Addressing the regulatory, supervisory and oversight challenges raised by "global stablecoin" arrangements

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Executive Summary

The banking sector has undergone significant changes over the past decade with many consumers seeking more convenient, efficient ways to carry out their day-to-day transactions. The COVID-19 pandemic has only accelerated this movement to electronic payment solutions. Long before COVID-19, Canadian banks responded by introducing new platforms for their services while remaining dedicated to protecting their customers' data. Our banks continue to adopt new forms of technology to meet the needs of consumers while at the same time providing trust and stability as regulated financial institutions. Consumers benefit from a range of delivery options for their banking services from branches and ATM machines to online and mobile banking. Behind the scenes, our banks are also involved in maintaining a stable and efficient payments infrastructure that is overseen by the Bank of Canada and operated on the basis of a stable and secure fiat currency (the Canadian dollar).

While new products, like stablecoins[1], offer the promise of greater efficiency in transaction processing, they may also introduce new risks to the stability of the financial sector. Indeed, such risks from disruptors in other sectors have already been observed, particularly in the absence of government regulation. The uncertainty of the pandemic heightens the need for governments and regulators to carefully monitor the activities of non-regulated institutions in the payments space and in the broader financial system, including the issuance of crypto-assets such as stablecoins. It is critical that any new entrants do not impair the safety and soundness of the financial system or cause harm to consumers. In particular, we support the ongoing assessment of non-regulated institutions that could potentially introduce systemic risk.

The aim of this paper is to highlight important issues that should be considered when regulating, supervising, and overseeing Global Stablecoin (GSC) arrangements. The cornerstone of any new approach should be driven by the need to provide regulatory clarity and promote confidence and stability in financial markets. Innovation should also be encouraged but in a careful and thoughtful manner. To this end, the banking industry supports a holistic, risk-based approach grounded in the following principles which the CBA[2] articulated in a similar manner in our response to the Basel Committee on Banking Supervision (BCBS)[3]:

- Regulators should take a steady and measured approach and act in a timely manner when considering any possible GSC arrangements. Particular attention should be paid to those initiatives led by or involving non-regulated market participants, including ensuring oversight of their activities[4];

- Any oversight and regulatory treatment should be commensurate with the underlying risks and should consider the different types and uses of GSCs in the market;
- A principles-based approach is needed that strikes a balance between the goals of effective oversight and fostering innovation, thereby allowing the market to continue to grow and evolve;
- Regulatory authorities should work together in a coordinated manner and engage in ongoing dialogue with key stakeholders.

Introduction

The CBA has a strong interest in the efficiency, safety, and soundness of the payments and broader financial system. This includes participating in larger scale projects to modernize our payments system that are supported by key stakeholders including the Bank of Canada.[5] This is equally matched by our desire to ensure that innovation is applied thoughtfully, such that new or emerging risks are managed appropriately to ensure trust in the financial system is maintained. This is more critical than ever with a heightened risk of fraud and the threat of cyber attacks as more transactional activity moves online, particularly with the onset of the pandemic.[6] While innovation and competition in financial services is important, we encourage further study of GSC arrangements and stress the need for prospective issuers to provide full transparency to the general public and regulators on how such arrangements would function and how the various risks would be managed. Prospective GSC issuers should cooperate with authorities in a timely manner and adhere to local jurisdictional approval processes. We urge governments and regulators to continue to assert their control over the financial system such that the use of any private sector GSCs remains strictly controlled. A financial system that is reliable, stable and resilient is the backbone of our economy, and we therefore need to ensure comparable, risk-based regulation for any new entrants.

While prospective non-regulated GSC issuers may promise benefits such as greater financial inclusion, they lack a proven track record in delivering financial services and managing risks effectively. We are encouraged that concerns around consumer protection are being recognized by regulators, particularly as they relate to the emergence of potential stablecoin networks on a global scale.[7] As highlighted in the FSB's consultative document, there are also numerous issues for authorities to consider in how to regulate, supervise, and oversee GSC arrangements. Further clarity is needed on how such efforts would be coordinated on a global scale, including the roles and responsibilities of national regulators.

In the sections that follow, we briefly consider the nature of GSC arrangements in terms of their characteristics and the proposed scope of regulation by the FSB. We then put forward our case for a holistic risk-based approach for GSC arrangements that acknowledges the importance of promoting confidence and stability in financial markets in relation to identified risks and vulnerabilities, the importance of innovation, the need for a flexible principles-based approach, and the need for coordination on a global scale. In general, we agree with the FSB's recommendations for authorities on regulating GSCs and we provide comments on certain recommendations below.

Nature of GSC Arrangements

We agree with the FSB's focus on privately issued GSCs primarily used for retail purposes as we believe the risks and vulnerabilities are heightened in these circumstances, especially with respect to the financial system and real economy. By contrast, regulated financial institutions have begun exploring the use of stablecoins on a more limited basis for specific purposes such as internal cross-border money transfers and the transfer of payments between institutional clients.[8] These initiatives are being undertaken in a more controlled environment with regulatory oversight and no direct impact to consumers. We therefore believe such activities should not be subject to any additional regulatory treatment.

We concur with the FSB on their analysis of the characteristics of GSCs, and on the need to distinguish GSCs from other crypto-assets and other stablecoins. Making this distinction based on a stabilization mechanism, combination of multiple functions and activities, and potential reach and adoption across multiple jurisdictions, appears reasonable. Other defining characteristics of GSCs may also emerge over time based on different types and uses of GSCs.

Promoting Confidence and Stability in Financial Markets

We agree with earlier observations made by the G7 Working Group on Stablecoins that GSCs have the potential to increase fragilities in conventional domestic currency and facilitate the cross-border transmission of shocks. Moreover, we support the G7's position that no GSC project should begin operation until the legal, regulatory and oversight challenges and risks are adequately addressed through appropriate designs and by adhering to regulation that is clear and proportionate to the risks.[9]

We support the FSB's efforts in moving this project forward and considering the potential risks to financial stability from GSCs through certain key channels. We note that risks may also be elevated by the participation of non-regulated market participants. We also believe that a holistic approach to regulation is necessary so that stablecoin arrangements are looked at as a whole, in addition to their individual components.[10] To this end, we commend the FSB and standard-setting bodies on the analysis they have undertaken, and we support the FSB's recommendation that authorities should develop comprehensive regulation, supervision, and oversight of GSC arrangements.

We offer further comments below on potential risks to financial stability and consumers as identified by the FSB, along with our support of related FSB recommendations.

Potential Risks of GSCs

Risk to Consumers

We agree with the valuation risk identified by the FSB which could translate into significant fluctuations in users' wealth. While other crypto-assets such as Bitcoin often attract the greatest attention in terms of price fluctuations, it is important to highlight that stablecoins may also carry such risk which may differ by type of stablecoin. An analysis by the European Central Bank revealed that a leading algorithm-based stablecoin (NuBits) carried higher volatility compared to other stablecoin types even before users lost confidence in it.[11] Indeed, the ECB found that algorithmic stablecoins have not yet proven capable of withstanding market shocks and maintaining a stable value in the currency of reference. Other types of stablecoins also carry some degree of valuation risk based on different factors. For example, tokenized funds (i.e. backed by fiat currency) are dependent on the trust users have in the entity backing the stablecoin initiative, while other collateralized stablecoins can have a stable price only to the extent that the volatility of collateral is properly managed.[12]

Moreover, there is also the risk that a GSC arrangement may fail and that consumers will be under the false impression that their holdings will benefit from the same protection offered by deposit insurance coverage for bank deposits. As noted by Governor Brainard of the US Federal Reserve Board, not only is it not clear whether comparable protections will be in place for one of the larger GSC initiatives, or what recourse consumers will have, but it is not even clear how much price risk consumers will face since they do not appear to have rights to the stablecoin's underlying assets.[13]

Awareness of potential vulnerabilities and an understanding of the risks should be made clear to any GSC user or investor. We agree with the FSB's recommendation that authorities should ensure that GSC arrangements provide comprehensive and transparent information to users and relevant stakeholders that is necessary to understand the functioning of the GSC arrangement, including with respect to its stabilization mechanism.

Operational risk

The FSB is also correct in highlighting the risk of operational disruption in the GSC environment. This is of particular concern in a large decentralized global environment that may include both regulated and non-regulated participants and linkages to the existing financial system. We are interested in what measures would be instituted to protect against any negative spillover effects. While banks have robust and well-established risk management functions, we need further clarity on how risks would be managed by non-bank participants, and how regulators would be involved. As such, we agree with the FSB's recommendation that authorities should ensure that GSC arrangements have in place a comprehensive governance framework with a clear allocation of accountability. The need for continuous monitoring and testing of the operating infrastructure and well-established back-up plans will also be critical to mitigate against any disruptions. With this in mind, we also support the FSB's recommendation that GSC arrangements should have appropriate recovery and resolution plans. We note that authorities already have such guidance in place for the banking industry.[14]

We note that a key component of operational resiliency includes a comprehensive risk management framework that addresses both cyber risk and anti-money laundering and countering the financing of terrorism and proliferation (AML/CFT) concerns. We concur with the analysis put forward by the ECB that, without effective oversight and risk management of these risks, there is a potential for negative contagion effects on the financial system.[15] Cyber security risks introduced by GSC arrangements are evident from both a technology, infrastructure and consumer perspective. We support the FSB recommendation that authorities should ensure GSC arrangements have effective risk management frameworks and cyber security safeguards in place to manage cyber security risks.[16] Authorities can draw from internationally recognized frameworks to ensure effective risk management, such as the Cybersecurity Framework published by the National Institute for Standards and Technology (NIST). From the perspective of the banking sector, the BCBS points out that banks having a role in a GSC arrangement could be subject to potential cyber crime and fraud and sets out how the BCBS principles for the Sound Management of Operational Risk will help to mitigate against these risks.[17] With respect to AML/CFT concerns, the G7 working group suggests that if crypto-assets, including stablecoins, are not effectively regulated, this may create opportunities for money laundering, terrorist financing and other illicit financing activities.[18] A Financial Action Task Force (FATF) report to the G20 raises similar concerns on potential money laundering and terrorist financing risks from so-called stablecoins, particularly if they are adopted on a widespread scale[19]. Further, FATF indicates that both global stablecoins and their service providers would be subject to FATF standards[20]. These standard setters offer a sound foundation to address these potential risks and we encourage ongoing assessment of these risks as GSC arrangements evolve.

Other risks

We agree there is also a risk of changes to the scale and nature of exposures to financial institutions, as banks could be involved in different roles within a GSC arrangement. Similarly, the BCBS highlighted different channels through which banks could be directly or indirectly exposed to crypto-assets in their earlier discussion paper. We emphasize that each of the potential roles should be considered separately as they involve very different bank activities that present different types and levels of risk. We therefore reiterate our support of the FSB's recommendation that authorities should apply regulatory requirements to GSC arrangements on a functional basis and proportionate to their risks. In fact, we note that some of the roles such as acting as custodians of the reserve assets or the stablecoins themselves may not involve ownership by the banks or any material risk exposure.[21] Thus, banks should not be subject to any specific prudential treatment in these circumstances.

Potential confidence effects and macro financial risks raised by the FSB are also valid concerns. During periods of uncertainty, it is critical that governments and central banks retain their ability to exercise fiscal and monetary policy to rebuild economies; measures should therefore be taken to prevent any widespread holdings of privately issued stablecoins and GSCs. This is an important issue raised by central banks and we have elaborated further on this issue in our paper below.

Potential Vulnerabilities of GSCs

In terms of vulnerabilities arising from the functions and activities of GSC arrangements, we agree with the importance of the choice and management of reserve assets in relation to asset-linked stablecoins. Indeed, we have already observed that risks related to such reserves can be magnified for private sector issuers. For example, Tether notably changed the terms of its reserves such that they no longer guarantee that every USDT is backed by fiat currency. The fact that other assets and receivables may be used as reserves introduces increased risk as the conversion of every USDT at the guaranteed 1:1 USD ratio in a timely manner may not be possible and this may leave consumers vulnerable when access to fiat currency is needed. Furthermore, the lack of an independent audit into the nature of Tether's reserves has proved troubling as this raises questions concerning the existence and support provided by the stabilization mechanism.[22] For algorithm-based stablecoins, there is the risk that the algorithm that keeps the currency stable fails or is otherwise manipulated.[23] The FSB also highlights other valid concerns including the potential for large-scale redemptions of GSCs that may trigger "fire sales" of reserve assets that could reduce the value of the stablecoin.

Given these concerns, disclosure around the nature of stabilization mechanisms and how they operate will be critical. We therefore agree with the FSB recommendation that calls for comprehensive and transparent information necessary to understand the functioning of the GSC arrangement, including with respect to its stabilization mechanism. Experts may also be needed to independently test and validate protocols that control the supply of algorithm-based stablecoins, and independent audits of the nature, existence, and completeness of reserve assets may be required. Ongoing monitoring and attestations around such stabilization mechanisms would provide further assurance. To help mitigate against possible events leading to "fire sales", we also suggest that GSC arrangements be subject to comprehensive and periodic stress testing exercises to ensure that such arrangements can withstand any unforeseen shocks. Stress testing exercises of large internationally active banks is already an important part of the toolkit for banking regulators.

Finally, we agree with the other vulnerabilities highlighted by the FSB related to the GSC arrangements' infrastructure and the applications and components on which users rely to store private keys and exchange coins. It will be critical to understand how the responsibilities for managing the overall infrastructure will be determined and what safeguards will be required against potential issues identified including operational incidents, compromised ledgers, and lack of network capacity. As noted earlier, appropriate recovery and resolution plans will also be important as recommended by the FSB. Due to their global nature, we also support comprehensive regulation, supervision and oversight of the GSC arrangement across borders and sectors, which we will expand on further below.

Supporting Innovation Requires Flexible, Principles-Based Regulation

We support a principles-based approach that strikes a balance between the goals of effective oversight and fostering innovation. The evolving nature of stablecoins reinforces the importance of a flexible, principles-based approach to ensure participants can provide innovative solutions in a sound and stable financial system.

In establishing a regulatory framework, a key priority is to balance the goals of innovation and competition with the goal of effective oversight. As we alluded to above, we agree that the primary objective of the FSB's recommendations is to help authorities determine an appropriate level of regulatory and supervisory oversight to mitigate potential risks that GSCs may pose to financial stability, market integrity, and consumers. However, this does not mean innovation will be hindered. As we expressed at the outset of our paper, financial innovation is a key driver to offering new services and products and these changes are often linked with new and evolving technology. This is particularly true with the crypto-asset market, including stablecoins, where the underlying technology of stablecoins may evolve and shift over time. Regulators will need to develop agility in order to increase their understanding and assessment of GSC arrangements and their implications both domestically and abroad.[24]

It is also important to underscore that the presence and materiality of risks depends on the use and economic function of the stablecoin. We support the premise that financial systems or technologies should not be treated differently unless there is a new risk resulting from the specific aspects of a GSC arrangement. Switzerland's regulatory guidelines highlight the importance of regulatory and policy frameworks remaining principles-based and technology-neutral while recognizing that the structure of stablecoins can vary greatly.[25] The G7 working group also supports the assertion that regulators should avoid hindering innovation "as long as it does not conflict with public policy goals, including monetary sovereignty.[26] As such, we are aligned with the FSB's recommendation that regulatory requirements for GSC arrangements should promote a technology-neutral approach that is applied on a functional basis and proportionate to their risks.

The potential functionality of stablecoins to permit payments across borders illustrates the importance of regulations being proportionate to the risks. Switzerland's regulatory body, Financial Market Supervisory Authority (FINMA), reinforces this point in the reference to stablecoins in its guidelines. For example, FINMA notes that stablecoin arrangements that increase the risks of a payment system are expected to meet the same criteria and must abide by the same requirements as traditional payment systems (i.e. same risks, same rules).[27] In the context of a payment system, we concur that GSC arrangements that perform systemically important payment system functions should be subject to international Principles governing Financial Market Infrastructures (PFMIs). This involves having appropriate oversight to minimize the transmission of negative shocks between participants and between systems, which could adversely affect economic activity by impairing the ability of end-users to make payments, or by undermining confidence in the overall payments system. Harmonized and consistent rules such as these play an important role in managing and controlling risk, while also increasing resiliency across the payment system and among the participants that connect to these systems.

Coordinated regulatory approach

The FSB explores the implications of GSC arrangements that operate across borders and sectors. In light of these cross-border challenges, we agree that coordination is needed with financial regulators and international bodies. The Bank of Canada suggests that "a global effort is required to understand the wide-ranging implications and ensure the regulatory framework is fit for purpose."[28] We support the efforts by regulators to understand the potential implications and risks of using stablecoins at the global level, including the challenges of monitoring their use, to ensure a holistic approach to regulation.

In line with cross-border challenges, the FSB highlights potential challenges for regulators in the case of a GSC arrangement that may operate in multiple jurisdictions and have multiple entities operating separately from one another. Taking steps to address regulatory arbitrage is particularly relevant given the potential for a GSC arrangement to operate differently in different jurisdictions. Close coordination among regulators to close the potential regulatory gaps in different jurisdictions' regulatory frameworks is essential to address this challenge. This will help to ensure compatible, risk-based regulation for any new entrants in the financial services ecosystem and avoid negative uneven oversight.

Participation in joint working groups organized at an international level will be valuable to further this understanding and to help clarify expectations amongst the ecosystem participants. We applaud the current efforts being undertaken by the FSB and international standard setters to review and assess how current regulatory frameworks and standards apply to stablecoins and GSC arrangements. As we previously noted in our BCBS response on crypto-assets, standardization, consistent taxonomy and regulatory clarity would help create trust amongst all participants and reduce confusion for regulators and oversight bodies as well.[29] Recognizing the evolving nature of stablecoins and ongoing collaboration amongst regulators, both domestically and across jurisdictions, will help to address these concerns.

Other Considerations

Given the potential reach of GSC arrangements, collaboration and coordination also extends beyond the financial authorities and international standard-setting bodies mentioned above. The G7 working group suggests that "finance ministries, central banks, international organisations, standard setters and other public authorities maintain the high level of international coordination and collaboration needed for cross-border policies and regulatory regimes that apply to stablecoins".[30] Moreover, the FSB acknowledges there are a number of important considerations that authorities will need to address that are outside the scope of the consultative document. Issues such as data privacy, impact to monetary policy, and the potential impact of the introduction of Central Bank Digital Currencies (CBDCs) are some of the key elements to consider when undertaking a holistic approach for the regulation and oversight of stablecoins.

Collaboration and coordination should extend to regulatory authorities to ensure a consumer's privacy is protected, regardless of the size of a stablecoin arrangement. A high degree of data privacy and protection will be paramount, particularly in the case of GSC arrangements, where data privacy and protection concerns can be elevated if a GSC were to become the custodian of a large quantity of users' personal information. In this regard, we agree with the G7 working group that authorities will need to ensure appropriate data privacy and protection rules are applied to ensure consumers personal information is protected. [31] While we address the potential negative spillover effect from a financial stability perspective, a loss of confidence in a GSC's ability to protect personal information may also have adverse effects on the financial sector's ability to protect consumer data. Moreover, cross-border challenges due to potential variances in privacy rules across jurisdictions will also require the close collaboration among policymakers and oversight bodies to ensure high standards of data privacy are upheld. Though outside the scope of the FSB consultative document, privacy concerns raised by the G7 and others are valid and warrant further analysis as part of a holistic approach to regulation.

It is also important to highlight the potential impact of other products such as the growth of cryptocurrencies, like CBDCs, when evaluating the potential impact of stablecoins. At present, the current size of the stablecoin market suggests the potential impact to central bank's monetary policy is negligible; however, as we allude to in the risks section above, there are potential implications for the role of central banks and monetary policy if widespread adoption of a stablecoin occurs.[32] For example, the Bank of England notes that a GSC arrangement could become a substitute form of money where money shifts from accounts at banks to holding stablecoin virtual 'wallets' provided by non-banks.[33] There are concerns that these arrangements, built on the backbone of existing large and/or cross-border customer bases, could achieve scale rapidly and negatively impact the efficacy of monetary policy.[34] A sizeable shift in demand toward these arrangements could reduce the demand for cash thereby affecting a central bank's balance sheet.[35] These concerns, compounded by the other risks and vulnerabilities noted above, have prompted central banks to call for effective regulation and oversight of GSCs before these arrangements can operate.

Finally, the potential impact on monetary policy has led central banks to consider the rise of GSCs as part of their broader assessment of issuing CBDCs. Although Central banks across the globe continue to research CBDCs, some at an accelerated pace due to COVID-19, there has been little movement toward the issuance of CBDC in domestic markets. In Canada, the Bank of Canada remarked in a recent speech that it does not foresee a compelling reason to issue a CBDC at this time; however, the potential introduction of a private digital currency may prompt the Bank to alter their view. While a CBDC is not expected in the foreseeable future for Canada, the Bank of Canada echoes the call of other central banks for the establishment of an appropriate regulatory framework for stablecoins and other private digital currencies, both in Canada and abroad.[36]

Conclusion

The financial market continues to evolve as new products and technology continue to impact the way consumers transact. Although GSC arrangements have yet to make a significant impact on this market, the need for establishing a regulatory framework is clear. Undertaking a holistic approach to regulation that is principles-based and technology neutral will help promote financial stability and, at the same time, foster innovation in financial services and ensure the flexibility to adapt to an evolving market.

There are a number of potential vulnerabilities and risks that may arise from a GSC arrangement and the FSB offers a sound basis for the management of these risks using existing regulatory, supervisory and oversight frameworks. We agree with the suggested recommendations put forward by the FSB and urge regulators to pursue a measured approach to fully assess the different risks that a GSC arrangement may pose, and to ensure that any new measures set forth by regulatory bodies are proportionate to these risks.

In the context of a GSC arrangement that has the potential to expand across multiple jurisdictions, we firmly believe ongoing collaboration and coordination amongst key stakeholders will be necessary to provide meaningful guidance and clarity in a rapidly evolving market. All stakeholders, including regulators and market participants must work together to foster confidence and trust in the digital era while promoting stability, innovation, and economic growth.

We appreciate the opportunity to provide comments on this important topic. We would be pleased to discuss our submission in greater detail at your convenience.

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[1] For the purpose of this document, a stablecoin is defined by the FSB as "A crypto-asset that aims to maintain a stable value relative to a specified asset, or a pool or basket of assets" while a global stablecoin (GSC) is defined as "A stablecoin with a potential reach and adoption across multiple jurisdictions and the potential to achieve substantial volume". https://www.fsb.org/wp-content/uploads/P140420-1.pdf

[2] The Canadian Bankers Association is the voice of more than 60 domestic and foreign banks that help drive Canada's economic growth and prosperity. The CBA advocates for public policies that contribute to a sound, thriving banking system to ensure Canadians can succeed in their financial goals. www.cba.ca.

[3] CBA submission to the BCBS on their Discussion Paper "Designing a Prudential Treatment for Crypto-assets" (March 13, 2020). https://cba.ca/Assets/CBA/Documents/Files/Article%20Category/PDF/sub-20200313-designing-a-prudential-treatment-for-crypto-assets-en.pdf

[4] It is important to distinguish GSC arrangements led by non-regulated market participants from the use of stablecoins, including GSCs, by regulated financial institutions that are already subject to supervision and oversight.

[5] Deputy Governor of the Bank of Canada Timothy Lane (February 25, 2020) – Money and Payments in the Digital Age https://www.bankofcanada.ca/2020/02/money-payments-digital-age/

[6] As of April 27, 2020, the Canadian Centre for Cyber Security reports over a thousand malicious imitations of Government of Canada websites using COVID-19 themed lures, with most targeting the Canada Revenue Agency and Canadian Emergency Response Benefit. https://cyber.gc.ca/en/guidance/cyber-threat-bulletin-impact-covid-19-cyber-threat-activity. The Canadian Anti-Fraud Centre also highlights 18,803 Canadian reports of fraud as of April 30, 2020 amounting to $22.6M in losses. https://www.antifraudcentre-centreantifraude.ca/index-eng.htm

[7] US Federal Reserve Board Governor Lael Brainard (December 18, 2019) - *Update on Digital Currencies, Stablecoins, and the Challenges Ahead* https://www.federalreserve.gov/newsevents/speech/brainard20191218a.htm

[8] Wells Fargo Digital Cash and the JPMCoin are two examples.

[9] "Investigating the impact of global stablecoins", G7 Working Group on Stablecoins (October 2019) https://www.bis.org/cpmi/publ/d187.pdf

[10] Bank for International Settlements, G7 Working Group on Stablecoins, Investigating the impact of global stablecoins", October 2019

[11] European Central Bank (November 2019) – Stablecoins – no coins, but are they stable? https://www.ecb.europa.eu/paym/intro/publications/pdf/ecb.mipinfocus191128.en.pdf

[12] European Central Bank Occasional Paper Series (August 2019) – In search for stability in crypto-assets: are stablecoins the solution? https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op230~d57946be3b.en.pdf

[13] US Federal Reserve Board Governor Lael Brainard (December 18, 2019) - *Update on Digital Currencies, Stablecoins, and the Challenges Ahead* https://www.federalreserve.gov/newsevents/speech/brainard20191218a.htm

[14] FSB Key Attributes of Effective Resolution Regimes for Financial Institutions (October 15, 2014) https://www.fsb.org/wp-content/uploads/r_141015.pdf

[15] ECB, A regulatory and financial stability perspective on global stablecoins, https://www.ecb.europa.eu/pub/financial-stability/macroprudential-bulletin/html/ecb.mpbu202005_1~3e9ac10eb1.en.html#toc8

[16] Bank for International Settlements, G7 Working Group on Stablecoins, Investigating the impact of global stablecoins", October 2019.

[17] Ibid.

[18] Ibid.

[19] FATF Report to the G20 Finance Ministers and Central Bank Governors on So-Called Stablecoins – June 2020 (https://www.fatf-gafi.org/publications/fatfgeneral/documents/report-g20-so-called-stablecoins-june-2020.html).
Notably, "FATF has found that so-called stablecoins share many of the same potential ML/TF risks as some virtual assets, in virtue of their potential for anonymity, global reach and layering of illicit funds. Depending on how they are designed, they may allow anonymous peer-to-peer transactions via unhosted wallets. These features present ML/TF vulnerabilities, which are heightened if there is mass-adoption". FATF also notes that "When reviewing current and potential projects, so-called stablecoins appear better placed to achieve mass-adoption than many virtual assets, if they do in fact remain stable in value, are easier to use and are under sponsorship of large firms that seek to integrate them into mass telecommunication platforms."

[20] As noted in the FSB consultative document and FATF (October 18th, 2019) – *Money laundering risks from "stablecoins" and other emerging assets,* https://www.fatf-gafi.org/publications/fatfgeneral/documents/statement-virtual-assets-global-stablecoins.html

[21] We discuss the subject of custody arrangements for crypto-assets in our earlier CBA submission to the BCBS on their Discussion Paper "Designing a Prudential Treatment for Crypto-assets" (March 13, 2020). https://cba.ca/Assets/CBA/Documents/Files/Article%20Category/PDF/sub-20200313-designing-a-prudential-treatment-for-crypto-assets-en.pdf

[22] Cointelegraph (Mar 24, 2019) Changes to Tether's Terms of Reserves Raises Fresh Concerns https://cointelegraph.com/news/changes-to-tethers-terms-of-reserves-raises-fresh-concerns

[23] Coinrivet – Stablecoins: what are the risks and benefits? https://coinrivet.com/guides/what-is-an-altcoin/stablecoins-what-are-the-risks-and-benefits/

[24] CBA submission to the BCBS on their Discussion Paper "Designing a Prudential Treatment for Crypto-assets" (March 13, 2020). https://cba.ca/Assets/CBA/Documents/Files/Article%20Category/PDF/sub-20200313-designing-a-prudential-treatment-for-crypto-assets-en.pdf

[25] https://www.finma.ch/en/news/2019/09/20190911-mm-stable-coins/

[26] Bank for International Settlements, G7 Working Group on Stablecoins, Investigating the impact of global stablecoins", October 2019

[27] https://www.finma.ch/en/news/2019/09/20190911-mm-stable-coins/

[28] Deputy Governor of the Bank of Canada Timothy Lane (February 25, 2020) – Money and Payments in the Digital Age https://www.bankofcanada.ca/2020/02/money-payments-digital-age/

[29] CBA submission to the BCBS on their Discussion Paper "Designing a Prudential Treatment for Crypto-assets" (March 13, 2020). https://cba.ca/Assets/CBA/Documents/Files/Article%20Category/PDF/sub-20200313-designing-a-prudential-treatment-for-crypto-assets-en.pdf

[30] Bank for International Settlements, G7 Working Group on Stablecoins, Investigating the impact of global stablecoins", October 2019

[31] Ibid.

[32] Governor, Federal Reserve, Lael Brainard (October 16, 2019) - Digital currencies, Stablecoins and the Evolving Payments Landscape. https://www.federalreserve.gov/newsevents/speech/brainard20191016a.htm

[33] Deputy Governor Financial Stability of the Bank of England, Sir Jon Cunliffe (February 28th, 2020) – It's time to talk about money. https://www.bankofengland.co.uk/-/media/boe/files/speech/2020/its-time-to-talk-about-money-speech-by-jon-cunliffe.pdf?la=en&hash=A39E014DBBA2C5E88D1B8339E61598CBD62BCA3E

[34] Bank for International Settlements, G7 Working Group on Stablecoins, Investigating the impact of global stablecoins", October 2019

[35] Governor, Federal Reserve, Lael Brainard (October 16, 2019) - Digital currencies, Stablecoins and the Evolving Payments Landscape. https://www.federalreserve.gov/newsevents/speech/brainard20191016a.htm

[36] Deputy Governor of the Bank of Canada Timothy Lane (February 25, 2020) – Money and Payments in the Digital Age https://www.bankofcanada.ca/2020/02/money-payments-digital-age/