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Regulatory and Policy Gaps and Inconsistencies of Digital Currencies

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Preface

This white paper explores potential regulatory and policy gaps and inconsistencies that stem from existing approaches towards retail CBDCs and stablecoins. It provides an initial framework for policy-makers to address these gaps and inconsistencies.

Designing a coherent, global and innovation-friendly regulatory and policy framework for digital currencies is a challenging task. Three key challenges face policy-makers:

- Conflict between rapidly changing technology and a reactive rule-making process
- Lack of coordination among rule-making bodies in financial services
- Lack of consensus on what digital currencies are designed to accomplish, especially relative to pre-existing alternatives

Many digital currencies claim to be created for the purpose of improving existing payments systems and promoting financial inclusion, by reducing transactional friction through improving settlement processes or bypassing intermediaries altogether. A fragmented regulatory environment with gaps, inconsistencies and redundancies at domestic or international levels could easily frustrate such purposes and stagnate innovation.

The term “digital currencies” used throughout this white paper refers mainly to retail CBDCs¹ and stablecoins. This paper chooses to focus on retail CBDCs and stablecoins, as their potential to gain wide-scale adoption may create significant risks for individuals as well as to financial and monetary systems. The aim of this white

paper is to help foster a regulatory and policy environment conducive to the development and adoption of digital currencies, while the laws and regulations on digital currencies are still being shaped. The ecosystem will continue to see the emergence of new CBDCs, stablecoins and cryptocurrencies, so regulators should anticipate a complex and diverse landscape.

This white paper reflects insights generated through discussions and collaborations with senior public and private sector leaders. It builds on the work of various international standard-setting organizations. It identifies current trends of regulatory and policy developments shown by selected countries and key standard-setters. And it highlights how existing approaches to innovation may create regulatory and policy gaps and inconsistencies for digital currencies at both domestic and global levels.

In addition, this paper explores the interplay between retail CBDCs and stablecoins and probes how laws and regulations should approach these digital currencies, if policy-makers decide to make stablecoins available to consumers alongside retail CBDCs. It examines the pros and cons of some existing rule-making approaches and proposes an initial framework for policy-makers and regulators to consider, with the aim of helping to drive global and domestic coordination and interoperability in an environment with fast-moving technological innovation.

1

Potential regulatory and policy gaps and inconsistencies

This chapter examines potential regulatory gaps and inconsistencies in the following four areas:

1. Gaps between innovations and existing laws and regulations
2. Gaps and inconsistencies created by the overlapping jurisdictions of different regulatory agencies
3. Gaps and inconsistencies created by lack of global coordination
4. Gaps and inconsistencies due to the similarities between retail CBDCs and stablecoins

1.1 Gaps between innovations and existing laws and regulations

Existing laws and regulations may not be equipped to provide a legal basis for the existence of digital currencies or address their risks

As the technology underlying digital currency continues to evolve and becomes more sophisticated, regulators and policy-makers are facing three key challenges that result in potential gaps and inconsistencies.

First, existing laws and regulations may not be equipped to provide a legal basis for the existence of digital currencies. Gaps can occur when the conventional definitions of terms such as “property”, “funds”, “assets” or “money” do not include or cannot be interpreted to include digital currencies. There may be gaps in granting legal grounds to support the creation of digital currencies and the financial services built upon digital currencies. For example, while many central banks are conducting research on CBDCs, with a few already in pilot phases, 104 central banks do not have the authority to issue CBDCs under their central banking laws, according to a survey by the International Monetary Fund (IMF).² With respect to stablecoins, there is little or no guidance in most jurisdictions as to who has the authority to issue stablecoins or – if the issuance requires a special licence or authorization – what are the mechanisms for supervising stablecoins and the required regulatory oversights.

Second, there may be regulatory and policy gaps in addressing risks unique to digital currencies, particularly those risks associated with the decentralization characteristics of digital currencies. The mandate of various regulatory bodies may need to evolve as the emergence of digital currencies requires them

to handle new responsibilities and play new roles. Consumer protection is an area where regulators face significant challenges – for a more detailed discussion, refer to the white paper in this series entitled [Digital Currency Consumer Protection Risk Mapping](#).

Another area where regulators face significant challenges is financial crime. As digital currencies can enable users to conduct transactions at high speed without an intermediary, there is a risk that criminals can exchange funds across borders much faster and more easily than if they used cash. Furthermore, a payer and a payee in a permissionless environment can easily create numerous anonymous, unhosted (self-custody) wallets³ and multiple small-amount transactions to circumvent regulations that focus on monitoring large transactions. The Financial Action Task Force (FATF) amended its standards in 2019 to require regulation of digital currencies and since then it has issued various guidelines about combatting financial crimes involving digital currencies.⁴

The FATF’s anti-money laundering and combatting the financing of terrorism (AML/CFT) measures generally place obligations on intermediaries between individuals and the financial system, while transactions between unhosted wallets are not subject to AML/CFT measures. The FATF addresses this by recommending that countries adopt measures such as:

- Creating a broad definition of “Virtual Asset Service Providers” (VASPs) to



bring everyone who has some level of control over the ecosystem under the jurisdiction of AML/CFT measures

- Requiring VASPs to obtain or keep a record of transactions and verify the information of payers and payees
- Placing additional controls or supervision over VASPs that allow transactions to unhosted wallets, including not permitting VASPs to transact with unhosted wallets

Such compliance measures may reduce the efficiency of transactions as, from technical standpoint, it may not be easy to determine if a counterparty is a VASP or an unhosted wallet.⁵ As most countries in the world have not yet adopted FATF recommendations, it remains to be seen whether these recommendations will be effective in combatting financial crimes.

Third, there may be gaps due to policy-makers' inability to keep pace with the technology and implement and enforce the required regulations quickly enough. Policy-makers often find themselves playing catch-up when it comes to regulating innovations under the existing legislative process. The inability of policy-makers to keep up with technology could prevent the benefits of innovation from materializing and expose users to risks. Meanwhile, the few jurisdictions that have drafted regulations for VASPs are struggling to enforce them. Some jurisdictions have not been able to complete the licensing process even within two or three years of VASPs submitting applications. Where the process of licensing VASPs has been completed within a reasonable time period, regulators may not have been able to effectively restrict unlicensed exchanges from operating, thus disincentivizing VASPs that spend time and effort complying with regulatory frameworks.

1.2 Gaps and inconsistencies created by the overlapping jurisdictions of different regulatory agencies

While stablecoins have, to date, mostly been used to facilitate the trading of cryptocurrencies with high volatilities, the industry expects stablecoins to be used as medium of exchange for general commerce. The ability to have a stable value is important for stablecoins to meet such industry expectation. However, the design required to stabilize the value of stablecoins is complex.

Stablecoins may be backed by fiat currencies, short-term bonds and other securities or assets (including cryptocurrency). Certain stablecoins share similar characteristics with other traditional financial instruments, such as certificates of deposit, money market funds, securities or derivatives. From the perspectives of securities and commodity

commissions, stablecoins may be considered as securities, commodities or derivatives, depending not only on how a stablecoin is structured but also on the nature of the assets that underpin the reserve.⁶ Stablecoins may also be classified based on their systemic importance.

A survey conducted by the Financial Stability Board (FSB) on regulatory and supervisory approaches to stablecoins shows that while the complex design of stablecoins invites attention from multiple regulatory agencies, few countries have issued guidance on the classification and application of existing regulations or supervision to stablecoins.⁷ For an overview of different classification criteria for cryptoassets, see Figure 1.

FIGURE 1 | Selected examples of cryptoasset classification criteria⁸

Functionality criteria			
Categories	Payment/exchange	Investment	Utility
Description	Intended to be used as means of payment or exchange	Provides rights and obligations similar to traditional financial instruments like shares, debt instruments or units in a collective investment scheme.	Grants holders access to a current or prospective service/product in one or multiple company's network or ecosystem
Subcategories or labels*	payment token, e-money token, exchange token	security token	utility token
		hybrid token	

Stabilization mechanism criteria		
Categories	Asset-linked	Algorithm-based
Description	Stablecoin that purports to maintain a stable value by referencing physical or financial assets or cryptoassets (FSB (2020)). Can be further differentiated into currency-based, financial instrument-based, commodity-based and cryptoasset-based stablecoins.	Stablecoin that purports to maintain a stable value via protocols that provide for the increase or decrease of the supply of the stablecoins in response to changes in demand (FSB (2020)).
Subcategories or labels**	asset-referenced token, stable token	algorithmic stablecoins

Systemic importance criteria		
Categories	Global	Non-global
Description	Stablecoins with a potential reach and adoption across multiple jurisdictions and the potential to achieve substantial volume (FSB (2020))	Stablecoins without a potential reach and adoption across multiple jurisdictions and the potential to achieve substantial volume
Subcategories or labels**	significant asset-referenced token, significant e-money token, systemic stable token	asset-referenced token, e-money token, stable token

Notes: * Examples of subcategories or labels used by some surveyed authorities.

** Examples of subcategories or labels proposed in regulations currently in consultation processes in some surveyed jurisdictions.

Source: Bank of International Settlements

The overlapping jurisdictions of different regulatory agencies create difficulties in classifying and regulating stablecoins both at domestic and international levels. Conflicting views may create regulatory and policy loopholes that could be exploited by the very individuals that regulators intend to forestall. While there may be case law that provides guidance on how and when stablecoins should be treated as “securities” in some jurisdictions,⁹ regulators often request that market participants consult with them on a case-by-case basis given the novelty of these technologies.¹⁰ Such case-by-case consultations could potentially increase the compliance costs for companies that are willing to comply with rules for issuing stablecoins (or increase potential fines for those intending to avoid or ignore compliance). This approach could also create complexity that may lead to gaps and inconsistencies within the governing agency.

Furthermore, this lack of regulatory certainty may deter new participants from entering the space and thus stifle innovation in a specific jurisdiction. The challenge of how to classify various digital currencies is the first question posed in the UK government’s public consultation paper of January 2021, [UK regulatory approach to cryptoassets and stablecoins: Consultation and call for evidence](#). The paper’s authors, HM Treasury, acknowledge the importance of clarifying the taxonomy of stablecoins and creating regulatory certainty for consumers and businesses. They also emphasize the importance of any classification to be “future-proof and sufficiently flexible”.¹¹ A clear classification of stablecoins should be the first step in achieving regulatory clarity on the governance of stablecoins.

1.3 Gaps and inconsistencies created by lack of global coordination

“ Without regulatory consistency, a multi-jurisdictional stablecoin might need to comply with securities regulations in country A, derivatives regulations in country B, banking regulations in country C and perhaps no regulations at all in country D

A diversity of ways to classify stablecoins in one country not only complicates the legal framework for stablecoins within that jurisdiction, it also creates an additional layer of translation and confusion between countries and regions. While many international standard-setting organizations have been updating their guidance regarding stablecoins, there remains a lack of global coordination on stablecoin classification. Without organizations driving regulatory consistency over classification at a global level, it is not hard to imagine that an issuer of a multi-jurisdictional stablecoin might need to comply with securities regulations in country A, derivatives regulations in country B, banking regulations in country C and perhaps no regulations at all in country D.

Without coordination among countries, such potential gaps could allow for regulatory arbitrage. Issuers may choose to issue coins in jurisdictions with favourable classifications or where stablecoins are not governed by any regulations. Well-established financial institutions with global footprints may strive for broader compliance, while delaying product offerings that could provide better services to their consumers. A stablecoin-issuer exploiting such gaps may reach systemic status before any legal protection can be put in place. They could then be used to conduct money laundering, cyber-crime and other illicit activity.

Standard-setting organizations, such as the FSB, and regulators are increasingly considering how to regulate stablecoins that may present a systemic risk to financial stability. Part of the challenge with such an endeavour is that there is no agreed definition among jurisdictions of what constitutes a “systemic risk”. This lack of a globally accepted definition or a means to measure such risk can lead to a substantial amount of regulatory discretion, which may result in gaps and inconsistencies.¹²

While retail CBDCs may face a clearer regulatory landscape domestically, the possibility of using retail CBDCs for cross-border payments raises many questions. How will a retail CBDC be treated beyond its border? Do the receiving country’s laws and regulations allow for retail CBDCs? Do the existing definitions of money or e-money capture retail CBDCs? How are the financial products that are built on retail CBDCs classified? Will existing foreign exchange control rules apply? These are just some of the possible questions. Regulatory gaps can easily widen when the answers to such questions are not carefully evaluated, and inconsistencies will emerge if those questions are not dealt with in a consistent manner across various agencies.¹³



1.4 Gaps and inconsistencies due to the similarities between retail CBDCs and stablecoins

In the past few years, several analyses have examined the policy and regulatory implications of CBDCs and stablecoins, many of which have narrowly focused on one or the other. While stablecoins do not have the same legal status as CBDCs and the value of a stablecoin depends on its underlying stabilization mechanism and governance, stablecoins are similar to retail CBDCs in many ways:

- Both retail CBDCs and stablecoins can act as a medium of exchange and store of value, notwithstanding potentially higher risks associated with stablecoins due to their backing and reserve management
- Both retail CBDCs and stablecoins can be based on distributed ledger infrastructure
- Both can pose systemic risks (such as cybersecurity and financial stability risks) if widely adopted

The similarities between retail CBDCs and stablecoins have been recognized by several policy-makers. For example in the UK, HM Treasury has pointed out in its discussion paper that the category of tokens with stable value would also include “tokenized forms of central bank money”.¹⁴ If regulators choose to treat retail CBDCs outside the existing legal framework for digital currencies or cryptoassets, it is important that they close any regulatory gaps to cover risks associated with

using retail CBDCs that are similar to stablecoins. For this reason, the FATF has emphasized in its updated guidance that even though CBDCs are not considered a “virtual asset”, the same FATF standards applicable to fiat currencies would also apply to CBDCs.¹⁵

If central banks and policy-makers choose a future where retail CBDCs and stablecoins co-exist, it will be important to ensure similar regulations apply to both types of digital currency in areas where they create similar risks, while ensuring stronger regulations and protections where the risks are higher. Unequal treatment for the same risk may drive individuals and corporations away from adopting the type of digital currency that comes with the least regulatory protection. It could also create confusion from a user’s perspective, particularly in cases where stablecoins and retail CBDCs co-exist.

Furthermore, there may be regulatory or policy gaps with respect to digital currencies in areas not covered by central banks’ ordinary functions. One notable example is that of cyber risks, such as the lack of cyber resilience of a significant digital currency or a weakness or “bug” common to a number of digital currencies. When a cyber incident progresses from the operational level of an institution to impacting the entire financial system, citizens’ trust of the system is affected, which could then turn what is simply an operational incident into a full-blown systemic financial crisis.¹⁶



Principles for regulation

When it comes to solutions to fill gaps and address inconsistencies, the first question is: Should we create a new regulatory regime and agency to govern digital currencies, or should we build upon existing laws and regulations? However, given how diverse the legal systems are across different jurisdictions and given the varying sophistication of laws and regulations on financial products and services, there cannot be a one-size-fits-all approach.

In common law countries, where the law could be derived from custom and judicial precedent, we may rely on the evolution of case law to take care of gaps and inconsistencies as digital currencies evolve, although this could be a lengthy process. In civil law countries that rely more on statutes, a comprehensive guideline may be a better approach. At the same time, it is difficult, if not impossible, to fashion a comprehensive guideline that is future-proof. In markets with sophisticated financial

services products and well-designed legislation, the solution may be to update existing laws and regulations to capture the complexity of digital currencies. In markets where the development of financial services and respective laws and regulations are still at an early stage, it may make more sense to build a completely new regulatory framework to address digital currencies.

While the regulatory approach to digital currencies is still being shaped, some principles in law-making may be helpful to regulators who are trying to bridge the gap between innovation and regulation. This chapter presents some principles for regulation in two broad areas:

- Inter-agency and international coordination
- Risk-based approach to regulate digital currencies

2.1 Inter-agency and international coordination

Today, it is not uncommon for crypto-exchanges and fintech firms to conduct duplicative compliance processes. While each agency's set of requirements may have its own merits, the layering of such processes adds complexity that can prove untenably burdensome. With stablecoins, local regulations can have global ramifications. It is well understood that the private sector, policy-makers and regulators share the same goal: empowering strong compliance programmes and supporting innovation, while ensuring consumer protections and financial inclusion. However, when it comes to CBDCs, even though there is some cross-border collaboration, most central banks are principally focused on the domestic use cases for CBDCs in their current phase of research. Due to the complex design and inherent cross-border uses for digital currencies, regulators must work together, both between different domestic agencies and across jurisdictions.

In many jurisdictions, there are already frameworks that allow inter-agency coordination and which could be used to identify potential regulatory and policy gaps and inconsistencies in taking a coordinated approach towards digital currencies. For example, among financial regulators in Kenya, there is a Joint Financial Services Forum to work on issues

across different agencies.¹⁷ As part of this forum, there is now a common sandbox approach led by the Capital Markets Authority with representation from all financial sector regulators. Applications to the sandbox are comprehensively assessed by all financial sector regulators together. The Hong Kong Special Administrative Region adopts a multi-agency approach under which all relevant financial services agencies would need to work with one another even when a fintech firm only contacts one of the agencies.¹⁸ The Bank of England and HM Treasury have formed a joint CBDC Taskforce to coordinate the exploration of CBDC.¹⁹

In terms of international coordination, countries can look to major international standard-setting bodies for guidance in drafting their respective laws, regulations and guidelines for digital currencies. These bodies include, but are not limited to:

- **Bank for International Settlements (BIS):** an international financial institution owned by 63 central banks, which aims to promote global monetary and financial stability through the coordination of global central banks and their monetary policy efforts. BIS has published leading papers on CBDCs and stablecoins.

“ The private sector, policy-makers and regulators share the same goal: empowering strong compliance programmes and supporting innovation, while ensuring consumer protections and financial inclusion

- **Basel Committee on Banking Supervision (BCBS):** the primary global standard-setter for the prudential regulation of banks, which provides a forum for regular cooperation on banking supervisory matters. Its 45 members comprise central banks and bank supervisors from 28 jurisdictions. It has published various papers on cryptoassets.
- **European Commission (EC):** the EU's politically independent executive arm, the EC is responsible for drawing up proposals for new European legislation and implements the decisions of the European Parliament and the Council of the European Union. In September 2020, the EC published a proposal for an EU regulation on markets in cryptoassets (MiCA).²⁰
- **Financial Action Task Force (FATF):** an inter-governmental organization overseeing the combatting of money laundering and terrorist finance, whose recommendations and standards (particularly on VASPs) have been followed by various domestic AML/CFT regulators.
- **Financial Stability Board (FSB):** an international body that monitors and makes policy recommendations about the global financial system and whose publications provide clarity on the issues around financial stability, CBDCs and stablecoins.
- **International Organization of Securities Commissions (IOSCO):** an international body that brings together the world's securities regulators and sets global standards for the securities sector. IOSCO works extensively with the G20 and the FSB on the global regulatory reform agenda. It has issued detailed assessments on how IOSCO principles and standards could apply to global stablecoin initiatives.

Such organizations have been active in their publication of, for example, risk-based guidance reports, standards recommendations, regional reports and collaborative pilot reports. These publications have helped in the scoping of macro issues and in assisting domestic policy-makers prioritize regulatory efforts around cross-jurisdictional issues.

In addition to activities led by the international standard-setting organizations, below are some examples of other types of international coordination which could be leveraged to drive regulatory interoperability and standards for retail CBDCs and stablecoins:

- **Global Financial Innovation Network (GFIN):** a network formed by over 60 financial regulatory organizations, with a goal of supporting financial innovation at a global scale.²¹ In 2019 and 2020, GFIN piloted a single-entry, cross-border testing application for firms wishing to test their innovative financial services across more than one jurisdiction.
- **Bilateral fintech agreements:** some financial regulatory agencies, such as the Commodity Futures Trading Commission (CFTC) in the US,²² have entered into fintech cooperation agreements with counterparties from other countries, to create a framework for coordination, referrals and information-sharing. The Monetary Authority of Singapore is a champion of this approach and had entered into fintech cooperation agreements with 35 counterparties, as of 31 March 2021.
- **Bilateral or multilateral trade agreements:** trade agreements also play an important role in shaping standards and promoting interoperability. In the Australia-Singapore Digital Economy Agreement, which was signed at the end of 2020, both governments have committed to promote the adoption of internationally accepted standards for online payment systems.²³



- **United Nations Commission on International Trade Law (UNCITRAL) model law approach:** UNCITRAL is the core legal body of the UN system focusing on the modernization and harmonization of rules on international business. UNCITRAL has published the model laws and regulatory guidelines on international credit transfers, electronic commerce, electronic signatures and

electronic transferable records, which allow more uniformity across different jurisdictions.

For a more detailed discussion on global coordination, including public-private collaboration, refer to the white paper in this series entitled [The Role of Public Sector and Public-Private Cooperation in the Era of Digital Currency Growth](#).

2.2 Risk-based approach to regulate digital currencies

Ex-ante and ex-post²⁴ are two approaches that regulators often take when it comes to regulating the latest technologies. The risk of the ex-ante approach is that it may create unnecessary compliance burdens during the infancy of an innovation, which stymie the innovation. Ex-ante can also lead to poorly designed regulations due to a lack of sufficient knowledge of the innovation. In addition, an ex-ante approach may create an unlevel playing field between new entrants and established players who are more knowledgeable or who have more resources to satisfy compliance requirements. Meanwhile, the risk of the ex-post approach is that it may tolerate risky behaviours that could create systemic risk, or harm people or society.

One potential solution to address the dilemma created by the choice between an ex-ante or ex-post approach is to adopt a risk-based approach to law-making. One type of risk-based approach is to have sandbox or innovation labs, which allow innovation to be tested in a limited and controlled environment. Based on a recent study by the World Bank, sandboxes allow for an open dialogue between innovators and regulators and give regulators opportunities to collect empirical data to support policy development, particularly in areas where regulatory requirements are missing or unclear.²⁵

Depending on how sandbox and innovation lab-related regulations are drafted, they may also create an unlevel playing field, tilted in favour of providing more incentives for start-ups. It is important to offer the same opportunities to both start-ups and existing players when it comes to innovation. From the sandbox applicant's perspective, sandboxes may not provide sufficient protection for true innovators to base their entire business models on, given that the legal environment may still be unpredictable outside the sandbox. In addition, there are limitations to an innovation lab or sandbox, such as the following:

- Given that sandbox activities are conducted within a controlled environment, the potential systemic risk of digital currencies may not surface

- There is no cross-border sandbox to test the cross-border nature of stablecoins
- Regulators may still need to come up with a comprehensive legal framework when stablecoin ecosystem participants exit the sandbox or innovation lab

Another risk-based approach is to create different levels of regulation based on the potential risks to which a digital currency may expose consumers and society. This approach is exemplified in the EU's proposed MiCA regulation, which will apply to any cryptoasset that is not already subject to EU regulation. MiCA acknowledges that the cryptoasset market today is still small and does not present significant risks to financial stability. The proposed MiCA regulation separates stablecoins into two types:

- “asset-referenced tokens”, which maintain a stable value by referring to the value of several fiat currencies, commodities or other cryptoassets or a combination of such assets
- “e-money tokens”, which are used as a means of exchange and maintain stability by referring to the value of one fiat currency

Given that the issuance and circulation of “asset-referenced tokens” present potentially higher risks, such tokens are subject to more stringent approval processes and compliance requirements. Furthermore, MiCA proposes a bespoke framework to regulate “significant” stablecoin-issuers and it will force them to comply with stronger capital, investor and supervisory requirements laid down by the European Banking Authority (EBA). These include rules and further requirements on governance, conflicts of interest, reserve assets, custody, investment and the disclosure document. However, MiCA creates a more light-touch approach for small and medium-sized issuers and providers that do not present systemic risk.

“ One risk-based approach is to create different levels of regulation based on the potential risks to which a digital currency may expose consumers and society – as exemplified in the EU's proposed MiCA regulation

3

An initial framework to identify, prevent and address gaps and inconsistencies

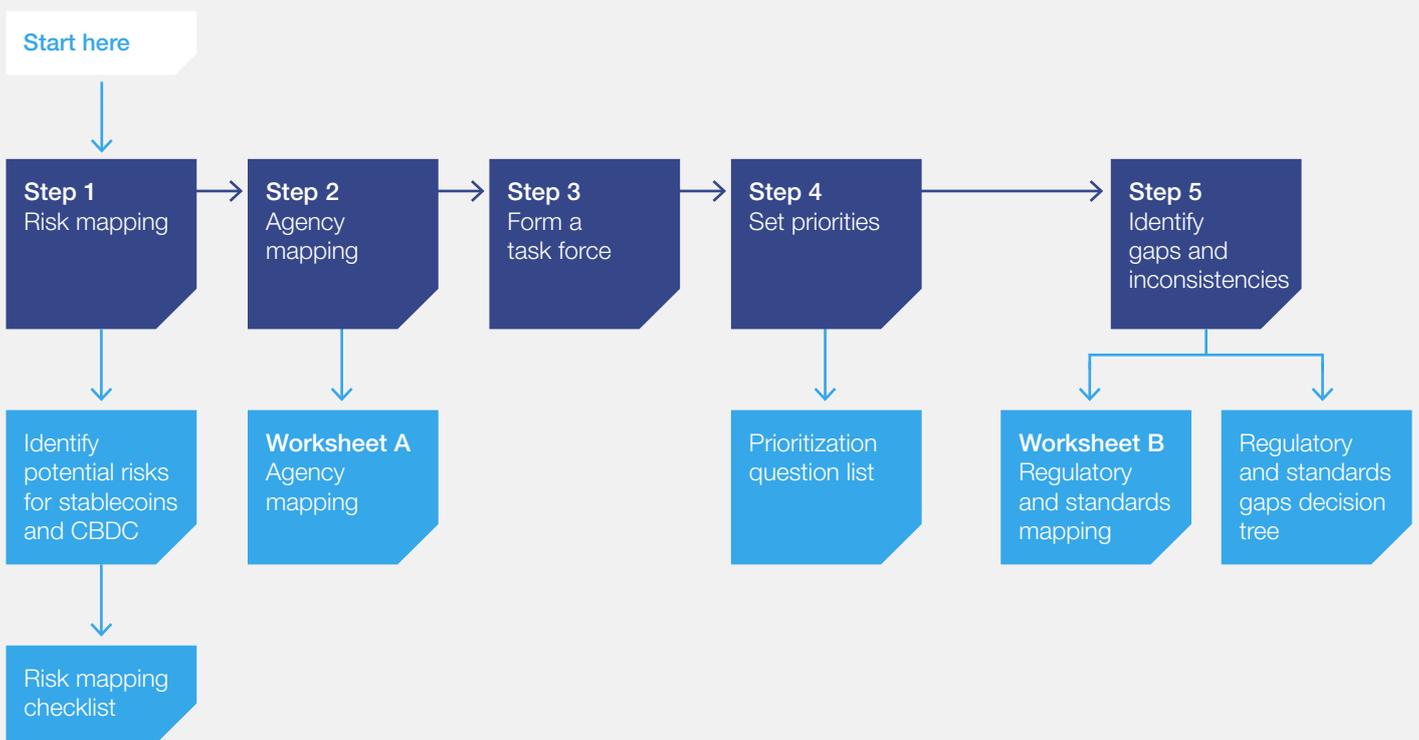
The policy development and regulation of digital currencies need a systemic approach to avoid creating confusion for the payments ecosystem. If policy-makers envisage a system where stablecoins and retail CBDCs co-exist with other payment methods, they will need to identify areas where existing regulations are sufficient and where new regulations are needed for these digital currencies.

As a starting point, this chapter proposes a five-step framework for identifying, preventing and addressing regulatory gaps and inconsistencies, which policy-makers and regulators could consider adopting. The five steps, presented in graphic form in Figure 2, are as follows:

1. Risk mapping
2. Agency mapping
3. Form a taskforce
4. Set priorities
5. Identify gaps and inconsistencies

While this framework may not be able to address all the issues we have identified in this white paper, and while we acknowledge that this framework offers an over-simplified view of a complex law-making process, we nonetheless hope it provides a way forward in addressing regulatory gaps and inconsistencies in relation to emerging digital currencies.

FIGURE 2 Five-step framework for identifying, preventing and addressing regulatory gaps and inconsistencies



Step 1 | Risk mapping exercise

Map out key risks to society posed by various users of the digital currency in question throughout its lifecycle, using the risk mapping checklist set out below (see Figure 3).

FIGURE 3 Risk mapping checklist

	Issuer	Exchange	Custody/wallet provider	Digital currency holder	Other relevant players?
Issuance	<ul style="list-style-type: none"> - Capitalization risk - Liquidity risk - Counterparty risk - Run risk - Customer fund risk - Cybersecurity risk - AML/CFT - Fraud - Foreign exchange control - Monetary policy/ financial stability risk - Concentration risk - Tax evasion risk - Technical risk (e.g. insufficient smart contract audits) - Data privacy 	Not applicable	Not applicable	Not applicable	
Circulation (distribution/exchange)	<ul style="list-style-type: none"> - AML/CFT - Cybersecurity risk - Fraud - Foreign exchange control - Monetary policy/ financial stability risk - Concentration risk - Tax evasion risk - Data privacy 	<ul style="list-style-type: none"> - Liquidity risk - Cybersecurity risk - Customer fund risk - AML/CFT - Fraud - Foreign exchange control - Monetary policy/ financial stability risk - Concentration risk - Tax evasion risk - Technical risk (e.g. insufficient smart contract audits) - Data privacy 	<ul style="list-style-type: none"> - Cybersecurity risk - Capitalization risk - Customer fund risk - Run risk - AML/CFT - Fraud - Foreign exchange control - Monetary policy/ financial stability risk - Concentration risk - Tax evasion risk - Data privacy 	<ul style="list-style-type: none"> - AML/CFT - Fraud - Foreign exchange control - Monetary policy/ financial stability risk - Tax evasion risk - Cybersecurity risk - Data privacy 	
Storage	Not applicable	Not applicable	<ul style="list-style-type: none"> - Cybersecurity risk - Capitalization - Counterparty - Customer fund risk - Fraud - Monetary policy/ financial stability risk - Concentration risk - Data privacy 	<ul style="list-style-type: none"> - Non-custodial wallet: property risk (theft, damage etc.) - Cybersecurity risk - Monetary policy/ financial stability risk - Data privacy 	
Governance	<ul style="list-style-type: none"> - Redemption risk - Market risk - Fraud - Monetary policy/ financial stability risk - Risk of minority holders' interests being infringed by majority holders 	Not applicable	Not applicable	Not applicable	

Step 2 Agency mapping

Identify all relevant agencies and standard-setting bodies that would impact the development of retail CBDCs and stablecoins, and address the risks identified in the risk mapping checklist, using Agency mapping: Worksheet A below (see Figure 4).

Worksheet A allows policy-makers and regulators to generate an overview of:

- The jurisdiction each government agency has over retail CBDCs and stablecoins and its respective subject matter expertise
- The jurisdiction each government agency has over the activities of different players in the ecosystem
- The coverage of the subject matter by various standard-setting organizations

Ask the following questions as you work through Worksheet A:

- What activities does this agency cover?
- What risks does this agency set out to prevent?
- What are the laws, regulations or standards published by this agency that would impact this type of digital currency or player?

FIGURE 4 Agency mapping: Worksheet A (with examples)

	Domestic retail CBDCs	Foreign retail CBDCs*	Domestic stablecoins	Foreign stablecoins**	Issuer	Exchange	Wallet	Users	Other relevant players?
Central bank	Issuance Circulation Financial stability AML/CFT	Foreign exchange AML/CFT	Issuance Circulation AML/CFT	Issuance Circulation AML/CFT	AML/CFT	AML/CFT	AML/CFT	AML/CFT	N/A
Finance ministry	Issuance	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Banking/financial services regulators	Circulation	Circulation	Issuance Circulation	Issuance Circulation	Licensing Auditing	Licensing Auditing	Licensing	N/A	N/A
Securities commission	N/A	N/A	Issuance Circulation	Issuance Circulation	Licensing Auditing	Licensing Auditing	N/A	Market stability Insider trading	N/A
Commodity/derivatives	N/A	N/A	Issuance Circulation	Issuance Circulation	Licensing Auditing	Licensing Auditing	N/A	N/A	N/A
Consumer protection bureau	Consumer education Fraud	Consumer education Fraud	Consumer education Fraud	Consumer education Fraud	Consumer education Fraud	Consumer education Fraud	Consumer education Fraud	Consumer education Fraud	N/A
Tax authorities	Income tax calculation and collection	Income tax calculation and collection	Income tax or capital gain tax calculation and collection	Income tax or capital gain tax calculation and collection	Tax reporting	Tax reporting	N/A	Tax reporting Income tax or capital gain tax calculation and collection	N/A
Other relevant agencies	Data privacy	Data privacy	Data privacy	Data privacy	Data privacy	Data privacy	Data privacy	Data privacy	N/A
Standards organizations (e.g. FATF)	AML/CFT	AML/CFT	AML/CFT	AML/CFT	AML/CFT	AML/CFT	AML/CFT	AML/CFT	N/A

*Refers to retail CBDCs issued by foreign country

**Refers to stablecoins issued by entities incorporated outside of the jurisdiction

Step 3 | Organize taskforce

After completing Worksheet A, form a taskforce or similar body composed of the senior leaders of agencies and standard-setting bodies identified in Worksheet A for each subject matter or risk area, including representatives from international standard-setting organizations.

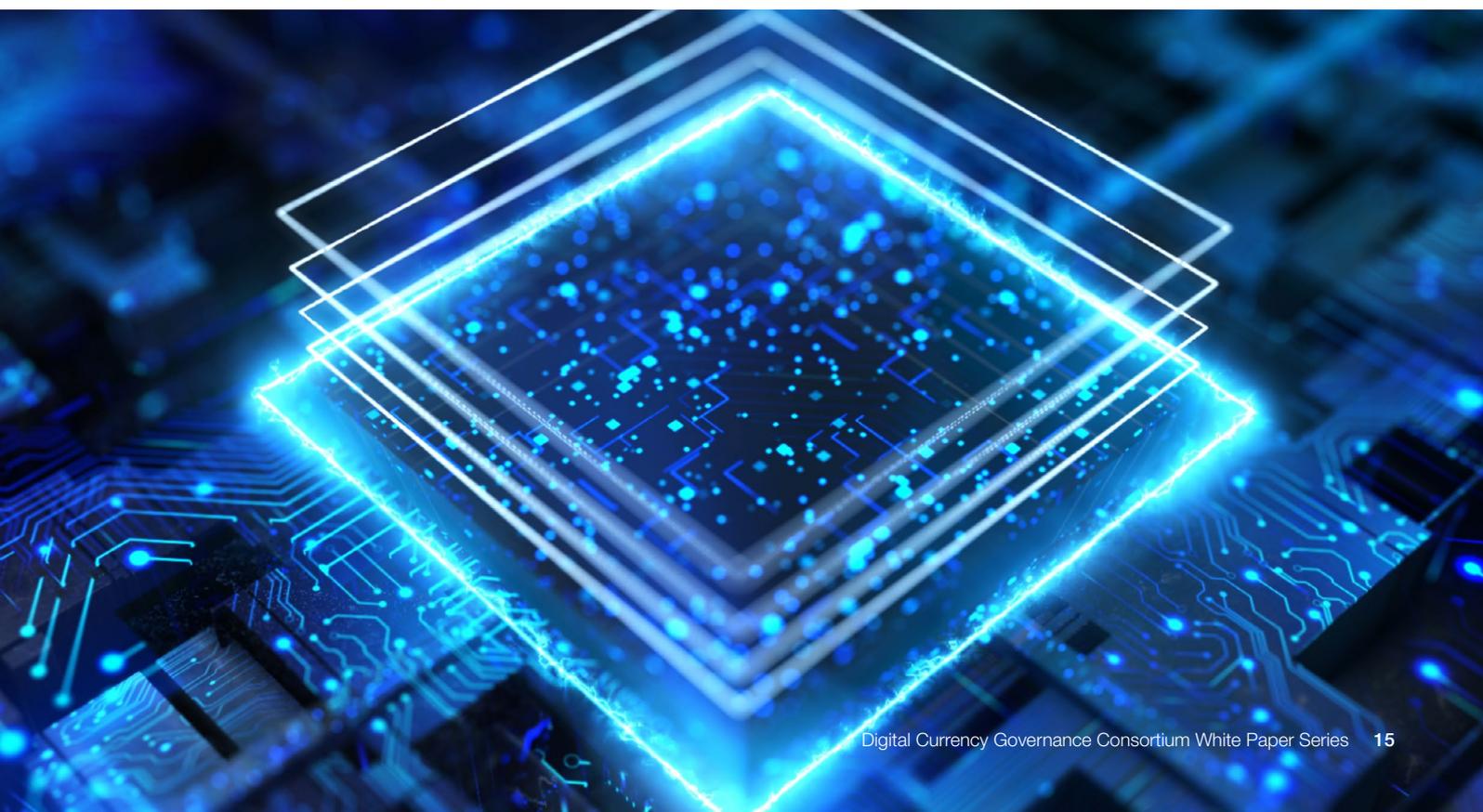
Step 4 | Set priorities

The taskforce can analyse the current state of development of retail CBDCs and stablecoins, and the digital currency regulatory environment, by asking the following questions:

- Where do we stand in terms of the development of our own CBDC?
- Where do our major trading partners stand in terms of the development of their CBDCs?
 - Is there a cross-border element in the design?
 - When will the cross-border function be in force?
 - How will this cross-border function impact our capital inflow and out-flow?
- Where do we stand in terms of the development of stablecoins?
 - What are the prevalent use-cases of stablecoins in our jurisdiction?

- What is the critical mass of adoption that we are looking for before we put in place regulations or impose requirements, such as fully backing reserves at the central bank or in bankruptcy-remote accounts at regulated commercial banks?
- What are the risks that we need to start regulating now?
- Are there any stablecoins offered by corporations incorporated or located outside of our country that are gaining traction in our country?
- In respect of both CBDCs and stablecoins, what are the pros and cons of starting to regulate now, compared to a watch-and-wait approach?

Based on the answers to these questions, the taskforce can prioritize required actions. For example, the taskforce may decide simply to continue monitoring the development of CBDCs and stablecoins in their jurisdiction, or they might decide it is time to start drafting relevant laws and regulations.



Step 5 Identify gaps and inconsistencies

For step five, the taskforce should aim to identify potential inconsistencies, overlaps and gaps in existing laws and regulations when they are applied to retail CBDCs and stablecoins. The taskforce can then make decisions on how to address these concerns using the tools below:

- Regulatory and standards mapping: Worksheet B (see Figure 5)
- Regulatory and standards mapping: Decision tree (see Figure 6)

While monitoring the development of digital currencies, the taskforce may leverage Worksheet B below to evaluate whether existing laws and regulations have covered all potential risks of retail CBDCs and stablecoins.

FIGURE 5 Regulatory and standards mapping: Worksheet B (with examples)

	Domestic retail CBDCs	Foreign retail CBDCs	Domestic stablecoins	Foreign stablecoins
Definition	Yes, defined in Article X, Section X, Clause X of central banking law	Not yet defined. Most appropriate agency to come up with the definition: central bank	Yes, defined in Article X, Section X, Clause X of banking law AND Article X, Section X, Clause X of securities law Definitions may create inconsistencies Action needed: banking regulatory body and securities commission to meet and reconcile the differences	
Authority to issue				
Licensing requirements for issuer				
Authority to circulate				
Licensing requirements for circulation				
Limitation to hold (quantity, qualification, if any)				

FIGURE 5 | Regulatory and standards mapping: Worksheet B (continued)

	Domestic retail CBDCs	Foreign retail CBDCs	Domestic stablecoins	Foreign stablecoins
Requirements on potential types of assets that could constitute reserve				
Reserve reporting requirements				
Reserve auditing requirements				
Authority to audit				
Licensing requirements for audit				
Reserve disclosure requirements				
Privacy requirements				
AML/CFT				
Consumer protection requirements				
Competition/Antitrust				
Taxation				
Others				

Regulatory and standards mapping: Decision tree

Policy-makers and regulators can ask themselves the following questions in the order below as they work through Worksheet B:

Q. Has this subject matter/issue/risk area been covered by any existing laws and regulations?

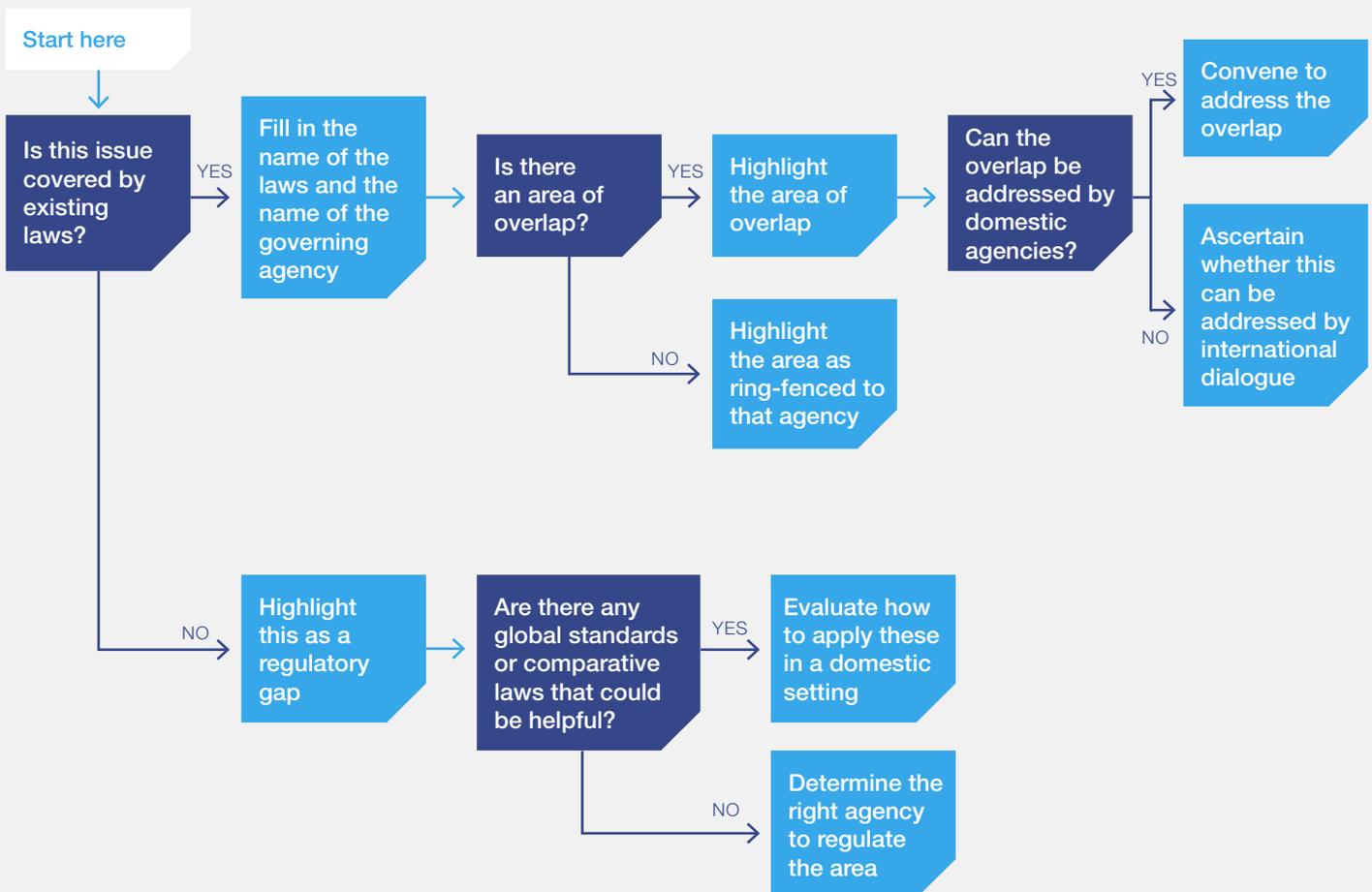
If yes – the risk is covered by existing regulations:

- Fill in the name of the laws and regulations, the relevant provision(s) and the name of the governing agency. Highlight the area as green.
- Is there an area of overlap? Highlight the area of overlap as yellow.
 - If yes, can this overlap be addressed by a domestic agency?
 - If yes, call for inter-agency discussions over the overlapping areas.
 - If no, engage relevant international agencies or those of other countries.
 - If no, mark as issue/risk ring-fenced by the relevant agency.

If no – the risk is not covered by existing regulations:

- Highlight the area of the gap as red.
- Are there any global standards or rules adopted by other countries that could be helpful?
 - If yes, evaluate to what extent the global standards/rules adopted by other countries could help.
 - If no, can this gap be addressed by a domestic agency? Should it be?
 - If yes, identify the relevant agency whose jurisdiction can cover such gap. If no existing agency covers the gap, then discuss if there is a need to create a new agency or assign it to an existing agency.
 - If no, mark as issue/risk ring-fenced by the relevant agency.
 - If no, engage relevant international agencies or those of other countries.

FIGURE 6 Regulatory and standards mapping: Decision tree



Conclusion

While both the private and public sectors are actively exploring the full potential of digital currencies, there are regulatory and policy gaps and inconsistencies. Most of these gaps and inconsistencies are a result of the mismatch between the speed of innovation and the pace of regulatory and policy development. To prepare for a future with digital currencies, policy-makers need to consider carefully how they should structure their laws and regulations, as well as how to create both domestic and cross-jurisdictional coordination structures.

A coordinated effort between various agencies within a country and among different countries and organizations could help bridge the gaps and address the inconsistencies, particularly in the areas of combatting financial crimes, privacy, consumer protection and dispute resolutions, where these are most critical. A risk-based regulatory approach can provide more flexibility to

accommodate future innovation. While complete future-proofing is impossible in such an ever-evolving landscape for digital currency, premature regulations could stifle productive innovation and limit societal benefit. They could also promote regulatory havens and arbitrage for less-compliant participants, which would have an impact on the benefits these financial innovations may offer.

Given the impacts that regulatory gaps and inconsistencies could have on emerging digital currencies, this paper supports a measured, coordinated, multi-jurisdictional and inclusive approach to the creation and implementation of policy, laws and regulations, which is carefully calibrated to limit the creation of gaps and inconsistencies from the outset. Such an approach would lay the foundation for sustainable innovation, align regulatory frameworks and foster greater levels of international collaboration.

Endnotes

1. If central banks choose to issue retail CBDCs, it is most likely that they will follow a two-tier system to allow the private sector to participate in the distribution and maintenance of accounts for retail CBDCs, while allowing holders of such retail CBDCs to have direct claims against issuing central banks. See: World Economic Forum, *Central Bank Digital Currency Policy-Maker Toolkit*, January 2020, http://www3.weforum.org/docs/WEF_CBDC_Policymaker_Toolkit.pdf.
2. Bossu, Wouter et al., *Legal Aspects of Central Bank Digital Currency: Central Bank and Monetary Law Considerations*, International Monetary Fund, November 2020, <https://www.imf.org/en/Publications/WP/Issues/2020/11/20/Legal-Aspects-of-Central-Bank-Digital-Currency-Central-Bank-and-Monetary-Law-Considerations-49827>.
3. An unhosted wallet is a device to store, send and receive digital currencies, which is not hosted by a third-party financial system. Given an unhosted wallet is completely controlled by its owner, it can be very difficult or sometimes impossible to determine who is accessing or in control of the use of cryptocurrencies in an unhosted wallet. Unhosted wallets allow for anonymity and concealment of illicit financial activity.
4. Financial Action Task Force (FATF), *Updated Guidance for a Risk-Based Approach for Virtual Assets and Virtual Asset Service Providers*, 2021, <https://www.fatf-gafi.org/publications/fatfrecommendations/documents/guidance-rba-virtual-assets-2021.html>.
5. In addition, if information exchange is not yet built into a network or is not automated, human interaction would be required to obtain the necessary information, which will slow down the speed of transactions using digital currencies and eventually increase costs.
6. The Board of the International Organization of Securities Commissions (IOSCO), *Global Stablecoin Initiatives: Public Report*, March 2020, <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD650.pdf>.
7. Financial Stability Board, *Addressing the regulatory, supervisory and oversight challenges raised by “global stablecoin” arrangements: Consultative document*, 14 April 2020, <https://www.fsb.org/wp-content/uploads/P140420-1.pdf>.
8. Coelho, Rodrigo et al., *FSI Insights on policy implementation No 31: Supervising Cryptoassets for anti-money laundering*, Financial Stability Institute of the Bank for International Settlements, April 2021, <https://www.bis.org/fsi/publ/insights31.pdf>.
9. Landy, Douglas, “Stabilized: OCC settles debate about regulatory characterization of bank-issued stablecoins”, *White & Case LLP*, 21 January 2021, <https://www.whitecase.com/publications/alert/stabilized-occ-settles-debate-about-regulatory-characterization-bank-issued>.
10. “SEC FinHub Staff Statement on OCC Interpretation”, *U.S. Securities and Exchange Commission*, 21 September 2020, <https://www.sec.gov/news/public-statement/sec-finhub-statement-occ-interpretation>.
11. HM Treasury, *UK regulatory approach to cryptoassets and stablecoins: Consultation and call for evidence*, January 2021, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/950206/HM_Treasury_Cryptoasset_and_Stablecoin_consultation.pdf.
12. Hansen, Lars Peter, *Challenges in Identifying and Measuring Systemic Risk*, National Bureau of Economic Research, November 2012, https://www.nber.org/system/files/working_papers/w18505/w18505.pdf.
13. The Financial Action Task Force (FATF) has made it clear that CBDCs are not “virtual assets” for FATF purposes, and activities using CBDCs would be “covered as if they were using cash or electronic payments”. See: The Financial Action Task Force, *FATF Report to the G20 Finance Ministers and Central Bank Governors on So-called Stablecoins*, June 2020, <https://www.fatf-gafi.org/media/fatf/documents/recommendations/Virtual-Assets-FATF-Report-G20-So-Called-Stablecoins.pdf>.
14. HM Treasury, *UK regulatory approach to cryptoassets and stablecoins: Consultation and call for evidence*, January 2021, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/950206/HM_Treasury_Cryptoasset_and_Stablecoin_consultation.pdf.
15. Financial Action Task Force (FATF), *Updated Guidance for a Risk-Based Approach for Virtual Assets and Virtual Asset Service Providers*, 2021, <https://www.fatf-gafi.org/publications/fatfrecommendations/documents/guidance-rba-virtual-assets-2021.html>.
16. European Systemic Risk Board, *Systemic cyber risk*, February 2020, https://www.esrb.europa.eu/pub/pdf/reports/esrb_report200219_systemiccyberrisk~101a09685e.en.pdf.
17. Taylor, Charles et al., *Institutional Arrangements for Fintech Regulation and Supervision*, International Monetary Fund, December 2019, <https://www.imf.org/en/Publications/fintech-notes/Issues/2020/01/09/Institutional-Arrangements-for-Fintech-Regulation-and-Supervision-48809>.
18. Taylor, Charles et al., *Institutional Arrangements for Fintech Regulation and Supervision*, International Monetary Fund, December 2019, <https://www.imf.org/en/Publications/fintech-notes/Issues/2020/01/09/Institutional-Arrangements-for-Fintech-Regulation-and-Supervision-48809>.
19. “Bank of England statement on Central Bank Digital Currency”, *Bank of England*, 19 April 2021, <https://www.bankofengland.co.uk/news/2021/april/bank-of-england-statement-on-central-bank-digital-currency>.

20. European Commission, *Proposal for a Regulation of the European Parliament and of the Council on Markets in Crypto-assets, and amending Directive (EU) 2019/1937*, 24 September 2020, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020PC0593>.
21. "About GFIN" [Homepage], *Global Financial Innovation Network*, 2021, <https://www.thegfin.com/about>.
22. "Fintech Cooperation Arrangements", *Commodity Futures Trading Commission*, 2021, <https://www.cftc.gov/LabCFTC/FinTechCoopArrangements/index.htm>.
23. "Australia-Singapore Digital Economy Agreement", *Australian Government, Department of Foreign Affairs and Trade*, 8 December 2020, <https://www.dfat.gov.au/trade/services-and-digital-trade/australia-and-singapore-digital-economy-agreement>.
24. "Ex-ante" can be defined as "based on forecasts rather than actual results". "Ex-post" can be defined as "based on actual results rather than forecasts". Source: Oxford Languages, September 2021.
25. Appaya, Sharmista et al., *Global Experiences from Regulatory Sandboxes*, International Bank for Reconstruction and Development, The World Bank Group, 2020, <http://documents1.worldbank.org/curated/en/912001605241080935/pdf/Global-Experiences-from-Regulatory-Sandboxes.pdf>.



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