financial innovations embodied in stablecoins can make to expand access to financial services and enhance the speed and efficiency of the global payments arrangements (Financial Stability Board, 2019). In this regard, Sir Jon Cunliffe, Chair of the BIS Committee on Payments and Market Infrastructures (CPMI) has noted that cross-border payments systems have been neglected for too long, and that "(f)ixing the plumbing matters. ... Improving the cost, speed and reliability of payments would remove frictions that prevent many small businesses reaching out to customers beyond their borders. ... Better systems would make a real difference to many of the poorest and most vulnerable who disproportionately bear the cost of the frictions of the current systems".<sup>19</sup> A recent article in *The Economist* notes that the average cost of sending the equivalent of US\$200 of cross-border remittances in 2018 ranged from about 6.5 percent at traditional money-transfer firms to 8 percent at banks.<sup>20</sup>

The G20 has made enhancing cross border payments a priority during the 2020 Saudi Arabian Presidency. It has tasked the FSB, in coordination with the CPMI and other relevant standard-setting bodies and international organizations, to develop a roadmap to enhance global cross-border payment arrangements by October 2020.<sup>21</sup> The roadmap is being developed in three stages.

The first stage involves an assessment of the frictions in existing cross-border payment processes. The first-stage report presented to the G20 by the FSB in April 2020 (Financial Stability Board, 2020a) notes that a roadmap would need to encompass a variety of approaches and time horizons, and a range of actors in the private and public sectors would have important roles to play. Technological innovation could build on existing cross-border and domestic payment arrangements or take the form of new structures and ecosystems. The initiatives would have to be accompanied by measures to address all relevant risks.

The second stage sets out the focus areas and associated building blocks of a response to address the challenges identified in the first stage. The second-stage report submitted to the G20 by the CPMI in July 2020 (Bank for International Settlements, 2020b) has identified five key focus areas for further work: (i) public and private sector committing jointly to a common vision to enhance cross-border payments; (ii) coordinating on regulatory, supervisory and oversight frameworks; (iii) improving existing payment infrastructure and arrangements; (iv) enhancing data and

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<sup>19</sup> "Cross-border payment systems have been neglected for too long", CPMI speech, 30 July 2020. <https://www.bis.org/cpmi/speeches/sp200730.htm>

<sup>20</sup> <https://www.economist.com/leaders/2019/04/13/the-cost-of-cross-border-payments-needs-to-drop> 13 April 2019.

For improving other aspects of cross-border payments, see Malykina, E. "Corporate treasurers seek improvements in cross-border payments". <https://www.americanexpress.com/us/foreign-exchange/articles/improvements-needed-in-cross-border-payments/>

<sup>21</sup> Communiqué, G20 Finance Ministers and Central Bank Governors Meeting, Riyadh, February 22-23, 2020. [https://www.mof.go.jp/english/international\\_policy/convention/g20/communique200223.htm](https://www.mof.go.jp/english/international_policy/convention/g20/communique200223.htm)

market practices; and (v) exploring the potential role of new payment infrastructures and arrangements (such as global stablecoins and central bank digital currencies).

The third stage involves putting together the actual roadmap of the practical steps to be implemented and the indicative time frames. The third-stage report is scheduled to be delivered by the FSB to the G20 Finance Ministers and Central Bank Governors in October 2020.

### III. Central bank digital currencies

The Libra proposal has renewed the interest of central banks to have their own digital currencies. A key motive is to counter the competitive pressure from cryptocurrencies and remain in control of monetary policy matters. Another important consideration is that central bank digital currencies (CBDC) would enhance the efficiency of the payments system. In emerging market economies, financial inclusion is an important motivation (Auer et al., 2020; Bordo and Levin, 2017; De Meijer, 2020; He, 2018). A survey of 63 central banks in late 2018 conducted by the BIS revealed that a majority of central banks were researching CBDCs but that this work was primarily conceptual and only a few intended to issue a CBDC in the short to medium term (Barontini and Holden, 2019). But the sentiment had changed by late 2019. Central banks in emerging market economies are moving at a faster speed than central banks in advanced economies from conceptual research to intensive practical development of digital currencies. In a survey conducted by the BIS in late 2019, central banks representing a fifth of the world's population said they are likely to issue the first CBDCs in the next few years. (See Boar et al. 2020). Auer et al. (2020) report that as of mid-July 2020, at least 36 central banks had published retail or wholesale CBDC work.<sup>22</sup> Retail CBDC pilots have been completed in three countries (Ecuador, Ukraine and Uruguay) and are ongoing in six countries (Bahamas, Cambodia, China, Eastern Caribbean Currency Union, Korea, and Sweden).<sup>23</sup> The Atlantic Council Global Business and Economics Center and Harvard University Belfer Center have initiated a new project to track what various countries are doing on CBDCs.<sup>24</sup>

Given the cross-border implications of CBDCs, it is felt that cooperation between central banks is essential to come up with the optimal design for CBDCs. Six advanced-country central banks (Bank of Canada, Bank of England, Bank of Japan, European Central Bank, Sveriges Riksbank and Swiss National Bank) together with the BIS have created a group to share their research findings on the potential costs and benefits of introducing CBDC in their home jurisdictions.

Significant preparatory work would be required prior to issuance of CBDC. In particular, operation capabilities would have to be upgraded for managing reserves and deposits, protecting user privacy, preventing digital counterfeiting, and mitigating cyber-attacks and other operational risks (Kiff et al., 2020; Kumar and Rosenbach, 2020).

CBDC, like cryptocurrencies, also carry significant risks associated with monetary policy, financial stability and illicit transactions, depending on its design. The risks and challenges are greater in

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<sup>22</sup> Auer et al. (2020) examine the economic and institutional drivers of CBDC development. They find that, overall, the likelihood of CBDC projects is positively associated with the use of mobile phones and innovation capacity. Also, work on retail CBDCs is more advanced in countries where the informal economy is larger, whereas work on wholesale CBDCs is positively correlated with financial development in the country.

<sup>23</sup> Among all ongoing CBDC projects, the one by China is at the most advanced stage. Four cities have been selected for the initial trial — Shenzhen, Chengdu, Suzhou and Xiongan.

<sup>24</sup> <https://www.atlanticcouncil.org/blogs/econographics/the-rise-of-central-bank-digital-currencies/>

the case of a general-purpose CBDC compared to a wholesale CBDC. Disintermediation and defunding of the banking sector and “digital runs” towards CBDCs are major risks of a general purpose CBDC. A large-scale substitution of bank deposits by CBDC would erode bank lending activity, lower profitability, and possibly drive banks into shadow banking activities. The scope for anonymous transactions would be considerable in the case of a distributed ledger-based CBDC. It also could be difficult to apply AML/CFT requirements if non-residents are allowed to hold and transact in token-based CBDC (Bank for International Settlements, 2018).

A CBDC available cross-border to nonresidents would change the nature of global liquidity and safe asset provision. It also could facilitate capital flight from risk, which would lead to tight domestic funding conditions and sharp movements in foreign exchange markets (Bank for International Settlements, 2018). CBDC could come with first mover advantages. Countries might face challenges in preparing for what would happen if other central banks were to introduce CBDC. China’s move on its own version of CBDC has clearly put pressure on other central banks.<sup>25</sup> As Kumar et al. (2020) note, an early lead in technology development could allow China to dictate how the global payments infrastructure that facilitates cross-border trade and remittances evolves. It has been claimed by a Chinese think tank that a fundamental motivation of China’s CBDC project is to increase the role of the renminbi in cross-border transactions and international trade pricing, and to promote its acceptance as a reserve currency.<sup>26</sup>

China has taken the battle for cryptocurrency hegemony to a new stage. Aside from the issuance of its own version of CBDC, deliberations are underway on the creating a regional digital currency scheme consisting of the Chinese yuan, Japanese yen, South Korean won, and Hong Kong dollar.<sup>27</sup> The initiative seems like a small-scale variant of an idea floated in August 2019 by Mark Carney, then Governor of the Bank of England, for the creation of a global Synthetic Hegemonic Currency (SHC) through a network of central bank digital currencies (Carney, 2019). Carney argued that because of the dominance of the U.S. dollar in the international monetary and financial system, developments in the U.S. economy could have negative spillover effects on the rest of the world via asset markets. The global economy has become multipolar over the years, and a reformed financial architecture developed around a new SHC would support better global outcomes. There would be many execution challenges, including the risk of fragmentation across Digital Currency Areas<sup>28</sup> and the need for close cooperation between central banks.

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<sup>25</sup>See Lael Brainard, “An Update on Digital Currencies”, Speech. August 13, 2020. <https://www.federalreserve.gov/newsevents/speech/brainard20200813a.htm>

<sup>26</sup> <https://www.ledgerinsights.com/china-central-bank-digital-currency-cbdc-renminbi-dollar/>  
A big step in the internationalization of the renminbi was its inclusion in the Special Drawing Right (SDR) basket as a fifth currency with effect from October 1, 2016. Since then, many central banks have added the renminbi to their mix of reserve assets.

<https://www.imf.org/en/News/Articles/2016/09/30/AM16-PR16440-IMF-Launches-New-SDR-Basket-Including-Chinese-Renminbi>

<sup>27</sup> The proposal envisions establishing a cross-border payment network in which businesses will make deals with each other using digital wallets. See <https://fintechzoom.com/fintech-news-payment-systems/china-takes-battle-for-cryptocurrency-hegemony-to-new-stage/>; June 14, 2020

<sup>28</sup> A digital currency area is defined as a network where payments and transactions are made digitally by using a currency that is specific to this network. As Brunnermeier et al. (2019) have noted, the provision of the range of payment and data services that digital currencies encompass is likely to face regulation of unequal stringency in different countries. Differing regulatory frameworks may make it difficult for network operators to fully exploit economies of scale and scope provided by big data.

It has been argued that issuance of CBDCs by other national governments and their internationalization could undermine the U.S. dollar's dominance as a vehicle currency and reserve currency.<sup>29</sup> Hence, it has been suggested that the United States should not take a wait-and-see attitude to the issuance of a digital dollar.<sup>30</sup> However, Gita Gopinath, IMF Chief Economist, believes that digital currencies are unlikely to dislodge the U.S. dollar from its dominant currency position anytime soon. In an op-ed piece in the Financial Times, she notes that “the dollar’s status is bolstered by the institutions, rule of law, and credible investor protection that the U.S. is seen as providing. Simply raising the supply of an alternative currency will not be enough to surmount these considerations”.<sup>31</sup> In the same vein, Mark Carney notes that, notwithstanding considerable economic and institutional reforms that have facilitated the growing use of the Chinese renminbi in international trade and finance, “for the renminbi to become a truly global currency, much more is required” (Carney, 2019).

There are geopolitical considerations associated with CBDCs that would be particularly challenging to resolve. Digital currencies can facilitate avoidance of dollar transactions and U.S. financial oversight. Currently, information sharing with SWIFT and U.S. correspondent banks allows the U.S. authorities to identify illicit activity, such as money laundering and financing of terrorism. The advent of national central bank digital currencies is likely to dilute the dominance of SWIFT and the U.S. correspondent banks in executing international payments.<sup>32</sup> Thus, in the new world of central bank digital currencies, a new framework and arrangement will need to be worked out under the aegis of the G20 to track and limit illicit cross-border flows.

#### IV. Conclusions

Digitalization is reshaping the financial system. The proliferation of cryptoassets is challenging the roles of central banks. To counter this pressure, central banks are considering issuing their own digital money. Commercial banks will face increasing competition from cryptocurrencies, stablecoins and CBDC. It is clear that an appropriate financial architecture has to be put in place that corrects the failings in existing arrangements, keeps pace with evolving technology, and addresses the risks of unintended side-effects. Since digital currencies will transcend international borders, the new frameworks have to cover both the national and international perspectives. Thus, there is a need for close cross-border cooperation and coordination in developing the new frameworks and exercising oversight subsequently. The G20, international

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<sup>29</sup> It is estimated that 40 percent of global exports are invoiced in the U.S. dollar (Boz et al., 2020) and that the about 60 percent of global foreign exchange reserves are held in U.S. dollars. These shares have remained broadly stable in recent years. In contrast, the global share of the renminbi is slightly less than 2 percent in both invoicing of exports and foreign exchange reserves.

<sup>30</sup> <https://www.finextra.com/newsarticle/35409/ing-economist-the-us-has-most-to-lose-in-war-of-digital-currencies>, March 5, 2020; and <https://static1.squarespace.com/static/5e16627eb901b656f2c174ca/t/5f0c5d052d6235002637d0f6/1594645769165/Digital-Dollar-Project-Whitepaper+vF+7+13+20.pdf>, May 2020.

<sup>31</sup> “Digital currencies will not displace the dominant dollar”. Opinion, Financial Times, January 7, 2020. <https://www.ft.com/content/e5dd66b8-2ca0-11ea-84be-a548267b914b>

<sup>32</sup> Kumar and Rosenbach (2020); Raghuvvera (2020); <https://www.atlanticcouncil.org/blogs/econographics/the-rise-of-central-bank-digital-currencies/> April 23, 2020; and <https://www.bloomberg.com/news/articles/2020-05-22/jpmorgan-says-u-s-power-at-risk-from-central-bank-digital-fx> May 22, 2020.

agencies, global standard-setting bodies, and national authorities have key roles to play in this process.

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