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Newsletter

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Current CBDC Considerations and Future Prospects in Major International Organizations and in Major Developed Countries
(U.S., Europe, Japan, and U.K.)

(CBDC = Central Bank Digital Currency)

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Executive Summary

1: Current Considerations on Digital Money (including CBDC) by International Organizations

- This chapter introduces the current Considerations by major international organizations on digital money (including CBDC).
- Although they (IMF, BIS, G7/G20/T20, FSB, and FATF) have different purposes of establishment and different areas and matters to focus on, the overall direction of digital money is as follows.

> ✓ Use of crypto assets as a means of payment are "✕" (high price volatility, insufficient AML/CFT regulation)
>
> ✓ Stablecoins (including global stablecoins) are "△" (caution is required and must be regulated by national authorities)
>
> ✓ CBDCs are "○" (but subject to international cooperation and standardization)

2: Current CBDC Considerations in Major Developed Countries

- This chapter introduces CBDC research and Considerations in major countries (U.S., Europe, Japan, and U.K.) and its future plans (to the extent known).
- The developed countries with well-developed domestic payment systems agree that CDBC is not a "substitute for cash and deposits" but a "supplement or complement" to them. They also continue to study CDBC as "one of the options" for upgrading existing payment systems.
- No major developed country has decided to issue CBDC at this time. The timing (not the "issuance date") of the proposed issuance is set for the second half of the 2020s at the earliest.
- The 4 countries differ in their attitude toward research and consideration (Europe is proactive. In the U.S. and the U.K., the governments and central banks have been active, but now Congress and private settlement providers have raised objections. Japan is still examining the progress).

1. Current Considerations on Digital Money (including CBDC) by International Organizations

2. Current CBDC Considerations in Major Developed Countries

【Appendix / Reference】

1 - (1) Current Considerations by Major International Organizations

- The stance of major international organizations on digital money (CBDC, stable coins, crypto assets) is as follows. Overall, the use of crypto assets as a means of payment are "X" (high price volatility, insufficient AML/CFT regulation), stablecoin (including GSC) is "△" (caution is required, and must be regulated by national authorities), and CBDC is "○" (but subject to international cooperation and standardization).
- In addition, a "Time-series movement of the status of crypto assets/stable coins/CBDC by major international organizations" and various "FATF documents (centered on money laundering regulations)" are included in the Appendix at the end of this report.

Stance on "Digital Money" by Major International Organizations

	IMF (International Monetary Fund)	BIS (Bank for International Settlements)	BIS + 7 Central Banks	G7 / G20 / T20	FSB (Financial Stability Board)	FATF (Financial Action Task Force on Money Laundering)
Name of International Organization and its role	IMF contributes to (1) promote international trade, (2) increase the high level of employment and national income, and (3) achieve exchange rate stability, by conducting surveillance of the exchange rate policies of member countries and taking action where the balance of payments has deteriorated significantly.	BIS is the clearing house between central banks. It also supports central bank policies and international cooperation with the aim of stabilizing currency values and the financial system. The "Committee on Payment and Market Infrastructures (CPMI)" is a subordinate organization of the BIS.	CBDC-related joint research group consisting of the BIS and central banks from seven developed countries/regions*. *Bank of Canada, BOE, ECB, Swedish Riksbank, Swiss National Bank, Bank of Japan, FED.	G7: Government forum of the U.S., U.K., France, Germany, Japan, Italy and Canada. G20: Government forum of a group of 20 countries/regions consisting of "G7" + EU + Russia + 11 emerging countries. T20 (Think 20): Engagement group where think tanks from each country discuss various policy issues and make policy recommendations to the G20.	An organization that coordinates national financial regulation and supervision, identifies and addresses financial vulnerabilities, and promotes the development and implementation of other financial sector policies with the goal of stabilizing the international financial system. It was established in April 2009 in the wake of the Lehman Brothers collapse. Its secretariat is located within the BIS (Basel headquarters).	An international organization that sets standards for measures to prevent money laundering and terrorist financing.
Basic Policy on Recent "Digital Money /Digital Currency"	While digital money has "great potential and merit," its impact on "financial stability" and the "international monetary system" in general is significant. So, cooperation and coordination among countries is important.	"Public interest" is important for digital money.	As the group established for the purpose of "information sharing" and "standardization" of CBDC R&D, there is no reference to privately issued digital money. No central bank has decided to issue CBDC at this time. It is positioned as "one of the options.	Since it is a "government forum", the focus is on the central bank "keeping their money relevant".	Focus is on "maintaining global financial stability".	Strengthening of the "AML/CFT regime" for digital money through a series of FATF standards (Recommendation #15: Prevention of misuse of new technologies) .
Areas mentioned (As a means of payment) – **CBDC**	○ ? Careful system design is necessary to avoid undesirable situations such as "outflow of funds from banks" and "leakage of privacy". (But it may be better than the money described below)	○ Retail CBDC can ensure "open settlement platforms" and a "competitive level playing field conducive to innovation".		○ ? Should be considered before the money described below (despite there are many issues)		? Like other forms of legal tender issued by central banks, it is subject to FATF standards (but explicitly excluded from the definition of "crypto assets" under FATF standards).
Private issue – **Stable Coin (include "Global Stable Coin")**	△ Insufficient preparation and disclosure of some stable coins. (Need to introduce global standards as soon as possible and strengthen their monitoring capacity.)	△ Although "underlying assets" such as legal tender can reduce price volatility, they cannot be "Game Changers".		△ Stable coin should be subject to high regulatory standards.	△ At this point, the holding and trading is mainly for "speculative purposes," but there are concerns that it may cause broader financial stability problems in the future through a decline in confidence in the financial system, etc. (Appropriate regulation and supervision across sectors and jurisdictions are needed.)	? Stable coins and GSCs are now subject to FATF standards and precautionary measures are required for intermediaries. Further regulatory reinforcement is needed to mitigate potential risks.
Private issue – **Crypto Asset**	△ Insufficient operational and financial soundness of crypto asset providers. Insufficient investor protection. (Implementation of global standards and strengthening of monitoring capabilities are urgently needed.)	× It is a "Speculative Assets".			× Use of crypto assets for payments is limited (lack of price stability). In addition, there are significant data gaps that prevent authorities from assessing risks.	? Crypto assets and their service providers (VASPs) need to be regulated under FATF standards, but their AML/CFT regimes in most jurisdictions are still in the early stages.
Reference Page	p8 -13	p14 - 19	p28 - 30	p31 - 34	p35 - 42	【Appendix #2】p62 - 70

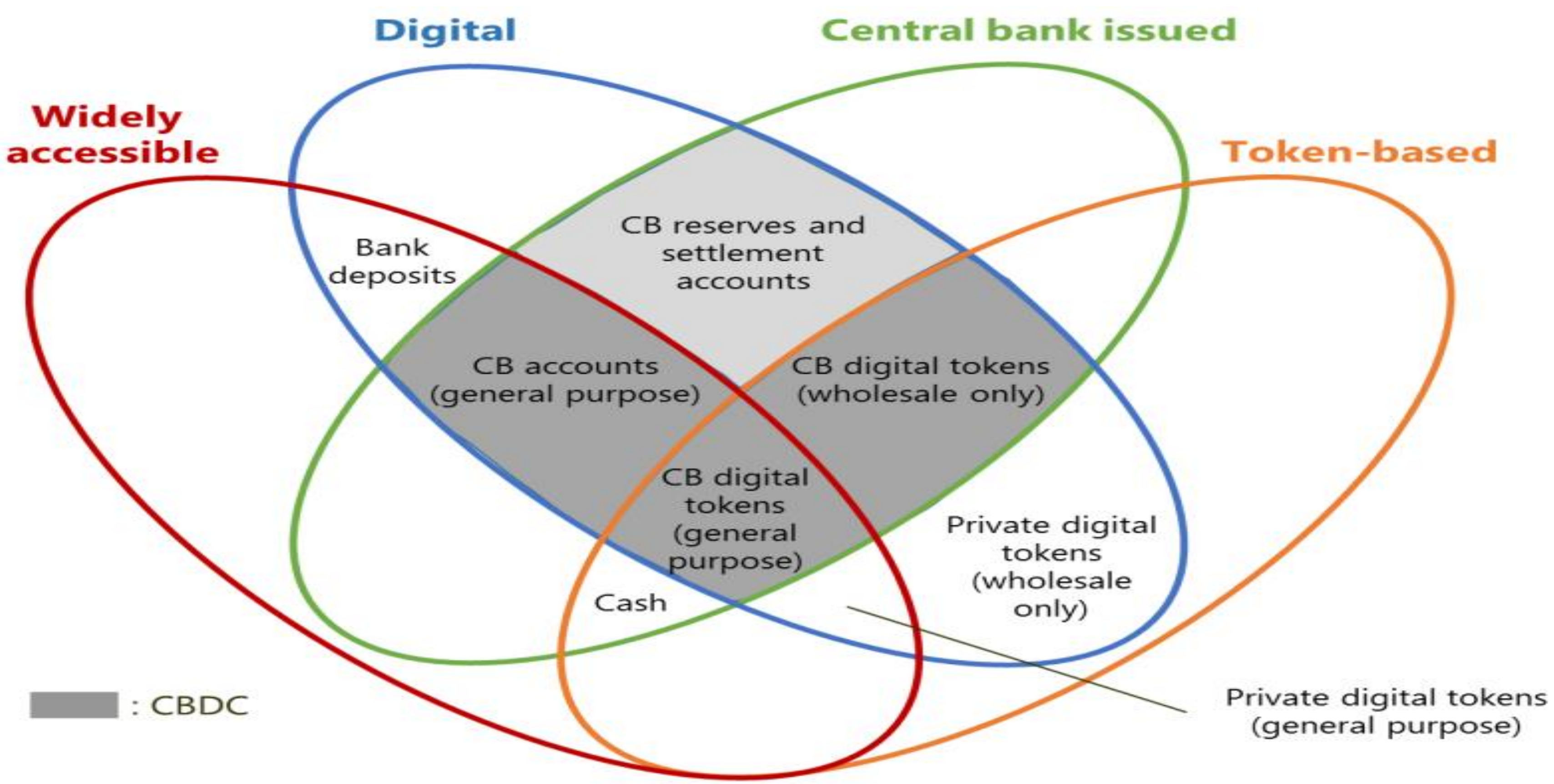
(Source) Prepared by the Institute for International Monetary Affairs from various sources

1 - (2) CBDC among digital currencies (1/2)

Mar 2018 / BIS (CPMI)
"Central bank digital currencies".

- Although there is no clear definition of the term "digital currency," it generally refers to "something that is converted into digital data (rather than paper money or coins) and can be used as currency" or "something that expresses value in digital data".
- Since the mid-2010s, the term "digital money" has been used to refer to new forms of money, rather than existing forms of "digital value" (e.g., electronic money, prepaid cards, bank accounts, etc.). The term "digital currency" has become a generic term for currency.
- The BIS (CPMI) report of March 2018 classifies CBDC as shown in the figure below.

The money flower: a taxonomy of money



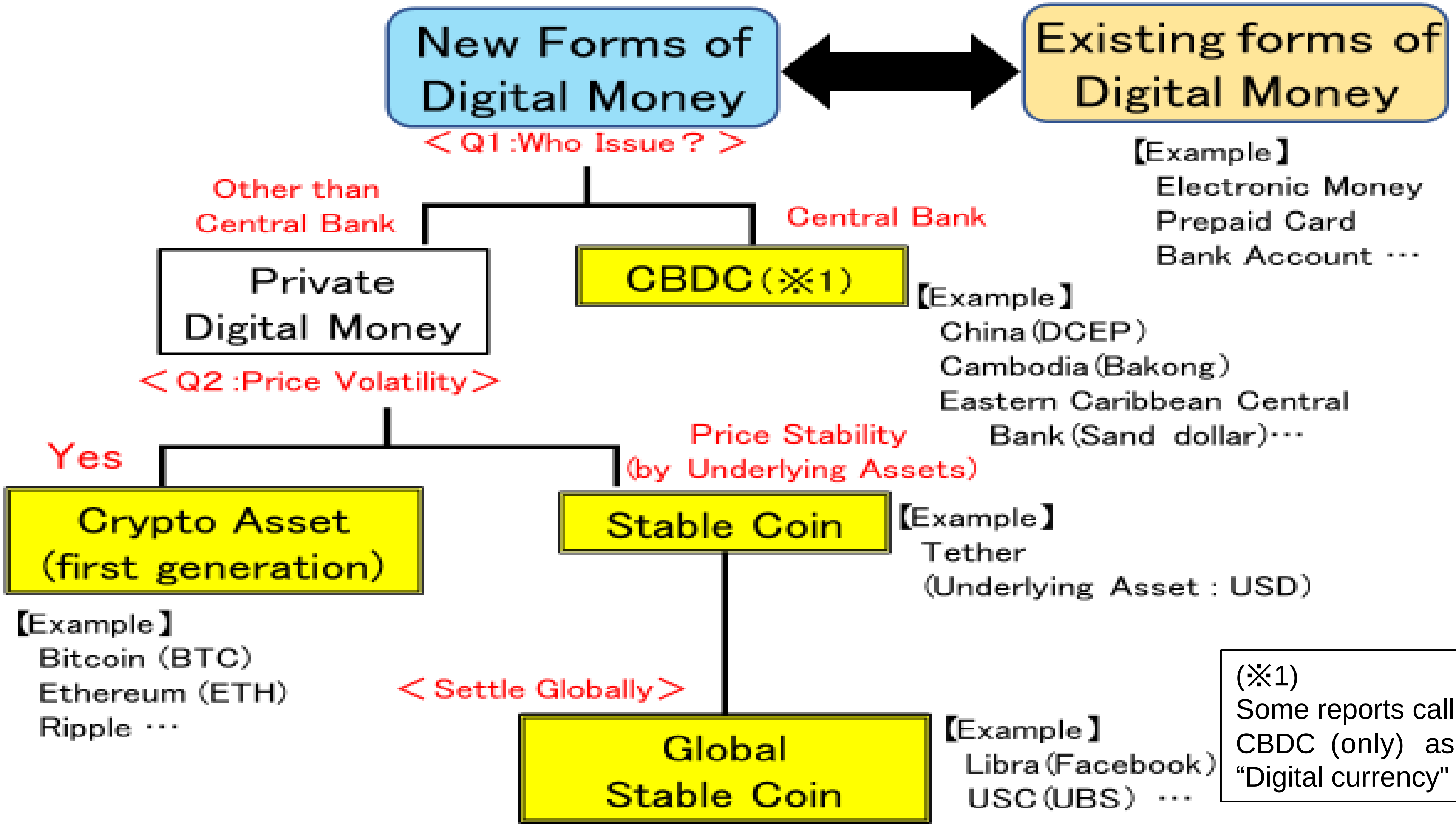
(Source) BIS (CPMI)「Central bank digital currencies」(Mar 2018) (Graph1)

1 - (2) CBDC among digital currencies (2/2)

Oct 2020 / IMF
"DIGITAL MONEY ACROSS BORDERS
: MACRO-FINANCIAL IMPLICATIONS".

- Also, the IMF report of October 2020 classifies "digital currencies (including CBDC)" as shown in the figure below.

Classification of "Digital Currency"



(※1)
Some reports call CBDC (only) as "Digital currency"

(Source) Refer to IMF「Digital Money Across Borders: Macro-Financial Implications」(Oct 2020) (Figure 2)

1 - (3) Trends in IMF (1/6)

Oct 2020
"DIGITAL MONEY ACROSS BORDERS
: MACRO-FINANCIAL IMPLICATIONS".

- On October 2020, IMF released the report "DIGITAL MONEY ACROSS BORDERS: MACRO-FINANCIAL IMPLICATIONS". The purpose of preparing this report was to make an initial attempt to address the complex interactions between incentives to adopt and use CBDCs and GSCs (Global Stable Coins) across borders and their macro-financial effects.
- While the paper presents an initial analysis of the policy implications of such macro-financial effects, it refrains from making policy recommendations.

Extract of "DIGITAL MONEY ACROSS BORDERS: MACRO-FINANCIAL IMPLICATIONS"

- Digitalization of money and payments has the potential to shock the organization of the international financial system. Recent breakthroughs and cost reductions in digital technology such as cloud computing and the proliferation of mobile devices have dramatically increased the accessibility by individuals and firms to payment instruments previously used only by financial institutions (e.g., real time transfer of balances maintained at central banks). As a result, the present international monetary landscape, which is based on connecting banking systems spread around the globe in different locations and time zones, could be reconfigured.
- CBDCs and GSCs could make cross-border payments less costly and and make it easier for households and small firms to have access to financial services. At the same time, foreign CBDCs and GSCs could make it harder for country authorities to run independent monetary policies and control domestic financial conditions.
- For central banks that decide to issue CBDCs, doing so might in some cases help their currencies to internationalize or achieve reserve currency status, but could complicate the conduct of their own monetary policy as foreign use of their CBDCs could increase capital flow volatility.
- Overall, the paper finds that CBDCs do not qualitatively change the economic forces that lead to the international use of currencies, as they are only digital forms of existing fiat currencies but quantitatively, they could reinforce the incentives behind currency substitution and currency internationalization.

(Source) IMF「Digital Money Across Borders: Macro-Financial Implications」(Oct 2020)

1 - (3) Trends in IMF (2/6)

Oct 2020 (continued)
“DIGITAL MONEY ACROSS BORDERS
: MACRO-FINANCIAL IMPLICATIONS".

- The “4 hypothetical scenarios" for the adoption of CBDC and GSC presented in the IMF report are as follows.

An Overview of the “4 Hypothetical Scenarios.”

	Scenario	Summary
1	Niche use for cross-boarder payments	・A CBDC or a GSC is used as the preferred means for small value transactions, such as remittances across borders, due to its low cost and efficiency or due to legal and regulatory limits that are placed on the purpose and amounts that can be transferred internationally. ・The CBDC or GSC would not be held for very long—in most cases for "the duration of the transaction", and in some cases as "a store of value". ・The CBDC or GSC would be exchanged for local currency to make purchases domestically, and the CBDC or GSC would not supplant the local unit of account.
2	Greater currency substitution in some countries	・A foreign CBDC or a GSC pegged to an existing fiat currency induces greater use of foreign currency in countries with high and volatile inflation and unstable exchange rates. ・In those countries, use of the CBDC or GSC is intensive and replaces the domestic currency significantly: as "a store of value (in and of itself, or to access assets in that currency)", as "a means of payment" for many but not all transactions (including some regional cross-border trade), and as a "common (though not necessarily ubiquitous) unit of account". ・In addition, even in countries with credible policy frameworks, the adoption of GSCs could be significant as they could facilitate transactions associated with certain e-commerce or social networking platforms.
3	Global adoption	・A single GSC becomes commonly adopted in many countries and replaces the local currency as "store of value", "means of payment", and "unit of account"; and is also widely used for international transactions. ・This scenario may arise if a Big Tech platform of global scale decides to launch a GSC to its large customer base which spans across the globe.(Network externality / Network effect)
4	Global adopion with multipolarity	・Instead of one single GSC dominantly used for international transactions and payments, and for domestic use worldwide (as described in Scenario 3), a few CBDCs and GSCs are used internationally for both domestic and international transactions. ・In the case of CBDCs, there may be "currency blocs” within which countries choose one common CBDC for both international and domestic transactions.

(Source) IMF「Digital Money Across Borders: Macro-Financial Implications」(Oct 2020)

1 - (3) Trends in IMF (3/6)

Oct 2020 (continued)
“DIGITAL MONEY ACROSS BORDERS
: MACRO-FINANCIAL IMPLICATIONS".

- The 4 hypothetical scenarios are then compared in terms of “A: Monetary policy Transmission“, ”B: Financial Stability“, "C: Capital Flows," and "D: International Reserves.
However, note that no comparison is made as to which scenario is superior/inferior overall.

A Comparison of “4 Hypothetical Scenarios" from “4 Different Perspectives."

		【Scenario #1】 Niche use for cross-boarder payments	【Scenario #2】 Greater curency substitution in some countries	【Scenario #3】 Global adoption	【Scenario #4】 Global adoption with multipolarity
A	Monetary Policy Transmission	×（Minor Impact） Unless it promotes currency substitution, it will not have a significant impact on the effectiveness of monetary policy.	△（Case by Case） Whether "the country's business cycle and the currency issuer's business cycle coincide" will determine whether the country can weather the shock.	◎（Potential for significant impact） Countries adopting the GSC are exposed to the risk of being influenced by the financial stance of private companies. ("financial stance of the country" < "financial stance of the private company") In other words, there may be a fundamental problem with entrusting the center of a country's macro-financial/macro-economic strategy to a profit-oriented private company.	△（Case by Case） Multipolarity depends on whether it is characterized by "1) country currency blocs" or "2) currency competition within each country". Case 1): Monetary policy effects will be diluted for countries whose business cycles differ from those of the average member of the currency bloc. Case 2): While multipolarity may not add to the benefits of diversification, it may complicate exchange rate stabilization methods.
B	Financial Stability	×（Minor Impact） The impact on the vulnerability of financial institutions' balance sheets is small.	◎（Potential for significant impact） Further pressure could be placed on funding and solvency risks.	◎（Potential for significant impact） It could pose systemic risks due to interconnectedness.	○（Impact） Currency competition could create incentives for GSC service providers to take on higher risk in order to gain market share in the short term.
C	Capital Flows	×（Minor Impact） Likely to have no significant impact on capital flows.	◎（Potential for significant impact） May affect the volatility of capital flows.	○（Impact） Adopting a common GSC would largely eliminate exchange rate risk and re-denomination risk. This could lead to the integration of international capital markets. (However, the experience of the Eurozone financial and capital markets union suggests that full integration of financial systems and markets requires more than the introduction of a single currency.)	◎（Potential for significant impact） May increase opportunities for international risk sharing. (The emergence of multiple CBDCs and GSCs, while reducing various frictions, may increase complexity. This could lead to fragmentation of established markets and formal mechanisms to provide liquidity backstops, hindering the ability to deal with capital outflows and thereby amplifying volatility).
D	International Reserves	×（Minor Impact） Likely to have limited impact on reserves since the unit of account for trade and financial transactions will not be substituted.	○（Impact） Leads to a precautionary motive by the central bank to increase foreign exchange reserves.	◎（Potential for significant impact） The inherent tension between the goals and strategies of "private issuers to maximize profits" and "global financial and monetary stability" could be exposed. It is also unclear whether GSC issuers will offer swaps to serve as "lender of last resort" in the event that some risk materializes.	○（Impact） Reserve holdings could be more diversified. (would allow for further diversification of foreign reserves)

Note: "◎, ○, △, and ×" are based on the IMF's evaluation of the IMF report.

1 - (3) Trends in IMF (4/6)

July 2021
「THE RISE OF DIGITAL MONEY – A STRATEGIC PLAN TO CONTINUE DELIVERING ON THE IMF'S MANDATE」

- IMF Staff Report on July 2021 said that rapid technological innovation, private sector innovation, growing end-user needs and expectations, and the willingness of national authorities to improve their services have focused attention on new forms of digital money, making payments with it "easier," "faster," "cheaper," and "more accessible" across borders and praised the possibility that this could bring "great benefits" to all people.
- However, there are new challenges that policymakers need to address to maximize the benefits and address the risks and issues associated with its implementation. The report argues that the bank must contribute to the "strengthening, broadening, and deepening of activities related to money".
- The report then identifies "policy challenges for digital money" (table below) and the IMF's role and activities in response (left table on next page).

Main Policy Challenges Related to the Introduction of Digital Money

A. Implications for the International Monetary and Financial System		
Monetary and Financial Issues	#21	Digital money could lead to much more widespread currency substitution, especially in countries with high inflation and volatile exchange rates.
	#22	Currency substitution into a global private digital currency would subject countries to additional risks. In particular, the monetary policy stance of a private firm is likely to come with a different optimization
	#28	With higher gross capital flows and potentially less effective capital flow management measures, countries may find it harder to manage their financial conditions and exchange rates, or freely choose their exchange rate regime. Global financial conditions could be transmitted more readily around the world, complicating policy tradeoffs.
Payments and Interoperability	#32	Digital money could be leveraged to foster integration. Interoperability of digital forms of money is desirable for a multilateral IMS.
	#29	On the other hand, the risk of fragmentation and of a global digital divide is stark. Regional settlement arrangements could proliferate, driven by countries' desire for autonomous and direct settlement. Such arrangements could also be instruments of geopolitical interests and forces, to avoid or impose bilateral sanctions.
	#31	Moreover, privacy implications—discussed more narrowly above—also loom on geopolitics.
	#33	Strong international cooperation and a clear global vision are needed. The IMS stands at a crossroads between integration and fragmentation.
Reserve Currency Configurations and Backstops	#36	The digitalization of money may accelerate changes to the configuration of reserve currencies (but may not change it dramatically over a short period).
	#37	Regional backstops may thus be reinforced and become more credible, in addition to global backstops as provided by the IMF. Cooperation between these various backstops may become increasingly important.
B. Narrow Implications for Domestic Economic and Financial Stability		
Consumer Protection and Privacy	#41 #42	Risks stem from potential losses on reserve assets, illiquidity of those assets, or their seizure by other creditors in case of the issuer's bankruptcy. As a result, runs from stablecoins could materialize. Financial stability could suffer if reserve assets had to be liquidated on a large scale, or withdrawn from large banks.
	#45	Questions emerge on appropriate safety nets and crisis management measures on stablecoins.
	#47	Countries struggle to find an appropriate balance between protecting privacy, enticing private sector participation, and ensuring financial integrity in line with the Financial Action Task Force (FATF) standards.
Safety and Soundness	#48	A clear legal framework Is critical to safety and soundness. However, digital money raises some fundamental questions about current legal frameworks.
	#51 #52	Another important aspect of safety and soundness is operational resilience, including cyber-security. New digital forms of money must be robust to cyber attacks, outages, technical glitches, new digital fraud risks, and faulty algorithms.
Financial Integrity	#53 #54	Without proper regulation, digital money can become a virtual safe-haven for criminals to conduct illicit financial transactions. However, many countries lack the capacity to implement and monitor effectively AML/CFT measures in the digital world.

C. Broad Implications for Domestic Economic and Financial Stability		
Innovation and P-P Partnerships	#56 #58	The demarcation and collaboration between the public and private sectors in the provision of digital money still needs to be analyzed and tested.The question arises as to whether and how to extend this dual public-private system into the digital era.
	#59	Even without considering so far, central banks will have to determine how to involve the private sector in the provision of CBDC.
Credit Provision and Banking	#60	Widespread adoption of digital money would likely alter the role of banks through at least four channels, with implications for credit provision, market structure, and financial stability.
	#62	Credit intermediation could shift away from banks and toward non-deposit taking institutions and markets.
	#63	The shift in value-added from traditional commercial banks to Big Techs, to the extent these are more efficient at capturing and analyzing users' data, is likely.
	#64	The rise of decentralized finance (DeFi) and their impact on financial stability will need to be carefully reviewed (though they still nascent).
	#66	Substantial CBDC or stablecoin demand might absorb a large share of government bonds. This could affect the yield curve, and in the case of stablecoins whose reserves cannot be lent out, the availability of collateral.
Competition and Market Contestability	#67 #68	New digital forms of money will likely have an impact on market structure in payments. Country authorities are increasingly asking how to minimize these network effects and maintain market contestability.
Financial Inclusion	#69	Financial inclusion has greatly benefited from the introduction of digital money. In many cases, the staggering rise in mobile money adoption benefited from the contemporaneous development of digital identities.
	#70	The Covid-19 pandemic highlighted the benefits of digital financial services but also the risk of leaving some behind. Countries must therefore invest in the broader infrastructure and design, and distribute services so they reach everyone.
	#71	Inclusion is not just the result of lower servicing costs, but also of lower risks and higher revenues from accessing and analyzing user data. Countries are thus increasingly aware of the need to regulate data use, storage, ownership, transfer, and localization, though doing so is not straightforward.
Climate Sustainability	#72	Concerns emerge about the carbon footprint and energy needs of cryptoassets. If not well managed, the proliferation of digital money may come with hidden environmental costs.
	#73	The carbon footprint of specific digital monies should be evaluated.Methodologies to do so and reporting requirements should be standardized between countries. However, guidance for how to do so is currently lacking.
Fiscal Policy Effeciency	#74 #75	Digital money is contributing to the push to modernize public financial management systems (opened new possibilities to automate tax collection and better monitor tax evasion), in an effort to find fiscal space in a post-Covid environment. The macro-economic benefits of these transformations appear to be sizable.

（Source）Extract from 「THE RISE OF DIGITAL MONEY – A STRATEGIC PLAN TO CONTINUE DELIVERING ON THE IMF'S MANDATE」(July 2021)

1 - (3) Trends in IMF (5/6)

July 2021
IMF POLICY PAPER
「The Rise of Public and Private Digital Money」

- Also on July 29, 2021, the IMF's Executive Board discussed the staff report on the previous page and broadly agreed to the contents described (IMF POLICY PAPER "The Rise of Public and Private Digital Money").
- The Executive Board noted the need for the IMF to act quickly and be at the forefront of this effort to enable assistance to member countries, given the rapid progress of currency digitization. In particular, given the significant impact of digital money on the international monetary system, cross-border payments, and the domestic economic and financial stability of countries, the Council stressed the importance of considering the design of digital money and the importance of cooperation and coordination with international financial institutions as well as with regulators and the private sector (right table).

The Role of IMF		
A : IMF MISSION		
	The Fund has a mandate to help ensure that widespread adoption of digital money fosters domestic and international economic and financial stability. It must monitor, advise on, and help manage this far-reaching and complex transition.	
B : CORE COMPETENCIES (CORE STRENGTH) of IMF		
	(1)	Near universal membership, offering an ideal platform to bring together ministries of finance and central banks to discuss spillover effects and issues close to national economic policy interests, to propose policy solutions targeted to the needs and capacity of all countries, to offer and develop a common vision for the IMS, and to foster a common understanding of corresponding design principles for digital money.
	(2)	Core policy focus on macroeconomic, macrofinancial, exchange rate, and spillover issues and their interconnections at the center of the IMS.
	(3)	Broad expertise, bringing together economists, policymakers, technical and technology experts, and lawyers on common projects, reflecting the interconnected implications of digital money.
	(4)	Unique ties to member countries through surveillance and capacity development, which the Fund can leverage to spur open and constructive discussions on a bilateral, regional and global level, and to facilitate peer-to-peer learning and the sharing of policy lessons.
C : IMPLIMENTATION		
	(1)	To deliver on the above vision, the fund needs increased capacity, including dedicated resources. ・Rough calculations built from applying standard internal cost estimates to each of the above numerical output targets suggests "between 50 and 75 staff and other experts" in gross terms.
	(2)	Specific plans for hiring new staff and partnering with key organizations to complement IMF resources and activities (while minimizing duplication). ・Closely partner with "BIS Innovation HUB", "BIS", "CPMI (Committee on Payments and Market Infrastructures)", "FSB", "World Bank".

（Source）Extract from「THE RISE OF DIGITAL MONEY – A STRATEGIC PLAN TO CONTINUE DELIVERING ON THE IMF'S MANDATE」(July 2021)

Summary of IMF Executive Board's Evaluation	
(1)	Executive Directors noted that an increased adoption of digital money can foster greater efficiency and financial inclusion but also poses important challenges, and that the Fund has a critical role to play to help its members harness the benefits and manage the risks of digital money.
(2)	Directors agreed that digital money has implications that lie at the core of the Fund's mandate and that the Fund must be part of the discussions on these issues.
(3)	Digital money must be designed, regulated and provided so that countries maintain control over monetary policy, financial conditions, capital account openness, and foreign exchange regimes.
(4)	The Fund could serve as a thought leader in analytical work and policy development, particularly on issues related to the international monetary and financial system, in close collaboration with other organizations and provide timely advice in surveillance and capacity development to its members when requested.
(5)	Need to focus on the Fund's comparative advantage and to partner and collaborate with other international financial institutions, country authorities, standard setters, as well as the private sector, to maximize synergies and minimize duplication of work and foster knowledge sharing.
(6)	Directors noted the proposal on resource allocation and broadly agreed that this would need to be considered holistically in the context of the broader budget augmentation request.
(7)	Going forward, regular engagement with the Board will be important to reevaluate the appropriateness of the strategy and any agreed resource allocation.

（Source）Extract from IMF POLICY PAPER「The Rise of Public and Private Digital Money」(July 2021)

1 - (3) Trends in IMF (6/6)

Oct 2021
「Global Financial Stability Report, October 2021」
（Chapter 2 : The Crypto Ecosystem and Financial Stability Challenges）

- In the latest edition (October 2021) of the Global Financial Stability Report, which is published biannually by the IMF, the chapter "THE CRYPTO ECOSYSTEM AND FINANCIAL STABILITY CHALLENGES" (Chapter 2) was newly established.
- It clearly states that the rapid growth of the crypto asset ecosystem will bring opportunities for "fast and inexpensive payments" and "building a platform for innovative, comprehensive, and transparent financial services through decentralized finance (DeFi). On the other hand, it also stated that there are challenges such as "insufficient operational and financial soundness of crypto asset providers," "insufficient investor protection," "insufficient preparation and disclosure of some stablecoins," and "potential instability in capital flows (especially in emerging markets)" (left table).
- The "risks and threats to financial stability" from crypto assets and stablecoins are not systematic at this time, but the operational frameworks in most countries and regions are inadequate, so it is necessary to urgently introduce global standards for them and strengthen monitoring capabilities, and to develop a viable 8 policies are recommended (right table).

Financial Stability Challenges

	Issues	Background	Challenges / Risks
1	Challenges from the Crypto Ecosystem	The market capitalization of crypto assets has grown rapidly to over $2 trillion with volatility. There is a growing fear that volatility in this market will spread to the financial markets as a whole.	Operational, cyber, and governance risks
			Integrity (market and AML/CFT)
			Data availability/reliability
			Challenges from cross-border activities
2	Stablecoin -Specific Issues	The market capitalization of stablecoins linked to legal tender, such as "1 coin = 1 dollar," expanded.	How stable are stablecoins?
			Domestic and global regulatory and supervisory approaches
3	Macro -Financial Stability Issues	Crypto assets are penetrating emerging economies with weak financial infrastructures.	Cryptoization, capital flows, and restrictions
			Monetary policy transmission
			Bank disintermediation

Main Policy Recommendations

Standards, Supervision, and Data	(1)	National regulators should prioritize the implementation of global standards applicable to crypto assets
	(2)	Regulators need to control the risks of crypto assets, especially in areas of systemic importance
	(3)	Coordination among national regulators is key for effective enforcement and less regulatory arbitrage
	(4)	Regulators should address data gaps and monitor the crypto ecosystem for better policy decisions
Stablecoins	(5)	Regulations should be proportionate to the risk and in line with those of global stablecoins
	(6)	Coordination is needed to implement recommendations in areas of acute risk; enhanced disclosure, independent audit of reserves, fit and proper rules for network administrators and issuers; and more
Managing Macro -Financial Risks	(7)	Enact de-dollarization policies, including enhancing monetary policy credibility; a sound fiscal position; effective legal and regulatory measures; and the implementation of central bank digital currencies
	(8)	Capital flow restrictions need to be reconsidered with respect to their effectiveness, supervision, and enforcement

（Source）Both table Extract from 「Global Financial Stability Report」(Oct 2021)

1 - (4) Trends in BIS (1/6)

Jun 2021
「BIS Annual Economic Report」
（III. CBDCs: an opportunity for the monetary system）」

- "Chapter 3: CBDC: Opportunities for the Monetary System" was published in June, preceding the Annual Economic Report (2021) published by the BIS in July 2021. In the context of the recent progress of digitization (accelerated by the COVID-19 disaster) and innovative developments in consumer payment services, the report clearly states that retail CBDCs will ensure "an open payment platform" and "a competitive level playing field conducive to technological innovation".
- It also explains that first, the most important criterion for the adoption of CBDC is "whether it is in the public interest" (*), and that it should be designed with this in mind.

  * The "public interest" here refers not only to the economic benefits derived from a competitive market structure, but also to the quality of the governance system and fundamental rights such as the right to data privacy.

Points when Designing CBDC

	Points	Summary
1	Digital money should be designed with the "public interest" in mind.	By now, it is clear that [cryptocurrencies] are "speculative assets" rather than money, and in many cases are used to facilitate money laundering, ransomware attacks and other financial crimes. Bitcoin in particular has few redeeming public interest attributes when also considering its wasteful energy footprint.
		In any case, to the extent that the purported backing involves conventional money, [stablecoins] are ultimately only an "appendage to the conventional monetary system" and not a game changer.
		[The financial services provided by Big Tech (private digital money issued by Big Tech)] have the potential to promote 'greater financial inclusion,' 'improved services,' and 'cost savings' through their network effects. On the other hand, the entrenchment of market power may potentially exacerbate the high costs of payment services, still one of the most stubborn shortcomings of the existing payment system.
2	"Data Governance" (etc. Personal Information Protection) is Important."	Access to data confers competitive advantages that may entrench market power. Beyond the economic consequences, ensuring privacy against unjustified intrusion by both commercial and government actors has the attributes of a basic right. For these reasons, the issue of data governance has emerged as a key public policy concern.
3	Division of Roles between Central Bank and Private Sector (two-tiered architecture) will Promote Competition and Innovation	Central banks and PSPs (Payment Service Providers) could continue to work together in a complementary way, with each doing what they do best: "the central bank providing the foundational infrastructure of the monetary system" and "the private PSPs using their creativity, infrastructure and ingenuity to serve customers".
		Overall, "a two-tiered architecture" emerges as the most promising direction for the design of the overall payment system, in which central banks provide the foundations while leaving consumer-facing tasks to the private sector.
4	Enhanced Identification Methods based on Digital IDs	Effective identification is crucial to every payment system. It guarantees the system's safety and integrity, by preventing fraud and bolstering efforts to counter money laundering and other illicit activities. Sound identification is further required to ensure equal access for all users.
		Any CBDC architecture faces issues of data governance. The risks of data breaches would put an additional onus on the institutional and legal safeguards for data protection.
5	CBDC could Pave the Way for Improved Cross-Border Payments	"mCBDC arrangements" would allow central banks to mitigate many of today's frictions by starting from a "clean slate", unburdened by legacy arrangements. There are 3 potential models. → **check the next page (right table)**

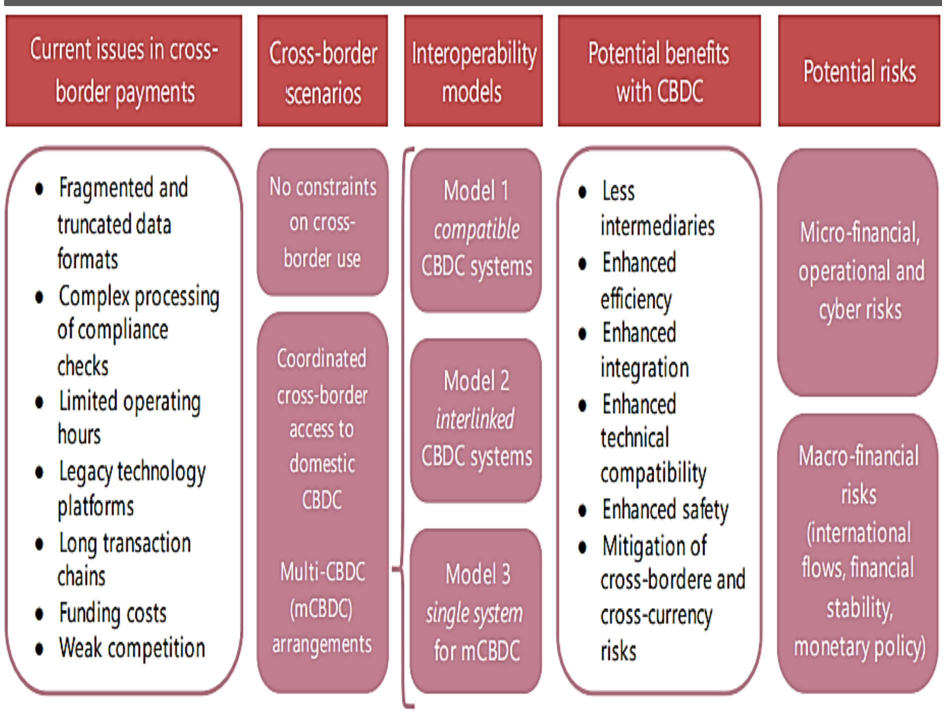
（Source）Extract from 「BIS Annual Economic Report」（III. CBDCs: an opportunity for the monetary system）」

1 - (4) Trends in BIS (2/6)

July 2021
「Central bank digital currencies for cross-boarder payments
（Report to the G20）」

- On July 9, 2021, the CPMI (Committee on Payment and Market Infrastructures) of the BIS, together with the BIS Innovation HUB, the IMF and the World Bank, published a joint report on the possibilities and challenges of using CBDCs in cross-border payments ("Central bank digital currencies for Cross-boarder payments") was published.
- The joint report was released in response to the G20 meeting in October 2020, which "presented a roadmap for addressing the various problems of cross-border payments (high cost, low speed, limited access, insufficient transparency, etc.) and for strengthening the payment system" and provides a framework for the hypothetical use of CBDC, as well as a roadmap for the development of a new payment system.
- Specifically, (1) three models (patterns) of frameworks for utilizing CBDCs for cross-border settlement are identified (right table), and (2) a comparison is made of the degree to which each model can solve the current settlement issues (however, no comparison of superiority or inferiority is made among the models) (see the table of next page).

Summary of the Potential to Enhance Cross-border Payments with CBDCs



（Source）Extract from「Central bank digital currencies for cross-boarder」(Graph1)

Summary of 3 mCBDC models

Models	Summary	Example
【Model1】 mCBDC Arrangement based on Compatible CBDC Systems	・Develop a CDBC system at each country. ・However, technologies such as "message formats, cryptography, data requirements, and user interfaces" should conform to "common international standards". ・Also, "laws, regulations, and supervisory standards" related to these standards will be standardized (contributing to simplification of KYC and transaction monitoring processes). ・The success of this model will require policy coordination among countries.	・"BIS+7Central Banks" Group
【Model2】 mCBDC Arrangement based on Interlinked CBDC Systems	・Develop a CDBC system at each country. ・However, the technology and payment systems will be common among the partner countries and interlinked (using technical interfaces).	・Project Jasper-Ubin (MAS / Bank of Canada) ・Project Jura (Bank of France / Swiss National Bank / BIS Innovation HUB) ・Project Stella (Bank of Japan / ECB)
【Model3】 single mCBDC multi-currency system	・A single CBDC system is used by multiple countries. ・Compared to【Model1】and【Model2】, it potentially allows for higher operational functionality and efficiency, but has the disadvantage of "higher governance and control hurdles (in each countries)".	・Inthanon-LionRock (Bank of Thailand / HKMA) ・Porject Aber (Saudi Central Bank / UAE Central Bank) ・mCDBC Bridge (HKMA / Bank of Thailand / UAE Central Bank / PBoC digital currency research lab)

（Source）Extract from「Central bank digital currencies for cross-boarder」

1 - (4) Trends in BIS (3/6)

July 2021
「Central bank digital currencies for cross-boarder payments（Report to the G20）」(continued)

- On the other hand, the chapter “Opportunities and risks associated with cross-border use of CBDCs” states that the final net effect requires an extensive and dynamic analysis that considers many factors, including potential feedback loops with “productivity”, “market integration and arbitrage”, “international trade”, and “labor market liquidity“, and initial analysis and assessment of the macro-financial effects and challenges of adopting CBDC (see the table of next page).

Potential Improvements of Different mCBDC Arrangements to Frictions in Correspondent Bank Arrangements for Cross-border Payments

	Potential improvements		
Frictions cross-border payments	**Model 1–mCBDC arrangement based on compatible CBDC systems**	**Model 2–mCBDC arrangement based on interlinked CBDC systems**	**Model 3–single mCBDC multi-currency system**
Legacy technology platforms	Compatible systems allow for efficiency gains in existing banking relations	A common clearing mechanism could reduce the number of relationships and provide economies of scale	A single system does not require such relations (however, a single system may add to operational costs)
Limited operating hours	CBDCs can be open 24/7, eliminating any mismatch of operating hours		
Fragmented and truncated data formats	Compatible message standards allow payments to flow without data loss or manual intervention	The message standard (eg ISO 20022) adopted by the interlinkage would act to harmonise standards across systems	Single message standard across the system eliminates mismatches
Unclear FX rates and unclear incoming fees	Compatibility requirements for wallet providers could enable users to calculate fees and rates prior to a payment	Common calculation of rates and fees for transfers using any interlinkage would aid transparency	A single system would likely be designed to include options for FX conversion
Long transaction chains	CBDCs could settle instantly, reducing the need for status updates		
Complex processing of compliance checks	Compatible compliance regimes reduce uncertainty and costs	Interlinking systems do not impact multiple or conflicting compliance requirements	Single set of access requirements means compliance could be equivalent across the system

（Source）Extract from「Central bank digital currencies for cross-boarder」(Table1)

1 - (4) Trends in BIS (4/6)

July 2021
「Central bank digital currencies for cross-boarder payments （Report to the G20）」(continued)

- Note that in the questionnaire to national central banks on "which risks are important to you," the following concerns were identified: "facilitation of tax avoidance and loss of oversight," "undesirable fluctuations in exchange rates," "AML/CFT," "cyber attacks," and "concerning foreign CBDCs or GSCs (global stable coins) dominating domestic markets as a powerful settlement instrument"
- Finally, it emphasizes the "need for multilateral cooperation" and the "importance of interoperability among CBDCs" as a prerequisite for further analysis of various important and complex issues in order to achieve potential benefits for public welfare while maintaining financial stability.

International Macro-financial Implications of Cross-border CBDC Use

	Impacts	Effects	Issues
1	Potential increase in cross-border flows	･Cheaper and more accessible remittances will benefit senders and recipients, help to buffer economic shocks, and stimulate growth. ･Markets should also become more integrated thus offering investment and risk-sharing opportunities.	･large gross foreign asset positions imply higher leverage and greater valuation effects, with knock-on effects on current account balances and potential balance of payments problems. ･In addition, capital flow volatility could increase as herd effects from less-informed investors materialise.
2	Potential financial stability risks and currency substitution	･The cross-border availability of CBDCs could lower the costs of obtaining, storing and spending foreign currency. ･There are already significant network effects for international currencies, and lower costs could therefore make already established international currencies even more attractive.	･While the root cause of currency substitution is the lack of confidence in a country's own currency, due to domestic conditions, rapid currency substitution could undermine countries' efforts to redress domestic policies. ･Currency substitution can also undermine the ability of the domestic central bank to carry out the lender of last resort function.
3	Reserve currency configurations and backstops	･Currencies used for international transactions, such as invoicing and paying for imports, could change with the advent of CBDC. In one scenario, reserve currencies such as the dollar or euro could become even more dominant if available digitally at a lower cost and to a wider user base.	･If more appropriate and user-friendly CBDCs are developed and preferred by users in various global trade and financial processes, the relative position of the dollar and the euro mayl decline. ･But, importantly, the credibility and stability of institutions, degree of financial openness, and the rule of law, as well as geopolitical forces, remain essential ingredients to currency internationalisation and tend to move slowly.

（Source）Extract from 「Central bank digital currencies for cross-boarder」

1 - (4) Trends in BIS (5/6)

Oct 2021
「Consultative Report: Application of the Principles for Financial Market Infrastructures to stablecoin arrangements」

- In October 2021, the BIS Committee on Payment and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO) provided the "Consultative Report: Application of the Principles for Financial Market Infrastructures to stablecoin arrangements" clarifying the approach methodology for "systemically important stablecoin" structures to comply with the "Financial Market Infrastructures Principles (FMI Principles)".
- In this report, the report lists "4 overarching determinants" and "more detailed underlying factors" as factors in determining whether the "Stablecoin Arrangement (SA)" is systemically important. And then explains that these factors need to be considered and evaluated in a flexible and comprehensive manner.

Notable Stablecoin Arrangement (SA) Features
1. Settlement assets that may be neither central bank money nor commercial bank
The safety of an SA's money settlements will depend on the credit and liquidity risk stemming from the entity performing the issuance and redemption of the stablecoin, on the assets used to supportthe value of the stablecoin and the relevant custody and investment arrangements. It also depends on the ability of the users to have access to these assets.
2. Multiple interdependent functions
SA to be useable as a means of payment and/or store of value, typically provides three core functions; (i) issuance, redemption and stabilisation of the value of the coins (ii) transfer of coins (hereinafter the "transfer function") (iii) interaction with coin users for storing and exchanging coins In some cases, all three functions are conducted by a single entity, while in others, the functions are unbundled, that is, each function is managed by a different entity or person. ➡This report builds on this standard by providing guidance in the context of SAs' multiple interdependent functions.
3. A potentially large-scale deployment of emerging technologies
SAs may have new features that may also be adopted by other FMIs. These features include the use of distributed and/or automated technology protocols as well as decentralisation of operations and/or governance. For instance, the use of distributed ledger technology (DLT) in the SA's transfer function may create a misalignment between legal (settlement) finality and technical settlement.

Considerations for Determining the Systemic Importance of an SA
1. Size of the SA, ie whether the stablecoin is used as a principal payment or settlement mechanism for the jurisdiction or the market it serves. This could include consideration of the;
a) number of stablecoin users; and
b) number and value of transactions and value of stablecoins in circulation
2. Nature and risk profile of the SA's activity, ie what is (are) the type(s) or nature of transactions and users. This could include consideration of the;
a) type of stablecoin users, eg retail customer, financial entities; and
b) type or nature of transactions, based on indicators such as;
(i) time criticality of the transactions given possible disruption
(ii) wholesale or retail nature of transactions
(iii) use or purpose of transactions, such as whether the SA is used in connection with cross-border payments, financial transactions/investments, monetary operations, or foreign exchange transactions
(iv) denomination of the stablecoin and/or its reserve assets
3. Interconnectedness and interdependencies of the SA, ie whether the SA has significant interconnectedness and interdependencies with the real economy and financial system. This could include consideration of the
a) interconnectedness with other systemically important FMIs and institutions and the real economy and governments (eg whether the SA is used to settle transactions for governments, important financial markets or other FMIs)
b) business, structural and operational complexity: the more complex the SA is, the greater the potential for interdependencies and the greater the challenge of managing them given the likely higher number of involved entities and risk propagation channels
4. Substitutability of the SA, ie whether there are available alternatives to using the SA as a means of payment or settlement for time-critical services.

(Source) Both table extract from 「Consultative Report: Application of the Principles for Financial Market Infrastructures to stablecoin arrangements」(Oct 2021)

1 - (4) Trends in BIS (6/6)

- And, based on the characteristics of stablecoin on the previous page, the following descriptions should be particularly considered with respect to the level and functionality technically required for "systemically important SA".

Guidance on the Application of the PFMI to Stablecoin Arrangements (SAs)

Principles	Guidance
<Principle 2> Governance	A systemically important SA should have appropriate governance arrangements. When seeking to observe Principle 2, a systemically important SA should consider how: ・the SA's ownership structure and operation allow for clear and direct lines of responsibility and accountability, for instance, it is owned and operated by one or more identifiable and responsible legal entities that are ultimately controlled by natural persons; and ・the SA's ownership structure and operation allow the SA to observe Principle 2 and the other relevant principles of the PFMI irrespective of the governance arrangements of other interdependent functions.
<Principle 3> Comprehensive Risk Management	A systemically important SA should regularly review the material risks that the FMI function bears from and poses to other SA functions and the entities (such as other FMIs, settlement banks, liquidity providers or service providers) which perform other SA functions or on which the SA relies for its transfer function. A systemically important SA should develop appropriate risk-management frameworks and tools to address these risks. In particular, it should identify and implement appropriate mitigations, taking an integrated and comprehensive view of its risks.
<Principle 8> Settlement Finality	A systemically important SA should provide clear and final settlement, regardless of the operational settlement method used. When seeking to observe Principle 8, a systemically important SA should: ・clearly define the point at which a transfer on the ledger becomes irrevocable and technical settlement happens and make it transparent whether and to what extent there could be a misalignment between technical settlement and legal finality; and ・ensure proper transparency regarding mechanisms for reconciling the misalignment between technical settlement and legal finality and have measures in place to address the potential losses that could be created in case of reversal stemming from the misalignment between technical settlement and legal finality.

Principles	Guidance
<Principle 9> Money Settlements	A stablecoin used by a systemically important SA for money settlements should have little or no credit or liquidity risk. In assessing the risk presented by the stablecoin, the SA should consider whether the stablecoin provides its holders with a direct legal claim on the issuer and/or claim on, title to or interest in the underlying reserve assets for timely1 convertibility at par into other liquid assets such as claims on a central bank, and a clear and robust process for fulfilling holders' claims in both normal and stressed times. When seeking to observe Principle 9, a systemically important SA should determine whether the credit and liquidity risks of the stablecoin that it uses for money settlements are minimised and strictly controlled and the stablecoin is an acceptable alternative to the use of central bank money. Relevant factors may include but are not limited to: ・The clarity and enforceability of the legal claims, titles, interests and other rights and protections accorded to holders of the stablecoin and SA participants in relation to the issuer of a stablecoin and reserve assets backing it, including their treatment (eg seniority) in the event of insolvency of the issuer, its reserve manager or a custodian of the reserve assets and/or other protections such as third party guarantees. ・The nature and sufficiency of the SA's reserve assets to support and stabilise the value of the outstanding stock of issued stablecoins, and the degree to which the SA's reserve assets could be liquidated at or close to prevailing market prices. ・The clarity, robustness and timeliness of the process for converting the stablecoin into other liquid assets such as claims on a central bank in both normal and stressed circumstances. The stablecoin should be convertible into other liquid assets, as soon as possible, at a minimum by the end of the day and ideally intraday. ・The creditworthiness, capitalisation, access to liquidity and operational reliability of the issuer of the stablecoin, provider of the settlement accounts and custodian(s) of the reserve assets. Reserve assets held or placed in custody should be protected against claims of a custodian's creditors. Any chosen custodians should have robust accounting practices, safekeeping procedures and internal controls to protect the assets, as well as a sound legal basis supporting its activities, including the segregation of assets. ・The sufficiency of the regulatory and supervisory framework that applies to the issuer, reserve manager(s) and/or custodian(s) of the reserve assets. ・The existence of risk controls that could, where needed, reduce credit and/or liquidity risks. Possible examples include collateral pools supporting committed lines of credit, third party guarantees and procedures for allocating losses arising from a default by the issuer or a decrease in value of the stablecoin.

（Source）「Consultative Report: Application of the Principles for Financial Market Infrastructures to stablecoin arrangements」(Oct 2021)

1 - (5) CBDC Survey of BIS (1/8)

- The BIS has published the results of three previous surveys on CBDC targeting national central banks.

(#1) January 2019 : BIS Papers No. 101 (Survey period: July-December 2018)
"Proceeding with caution - a survey on central bank digital currency".

(#2) January 2020: BIS Papers No. 107 (Survey period: July-December 2019)
"Impending arrival - a sequel to the survey on central bank digital currency".

(#3) January 2021: BIS Papers No. 114 (Survey period: Q4 2020)
"Ready, steady, go? - Results of the third BIS survey on central bank digital currency".

Further Explanation at p21 - 26

Number of Countries/Regions Surveyed (Yr2018: 63 / Yr2019: 66 / Yr2020: 65)

2018	2019	2020	国・地域名
○	○	○	Argentina
○	○	○	Australia
○	○	○	Azerbaijan
—	○	○	Bahamas
—	○	—	Bahrain
○	○	—	Bangladesh
○	○	○	Belgium
—	—	○	Bolivia (New)
○	○	○	Brazil
—	○	—	Brunei Darussalam
○	—	—	Cambodia
○	○	○	Canada
○	○	○	Cape Verde
○	○	—	Cayman Islands
—	—	○	Chile (New)
○	○	○	China
○	○	○	Colombia
○	—	—	Curacao & Sint Maarten
○	—	—	Cyprus
○	○	○	Dominican Republic
—	○	—	Eastern Caribbean
○	○	—	Ecuador
○	○	○	Egypt
—	○	—	El Salvador
—	○	○	Eswatini
○	○	○	Euro Area (ECB)
○	○	○	France
○	○	○	Georgia
○	○	○	Germany
—	—	○	Guatemala (New)

2018	2019	2020	国・地域名
—	—	○	Haiti (New)
—	—	○	Honduras (New)
○	○	○	Hong Kong SAR
○	○	○	Hungary
○	○	○	India
○	○	○	Indonesia
○	○	○	Iraq
○	○	○	Israel
○	○	○	Italy
○	○	○	Jamaica
○	○	○	Japan
○	○	○	Jordan
○	○	—	Kazakhstan
○	○	○	Kosovo
—	○	○	Kuwait
○	—	—	Latvia
—	—	○	Madagascar (New)
○	○	○	Malaysia
—	—	○	Mexico (New)
—	○	○	Mongolia
○	○	○	Montenegro
○	○	○	Morocco
—	—	○	Mozambique (New)
○	○	○	Netherlands
—	○	○	New Zealand
○	○	—	Nigeria
○	○	○	Norway
○	—	—	Pakistan

2018	2019	2020	国・地域名
○	—	—	Papua New Guinea
—	○	○	Paraguay
—	—	○	Peru (New)
○	—	—	Philippines
○	○	○	Russian Federation
○	—	—	Samoa
○	○	○	Saudi Arabia
○	○	○	Serbia
○	○	○	Singapore
○	○	○	Slovenia
○	—	—	Solomon Islands
○	○	○	South Africa
○	○	○	South Korea
○	○	○	Spain
—	○	—	Sri Lanka
○	○	○	Sweden
○	○	○	Switzerland
—	—	○	Tanzania (New)
○	○	○	Thailand
○	○	○	Tonga
—	—	○	Trinidad and Tobago (New)
—	○	—	Tunisia
○	○	○	Turkey
○	○	○	United Kingdom
○	○	○	United States
○	○	○	Uruguay
○	○	○	Vietnam
○	○	—	Zambia

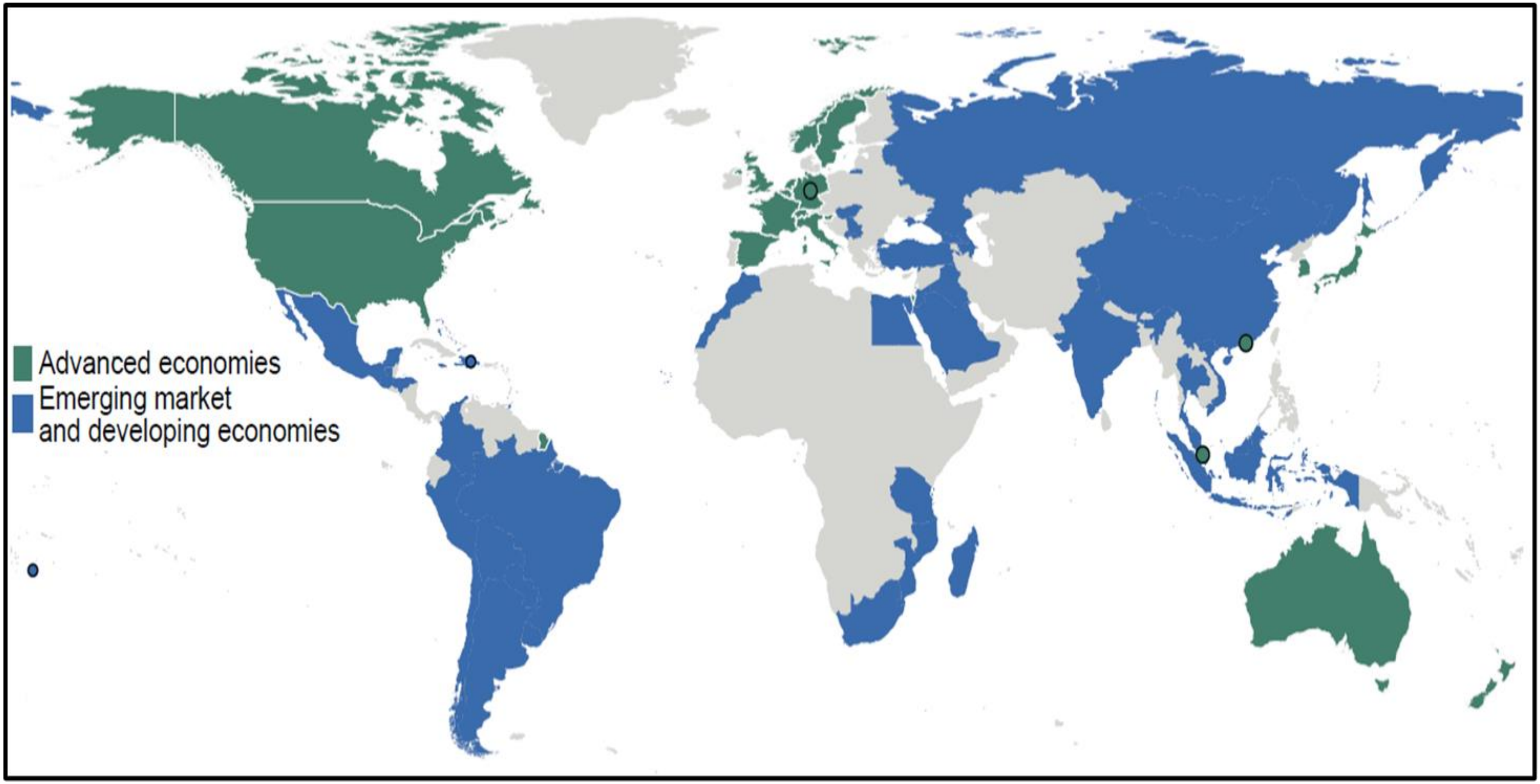
Number of countries/regions surveyed at least once in the past three surveys: 86
New: First country/region to be surveyed in the 3rd (2020 survey)

1 - (5) CBDC Survey of BIS (2/8)

Jan 2021
"Ready, steady, go? - Results of the third BIS survey on central bank digital currency"

- Third BIS survey (January 2021): survey period is Q4 2020
  - ✓ The breakdown of the 65 countries/regions that responded to the survey was "21 developed countries & regions / 44 developing countries".
  - ✓ The 65 countries & regions that responded cover "72% of the world's population / 91% of the world's economy".

Countries and Regions Responding to the Third BIS Survey (Graph 1)



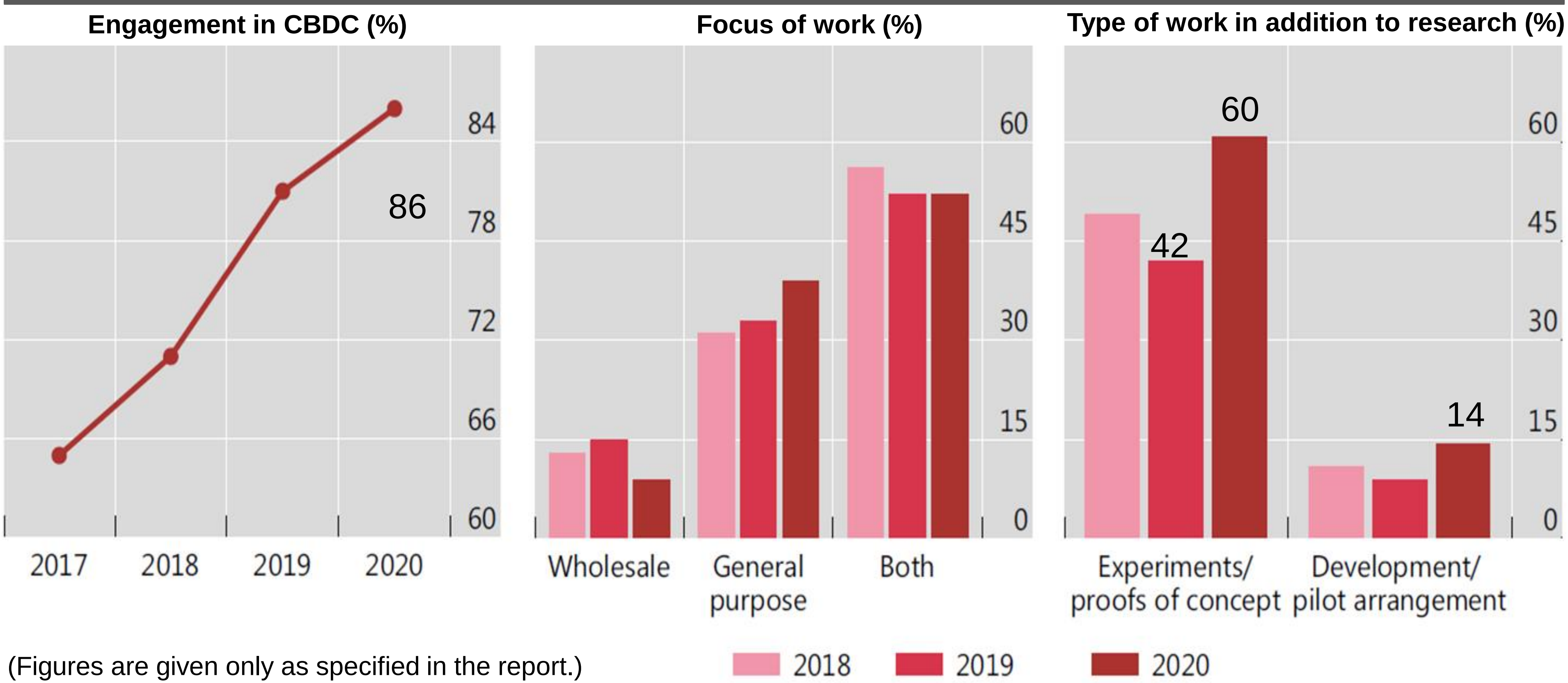
1 - (5) CBDC Survey of BIS (3/8)

Jan 2021 (continued)
"Ready, steady, go? - Results of the third BIS survey on central bank digital currency"

【Summary of results of the third BIS survey (January 2021)】(Part 1)

- Current CBDC initiatives (left graph)
  Central banks' interest in CBDC is further increasing.
- Focus of work (central graph)
  Relatively, the percentage of respondents considering CBDC for "retail purposes" has increased. The percentage of Central Banks considering only wholesale has declined slightly.
- Research and experimental current CBDC (right graph)
  CBDC moves from the research phase to the "experiments/proof-of-concept stage". More than 10% of the CBDCs are in the "development/pilot arrangement stage".

Central banks' Work on CBDC Advances Further (Share of Respondents) (Graph 2)



(Figures are given only as specified in the report.)

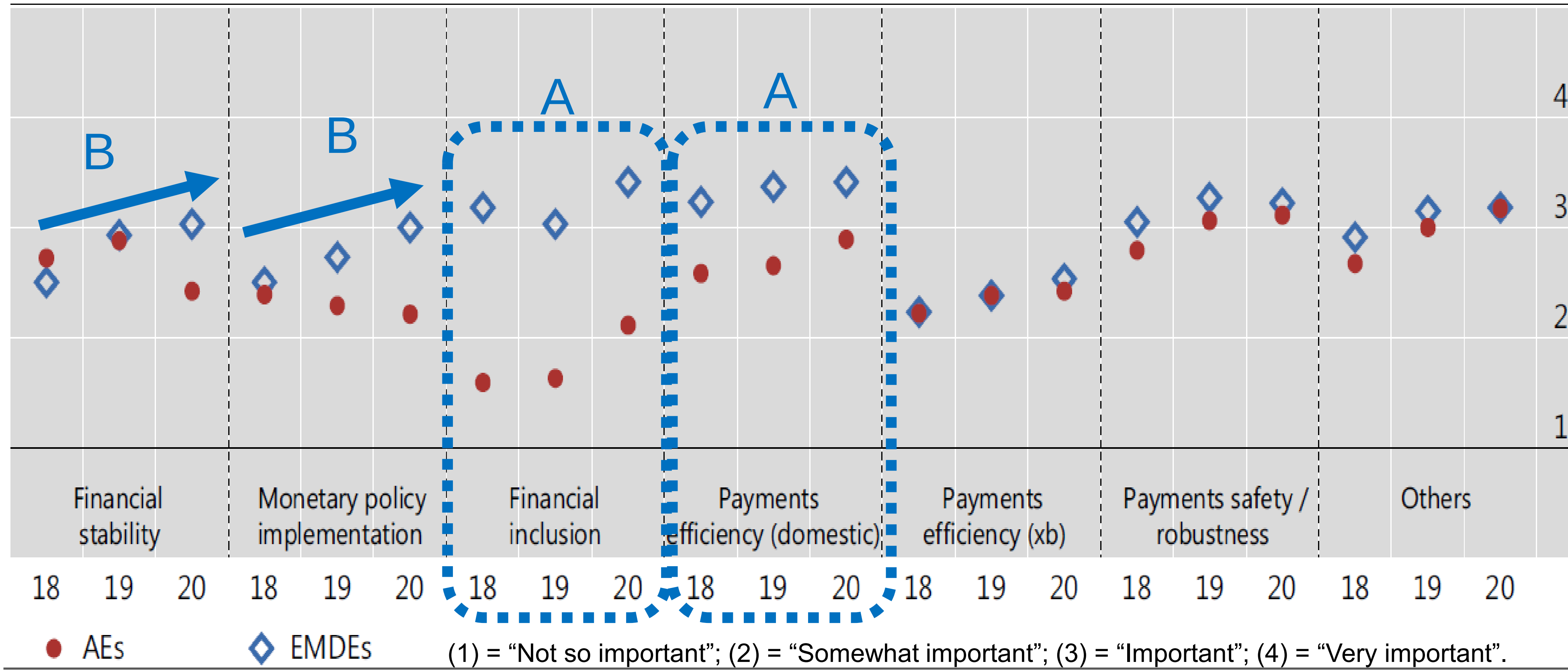
1 - (5) CBDC Survey of BIS (4/8)

【Summary of results of the third BIS survey (January 2021)】(Part 2)

＜Motivations for issuing a retail CBDC＞

- Generally, EMDEs (Emerging Markets and Developing Economies) report stronger motivations for issuing CBDC than AEs (Advanced Economies).
- "Financial inclusion" and "Payments efficiency (domestic)" emerges as a main factor across EMDEs and remains a top priority for CBDC development (Figure A). In addition, "financial stability" and "effective monetary policy" are also considered more important each time (Figure B).
- The "Others" include "maintaining monetary sovereignty (dollarization and countering privately issued digital currencies)" and "providing households and firms with continued access to central bank funds even as cash use declines".

Motivations for Issuing a Retail CBDC (Average Importance) (Graph 3)



(1) = "Not so important"; (2) = "Somewhat important"; (3) = "Important"; (4) = "Very important".

1 - (5) CBDC Survey of BIS (5/8)

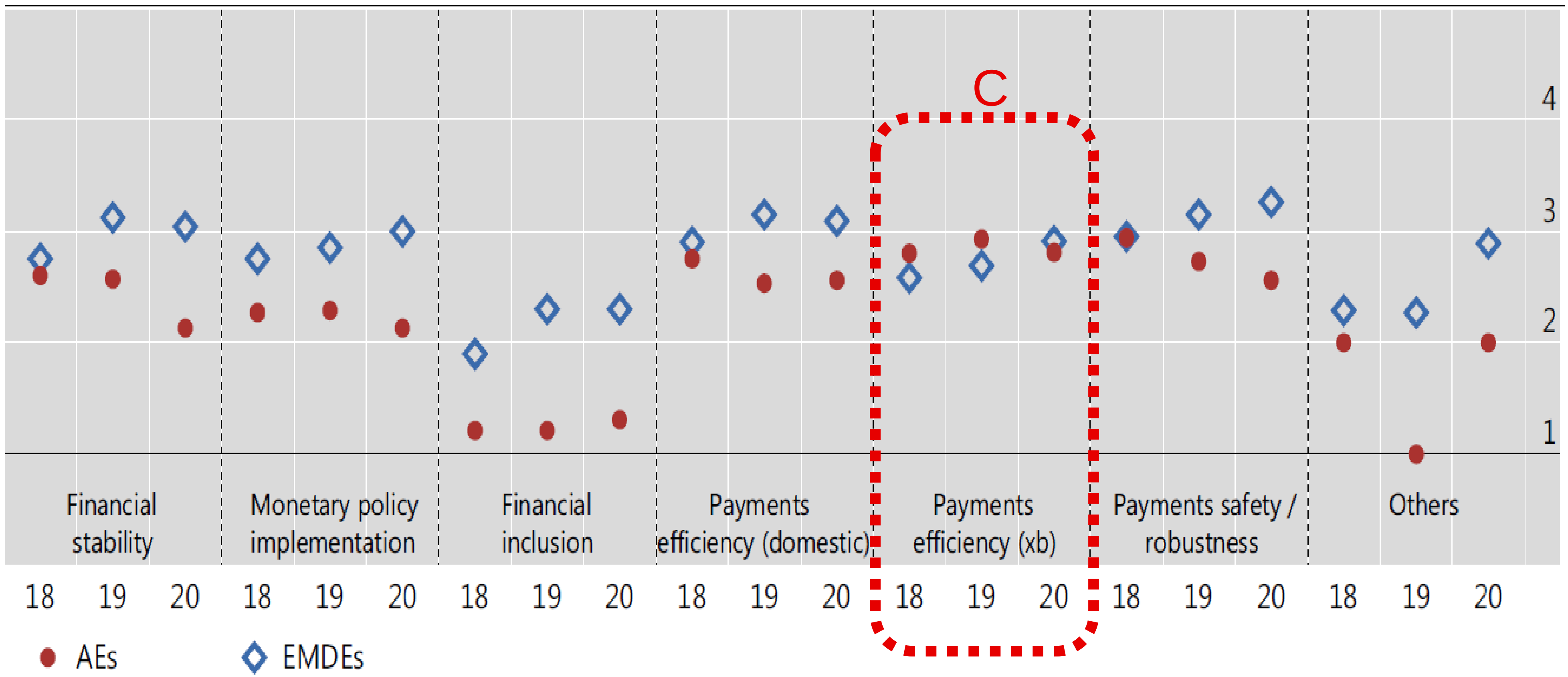
Jan 2021 (continued)
"Ready, steady, go? - Results of the third BIS survey on central bank digital currency"

【Summary of results of the third BIS survey (January 2021)】(Part 3)

＜Motivation for Issuing Wholesale CBDC＞

- The motivation to study wholesale CBDCs is generally weaker than the motivation to study retail (general use) CBDCs (also clear in the figure "Focus of work" on p12). EMDEs are generally more motivated to engage in wholesale purpose CBDC issuance than AEs.
- A common characteristic shared by EMDEs and AEs in the motivation for issuing wholesale CBDCs is relatively high "Payments efficiency for cross-border settlement" (Figure C below). The "Others" includes "development of capital markets", "cyber resilience", and "improvement of securities trading and settlement".

Motivations for Issuing a Wholesale CBDC (Average Importance) (Graph 4)



(1) = "Not so important"; (2) = "Somewhat important"; (3) = "Important"; (4) = "Very important".

1 - (5) CBDC Survey of BIS (6/8)

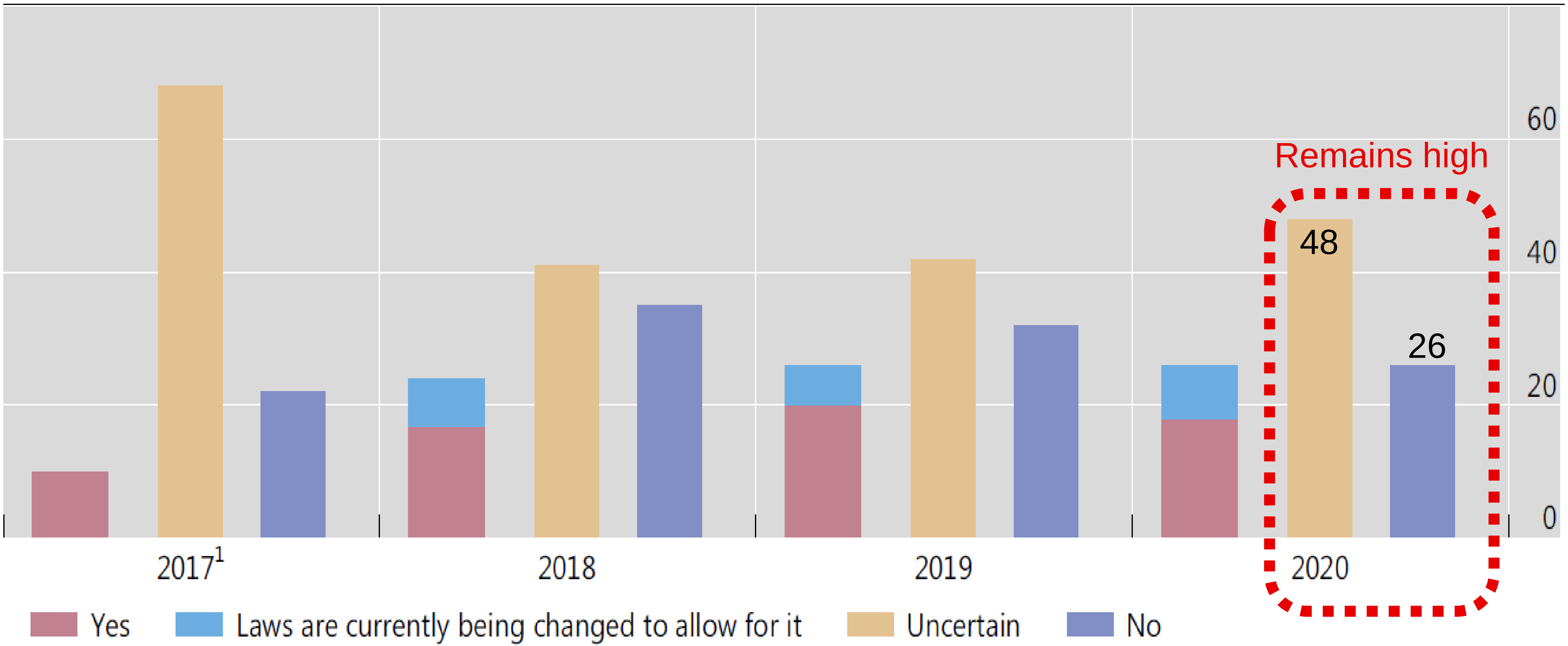
Jan 2021 (continued)
"Ready, steady, go? - Results of the third BIS survey on central bank digital currency"

【Summary of results of the third BIS survey (January 2021)】(Part 4)

＜Legal authority for Central Bank to issue CBDC＞

- Central banks accounting for 3/4 of the total respondents answered that their issuing authority is "Unclear" or "that they do not have such authority", and the percentage remains high. (The main reason for the higher percentage of "authority is unclear" responses compared to the 2019 survey is that some of the countries/regions covered in the 2019 and 2020 surveys were different.)
- The continued high percentage of central banks that have not sought clarification on issuing authority reflects the event that many central banks have not progressed to the point of development or piloting on CBDCs.

Legal Authority for Central Bank to Issue a CBDC (Share of Respondents) (Graph 6)



[1] There was no option for "laws are currently being changed to allow for it" in the 2017 survey.

(Figures are given only as specified in the report.)

1 - (5) CBDC Survey of BIS (7/8)

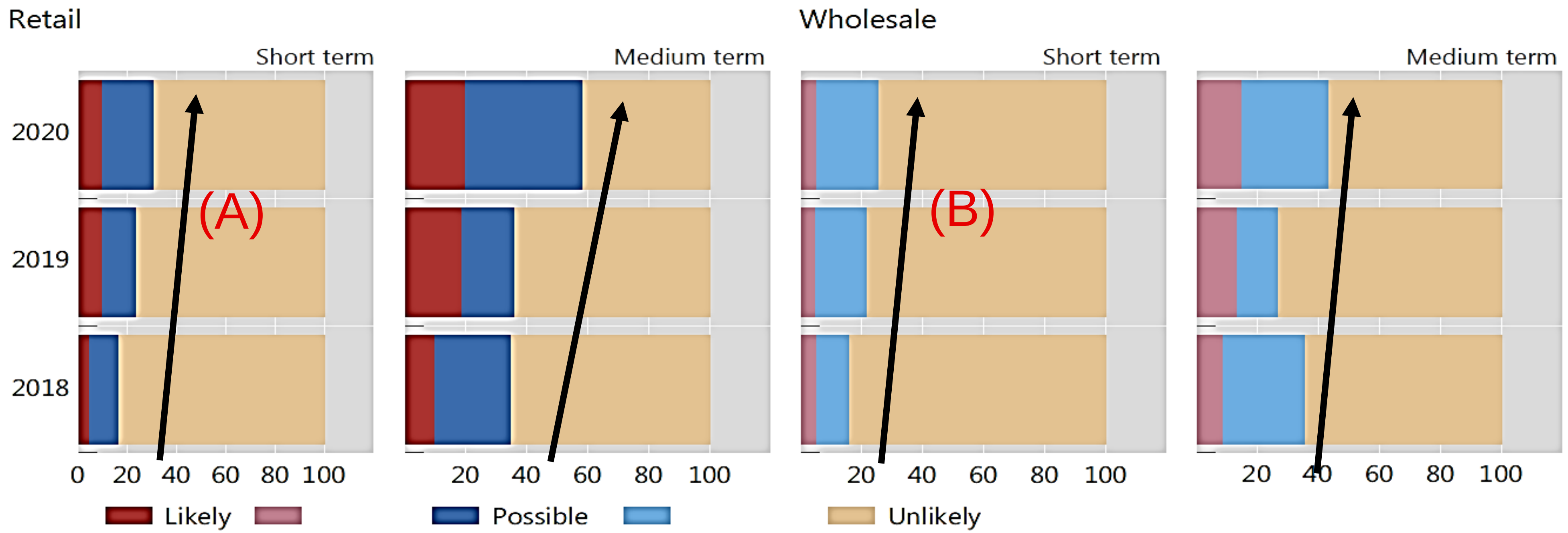
Jan 2021 (continued)
"Ready, steady, go? - Results of the third BIS survey on central bank digital currency"

【Summary of results of the third BIS survey (January 2021)】(Part 5)

＜Feasibility of CBDC issuance＞

- Overall, about 60% of central banks consider it unlikely that they will issue CBDC in the foreseeable future (short to medium term), although this percentage is gradually declining.
- As in the previous (2019) survey, in general, central banks in EMDEs are likely to issue CBDCs for retail purposes. However, in contrast to the previous survey, 1/5 (= 4 countries) of the responding AEs (compared to 1 last year) indicated that such issuance is "at least possible" in the short to medium term. (AEs in Figure (A) below)
- Wholesale CBDC is less likely to be issued than retail CBDC. However, as in the case of retail, the number of countries/regions that predict "unlikely" continues to decline. (Figure (B) below)

The Likelihood of CBDC Issuance Continues to Increase (Share of Respondents) (Graph 7)

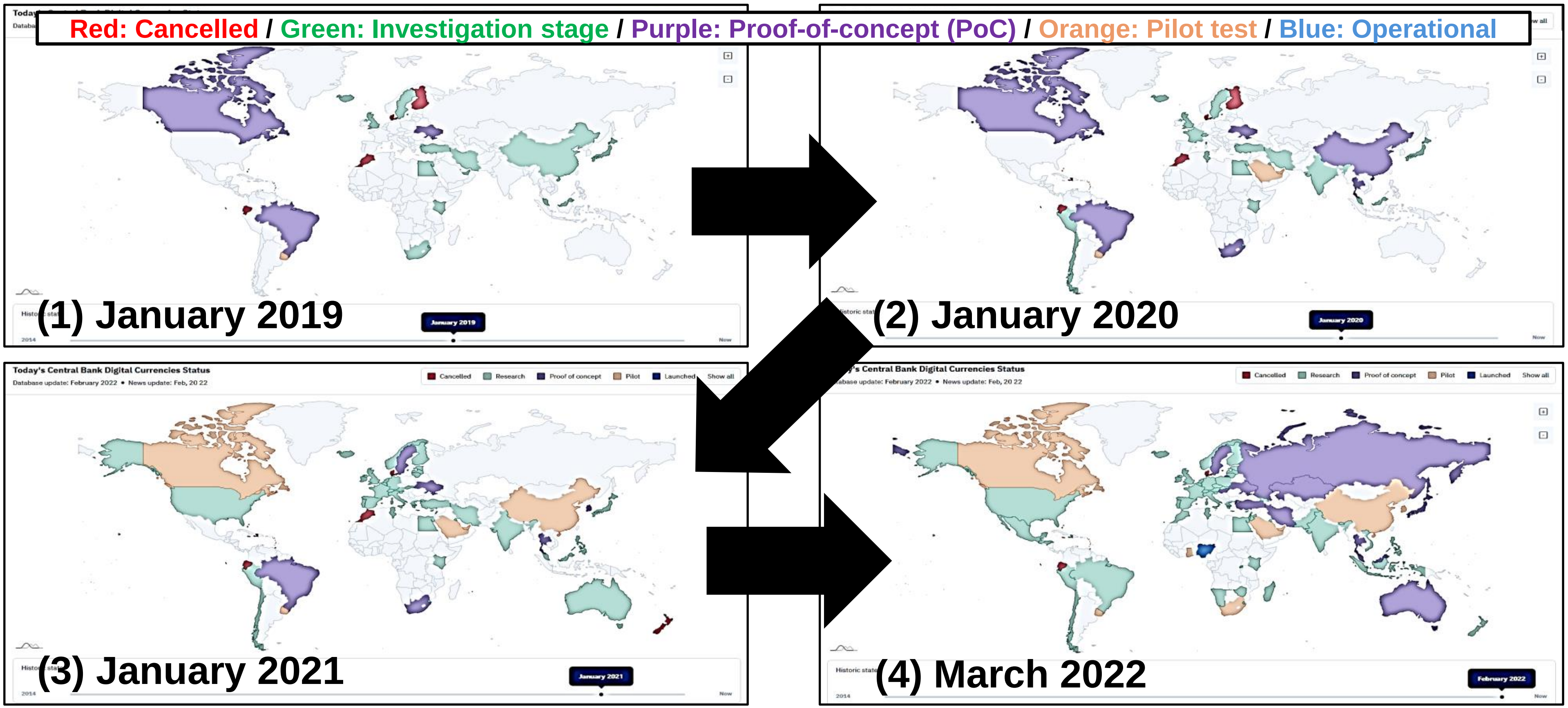


Short term: 1–3 years; Medium term: 1–6 years. "Likely" combines "very likely" and "somewhat likely". "Unlikely" combines "very unlikely" and "somewhat unlikely".

1 - (5) CBDC Survey of BIS (8/8)

- In light of the announcement cycle of the BIS Survey, the results of the “fourth edition” survey are to be announced in “January 2022“ but have not yet been released (as of March 31, 2022).
- However, according to CBDC Tracker (an open-source project that aims to provide a comprehensive information resource for CBDC initiatives around the world), more and more countries/regions are conducting CBDC research and consideration as the years go by, and the stage of research is also changing from “Investigation Stage" to "POC (Proof-of-Concept)" and "Pilot test".
- Therefore, we expect that the fourth CBDC Survey, which is scheduled to be released in the near future, will also report on the increasing interest of central banks in CBDC.

Current CBDC Considerations and Research in Each Country (as of January 2019 - March 2022)



(Source) Prepared by the Institute for International Monetary Affairs from "CBDC tracker"

1 - (6) Trends in "BIS+7 Central Banks" (1/3)

Oct 2020 / BIS+7 Central Banks
"Central bank digital currencies
: foundational principles and core features".

- In January 2020, a group of "BIS+7 Central Banks*" was established for the purpose of sharing knowledge on the evaluation of the potential use of CBDC.

  (*) Bank of Canada, ECB, Bank of Japan, Sveriges Riksbank (Sweden), Swiss National Bank, and Bank of England. Fed to join later.

- The purpose of preparing "Central bank digital currencies: foundational principles and core features" (Oct 2020) is;
  - (1) Organize "retail CBDC" (electronic payment instruments provided in local currency as a direct liability of the central bank) that can be used by a wide range of entities (but does not mean that central banks participating in this group are actively considering issuing CBDC).
  - (2) Recommend on how to proceed with future work and in what areas and in what ways international coordination would contribute to future policy discussions within each country.
- The report also presents "3 foundational principles" that the Central Bank should consider in issuing CBDCs and "14 core features" necessary for this purpose.

3 Foundational Principles

(1) DO NOT HARM

New forms of money supplied by the central bank should continue supporting the fulfilment of public policy objectives and should not interfere with or impede a central bank's ability to carry out its mandate for monetary and financial stability.

(2) COEXISTENCE

Central banks have a mandate for stability and proceed cautiously in new territory. Different types of central bank money – new (CBDC) and existing (cash, reserve or settlement accounts) – should complement one another and coexist with robust private money (eg commercial bank accounts) to support public policy objectives. Central banks should continue providing and supporting cash for as long as there is sufficient public demand for it.

(3) INNOVATION AND EFFICIENCY

Without continued innovation and competition to drive efficiency in a jurisdiction's payment system, users may adopt other, less safe instruments or currencies.

14 Core CBDC Features

Instrumental Features	(1) Convertible
	(2) Convenient
	(3) Acceptable and available
	(4) Low cost
System Features	(5) Secure
	(6) Instant
	(7) Resilient
	(8) Available (24hr/7days/365days)
	(9) Throughput
	(10) Scalable
	(11) Interoperable
	(12) Flexible and adaptable
Institutional Features	(13) Robust legal framework
	(14) Standard

（Source）Both tables extract from「Central bank digital currencies: foundational principles and core features」(Oct 2020)

1 - (6) Trends in “BIS+7 Central Banks” (2/3)

Sep 2021 / BIS + 7 Central Banks
“Central bank digital currencies
- executive summary”

- In September 2021, the second report was published in September 2021, consist of “Executive paper (Central bank digital currencies - executive summary)” and 3 accompanying in-depth reports (“System design and interoperability”, “User needs and adoption” and “Financial stability implications“).
- The executive paper consists of 3 chapters: "Motivation," "Key messages," and "Next steps (See next page for “Key messages” chapter).” The report outlines the progress made since the release of the "Central bank digital currencies: foundational principles and core features" (see previous page).
- The “Due dates" for the various Considerations listed in the "Next steps" and the "Interim Reporting Period" for these activities are not specified.

Motivation
(1) The centrality of central bank money in a monetary system anchors public trust in money and supports public welfare. (2) A CBDC robustly meeting the foundational principles envisaged by this group could be an important instrument for central banks in such a future to enhance financial stability, harness new technologies and continue serving the public. (3) As money and payments develop rapidly, central banks’ plans for CBDC will evolve. CBDC issuance and design are sovereign decisions. To date, none of our jurisdictions has yet decided to proceed with a general purpose CBDC, which is one option within a wider set of open possibilities for central banks. (4) International cooperation on CBDC could provide an avenue for improving cross-border payments. (5) CBDCs would be likely to have wide-ranging impacts on public policy issues beyond a central bank’s traditional remit.

Next Steps
Trusted and resilient money is a precondition for monetary and financial stability. This group will continue to collaborate on exploring how CBDCs could enhance any future system. Specifically: 1. The group will continue its practical policy and technical analysis, exploring the intersections between the three papers published and common areas of interest in CBDC research. 2. The group will continue contributing to other complementary international work on CBDCs and the future of payments, including the G7 Digital Payments stream, the G20 cross-border payments roadmap, the CPMI Future of Payments Working Group, and the IMF’s work on digital money. 3. The group will strengthen outreach and dialogue, domestically and internationally. Individually, we are fostering an open and informed dialogue on CBDC in our jurisdictions; and collectively, we are sharing insights from our work with other central banks, including in developing economies.

（Source）Both tables extract from 「Central bank digital currencies: executive summary」(Sep 2021)

1 - (6) Trends in “BIS+7 Central Banks” (3/3)

Sep 2021 / BIS + 7 Central Banks
“Central bank digital currencies
- executive summary” (continued)

- The "key messages" in the 3 accompanying in-depth reports (“System design and interoperability”, “User needs and adoption” and “Financial stability implications“) are;

(1) "System Design and interoperability" should ensure a balance between public and private sector involvement in system design and a situation where funds can flow easily among various payment systems (mainly domestic).

(2) In “User needs and adoption," it is important to understand current needs while at the same time anticipating future needs and incorporating innovation, which requires "flexible core system design" and "a diverse ecosystem surrounding CBDCs”.

(3) Under “Financial stability implications”, if a significant shift of funds from bank deposits to CBDC were to occur, safeguards against this need to be considered in advance in light of the potential impact on the financial intermediary function.

Summary of “Three Accompanying In-depth Reports"

Ⅰ : System Design and Interoperability	【Point】 Meeting the future needs of consumers will require the promotion of innovation, choice, and competition among the various intermediaries. To facilitate this, how can coordination and interoperability between the public and private sectors be incorporated into the CBDC system?	1 The central banks contributing to this report anticipate any CBDC ecosystems would involve the public and private sectors in a balance to deliver the desired policy outcomes and enable innovation that meets users’ evolving payment needs. 2 Need to ensure sufficient domestic interoperability to achieve easy flow of funds between the CBDC system and other payment systems. 3 Access to and treatment of payment data would play a significant role in any ecosystem design.
Ⅱ : User Needs and Adoption	【Point】 How can CBDC help people and businesses in a repidly changing technological environment?	1 A CBDC would need to anticipate the needs of future users and incorporate related innovations. 2 Central banks might accommodate evolving user needs by designing a flexible core system, supporting a diverse ecosystem of intermediaries delivering choice, competition and innovation. 3 Strategies for CBDC adoption would need to be tailored to the diverse economic structures and payment landscapes in individual jurisdictions.
Ⅲ : Financial Stability Implication	【Point】 How could the issuance of CBDC affect the banking system in terms of financial intermediation capacity and overall resilience?	1 A significant shift from bank deposits to CBDC (and even new forms of private digital money) could affect the lending and intermediation functions of the banking sector. 2 Central banks are considering safeguards to address financial stability risks. In such cases, the risks posed by the spread of CBDC need to be balanced against other policy objectives.

（Source）Extract from「Central bank digital currencies: executive summary」(Sep 2021)

1 - (7) Trends in “G7/G20/T20” (1/4)

Sep 2021
「THE EMERGENCE OF NEW MONIES AND THE NEED TO PREPARE THE FINANCIAL SYSTEM FOR THE DIGITAL AGE（TF9 – International Finance）」

- The G7/G20/T20 have generally advocated the importance of cross-border information sharing and international collaboration on research into digital money (including crypto assets, stablecoins, GSCs, and CBDCs) in general.
- Against this backdrop, the T20(*) issued a policy brief "THE EMERGENCE OF NEW MONIES AND THE NEED TO PREPARE THE FINANCIAL SYSTEM FOR THE DIGITAL AGE" in September 2021, for the G20 Summit (Rome, Italy) which was held at the end of October.

(*) Abbreviation for "Think 20," a policy research network of the G20 countries whose main role is to enable think tanks in each country to discuss various policy issues and make policy recommendations to the G20.

Summary of the “Specific Proposal”

1	Develop a comprehensive vision of the future of money and payments and continuous monitoring
2	Integrate that vision into an agenda to guide a resilient financial system in a prudent transition towards the digital age
3	Encourage the broadest possible international cooperation
4	Give impulse to a Global Digital Governance Compact for a responsible and inclusive digital economy; within this Compact, develop a Financial Chapter and calibrate the financial Agenda accordingly
5	Continue execution of the G20 Roadmap for Cross-Border Transactions
6	Continue supporting the Global Partnership for Financial Inclusion and implementing its G20 Financial Inclusion Action Plan

In addition, T20 recommend the setup of a "Digital Money & Finance Working Group (DMF-WG)" to;
(a) Perform the analysis of new digital instruments and procedures
(b) Propose the framework(s) for their incorporation to improve the financial architecture and society’s welfare
(c) Monitor of implementation.

This vision should be set under the umbrella of the Financial Stability Board (FSB). The IMF, the World Bank, and the BIS (with the Committees of Payments and Market Infrastructure and on the Global Financial System and its Central Bank Governance Group) should be members.
Active consultation with the International Standard-Setting Bodies is advised and engaging the private sector is essential due to its key role, especially in digital retail activities.

（Source）Extract from T20「Policy Brief」

1 - (7) Trends in “G7/G20/T20” (2/4)

Sep 2021 (continued)
「THE EMERGENCE OF NEW MONIES AND THE NEED TO PREPARE THE FINANCIAL SYSTEM FOR THE DIGITAL AGE（TF9 – International Finance）」

- The report states that “the two-tier financial system (a division in which the central banks monopolize base money issuance and private banks are in charge of broad money and credit creation)” is “no longer an unassailable bastion” due to the advancement of digitalization, and that central banks must “prepare themselves for the digital age by creating a financial system that is able to handle the digital age”. And, in order to ensure that “our money remains relevant,” the G20 leaders were presented with a “Specific Proposal” (previous page) and "Guidelines for a TO DO LIST“(table below).

Summary of the “Guidelines for a TO DO LIST”
1. VISION AND ADGENDA
It should assess vulnerabilities and potential benefits of different money and payment system designs; allow multiple payment alternatives to make the financial system more resil ient and competitive with faster payments and broader access.
Systemic risk must remain a priority. Making functionality not exclusively dependent on the banking system and levelling the playing field could help mitigate it.
CBDCs might be needed to ensure universal access to public money and the effectiveness of financial and monetary policies. But, its implementation should not give the public sector additional leverage in the economy.
Embrace the BIS’s principles (2020) for CBDCs; 1) do no harm, 2) ensure coexistence, and 3) foster innovation
Topics including "architecture and access", "data utilisation and sharing", "trust-building", "identification and privacy", "operational and cyber-resilience", "law and tax enforcement" require an ongoing evaluation process.
2. COOPERATION
The threat of international currency competition favours close international cooperation, but decisions will be rooted in national interests. Cooperation should dissuade a race to implement pre-emptive second-best solutions. The Agenda already reveals a strong defensive bias (preserving monetary sovereignty, avoiding digital “dollarisation”, evading financial sanctions). Coordination should select the choices promising the best collective outcomes.
While G7 central banks are cooperating on CBDCs, China has pioneered a carefully crafted independent path. It is feasible to harmonise experiences.
Cooperation between Advanced and Emerging Economies must gain broader scope and participation. We strongly support establishing BIS Innovation Hub nodes outside the leading financial centres in regions like Latin America and Africa that are busy with innovation.
3. A GLOBAL DIGITAL GOVERNANCE COMPACT
Digitalisation is reshaping society without a consistent set of shared norms. We urge G20 leaders to create a "Global Digital Governance Compact" to establish principles, codes of conduct, standards, regulation, and policies across the many relevant domains to build trust and ensure it works for the greater good.
The current segmented regulatory and monitoring efforts are counterproductive in an environment where key players, such as large tech companies, operate across various financial and non-financial businesses requiring cooperation across different authorities and geographic jurisdictions.
4. DIGITAL FINANCIAL INCLUSION
Digitalisation has contributed significantly to enhance financial inclusion globally through digital financial services (payments, remittances, transfers, savings, credit, insurance, securities, and others).
Supporting the "G20 Financial Inclusion Action Plan" should remain a priority when designing the Agenda.

（Source）Extract from T20「Policy Brief」

1 - (7) Trends in “G7/G20/T20” (3/4)

Oct 2021
「G7 Finance Ministers and Central Bank Governor’s Statement on Central Bank Digital Currencies（CBDCs）and Digital Payments」

- G7 Finance Ministers and Central Bank Governors declared the "Statement on Central Bank Digital Currencies (CBDCs) and Digital Payments)" (hereinafter "Statement") at the meeting on October 13th, 2021 in Washington, DC.
- While none of the G7 countries has any plans to issue CBDCs at this time, the Statement suggests that careful consideration of potential policy implications will continue.
- Also, that CBDCs must operate in a transparent and competitive environment. It also stresses the importance of transparency regarding the protection and use of information for the sake of monetary and financial stability and to gain the trust and confidence of users, and (although the country is not specified in the text) urges China (DCEP) and other leading countries in the development of CBDC.

Summary of the ”Statement”

#	Summary ("We" = G7)
1	Innovation in digital money and payments has the potential to bring significant benefits but also raises considerable public policy and regulatory issues.
	"Strong international coordination and cooperation" on these issues helps to ensure that public and private sector innovation will deliver domestic and cross-border benefits while being safe for users and the wider financial system.
2	If issued, a CBDC would "complement cash" and "could act as a liquid, safe settlement asset" and "as an anchor for the payments system".
	Alongside this statement, G7 finance ministries and central banks are publishing "Public Policy Principles for Retail CBDCs", to support and inform domestic policy and design deliberations within and beyond the G7.
	No G7 authority has yet taken the sovereign decision to issue a CBDC and careful consideration of the potential policy implications will continue.
3	We reaffirm that any CBDC should be grounded in our long-standing public commitments to "transparency", "the rule of law" and "sound economic governance".
	Any CBDC must support, and ‘do no harm’ to, the ability of central banks to fulfil their mandates for monetary and financial stability.
	We emphasise the importance of rigorous standards of privacy, accountability for the protection of users’ data, and transparency on how information will be secured and used, to command trust and confidence by users.
	Any CBDC ecosystem must be secure and resilient to cyber, fraud and other operational risks, must address illicit finance concerns and be energy efficient.
	CBDCs must operate in an open, transparent and competitive environment that promotes choice, inclusivity and diversity in payment options.
	We note the importance of considering interoperability on a cross-border basisgiven the potential role for CBDCs in enhancing cross-border payments. At the same time, we recognise a shared responsibility to minimise harmful spillovers to the international monetary and financial system.

#	Summary ("We" = G7)
4	We will continue working together to deepen our analysis of these public policy implications, including with relevant international organisations and standard setting bodies.
	We welcome further work by central banks, relevant authorities, and IMF to analyse potential impacts/effects of introducing CBDCs.
5	We are committed to continued coordination and cooperation to ensure that innovation in private digital money and payments is responsible, safe and consistent with our shared policy objectives.
	We reiterate that no global stablecoin project should begin operation until it adequately addresses relevant legal, regulatory and oversight requirements through appropriate design and by adhering to applicable standards.
	Stablecoins will need to be held to high regulatory standards, following the principle of same activity, same risk, same regulation, as is true for commonly used forms of money and payments in our economies.
6	We are committed to international co-operation to ensure common standards for the regulation of stablecoins.
	We welcome the work of CPMI, IOSCO, PFMI, and FSB related to stablecoins / GSCs.
7	We commit to the ambitious implementation of the G20 Roadmap to enhance cross-border payments, and welcome the quantitative global targets that have been set recently for addressing the challenges of cost, speed, transparency and access by 2027.

（Source）Extract from「G7 Statement」

1 - (7) Trends in “G7/G20/T20” (4/4)

Oct 2021
「Public Policy Principles for Retail Central Bank Digital Currencies（CBDCs）」

- On October 14, 2021, the G7 (Cornwall, UK) published "The Public Policy Principles for Retail Central Bank Digital Currencies (CBDCs) (henceforth "Public Policy Principles")". The principles are divided into two categories, "Foundational Issues" and "Opportunities".
- The Public Policy Principles include the aspect of "Dependencies," which are addressed by (1)Articulation and prioritization, (2)Understanding underlying design choices, (3)Evaluation techniques, (4)Exploring technology, architecture and policy solutions, and (5)Engaging stakeholders. At the same time, it noted that there are "trade-offs" in the public policy objectives of CBDC and presented the following as examples: (1)Protection of user information vs Reduction of illicit transactions, (2)Robustness vs Functionality, and (3)Cross-border use vs Minimization of spillover effects.

Summary of “Foundational Issues”

1: Monetary and financial stability	
	Any CBDC should be designed such that it supports the fulfillment of public policy objectives, does not impede the central bank’s ability to fulfill its mandate and ‘does no harm’ to monetary and financial stability.
2: Legal and governance frameworks	
	G7 values for the International Monetary and Financial System should guide the design and operation of any CBDC, namely "observance of the rule of law", "sound economic governance" and "appropriate transparency".
3: Data privacy	
	Rigorous standards of privacy, accountability for the protection of users’ data, and transparency on how information will be secured and used is essential for any CBDC to command trust and confidence. The rule of law in each jurisdiction establishes and underpins such considerations.
4: Operational resilience and cybersecurity;	
	To achieve trusted, durable, and adaptable digital payments; any CBDC ecosystem must be secure and resilient to cyber, fraud and other operational risks.
5: Competition	
	CBDCs should coexist with existing means of payment and should operate in an open, secure, resilient, transparent and competitive environment that promotes choice and diversity in payment options.
6: Illicit finance	
	Any CBDC needs to carefully integrate the need for faster, more accessible, safer and cheaper payments with a commitment to mitigate their use in facilitating crime.
7: Spillovers	
	CBDCs should be designed to avoid risks of harm to the international monetary and financial system, including the monetary sovereignty and financial stability of other countries.
8: Energy and environment	
	The energy usage of any CBDC infrastructure should be as efficient as possible to support the international community’s shared commitments to transition to a ‘net zero’ economy.

Summary of “Opportunities”

9: The digital economy and innovation	
	CBDCs should support and be a catalyst for responsible innovation in the digital economy and ensure interoperability with existing and future payments solutions.
10: Financial inclusion	
	Authorities should consider the role of CBDCs in contributing to financial inclusion. CBDC should not impede, and where possible should enhance, access to payment services for those excluded from or underserved by the existing financial system, while also complementing the important role that will continue to be played by cash.
11: Payments to and from the public sector	
	Any CBDC, where used to support payments between authorities and the public, should do so in a fast, inexpensive, transparent, inclusive and safe manner, both in normal times and in times of crisis.
12: Cross-border functionality; and international development	
	Jurisdictions considering issuing CBDCs should explore how they might enhance cross-border payments, including through central banks and other organisations working openly and collaboratively to consider the international dimensions of CBDC design.
13: International development	
	Any CBDC deployed for the provision of international development assistance should safeguard key public policies of the issuing and recipient countries, while providing sufficient transparency about the nature of the CBDC’s design features.

（Source）Both tables extract from「Public Policy Principles」

1 - (8) Trends in FSB (1/8)

Oct 2020
「Regulation, Supervision and Oversight of “Global Stablecoin” Arrangements - Final Report and High-Level Recommendations -」

- The FSB (Financial Stability Board) was established in 2009 and is responsible for measures, regulation, and supervision of international finance. Its secretariat is located within the Bank for International Settlements (BIS).
- Initially, the Board focused on the regulation of stablecoin / GSC (Global Stable Coin). On October 2020 "Regulation, Supervision and Oversight of "Global Stablecoin" Arrangements - Final Report and High-Level Recommendations -" were published to promote coordinated and effective regulation, supervision and monitoring 10 "High-Level Recommendations" to address financial stability risks by the GSC.

FSB High-Level Recommendations to Address the Regulatory, Supervisory and Oversight Challenges Raised by GSCs Arrangements

1. Authorities should have and utilise the necessary powers and tools, and adequate resources, to comprehensively regulate, supervise and oversee a GSC arrangement and its associated functions and activities, and enforce relevant laws and regulations effectively.
2. Authorities should apply comprehensive regulatory, supervisory and oversight requirements and relevant international standards to GSC arrangements on a functional basis and proportionately to their risks.
3. Authorities should cooperate and coordinate with each other, both domestically and internationally, to foster efficient and effective communication and consultation to support each other in fulfilling their respective mandates and to ensure comprehensive regulation, supervision, and oversight of a GSC arrangement across borders and sectors.
4. Authorities should ensure that GSC arrangements have in place a comprehensive governance framework with a clear allocation of accountability for the functions and activities within the GSC arrangement.
5. Authorities should ensure that GSC arrangements have effective risk management frameworks in place especially with regard to reserve management, operational resilience, cyber security safeguards and AML/CFT measures, as well as ‘fit and proper’ requirements.
6. Authorities should ensure that GSC arrangements have in place robust systems for collecting, storing and safeguarding data.
7. Authorities should ensure that GSC arrangements have appropriate recovery and resolution plans.
8. Authorities should ensure that GSC arrangements provide users and relevant stakeholders with comprehensive and transparent information necessary to understand the functioning of the GSC arrangement, including with respect to its stabilisation mechanism.
9. Authorities should ensure that GSC arrangements provide legal clarity to users on the nature and enforceability of any redemption rights and the process for redemption, where applicable.
10. Authorities should ensure that GSC arrangements meet all applicable regulatory, supervisory and oversight requirements of a particular jurisdiction before commencing any operations in that jurisdiction, and adapt to new regulatory requirements as necessary.

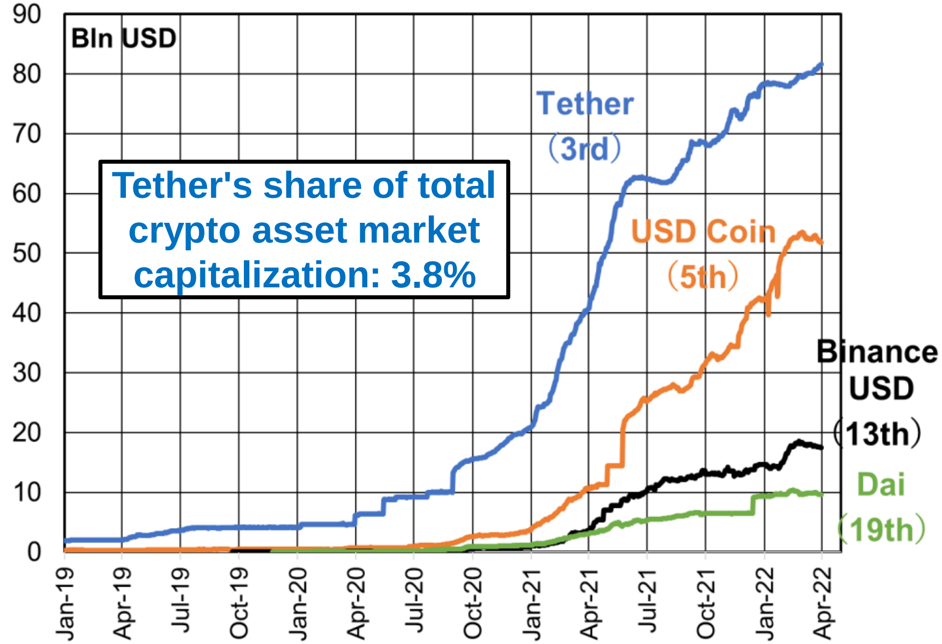
(Source) 「Regulation, Supervision and Oversight of “Global Stablecoin” Arrangements - Final Report and High-Level Recommendations -」(Oct 2020)

1 - (8) Trends in FSB (2/8)

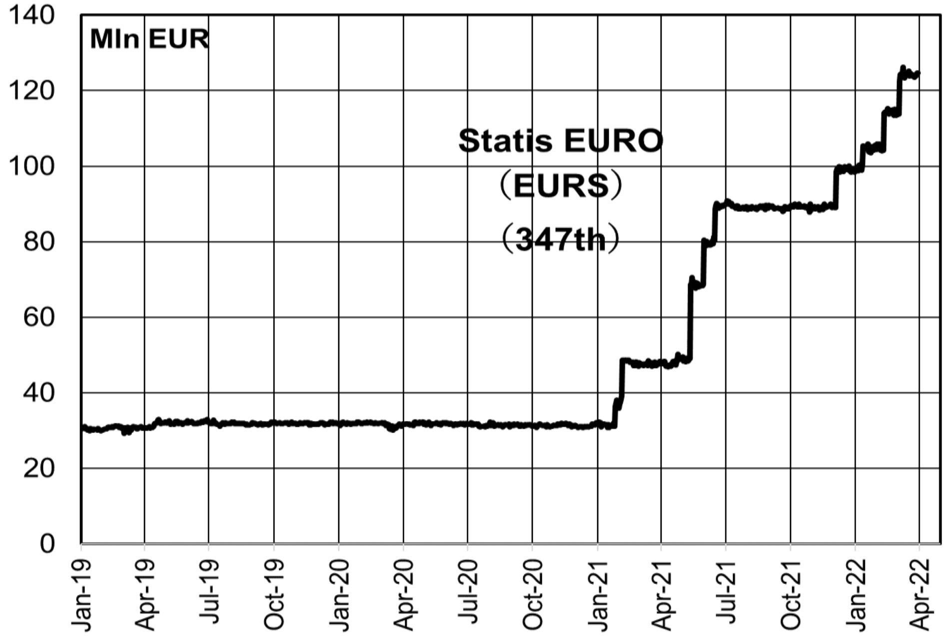
Oct 2021
「Regulation, Supervision and Oversight of "Global Stablecoin" Arrangements: Progress Report on the implementation of the FSB High-Level Recommendations」

- The FSB published "Regulation, Supervision and Oversight of "Global Stablecoin" Arrangements - Progress Report on the FSB High-Level -" (henceforth the "Progress Report") on October 2021, reporting on each country's progress against the aforementioned "10 High-Level Recommendations".
- Though the market capitalization of stablecoin has increased rapidly, it is mainly held and traded for "speculative purposes at present. However, there are concerns that this could lead to broader financial stability issues in the future through the participation of retail investors and a decline in confidence in the financial system. And there is a possibility that stablecoin will become a mainstream financial system in multiple countries and regions as a means of settlement and value preservation, and a significant amount of it will be traded (i.e., GSC).
- Since GSCs may pose greater risks to financial stability than Stable Coin, it asserted that it is necessary to "ensure appropriate regulatory, supervisory, and monitoring systems across sectors and jurisdictions" and "continuous and vigilant monitoring by authorities of both potential risk transmission channels and vulnerabilities arising from stablecoin's evolving use cases."

Market Capitalization of Major Stable Coin (USD Fixed)



Market Capitalization of Major Stable Coin (EUR Fixed)



(Source: Both chart) Coinmarektcap (as of Mar 31st, 2022)
Number of Crypto Assets : 18,610 / Market Cap.: USD2,154.2Bln

1 - (8) Trends in FSB (3/8)

Oct 2021
「Regulation, Supervision and Oversight of “Global Stablecoin” Arrangements: Progress Report on the implementation of the FSB High-Level Recommendations」(continued)

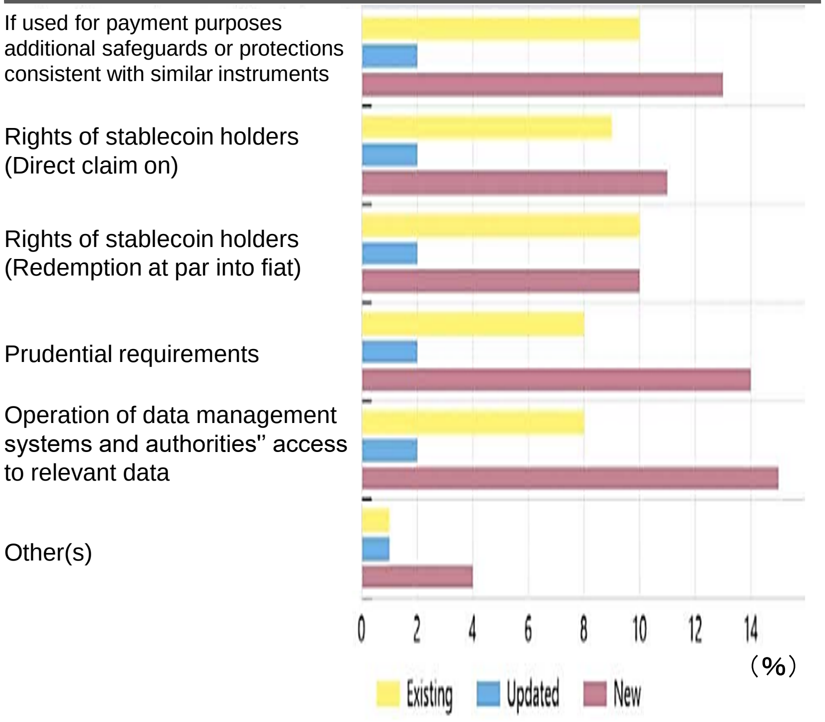
- The progress of 48 countries (27 developed and 21 developing) was checked in the first half of 2021. While several countries/regions have been reviewing and updating their legal and regulatory regimes, the report concludes that the establishment of their supervision and monitoring systems is "still at an early stage".
- The majority of countries/regions also consider it important to manage and monitor the potential gaps and regulatory arbitrage of GSCs (i.e., GSC transactions becoming more active in less regulated areas), and emphasizes the importance to ensure adequate regulation, supervision, and monitoring supported by appropriate international standards.
- In addition, all authorities responding to the FSB stock-take highlighted the importance of cross-border cooperation and coordination between authorities. (e.g., through "MoUs" if appropriate or needed) in order to overcome the challenges and risks posed by cross-border settlements in the GSC.

Status of Legal and Regulatory Considerations for Stablecoin in Major Countries and Regions

EU	【EC (European Commission)】 Issued a proposal for a regulation on markets in crypto assets (MiCA). The legislative process on MiCA is ongoing and still subject to discussion in EU legislative bodies. The subsequent overview is therefore not final. The following provisions are stipulated for stablecoins ; 1) Stablecoins are subject to authorisation requirement in the EU and must prepare a crypto-asset white paper. 2) For ARTs(asset-referenced tokens), MiCA sets out obligations concerning, governance, information to users (including on the management of the reserve), handling of complaints, prevention of conflicts of interest, and orderly wind-down.It also includes obligations regarding the investment of reserve assets, the custody of reserve assets and rights of holders. 4) Supervision by the European Banking Authority (EBA). 5) Regulates crypto-asset service providers, including wallet providers and operators of trading platforms and exchanges as well.
Singapore	【MAS (Monetary Authority of Singapore)】 Issued a public consultation in December 2019, seeking views on the interactions between money, e-money, and cryptocurrencies, including stablecoins, and the appropriate regulatory treatment for cryptocurrencies, particularly stablecoins. T MAS is continuing work on reviewing the appropriate regulatory treatment for stablecoins, such as the treatment under different legislation, taking into consideration its practical use and risks, and informed by ongoing work of the international SSBs.
U.S.A.	【PWG (U.S. President's Working Group on Financial Markets)】 PWG is working on the preparation of a report on stablecoins, which will discuss their potential benefits and risks, the current U.S. regulatory framework, and recommendations for addressing any regulatory gaps.
U.K.	【TM Treasury】 Issued a public consultation on crypto-assets and stablecoins on 7 January 2021. It proposes that stablecoins which could be reliably used for retail or wholesale payment transactions be subject to minimum requirements and protections as part of a UK authorisation regime under the responsibility of the FCA (Financial Conduct Authority). 【BOE (Bank of England)】 Issued a Discussion Paper on new forms of digital money in June 2021, including systemic stablecoins. The paper elaborates on the proposal set out in HMT’s consultation to bring systemic stablecoins within the Bank of England’s regulatory remit.

（Source）Extract from 「Progress Report」

Implementation Through Existing, New or Updated Legal Frameworks, Standards, Guidance and Other Regulatory, Supervisory and Oversight Tools



（Source）Extract from 「Progress Report」(Graph2)

1 - (8) Trends in FSB (4/8)

Oct 2021
「G20 Roadmap for enhancing cross-border payments
: First consolidated progress report」

- The G20 Riyadh Summit Leaders' Declaration was issued at the G20 Riyadh Summit on November 20-21, 2020 (via video conference because of the COVID-19 disaster)*.One of the challenges in the financial sector is to improve cross-border remittances (#16), and the leaders called on the FSB and other international organizations to implement plans to improve cross-border remittances and to report regularly to the G20.

  (*) For a summary of the G20 Riyadh Summit Declaration, see https://www.mofa.go.jp/files/100117981.pdf

- International organizations, led by the FSB, will release reports on "Improving Cross-Border Remittances" sequentially from April 2020 onward, identifying priority areas/elements and their improvement schedules by 2020. The report includes a section on GSC (Global Stable Coin) and CBDC in its "#18" and "#19" sections (see next page).
- From 2021, the progress of each component will be checked and evaluated. On October 13th of the same year, the "First Consolidated Progress Report" was released and submitted to the G20 Summit (Rome, Italy). Since then, the FSB has taken the lead in reviewing, evaluating, and reporting progress on an annual basis in principle.

Changes in Reports on Improving Cross-Border Remittances

Phase	Stage	Released	Name of the Report (Summary)	Institution
Analysis and Goal Setting	Stage 1 Assessment	Apr.09, 2020	Enhancing Cross-border Payments (Stage 1 report to the G20) Assess existing arrangements and issues related to cross-border remittances.	FSB
	Stage 2 Building Blocks	Jul.13, 2020	Enhancing cross-border payments: building blocks of a global roadmap (Stage 2 report to the G20) Developed Building Blocks of responses to improve current international cross-border settlement arrangements. It also identifies areas where the public sector can assist in the transition to improved cross-border remittance systems and public goods, and in the removal of unnecessary barriers.	BIS
	Stage 3 Roadmap	Oct.13, 2020	Enhancing Cross Border Payments (Stage 3 roadmap) Based on the above-mentioned stages, the FSB, together with international organizations and standard-setters, coordinates the development of a roadmap that shows the way forward.	FSB
Approval	G20 Riyadh Summit	Nov.20 -21 2020	G20 Riyadh Summit Leaders' Declaration (Extract from #16 "Financial Sector Issues") The (COVID-19) pandemic has reaffirmed the need to enhance global cross-border payment arrangements to facilitate "cheaper", "faster", "more inclusive and more transparent" payment transactions, including for remittances. We endorse the G20 Roadmap to Enhance Cross-Border Payments. We ask the FSB, in coordination with international organizations and standard-setting bodies, to monitor the progress, review the roadmap and annually report to the G20.	G20
Assessment	1st Consolidated Progress Report	Oct.13, 2021	G20 Roadmap for enhancing cross-border payments: First consolidated progress report The report emphasizes that most of the milestones set in "Stage 3: Roadmap" described above have been successfully completed or are nearing their final stages. The final goal of the overall roadmap remains firmly on track, although some timelines have been extended due to the breadth of the work in progress and the recognition of the importance of sufficient external outreach.	FSB
	2nd Consolidated Progress Report	Yr2022 (Estimate: October)	<From the "First Consolidated Progress Report"> In the "Second Consolidated Progress Report", (1) A detailed report on how progress on each milestone will be monitored (2) Develop and report on key performance indicators to estimate current performance of cross-border remittances is scheduled to be implemented. (an interim report is scheduled to be released in June 2022).	FSB (Estimate)
	3rd Consolidated Progress Report	Yr2023 (Estimate)	(Reports will be submitted on an annual basis thereafter)	FSB (Estimate)

(Source) Prepared by the Institute for International Monetary Affairs from various sources

1 - (8) Trends in FSB (5/8)

Oct 2021
「G20 Roadmap for enhancing cross-border payments
: First consolidated progress report」(continued)

- In the "First Consolidated Progress Report" released on October 13th, 2021, most of the milestones set in the roadmap for each of the key elements during 2021 have been met, although some deadlines have been extended due to the broad impact of some of the work and the need for further and adequate outreach to external stakeholders and reported that the project is well on its way to completion or nearing the final stages.
- Work to be done in 2022 will include "formulation of proposals for specific improvements in basic systems and arrangements" and "system development" in addition to further analysis. Going forward, "global coordination," "ongoing political support," and "investments in systems, processes, and technology" are important.

Targets of Cross-boarder Remittance Improvement Roadmap

	Challenge	Payment Sector		
		Wholesale	Retail (e.g.:B2B、P2B / B2P、other P2P)	Remittances (P2P)
1	Cost	(No target set)	Global average cost of payment to be no more than 1%, with no corridors with costs higher than 3% by end 2027	【Reaffirm UN SDG】 Global average cost of sending $200 remittance to be no more than 3% by 2030, with no corridors with costs higher than 5%
2	Speed	75% of cross-border wholesale payments to be credited within one hour of payment initiation or within one hour of the pre-agreed settlement date and time for forward-dated transactions and for the remainder of the market to be within one business day of payment initiation, by end-2027. Payments to be reconciled by end of the day on which they are credited, by end-2027.	75% of cross-border retail payments to provide availability of funds for the recipient within one hour from the time the payment is initiated and for the remainder of the market to be within one business day of payment initiation, by end-2027.	75% of cross-border remittance payments in every corridor to provide availability of funds for the recipient within one hour of payment initiation and for the remainder of the market to be within one business day, by end 2027.
3	Access	All financial institutions (including financial sector remittance service providers) operating in all payment corridors to have at least one option and, where appropriate, multiple options (i.e. multiple infrastructures or providers available) for sending and receiving cross-border wholesale payments by end 2027.	All end-users (individuals, businesses (including MSMEs) or banks) to have at least one option (i.e. at least one infrastructure or provider available) for sending or receiving cross-border electronic payments by end-2027.	More than 90% of individuals (including those without bank accounts) who wish to send or receive a remittance payment to have access to a means of cross-border electronic remittance payment by end-2027.
4	Transparency	All payment service providers to provide at a minimum the following list of information concerning cross-border payments to payers and payees by end-2027: (1) total transaction cost (showing all relevant charges, including sending and receiving fees including those of any intermediaries, FX rate and currency conversion charges); (2) the expected time to deliver funds; (3) tracking of payment status; and (4) terms of service.		

（Source）Extract from 「G20 Roadmap for Enhancing Cross-border Payments (First consolidated progress report)」(Oct 2021)

Focus Areas for Enhancing Cross-Border Payments

	Building Block	Main Institution
A :	Commit to a joint public and private sector vision to enhance cross-border payments	
BB1	Developing a common cross-border payments vision and targets	FSB
BB2	Implementing international guidance and principles	FSB
BB3	Defining common features of cross-border payment service levels	CPMI
B :	Coordinate regulatory, supervisory and oversight frameworks	
BB4	Aligning regulatory, supervisory and oversight frameworks for cross-border payments	FSB
BB5	Applying AML/CFT rules consistently and comprehensively	FATF
BB6	Reviewing the interaction between data frameworks and cross-border payments	FATF
BB7	Promoting safe payment corridors	IMF / WB
BB8	Fostering KYC and identity information sharing	FSB
C :	Improve existing payment infrastructures and arrangements to support the requirements of the cross-border payments market	
BB9	Facilitating increased adoption of PvP	CPMI
BB10	Improving (direct) access to payment systems by banks, non-banks and payment infrastructures	CPMI
BB11	Exploring reciprocal liquidity arrangements across central banks (liquidity bridges)	CPMI
BB12	Extending and aligning operating hours of key payment systems to allow overlapping	CPMI
BB13	Pursuing interlinking of payment systems for cross-border payments	CPMI
D :	Increase data quality and straight through processing by enhancing data and market practices	
BB14	Adopting a harmonised ISO 20022 version for message formats (including rules for conversion/mapping)	CPMI
BB15	Harmonising API protocols for data exchange	CPMI
BB16	Establishing unique identifiers with proxy registries	FSB
E :	Explore the potential role of new payment infrastructures and arrangements	
BB17	Considering the feasibility of new multilateral platforms and arrangements for cross-border payments	CPMI / BIS(IH)
BB18	Fostering the soundness of global stablecoin arrangements for cross-border payments	FSB / CPMI
BB19	Factor an international dimension into CBDC designs	CPMI / BIS(IH)

（Source) Extract from BIS「Enhancing cross-border payments (Stage 2)」(Jul 2020)

(BIS(IH) : BIS Innovation HUB

1 - (8) Trends in FSB (6/8)

Oct 2021
「G20 Roadmap for enhancing cross-border payments
: First consolidated progress report」(continued)

- Among the key elements "#18: GSC" and "#19: CBDC" emphasize that "(GSC) is not used for large settlements/(CBDC) has not been introduced in major countries," but that continued research and consideration of "impact on financial stability" and "consistency of AML/CFT" are necessary.

Actions and Milestones of "BB (Building Block) #18" and "BB19"

	Actions		Milestones
BB18: Fostering the soundness of global stablecoin arrangements for cross-border payments			
Action1	Completion of international standard-setting work, by reviewing existing standards and principles, and assessing the need for further guidance in accordance with the FSB recommendations	**SSBs (CPMI, FATF, IOSCO, BCBS),** as needed, to make any revisions to standards and principles or provide further guidance supplementing existing standards and principles in light of the FSB Report and following their review of their existing frameworks, including on cooperation, coordination and information sharing amongst authorities.	October 2020 - December 2021 (The deadline was then set to "April 2022"(revised))
Action2	Implementation of international standards in national jurisdictions, including effective cooperation, coordination and information sharing arrangements to support the comprehensive regulation, supervision and oversight of GSC arrangements across borders and sectors, in accordance with the FSB Report	**National authorities** to consider establishing or, as necessary, adjusting, for any existing GSCs and stablecoin arrangements that have the potential of becoming a GSC, cooperation arrangements consistent with international standards and principles, and the FSB Report.	October 2020 - December 2021, and as needed depending on the emergence of cross-border GSC arrangements
		National authorities to consider establishing or, as necessary, adjusting regulatory, supervisory and oversight frameworks consistent with the FSB recommendations and international standards and guidance.	October 2020 - July 2022 and as needed depending on the emergence of cross-border GSC arrangements
Action3	Review of the implementation and assess the need to refine or adapt international standards	**FSB** to review in consultation with other relevant SSBs and IOs the recommendations in the FSB Report and how any gaps identified could be addressed by existing frameworks, and update recommendations if needed.	January 2022 - July 2023
Action4 (Addition)	Added Action at the "First Consolidated Progress Report" (Oct. 2021)	CPMI in cooperation with relevant stakeholders and subject to the work on regulation, supervision and oversight of stablecoin arrangements, to consider whether and how the use of well designed global stablecoin arrangements could enhance cross border payments. CPMI in cooperation with relevant stakeholders to continue evaluating the impact on central banks' monetary, financial stability and payment functions.	October 2021 - December 2022
BB19: Factoring an international dimension into CBDC design			
Action1	Stocktaking and analysis of different CBDC designs	**CPMI in collaboration with BISIH, IMF and WB** to conduct a stock-take of provisional domestic CBDC designs and central bank experimentation and the extent they could be used for cross-border payments.	November 2020 - July 2021
		IMF, in cooperation with other relevant stakeholders, to analyse international macro financial implications of cross-border CBDC use.	
Action2	Development of options for access and/or interlinking	**CPMI in collaboration with BISIH, IMF and WB** to identify and analyse options for access to and interlinking of CBDCs that could improve cross border payments, covering different CBDC designs, access and interlinkage options (including interoperability with non-CBDC payment arrangements). BB17, 18 and 19, given that they will be addressing in part similar issues, will share relevant analysis and emerging thinking.	August 2021 - July 2022
Action3	Design study and dissemination	**BISIH** to assess the practical and technological complexities of implementing different multi-CBDC arrangement designs and interoperability types; conduct trials, experiments and prototyping of arrangements that enable access and interlinking and facilitate efficient cross-currency CBDC payments.	January 2022 - December 2022
		BIS in collaboration with IMF and WB to organise a conference to share information exchange/encourage collaboration on cross border payments across (planned) CBDC implementations.	
		IMF and WB to provide technical assistance on how to facilitate cross border use of CBDC if requested.	From July 2022 onwards

(Source) Extract from BIS「Enhancing Cross-border Payments (Stage 3 roadmap)」(Oct 2020)

1 - (8) Trends in FSB (7/8)

Feb 2022
「Assessment of Risks to Financial Stability from Crypto-assets」

- On February 16th, 2022, the FSB published "Assessment of Risks to Financial Stability from Crypto-assets". Based on recent developments in the crypto-asset market ("unsupported crypto-assets“, "stablecoins“, "decentralized finance (DeFi)“, and their trading platforms), the report outlines its views on the impact of crypto-assets on financial stability.
- While yet crypto-assets remain a small portion of overall global financial system assets, "insufficient data makes it difficult to get a complete picture“, "many investors and consumers do not fully understand what they are buying/selling“, and "deepening involvement of systemically important financial institutions (SIBs), hedge funds, and others in crypto asset trading“, etc. may cause financial stability risks to grow rapidly, and stressed the need to consider possible policy responses "in a timely and expeditious manner".

Overview of Vulnerabilities Related to “Unbacked Crypto-assets" and "Stablecoins"

	Vulnerabilities Concerning Unbacked Crypto-assets (such as Bitcoin)	Vulnerabilities Concerning Stablecoins
#1 Financial Sector Exposures	Connections between crypto-assets and systemically important financial institutions and core financial markets, though expanding, remain limited at the present time. However, much of the trading activity in crypto-assets, as well as in futures and other derivatives referencing them, takes place on platforms that may be operating outside the regulatory perimeter (or, in some cases, may be failing to comply with applicable laws and regulations) and without regulatory oversight that would provide transparency on the nature and extent of these exposures. If current trends continue, and absent effective regulation and supervision, financial stability risks may emerge as crypto-assets become increasingly interconnected with the wider financial system.	As with unbacked crypto-assets, linkages with the core financial system are rising. However, stablecoin issuers are not subject to a consistent set of standards regarding the composition of reserve assets backing the stablecoin, and there is a lack of consistency in disclosure practices among stablecoin issuers. Large-scale redemptions or a run on a stablecoin's reserve assets could lead to fire sales of those assets, creating disruptions in the markets in which the reserve is invested, such as the short-term funding markets.
#2 Wealth Effects	The recent price spike and attendant volatility may have been driven in large part by speculation, and increased appetite for "risk assets" from retail investors Even if the impact is limited on a global scale, the wealth effect could have a significant impact on a domestic level.	Total market capitalisation of stablecoins reportedly stood at around $157 billion in December 2021, an increase from $5.6 billion at the start of 2020. This represents about 6% of total crypto-assets, which is well above the 2-3% pre-pandemic levels. On the other hand, a number of incidents have raised wider concerns about governance, risk management and operational resilience in the stablecoin sector, with certain features that may amplify fragilities and undermine confidence in crypto-asset markets.
#3 Confidence Effects	Widespread holdings of crypto-assets by retail investors with limited knowledge of the market functioning including transaction fees, and given the lack of investor protections, or recovery and resolution frameworks, could result in adverse confidence effects. Taken together, this evidence suggests that any abrupt decrease in the value of crypto-assets – including that stemming from an operational incident – might result in a sharp loss of confidence by investors.	Certain stablecoins display structural features and vulnerabilities, such as maturity and liquidity mismatches, which have some similarities to money market funds. This includes their stated aim (but without a guarantee) to offer redemption at par, although redemption rights are not always well defined. At present, stablecoins are being used mainly as a bridge between traditional fiat currencies and digital assets, which in turn are primarily held and traded for speculative purposes. These close linkages suggest that the failure of certain stablecoins may pose a threat to the stability of the crypto-asset ecosystem itself, with knock-on effects to confidence in the sector.
#4 Use in Payments and Settlement	Thus far, the use of crypto-assets for payments remains limited. The most popular crypto-assets (Bitcoin) lack stability as a store of value, do not function as a unit of account, and have performance shortcomings (speed, cost and capacity) that limits their usefulness for mainstream payments. In some EMDEs, it has been argued that crypto-assets are becoming more prevalent out of necessity, such as to maintain savings in the face of currency devaluation or to carry out remittances. But the use of that as currency may add to economic instability Additionally, increasing financial exposures to crypto-assets with a significant energy footprint contributes to increased transition risk for the financial system, as these assets are vulnerable to jurisdictions' climate policies.	Stablecoins are at present primarily used to facilitate trading, lending, or borrowing of other crypto-assets on or through crypto-asset trading platforms. While their functions may evolve over time, the current generation of stablecoins are not yet used as a widespread means of payment. . In the event that stablecoins were used more extensively for payment, they would face many of the same risks as current payment systems, including "credit risk", "liquidity risk", "operational risk", "risks arising from improper or ineffective governance", and "settlement risk". When not managed effectively and comprehensively, this may impair the availability of critical financial services on which the real economy depends, threaten confidence, and operate as a channel through which financial shocks spread.
#5 Potential Future Global Stablecoins (GSCs)		Looking to the future, the emergence of so-called “GSCs" would pose risks to financial stability that exceed those of existing stablecoins. A disorderly run due to a loss in confidence on a GSC that has reached significant scale could lead to disruptions in the real economy and spillovers into the broader financial system. These financial stability risks are particularly relevant for EMDEs, especially in countries where the value of the domestic currency is not stable and payment infrastructures are not well developed. A wide use of GSCs in foreign currency may provide an additional channel for capital outflows and lead to disintermediation of domestic banking sector

（Source）Extract from 「Assessment of Risks to Financial Stability from Crypto-assets」(Feb 2022)

1 - (8) Trends in FSB (8/8)

Feb 2022
「Assessment of Risks to Financial Stability from Crypto-assets」(continued)

- The report also warns that the recent rapid rise of DeFi and related platforms could pose a risk to financial stability without adequate regulation and market oversight. (left table).
- Above all, the crypto asset market is borderless in nature. Therefore, international cooperation and coordination are needed to collect "transparent, consistent, and reliable" data that can provide a complete picture of the market and identify and quantify risks to its financial stability, and to implement possible policy responses in a timely and preemptive manner.
- It then identifies areas for particular ongoing vigilance to strengthen monitoring of that market and to minimize regulatory arbitrage (i.e., prevent mass use in less-regulated countries and regions). (right table)

	Overview of Vulnerabilities Related to DeFi
1	DeFi platforms aim to provide a decentralised governance structure by issuing the governance tokens, making it challenging for public authorities and regulators to identify an entity or individual accountable for meeting regulatory obligations (e.g. if they maintain control of a DeFi application). <Supplemental Explanation> A "Governance Token" is like a "vote" for or against upgrading the platform in question.Therefore, the "Governance Token Holder" does not means equal to the "Administrator of the relevant DeFi platform".
2	One of the novel features of DeFi platforms is that visibility and verification of identities of counterparties is not required. In addition, some third-party service providers offer additional privacy-enhancement (or even law evasion) techniques for DeFi users. It can therefore be difficult to trace transactions, increasing the risk of these platforms attracting illegal activities, money laundering, terrorist financing, or circumventing sanctions restrictions.
3	The sector has already seen numerous operational and cybersecurity incidents, and failures of governance. It is said that DeFi related hacks made up over 75% of the $481 million known total hack and theft volume of crypto-assets through September 2021. DeFi also has the potential to increase risks to financial stability from crypto-assets.

	Areas for Particular Ongoing Vigilance
1	Potential increasing bank sector involvement in the crypto-asset eco-system, especially where activities give rise to balance sheet exposure to crypto-assets, not captured by (or not in compliance with) appropriate regulatory treatment.
2	Institutional investors increasing their exposures to crypto-assets relative to the size of their portfolios. Risks could increase further if such exposures employ high levels of leverage, including through the use of derivatives referencing crypto-assets.
3	Acceleration in adoption of crypto-assets for payments. This could happen via partnerships with established payment firms or retailers/social networks.
4	The growth, role and risks associated with crypto-asset trading platforms.
5	Losses in crypto-assets, where accompanied by leverage, liquidity mismatch and interconnections with the traditional financial system, may amplify systemic risk arising from wealth effects. Loss of confidence in stablecoins could also trigger sales of their reserve assets, potentially affecting the functioning of short-term funding markets.
6	A rapid growth of DeFi, in the absence of clearly identifiable intermediaries or parties responsible for governance, challenges core financial (stability) regulatory and supervisory disciplines and doctrines.
7	Differing regulatory approaches could lead to regulatory arbitrage, thus increasing potential systemic risks.
8	Data gaps impeding risk assessment and calibration of policy options.

（Source）Both table extract from 「Assessment of Risks to Financial Stability from Crypto-assets」(Feb 2022)

1. Current Considerations on Digital Money (including CBDC) by International Organizations

2. Current CBDC Considerations in Major Developed Countries

【Appendix / Reference】

2 - (1) Current Considerations in Major Developed Countries (1/3)

- Major developed countries with enhanced domestic payment systems (the U.S., Europe, Japan, and the U.K.) agree that CBDC is not a "substitute for cash and deposits" but a "supplement or complement" to them. They also continue to study CBDC as "one of the options" for upgrading existing payment systems.
- As a result, the earliest date for the 4 countries to consider issuing CBDC (not "determinate issuing CBDC") is the late 2020s (the U.S. has not specified or stated such a date).

Current CBDC Considerations in the U.S., Europe, Japan, and the U.K.

			U.S.A.（FRB）	Europe（ECB）	Japan（BOJ）	U.K.（BOE）	【Reference】 China（PBoC）
1	Name of the CBDC （Candidate）		U.S. central bank digital currency （U.S. CBDC）	Digital Euro	Digital Yen	U.K. CBDC (Digital Sterling(?))	E-CNY／DCEP
2	Forms of CBDC (Matters under consideration)						
	（1）	Retail or Wholesale	Retail	Retail	Retail	Retail	Retail
	（2）	vs Cash	CBDC is a thing that "complements", not "replaces", the current form of money and the way financial services are provided.	The digital euro is not intended to replace cash. It should only be a complementary form of payment.	CBDC is a "complement" to cash. As long as there is a need for cash, we will continue to supply it responsibly.	CBDC does not "replace" cash. It is a "complement" to cash.	Positioned as a cash currency "M0 (M zero)" similar to existing banknotes/coins. Also, (real) renminbi, such as banknotes, will continue to be issued as long as there is demand for them.
	（3）	Forms of Issuance	Prospects for forms "issued through an intermediaries".	Digital euros should be made equally available to all euro member states through "supervised intermediaries".	A "two-tier" structure is envisioned through intermediary institutions (banks and settlement providers). (vertical coexistence)	N/A	Issuance of " Indirect" type, with private banks and other intermediaries in between.
	（4）	Interest Payment or not	N/A	Under current circumstances, unlimited holdings of digital euros at zero interest rates do not seem feasible. ⇒ "A tiered interest rate"/"penalty based on the amount held" is also an option.	N/A (Listed as one of the validation items in Phase 2)	N/A	No interest rate attached. (Positioned as a cash currency "M0 (M zero)" similar to existing banknotes and coins)
	（5）	Capped or Not the "User's Storage / Transaction Amount"	N/A		N/A (Listed as one of the validation items in Phase 2)	N/A	The upper limit is set at "4 levels" depending on the personal information registered in the application (e-wallet). The highest level appears to be "Unlimited".
	（6）	Others	Stated clearly that FR do not intend to move forward with the issuance of CBDC "without explicit support from the executive branch and Congress, ideally in the form of specific authorizing legislation."		In parallel with the various demonstrations, BOJ will promote research and analysis of technologies related to privacy protection, security measures, card-type device specifications, etc. through the "Future of Settlement Forum" and other forums.		"Managed Anonymity" is applied for privacy.
3	Upcoming Schedule		"Money and Payments: The U.S. Dollar in the Age of DigitalTransformation (Jan 2022)". 22 questions are appended to fully evaluate potential CBDCs. Public comments on them are open until May 2022.	1) Go to a 2 year study period starting July 2021. During that time ECB will proceed with the design work. 2) (If the next step is to be taken based on the results of 1) above), full-scale experiments will be conducted over a period of about 3 years. Issue availability to be considered after 2026?	1) Until March 2022 Demonstration and verification (Phase 1) 2) April 2022 - March 2023 Demonstration and verification (Phase 2) 3) From April 2023 Pilot experiment (if necessary) Governor Kuroda's view is that a decision on whether or not to issue CBDC will be made by around 2026 (speech at the Budget Committee of the House of Representatives on January 28, 2022).	Initiate a study and research on whether to proceed with the introduction of CBDC by the end of 2022 (announced on Nov. 2021). Based on this "development" phase, if it is concluded that CBDC is operationally and technically robust, it will be issued in the late 2020s (second half of the decade) at the earliest.	October 2020: Full-scale demonstration testing begins. February 2022: Full-scale operation is scheduled to begin in conjunction with the Beijing Winter Olympics.
4	Reference Page		p47 - 51	p52 - 55	p56 - 57	p58	

(Source: Prepared by the Institute for International Monetary Affairs from various sources)

2 - (1) Current Considerations in Major Developed Countries (2/3)

- In line with the aforementioned investigations and research on CBDC conducted by various international organizations, major developed countries are also conducting such studies.
- In particular, from 2021, countries are becoming more active in their communication. While no country or region has yet decided to issue CBDC, there are differences in their research stance (Europe is active. In the U.S. and the U.K., governments and central banks have been proactive, but now Congress and private settlement companies have submitted objections. Japan is proceeding with demonstration experiments while keeping a close eye on the progress of other countries).

Reports and Remarks by Key Figures on CBDC in the U.S., Europe, Japan, and the U.K.（1/2） 2014 – 2020

Other Events	Year	U.S.A.（FRB etc.）	Europe（ECB）	Japan（BOJ / FSA）	U.K.（BOE）
	2014				
	2015				Mar Digital currencies: response to the call for information
	2016			Nov 【Report】(BOJ Review) 「About Central Bank Digital Currency (CBDC) - Discussions and Demonstrations in Foreign Countries -」	
	2017			Sep 【BOJ/ECB】Joint Research Report of Project Stella（#01） 「Payment systems: liquidity saving mechanisms in a distributed ledger environment」	
Jan Coincheck(JPN)) Incident	2018	May FRB Governor Brainard Speech at "Decoding Digital Currency Conference" 「Cryptocurrencies, Digital Currencies, and Distributed Ledger Technologies: What Are We Learning?」		Mar 【BOJ/ECB】Joint Research Report of Project Stella（#02） 「Securities settlement systems: delivery-versus-payment in a distributed ledger environment」 Oct 【Speech】Deputy Governor Masayoshi Amamiya 「The Future of Money」 at the 2018 Autumn Annual Meeting of the Japan Society of Monetary Economics)	
Jun Facebook revealed "Libra" project	2019	Oct FRB Governor Brainard Speech at "At The Future of Money in the Digital Age" 「Digital Currencies, Stablecoins, and the Evolving Payments Landscape」 Dec FRB Governor Brainard Speech at "ECB Colloquium" 「Update on Digital Currencies, Stablecoins, and the Challenges Ahead」		Feb 【Report】(BOJ Working Paper Series) 「Digital Innovation, Data Revolution and Central Bank Digital Currency」 Jun 【BOJ/ECB】Joint Research Report of Project Stella（#02） 「Synchronised cross-border payments」 Jul 【Speech】Deputy Governor Masayoshi Amamiya 「Should the Bank of Japan Issue a Digital Currency?」 at a Reuters Newsmaker Event in Tokyo Dec 【Speech】Governor Haruhiko Kuroda 「Payments Innovations and the Role of Central Banks: Addressing Challenges Posed by Stablecoins」 at the Symposium for the 35th Anniversary of the Center for Financial Industry Information Systems	
Apr China DCEP Pilot test starts Oct "Sand Dollar" (Bahamas) Oct "Bakong" (Cambodia)	2020	Feb FRB Governor Brainard Speech at "Symposium on the Future of Payments, Stanford, California" 「The Digitalization of Payments and Currency: Some Issues for Consideration」 Aug FRB Governor Brainard Speech at "Federal Reserve Board and Federal Reserve Bank of San Francisco's Innovation Office Hours" 「An Update on Digital Currencies」	Sep ECB President Lagarde Speech at "Deutsche Bundesbank online conference" 「Payments in a digital world」 Oct Report on a digital euro p52 - 53	Feb 【BOJ/ECB】Joint Report of Project Stella（#04） 「Balancing confidentiality and auditability in a distributed ledger environment」 Feb 【BOJ】「Future of Payments Forum」 「The Future of Central Bank Digital Currency and Payment and Settlement Systems」 May 【BOJ】「Future of Payments Forum」 「Cross-border Remittance Subcommittee Meeting (1st)」 Jul 【BOJ】「Future of Payments Forum」 「Digital Currency Subcommittee (1st)」 (Themes: "Post-Corona Retail Payments" and "Technical Issues on Digital Payment Resilience and Universal Access") Sep 【BOJ】「Future of Payments Forum」 「Cross-border Remittance Subcommittee Meeting (2nd)」 Oct Announced "BOJ's Policy on CBDCs" Dec 【BOJ】「Future of Payments Forum」 「Security Token Subcommittee Meeting」	Mar Central Bank Digital Currency: opportunities, challenges and design p56 Dec Financial Stability Report - December 2020 「5: In focus – Systemic stablecoins and financial stability」

（Source）Made by IIMA using various sources

2 - (1) Current Considerations in Major Developed Countries (3/3)

Reports and Remarks by Key Figures on CBDC in the U.S., Europe, Japan, and the U.K.（2/2） 2021 –

Other Events	Year	U.S.A.（FRB etc.）	Europe（ECB）	Japan（BOJ / FSA）	U.K.（BOE）
	2021	Feb 【FEDS Notes】 Preconditions for a general-purpose central bank digital currency		Mar 【BOJ】 Held the「1st Liaison Conference on CBDC」 p56	Jan UK regulatory approach to cryptoassets and stablecoins: Consultation and call for evidence
		Mar FRB Chairman Powell "CPMI Closing Remarks" 「Pushing the Frontiers of Payments: Towards Faster, Cheaper, More Transparent and More Inclusive Cross Border Payments」			
		Mar「Global Stablecoins: Monetary Policy Implementation: Considerations from the U.S. Perspective」 （Finance and Economics Discussion Series）			
		May FRB Governor Brainard Speech at "CoinDesk 2021 Conference" 「Private Money and Central Bank Money as Payments Go Digital: an Update on CBDCs」		Apr 【BOJ】 Start of the experimental study (phase 2) on CBDC (until March 2022)	
		May FRB Governor Waller Speech at "American Enterprise Institute" 「CBDC: A Solution in Search of a Problem?」		May 【BOJ】(BOJ Payment Systems Report Supplement Series) 「Standardization of Information Technology Related to Digital Currency」	
		Jun FRB Vice Chairman Quarles Speech at "The 113th Annual Utah Bankers Association Convention" 「Parachute Pants and Central Bank Money」	p54	Jun 【BOJ】「Future of Payments Forum」 「Cross-border Remittance Subcommittee Meeting (3rd)」	Jun New forms of digital money
		Jul FRB Governor Brainard Speech at "Rebuilding the Post-Pandemic Economy" 2021 Annual Meeting of the Aspen Economic Strategy Group 「The dollar is very dominant in international payments, and if you have the other major jurisdictions in the world with a digital currency, a CBDC offering, and the U.S. doesn't have one, I just, I can't wrap my head around that.That just doesn't sound like a sustainable future to me.」	Jul「Digital Euro Project」started (Max 24 months) 「This doesn't mean that we will necessarily issue a digital euro, but rather that we will get ready to possibly issue it.」	Jun 【BOJ】「Future of Payments Forum」 Digital Currency Subcommittee (1st) (Themes: "Security" "Universal Access" and "Standardization of Information Technology")	Jun Tom Mutton (BOE CBDC Director) Speech at "The Future of FinTech Conference" 「Central Bank Digital Currency: An update on the Bank of England's work」
		Aug FRB Governor Waller Speech at "American Enterprise Institute" 「CBDC: A Solution in Search of a Problem?」	Oct ECB Executive Board Member Fabio Panetta Speech at "Elcano Royal Institute, Madrid" 「Central bank digital currencies: a monetary anchor for digital innovation」	p56	p58
		p49	Nov ECB Executive Board Member Fabio Panetta Speech at "ECB-CEBRA conference on international aspects of digital currencies and fintech" 「"Hic sunt leones" – open research questions on the international dimension of central bank digital currencies」	Oct 【BOJ】 Held the「2nd Liaison Conference on CBDC」	Nov【BOE／Treasury】 Statement on Central Bank Digital Currency next steps
		Nov President's Working Group on Financial Markets (PWG), the Federal Deposit Insurance Corporation (FDIC), and the Office of the Comptroller of the Currency (OCC) 「Report on Stablecoins」	Nov ECB Executive Board Member Fabio Panetta Speech at "ECON Committee of the European Parliament" 「Designing a digital euro for the retail payments landscape of tomorrow」	Nov 【FSA】 Study Group on Digital and Decentralized Finance (Interim Discussion Paper)	
		Nov FRB Governor Waller Speech at "2021 Financial Stability Conference" 「Reflections on Stablecoins and Payments Innovations」	Nov ECB Executive Board Member Fabio Panetta Speech at "30th Anniversary Conference of the Bank of Finland Institute for Emerging Economies (BOFIT)" 「Digital currencies around the world – what are the policy implications?」	Nov 【BOJ】「Future of Payments Forum」 Digital Currency Subcommittee (2nd) (Themes: "Resilience of Payment Infrastructure" and "Promptness in Payment Services")	
	2022 ～	Jan「Money and Payments: The U.S. Dollar in the Age of Digital Transformation」 p47 - 48		Apr 【BOJ】 Start of the experimental study (phase 2) on CBDC (until March 2023?)	

（Source）Made by IIMA using various sources

2 - (2) Trends in the U.S. (1/5)

- The U.S. (FRB) has been the slowest in researching CBDC compared to the other three countries/regions (Europe, Japan, and the U.K.), with a report on CBDC ("Money and Payments: The US Dollar in the Age of Digital Transformation") but has stopped short of soliciting questions and comments from stakeholders (until May 20th, 2022) in order to promote a broad and transparent discussion of its potential benefits and risks.

Summary of the FRB “Money and Payments” Report

I. Requirements	
(1)	Provide benefits to households, businesses, and the overall economy that exceed any costs and risks.
(2)	Yield such benefits more effectively than alternative methods.
(3)	Complement, rather than replace, current forms of money and methods for providing financial services.
(4)	Protect consumer privacy.
(5)	Protect against criminal activity.
(6)	Have broad support from key stakeholders. ⇒ go to p51
II. Potential Benefits of a CBDC	
(1)	Safely Meet Future Needs and Demands for Payment Services (A U.S. CBDC would offer the general public broad access to digital money that is free from credit risk and liquidity risk.)
(2)	Improvements to Cross-Border Payments
(3)	Support the Dollar’s International Role (The dollar’s international role also allows the United States to influence standards for the global monetary system.)
(4)	Financial Inclusion (CBDC could reduce common barriers to financial inclusion and could lower transaction costs, which could be particularly helpful for lower-income households.)
(5)	Extend Public Access to Safe Central Bank Money
III. Potential Risks and Policy Considerations for a CBDC	
(1)	Changes to Financial-Sector Market Structure (A CBDC could fundamentally change the structure of the U.S. financial system, altering the roles and responsibilities of the private sector and the central bank)
(2)	Safety and Stability of the Financial System (The ability to quickly convert other forms of money—including deposits at commercial banks—into CBDC could make runs on financial firms more likely or more severe)
(3)	Efficacy of Monetary Policy Implementation (The interactions between CBDC and monetary policy implementation would be more pronounced and more complicated if the CBDC were interest-bearing at levels that are comparable to rates of return on other safe assets.)
(4)	Privacy and Data Protection and the Prevention of Financial Crimes (Any CBDC would need to strike an appropriate balance between safeguarding consumer privacy rights and affording the transparency necessary to deter criminal activity.)
(5)	Operational Resilience and Cybersecurity (Threats to existing payment services — including operational disruptions and cybersecurity risks — would apply to a CBDC as well.)

(Source) Extract from 「The Fed - Money and Payments: The U.S. Dollar in the Age of Digital Transformation」(Jan 2022)

2 - (2) Trends in the U.S. (2/5)

Summary of the FRB “Money and Payments” : continued

Seeking Comment and Next Steps	
CBDC Benefits, Risks, and Policy Considerations	
(1)	What additional potential benefits, policy considerations, or risks of a CBDC may exist that have not been raised in this paper?
(2)	Could some or all of the potential benefits of a CBDC be better achieved in a different way?
(3)	Could a CBDC affect financial inclusion? Would the net effect be "positive" or "negative" for inclusion?
(4)	How might a U.S. CBDC affect the Federal Reserve’s ability to effectively implement monetary policy in the pursuit of its maximum-employment and price-stability goals?
(5)	How could a CBDC affect financial stability? Would the net effect be positive or negative for stability?
(6)	Could a CBDC adversely affect the financial sector? How might a CBDC affect the financial sector differently from stablecoins or other nonbank money?
(7)	What tools could be considered to mitigate any adverse impact of CBDC on the financial sector? Would some of these tools diminish the potential benefits of a CBDC?
(8)	If cash usage declines, is it important to preserve the general public’s access to a form of central bank money that can be used widely for payments?
(9)	How might domestic and cross-border digital payments evolve in the absence of a U.S. CBDC?
(10)	How should decisions by other large economy nations to issue CBDCs influence the decision whether the United States should do so?
(11)	Are there additional ways to manage potential risks associated with CBDC that were not raised in this paper?
(12)	How could a CBDC provide privacy to consumers without providing complete anonymity and facilitating illicit financial activity?
(13)	How could a CBDC be designed to foster operational and cyber resiliency? What operational or cyber risks might be unavoidable?
(14)	Should a CBDC be legal tender?
CBDC Design	
(15)	Should a CBDC pay interest? If so, why and how? If not, why not?
(16)	Should the amount of CBDC held by a single end user be subject to quantity limits?
(17)	What types of firms should serve as intermediaries for CBDC? What should be the role and regulatory structure for these intermediaries?
(18)	Should a CBDC have “offline” capabilities? If so, how might that be achieved?
(19)	Should a CBDC be designed to maximize ease of use and acceptance at the point of sale? If so, how?
(20)	How could a CBDC be designed to achieve transferability across multiple payment platforms? Would new technology or technical standards be needed?
(21)	How might future technological innovations affect design and policy choices related to CBDC?
(22)	Are there additional design principles that should be considered? Are there tradeoffs around any of the identified design principles, especially in trying to achieve the potential benefits of a CBDC?

(Source) Extract from「The Fed - Money and Payments: The U.S. Dollar in the Age of Digital Transformation」(Jan 2022)

2 - (2) Trends in the U.S. (3/5)

- On the other hand, the Working Group(WG) on Financial Markets under the President released a report on stablecoins in November 2021.The report pointed out that the rapid expansion of stablecoins as payment instruments could pose a threat to the U.S. economy and called on Congress to enact legislation to "limit issuers to deposit-taking financial institutions" and "restrict partnerships between issuers and general business companies".

Summary of "Report on STABLECOINS"

Risks presented by WG (Working Group)	WG Recommendations (Suggestions)
1. Loss of Value: Risks to Stablecoin Users and Stablecoin Runs	
Confidence in the SC may be undermined by factors including: (1) use of reserve assets that could fall in price or become illiquid (2) a failure to appropriately safeguard reserve assets (3) a lack of clarity regarding the redemption rights of stablecoin holders (4) operational risks related to cybersecurity and the collecting, storing, and safeguarding of data.	Require stablecoin issuers to be insured depository institutions, which are subject to appropriate supervision and regulation, at the depository institution and the holding company level.
Failure of a stablecoin to perform according to expectations would harm users of that stablecoin and could pose systemic risk.	
Fire sales of reserve assets could disrupt critical funding markets, depending on the type and volume of reserve assets involved. Runs could spread contagiously from one stablecoin to another, or to other types of financial institutions that are believed to have a similar risk profile.	
A run occurring under strained market conditions may have the potential to amplify a shock to the economy and the financial system.	
2. Payment System Risk	
Payment stablecoins face many of the same basic risks as traditional payment systems, including "credit risk", "liquidity risk", "operational risk", "risks arising from improper or ineffective system governance", "and settlement risk".	Require custodial wallet providers to be subject to appropriate federal oversight. In addition, provide the supervisor of a stablecoin issuer with authority to require any entity that performs activities critical to the functioning of the stablecoin arrangement to meet appropriate risk-management standards.
When not managed comprehensively, these risks can make payment systems less available and less reliable for users, and they can create financial shocks or operate as a channel through which financial shocks spread.	
3. Risks of Scale: Systemic Risk and Concentration of Economic Power	
For individual stablecoins, the potential for rapid growth may reflect economies of scale and scope; network effects that cause demand for a specific stablecoin to increase as more firms and consumers use the stablecoin; and first-mover advantages.	Require stablecoin issuers to comply with activities restrictions that limit affiliation with commercial entities. Supervisors also should have the authority to implement standards to promote interoperability among stablecoins. Limits on custodial wallet providers' affiliation with commercial entities or on custodial wallet providers use of user transaction data may also help address these issues.
The potential for an individual stablecoin to scale rapidly raises three sets of policy concerns. (1) A stablecoin issuer or a key participant in a stablecoin arrangement (e.g., a custodial wallet provider) could pose systemic risk – meaning that the failure or distress of that entity could adversely affect financial stability. (2) The combination of a stablecoin issuer or wallet provider and a commercial firm could lead to an excessive concentration of economic power. (3) A stablecoin that becomes widely adopted as a means of payment could present concerns about anti-competitive effects, for example, if users of that stablecoin face undue frictions or costs in the event they choose to switch to other payment products or services.	
4. Regulatory Gaps	
Today, stablecoin arrangements are not subject to a consistent set of prudential regulatory standards that address the risks discussed above. Therefore, SC transactions may slip through existing laws and regulations.	The agencies believe that legislation is urgently needed to comprehensively address the prudential risks posed by payment stablecoin arrangements.

The report also discusses how to address various risks based on existing regulations, legislation, and authorities as "interim measures" until legislation is enacted to comprehensively address the risks described above.

（Source）Extract from「Report on STABLECOINS」(Nov 2021）

2 - (2) Trends in the U.S. (4/5)

- The FRB's stance on CBDC (and stablecoins) is not monolithic. As shown in the table below, Director Brainerd (proactive) and Director Waller (cautious) have issued contrasting comments.

Stance on CBDC (Digital Dollars) and Stablecoins: Summary of Statements by FED Directors

＜Proactive＞ Governor Lael Brainard (Nominated as next Vice Chair)	＜Cautious＞ Governor Christopher J. Waller
"The dollar is very dominant in international payments, and if you have the other major jurisdictions in the world with a digital currency, a CBDC offering, and the U.S. doesn't have one, I just, I can't wrap my head around that.That just doesn't sound like a sustainable future to me." "Stablecoins could proliferate and fragment the payment system, or one or two could emerge as dominant." July 30th, 2021 At "Rebuilding the Post-Pandemic Economy" 2021 Annual Meeting of the Aspen Economic Strategy Group, Aspen, Colorado	"While CBDCs continue to generate enormous interest in the United States and other countries, I remain skeptical that a Federal Reserve CBDC would solve any major problem confronting the U.S. payment system." "After exploring many possible problems that a CBDC could solve, I am left with the conclusion that a CBDC remains a solution in search of a problem." Aug 5th, 2021 At the American Enterprise Institute (AEI), Washington, D.C.
"(While it is important to consider how this will affect the Fed's responsibilities, such as "financial stability," "establishing a secure and efficient payments system," and "maintaining maximum employment and price stability",) A U.S. CBDC may be one potential way to ensure that people around the world who use the dollar can continue to rely on the strength and safety of U.S. currency to transact and conduct business in the digital financial system. " Feb 18th, 2022 At the 2022 U.S. Monetary Policy Forum, New York, New York	"My skepticism about the need for a CBDC, which I still hold, comes in part from the real and rapid innovation taking place in payments." "My argument—simple as it sounds—is that payments innovation, and the competition it brings, is good for consumers." "The market and the public are telling us there is room for improvement in the U.S. payment system. We should take that message to heart and provide a safe and sound way for those improvements to occur." Nov 17th, 2021 At the 2021 Financial Stability Conference

2 - (2) Trends in the U.S. (5/5)

- One of the conditions that "must be met in any additional work toward the development of CBDC" in the aforementioned report on CBDC (p47) is to "have broad support from key stakeholders".
- However, the financial institutions (ABA: American Bankers Association) and the payment institutions (TCH), which are one of the representatives, have expressed opposition to the introduction of CBDC .
- The hurdle is currently very high, as the FRB has indicated that the CBDC cannot be realized without the understanding of these related institutions, which are expected to play an important role in the realization of the digital dollar.

Figure 1: The American Bankers Association's (ABA) Stance on CBDC
ABA Statement for the Record for the hearing titled "Building a Stronger Financial System: Opportunities of a Central Bank Digital Currency" (September 2021) (Excerpted)
Policymakers around the world, including at the U.S. Federal Reserve, are examining the potential opportunities and risks associated with issuing CBDCs. As this work progresses, there is a growing recognition that CBDCs may be weighed down by very significant real-world trade-offs. The reality is that the dollar is largely digital today. The proposed benefits of CBDCs to international competitiveness and financial inclusion are theoretical, difficult to measure, and may be elusive, while the negative consequences for monetary policy, financial stability, financial intermediation, the payments system, and the customers and communities that banks serve could be severe. Unlike many other countries, the United States has a well-developed and robust financial system that is the backbone of our economy and markets. As they have done for hundreds of years, American banks today provide a broad array of essential financial and economic functions that benefit their communities, most notably, safekeeping deposits and making loans. For other countries, a CBDC could enhance their payment systems. The United States, however, has one of the most efficient, safe, and modern payments systems in the world.

Figure 2: Clearing House (TCH) Stance on CBDC
Excerpted from the report "On the Road to a U.S. Central Bank Digital Currency - Challenges and Opportunities," July 27, 2021
Policymakers (Treasury and Fed) need to articulate the clear purpose of issuing CBDCs. They should also identify the impact on "monetary policy", "financial stability", "the safety and soundness of the financial sector", "the impact on the efficiency of U.S. payment systems" and "financial crimes and sanctions evasion", and if there are other, less risky means of achieving the purpose. Current U.S. law is not likely sufficient to support a CBDC and the introduction of a CBDC would require new, carefully crafted legislation that describes the roles and responsibilities of relevant government entities and private sector participants as well as laws that support the use of CBDC and appropriately protect the users of CBDC. The introduction of a U.S. CBDC has the potential to destabilize both the domestic and foreign banking and financial services sectors, and to make illicit activity using the U.S. dollar easier. While it may not be possible to do no harm when introducing U.S. CBDC, avoiding these outcomes should be a high priority in any U.S. CBDC implementation even at the expense of the intended purpose.

2 - (3) Trends in Europe (1/4)

- In "Report on a digital euro" (Oct 2020), the ECB published an outline of the digital euro and reported on the launch of the Digital Euro Project.
- The European (ECB) stance on the CBDC (Digital Euro) initiative is more ambitious than that of the other three countries (U.S., Japan, and U.K.). One of the reasons for this is the growing number of non-authoritative payment transaction controls in Europe, such as foreign payment providers, crypto assets, and stable coins, as well as a sense of urgency to maintain monetary sovereignty.

Principles and Requirements for the Issuance of CBDC (digital euro) as Presented by the ECB in the "Report on a digital euro"

Feature Type		Description	Additional Description
Core Principles	1	Convertibility at par	Not a parallel currency
	2	Liability of the Eurosystem	A digital euro is central bank money and its issuance is controlled by the Eurosystem
	3	European solution	Widely accessible on equal terms in all euro area countries through supervised service providers
	4	Market neutrality	Not to crowd out private solutions
	5	Trusted by end users	Trusted solution from the start and over time
Scenario-specific Requirements	1	Enhanced digital efficiency (if launched to support digitalisation)	The digital euro should keep pace with state-of-the-art technology at all times in order to best address the needs of the market as regards, among other attributes, usability, convenience, speed, cost efficiency and programmability. It should be made available through standard interoperable front-end solutions throughout the entire euro area and should be interoperable with private payment solutions.
	2	Cash-like features (if aiming to tackle a decline in the acceptance of cash)	To match the key distinctive features of cash, a digital euro aiming to tackle a decline in the acceptance of cash should permit offline payments. Moreover, a digital euro should be easy for vulnerable groups to use, free of charge for basic use by payers and should protect privacy. It should have a strong European branding.
	3	Competitive features (if introduced to limit the uptake of forms of money that are not denominated in euro and/or not appropriately supervised)	The digital euro should have features which are at the technological frontier. It should offer the basis for providing functionalities that are at least as attractive as those of the payment solutions available in foreign currencies or through unregulated entities.
	4	Monetary policy option (if considered to be a tool for improving the transmission of monetary policy)	The digital euro should be remunerated at interest rate(s) that the central bank can modify over time.
	5	Back-up system (if aiming to improve the overall resilience of the payment system)	The digital euro should be widely available and transacted via resilient channels that are separate from those of other payment services and can withstand extreme events.
	6	International use (if introduced to increase the international role of the euro)	The digital euro should be potentially accessible outside the euro area in a way that is consistent with the objectives of the Eurosystem and convenient to non-euro area residents.
	7a	Cost saving (if launched for cost efficiency)	The design of the digital euro should achieve a reduction in the cost of the current payments ecosystem.
	7b	Environmentally friendly (if launched for environmental reasons)	The design of the digital euro should be based on technological solutions that minimise its ecological footprint and improve that of the current payments ecosystem.

(Source) Extract from ECB「Report on a digital euro」(Oct 2020)

2 - (3) Trends in Europe (2/4)

Principles and Requirements for the Issuance of CBDC (digital euro) as Presented by the ECB in the "Report on a digital euro"(continued)

Feature Type		Description	Additional Description
General Requirements	8	Ability to control the amount of digital euro in circulation	The digital euro should be an attractive means of payment, but should be designed so as to avoid its use as a form of investment and the associated risk of large shifts from private money (for example bank deposits) to digital euro.
	9	Cooperation with market participants	A project to introduce a digital euro should be carried out in line with best practices in IT project management. The digital euro should then be made available on an equal basis in all euro countries through supervised intermediaries, which could leverage their existing customer-facing services and avoid the costly duplication of processes.
	10	Compliance with the regulatory framework	Although central bank liabilities are not subject to regulation and oversight, in issuing the digital euro the Eurosystem should still aim at complying with regulatory standards, including in the area of payments.
	11	Safety and efficiency in the fulfilment of the Eurosystem's goals	The digital euro should be designed in a safe and efficient way. Its project and operating costs should be estimated and compared with the expected benefits, considering alternative solutions in any future scenario. The provision of non-core services should be left to supervised private entities.
	12	Easy accessibility throughout the euro area	The digital euro should be made available through standardised front-end solutions throughout the entire euro area and should be interoperable with private payment solutions. It should be easily accessible by anyone, including citizens who currently do not participate in the financial system (for example, those who do not have an account at a commercial bank), and should be easy to use. The digital euro would need to co-exist with cash.
	13	Conditional use by non-euro area residents	The design of the digital euro should include specific conditions for access and use by non-euro area residents, to ensure that it does not contribute to excessively volatile capital flows or exchange rates. Such conditions could take the form, for instance, of limits or adequate remuneration policies for holdings of digital euro of non-euro area residents.
	14	Cyber resilience	Digital euro services will need to be highly resilient to cyber threats and capable of providing a high level of protection to the financial ecosystem from cyberattacks. In the event of successful attacks, the recovery time should be short and the integrity of the data protected.

(Source) Extract from ECB「Report on a digital euro」(Oct 2020)

2 - (3) Trends in Europe (3/4)

- The "Digital Euro Project Team" conducted experimental work on the Digital Euro with the goal of gaining further insight as well as evaluating the technical feasibility of the design choices identified in the report on the previous page. The results from the experiments were published in July 2021 as "Digital euro experimentation scope and key learnings".
- The experiment was conducted in 4 workstreams with the participation of experts from ECB and national central banks in the euro area. None of the themes evaluated had major technical constraints, indicating that there was sufficient capacity to address the design requirements discussed in the report (left table).
- In response to these results, the ECB announced the official launch of the "Digital Euro" project in July of the same year (right table).

"Digital euro Experimentation Scope and Key Learnings"

	Experimentation	⇒	Key learnings from the experiments
<Work Stream #1> Scale the existing	Focused on an account-based system and tested the issuance, redemption and distribution of a digital euro using a network architecture built on the existing, centrally managed architecture of the TIPS system.		**【1. Digital Euro Ledger】** ・The prototypes were able to exceed the threshold of "10,000/sec". ・The power consumption of the core settlement systems was measured and assessed to be in the order of a few kilowatts to run thousands of transactions per second. ・It would be necessary to determine the role of each node in the payment channel network from a legal point of view.
<Work Stream #2> Combined feasibility	Focused on how to combine a centralised ledger and (one or more) decentralised platform(s) based on distributed ledger technology (DLT).		**【2. Privacy and AML】** ・When multiple privacy techniques were combined to investigate different privacy levels for the end users, a number of technological solutions were identified that would provide a basis for a payment solution with a very high degree of privacy. ・ Require further analysis to verify that the high level of privacy did not violate AML/CFT regulatory requirements.
<Work Stream #3> A new solution	Aimed at assessing a solution for the issuance, redemption and distribution of digital euro using a blockchain-based platform and fixed value tokens. In addition, the work stream explored the possibility of combining this blockchain solution with existing digital identity (e-ID) and digital signature components.		**【3. Limits on digital euro in circulation】** ・Found that it is possible to introduce limits on balances and transaction amounts regardless of the underlying technology. ・The implementation of a remuneration scheme could have some limitations, although remuneration was successfully implemented on different types of ledger.
<Work Stream #4> Bearer instrument	Together with 6 companies selected via a procurement process, the research conducted by this work stream focused on offline payment solutions (i.e. hardware based bearer instruments) that were already on the market or under development.		**【4. End-user access】** ・The possibility of using the existing infrastructures and technologies will make it easier to adopt digital euro as a means of payment. (but had limitations on NFC and Bluetooth) ・e-ID solutions could be very helpful in providing digital euro services.

(Source) Extract from ECB「Digital euro experimentation scope and key learnings」(Jul 2021)

ECB "Eurosystem Launches Digital euro Project"

The investigation phase will last 24 months and aim to address key issues regarding design and distribution.

A digital euro must be able to meet the needs of Europeans while at the same time helping to prevent illicit activities and avoiding any undesirable impact on financial stability and monetary policy.

Design to be based on users' preferences and technical advice by merchants and intermediaries

The investigation phase will assess the possible impact of a digital euro on the market, identifying the design options to ensure privacy and avoid risks for euro area citizens, intermediaries and the overall economy. It will also define a business model for supervised intermediaries within the digital euro ecosystem.

In any event, a digital euro would complement cash, not replace it.

2 - (3) Trends in Europe (4/4)

- The statements of key ECB officials indicate a proactive stance that central banks themselves must be aware of changes in payment practices and global developments and take action with regard to new payment arrangements in the future.

Stance on the Digital Euro: Summary of ECB Statements September 2020 and Beyond

＜Proactive＞
Fabio Panetta (Italy)
Member of the Executive Board of the ECB
(Responsible for Market Infrastructure &Settlement in ECB)

"If the trends of cashless were to persist and accelerate, cash would end up losing its central role and becoming a means of payment that people would be reluctant to use because it would be less adapted to their needs."

"The upshot is that if this scenario were to materialise, it would weaken the effectiveness of central bank money as a monetary anchor."

"A digital euro and cash would complement each other and ensure that central bank money remains a monetary anchor for the payments ecosystem and continues to serve as a means of exchange, a store of value and a unit of account."

Nov 5th, 2021
"Central bank digital currencies:a monetary anchor for digital innovation"
at the Elcano Royal Institute, Madrid

＜Neutral＞
Christine Lagarde
President of the ECB

"The Eurosystem has already reacted to technological change by launching innovative back-end payment solutions with a pan-European reach, such as the TARGET Instant Payment Settlement (TIPS) service. But we know that the private sector, by contrast, has made far less progress on delivering a pan-European solution for retail payments."

"The lack of payments integration in Europe means that foreign providers have taken the lead."

"The key to strengthening payment transactions in Europe is to
(1) Users can access inexpensive payment systems without risk and continue to be renewed, and
(2) European payment systems must adapt to the global digital economy.
and one possible solution is CBDC (Digital Euro)."

Sept 10th, 2020
"Payments in a digital world"
at the Deutsche Bundesbank online conference

<Reasons for promoting the Digital Euro Project>
1) Decrease in cash usage
2) To maintain an open and fair competitive environment and monetary sovereignty in Europe for payments in response to the "increase in the management of intra-European card transactions by non-European card payment providers" and the "increase in the market size of crypto assets and stable coins".

<The impact of the introduction of CBDC, including the digital euro, by developed countries>
・No matter which developed country introduces CBDC, there will be international ripple effects (on the macroeconomy and financial system, including monetary policy, capital movement, exchange rates, etc.), so international coordination and timely responses are needed regarding the use of CBDC by non-residents and its effects.
・Effective policy making requires foresight. Central banks must innovate to keep pace with changing payment habits and global developments.

Summary of speeches given in various locations in November 2021

2 - (4) Trends in Japan (1/2)

- BOJ announced its policy on CBDC initiatives in October 2020 (left table) that there are no plans to issue CBDC at this time. In July 2020, BOJ established a "Digital Currency Group" within the Settlement Mechanism Bureau.
- The BOJ's stance on CBDC initiatives is more cautious than that of the ECB, given that the BOJ already has an advanced domestic payment and settlement system and there is no urgency to introduce CBDC. On the other hand, the BOJ is currently exploring the appropriate payment and settlement system for the future digital society through the "Liaison and Coordination Committee on Central Bank Digital Currency" (right table).
- Proof-of-concept (phase 1) will be completed in March 2022. "Phase 2" will begin in April 2022, with pilot experiments to follow if necessary.

Outline of "BOJ's Policy on CBDCs"

I. Expected Functions and Roles of CBDC		
	A) Introducing a Payment Instrument alongside Cash	
	B) Supporting Private Payment Services	
	C) Developing Payment and Settlement Systems Suitable for a Digital Society	
II. Core Features Required for CBDC		
	A) Universal Access	
	B) Security	
	C) Resilience	
	D) Instant Payment Capability	
	E) Interoperability	
III. Points to Be Considered		
	A) CBDC's Relationship with Price and Financial Stability	
	B) Promoting Innovation	
	C) Ensuring Privacy and Handling End-User Information	
	D) Relationship with Cross-Border Payments	
IV. Next Steps		
	A) Experiments	
		1) PoC Phase 1 (till Mar 2022)
		2) PoC Phase 2 (from Apr 2022)
		3) Pilot program (if needed)
	B) Exploring Institutional Arrangements	
		1) Cooperation and role-sharing arrangements between a central bank and PSPs
		2) economic design of CBDC, including limits on the amount of issuance/holdings and remuneration
		3) privacy protection and handling of end-user information
		4) standardization of information technology (IT) relating to digital currency
	C) Coordination with Stakeholders at Home and Abroad	

Outline of the Liaison Committee on CBDC

Date of the Event	#1 Mar 26th, 2021	#2 Oct 15th, 2021
Purpose of the Event	An overview of the proof-of-concept experiment for indirect/retail CBDC, which will begin in April 2021, and comments from authorities and financial and settlement-related associations.	After an overview of the proof-of-concept experiment and explanation of its progress, a Q&A session and comments were held with financial associations.
Executive Summary	<Purpose of the Meeting> Information sharing among BOJ, the government, and the private sector regarding proof-of-concept experiments. <Points to be pointed out regarding CDBC> 1) Need to reach consensus on Japan-specific objectives. 2) Concerns about the increased cost burden of handling both cash and CBDC.	Questions were raised regarding "the nature of the ledger in the proof of concept", "differences in costs according to design patterns", and "the role of intermediary institutions such as private banks". <Major future considerations> 1) Impact on existing systems and importance of gradual expansion of CBDC functions and characteristics. 2) Concrete vision after the introduction of CBDC and how it should coexist with private financial services. 3) Possibility of making the intermediary institution a player other than BOJ.

(Source) Extract from BOJ「The Bank of Japan's Approach to Central Bank Digital Currency」(Oct 2020)

2 - (4) Trends in Japan (2/2)

- The Bank's key figures' statements are in line with the "Policy of the Bank of Japan on Central Bank Digital Currencies" on the previous page. However, at a meeting of the Budget Committee of the House of Representatives in January 2022, Governor Kuroda stated that he would make a decision on whether or not to issue digital yen by 2026, while stating that it was his "personal view".

Key Statements on Digital Yen by Bank of Japan Dignitaries

Executive Director Shinichi Uchida	「First Liaison Conference on Central Bank Digital Currencies (Opening Remarks)」(Mar 2021)
	・The BOJ's position that "there are no plans to issue CBDC at this time" remains unchanged.
	・However, given the technological factors and domestic and international circumstances known at this point, there is a reasonable possibility that "a payment system with CBDC as one element" will become a global standard in the future. In this context, we believe that proceeding with (demonstration) experiments now is a necessary step.
	・"What is the best balance between convenience and security in a digital society?", and "what roles should be played by central banks, banks, and non-banks in this context?", are all weighty issues. We do not mean to answer these questions now, but as a result of the answers, we may need parts of a CBDC in the future. Herein lies the significance of "launching a demonstration experiment" and, in parallel, "engaging in dialogue with all concerned parties.
	「Second Liaison Conference on Central Bank Digital Currencies (Opening Remarks)」(Oct 2021)
	・At the last conference, I stated that "there is a reasonable possibility that a payment system with CBDC as one of its elements will become a global standard in the future, given the technical factors known at this point and the situation in Japan and abroad. Overseas developments over the past six months have confirmed this. We must accept the fact that CBDC is becoming a realistic option in many countries.
	・The discussion on the "must be CBDC" is not the end of the matter. The purpose of the discussion is to draw up a "future vision of a payment system suitable for the digital society," and CBDC is merely a means to that end.
	・As for BOJ, its basic position to date remains the same: "There are no plans to issue CBDC at this time". However, while "issuing CBDC" is a major decision, "not issuing" is also becoming a major decision as serious consideration is being given to this issue in many countries around the world. And if we do not issue them, we have to think about how to build a payment system suitable for the digital society. In any case, the status quo cannot be maintained.
Govenor Haruhiko Kuroda	「During Q&A session at "the Budget Committee of the House of Representatives"」(Jan 28th, 2022)
	・CBDC is currently being studied in many countries, and the focus is shifting from "abstract research" to "more practical policy analysis and technical experimentation.
	・While the positioning of CBDC and the specifics of CBDC studies vary from country to country and region to region, they all share the same goal of establishing a stable and efficient payment and settlement system that is appropriate for the digital society. The Bank will continue to closely monitor developments in other countries and regions, and will continue to work closely with relevant parties both domestically and internationally to apply a variety of knowledge and insights to its own studies.
	・The introduction of CBDC will require a fairly extensive and large-scale effort, taking into account both technical and institutional aspects. Therefore, in order to decide whether or not to issue CBDC, we believe that it is essential to have sufficient discussions with the government and private operators, as well as to ultimately gain the full understanding of the public.
	・At this point, there is no fixed schedule for the issuance of CBDC, but I personally believe that a decision on whether or not to issue CBDC can be made in 2026 (taking into account the cooperation between Japan, the U.S., and Europe, etc.).

2 - (5) Trends in the U.K.

- The Treasury and BOE published the report “Digital currencies: response to the call for information" in March 2015. (The U.K. led the other three countries in CBDC-related research.)
- The BOE and the Treasury set up a joint task force to study CBDC in April 2021. In November, they announced that it would formally begin a study and research in 2022 to determine whether to proceed with the introduction of CBDC.
- The House of Lords held a hearing for BOE Governor Bailey and Deputy Governor Cunliffe in Nov 2021, but was somewhat harsh in its assessment, saying that the evidence was not sufficient to persuade and convince them of the need to issue CBDC. The hurdles to the realization of CBDC have been raised by the clear statement that the priority is to upgrade the interbank settlement infrastructure under the initiative of the government.

BoE and Treasury's Stance on CBDC
Excerpts from “Statement on Central Bank Digital Currency next steps” (Nov 2021)
In 2022, HMT (Treasury) and the Bank (BOE) will launch a consultation which will set out their assessment of the case for a UK CBDC, including the merits of further work to develop an operational and technology model for a UK CBDC. No decision has been made on whether to introduce a CBDC in the UK, which would be a major national infrastructure project. The 2022 consultation will inform a decision on whether the authorities are content to move into a ‘development’ phase which will span several years. If the results of this ‘development’ phase conclude that the case for CBDC is made, and that it is operationally and technologically robust, then the earliest date for launch of a UK CBDC would be in the second half of the decade.

House of Lords and PSR Stance on CBDC
Excerpts from the House of Lords report "Central bank digital currencies: a solution in search of a problem?" (Jan 2022)
We have yet to hear a convincing case for “why the UK needs a retail CBDC”. When the Joint Taskforce publishes the use case for a possible CBDC in 2022, it should set out the most significant long-term problem to which it believes a CBDC may be the answer. Its assessment should compare CBDCs against alternative means of achieving the same aims. While there appear to be no significant advantages for the UK in being an early adopter of CBDCs, we recognize that consumer payment preferences, technological developments and the choices of other countries may enhance the case for a UK CBDC in the future.
Excerpts from "The PSR Strategy" (Jan 2022)
The “4 strategic priorities" for the next 5 years are; 1) Ensure users have continued access to the payment services they rely on and support a choice of payment options. 2) Ensure users are sufficiently protected when using the UK's payment systems. 3) Promote competition between UK payment systems and the markets supported by them; protecting users where that competition is not sufficient. 4) Act to ensure the interbank systems provide the infrastructure, rules and incentives that foster innovation and competition in payments.

1. Current Considerations on Digital Money (including CBDC) by International Organizations

2. Current CBDC Considerations in Major Developed Countries

【Appendix / Reference】

【Appendix #1】Time-series Movement of the Status of Consideration by Major International Organizations（1/2）

- Since the birth of the Bitcoin (crypto asset) in 2009, blockchain technology/distributed ledger technology has attracted attention. Its potential for using as domestic and international settlement was identified due to its robustness, anonymity, low running costs, etc.
- With the announcement of the Facebook-led global stablecoin (Libra) concept and the Chinese government-led DCEP concept in 2019, CBDC is being actively considered around the world. In conjunction with this, the frequency of international organizations publishing reports on digital money/CBDC will increase.

Time Series of Major International Organizations' Considerations（1/2） 2014 – 2019

Other Events	Year	IMF	BIS	BIS + 7Central Banks	G7 / G20 / T20	FSB	FATF	Other International Institutions / International Associations
	2014						p62 Jun Virtual Currencies : Key Definitions and Potential AML/CFT Risks	
	2015		Nov 【CPMI】 Digital currencies				Jun Virtual Currencies : Guidance for a Risk-based Approach	
	2016							
	2017							
Jan Coincheck(JPN) Incident	2018						Oct FATF Recommendations Regulation of virtual assets	
Jun Facebook revealed "Libra" project	2019		Jan 【CBDC Survey #01】(BIS Papers No 101) Proceeding with caution – a survey on central bank digital currency Jul 「Update from the Chair of the G7 working group on stablecoins」（Speech from Mr Benoît Cœuré, Chair of the CPMI and Member of the Executive Board of the ECB） Oct 【CPMI】 Investigating the impact of global stablecoins		Mar 【T20（Japan）】<Policy Brief> Regulation of Crypto-asset Exchanges and the Necessity of International Cooperation Oct 【G20】 G20 Press Release on Global Stablecoins	Oct Regulatory issues of stablecoins	Feb Public Statement – Mitigating Risks from Virtual Assets Jun Public Statement on Virtual Assets and Related Providers Jun Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers p63	

【The reports framed in red are outlined on p8-42 and p62-70】

（Source）Made by IIMA using various sources

【Appendix #1】Time-series Movement of the Status of Consideration by Major International Organizations（2/2）

- CBDC issuance and distribution began in the Bahamas and Cambodia in the autumn of 2020. CBDC is also being studied in developed countries, but no country/region has decided to introduce it as of March 2022 (for details please go to Chapter 2).

Time Series of Major International Organizations' Considerations（2/2） 2020 –

Other Events	Year	IMF	BIS	BIS + 7Central Banks	G7 / G20 / T20	FSB	FATF	Other International Institutions / International Associations
Apr China DCEP Pilot test starts	2020		Jan 【CBDC Survey #02】(BIS Papers No 107) Impending arrival – a sequel to the survey on central bank digital currency	Jan Central bank group to assess potential cases for central bank digital currencies (6 banks (exclude FRB))				Feb 【Official Monetary and Financial Institutions Forum (OMFIF)】 「Digital currencies: A question of trust」
Oct "Sand Dollar" (Bahamas)						Apr Enhancing Cross-border Payments Stage 1 report to the G20	p66-68 Jun 【FATF 12 Month Review #01】 12 Month Review of Revised FATF Standards - Virtual Assets and VASPs	Jul 【G30 (Group of Thirty)】 DIGITAL CURRENCIES AND STABLECOINS Risks, Opportunities, and Challenges Ahead
Oct "Bakong" (Cambodia)			Aug Rise of the central bank digital currencies: drivers, approaches and technologies (BIS Working Papers No 880)			Apr Addressing the regulatory, supervisory and oversight challenges raised by "global stablecoin" arrangements (Consultative document)	Jun FATF Report to the G20 Finance Ministers and Central Bank Governors on So-called Stablecoins	p70
		p8-10 Oct Digital Money Across Borders: Macro-Financial Implications		p28 Oct Central bank digital currencies: foundational principles and core features	Oct 【T20 (Saudi Arabia)】<Policy Brief> Assessing the Impact of Stablecoins on the International Monetary System : G20 and IMF to Study the Impact of FACEBOOK'S LIBRA PROJECT	Oct Regulation, Supervision and Oversight of "Global Stablecoin" Arrangements "Final Report and High-Level Recommendations" p35	Sep Virtual Assets Red Flag Indicators of Money Laundering and Terrorist Financing	
	2021		Jan 【CBDC Survey #03】(BIS Papers No 114) Ready, steady, go? - Results of the third BIS survey on central bank digital currency	p20-26			Mar Public consultation on FATF draft guidance on a risk-based approach to virtual assets and virtual asset service providers	
			Jun CBDCs beyond borders: results from a survey of central banks			May Targets for Addressing the Four Challenges of Cross-Border Payments (Public Consultation)		Apr 【Institute of International Finance (IIF)】 IIF 2021 Digital Currency Roundtable
		p11 Jul The Rise of Digital Money - A Strategic Plan to Continue Delivering on the IMF's Mandate	Jun BIS Annual Economic Report 2021 Chapter#3「CBDCs: an opportunity for the monetary system」	p14				
		p12 Jul The Rise of Public and Private Digital Money - A STRATEGY TO CONTINUE DELIVERING ON THE IMF'S MANDATE	Jul 【BIS＋IMF＋World Bank】 Central bank digital currencies for cross-border payments	p15-17	p31-32	p36-37	Jul 【FATF 12 Month Review #02】 Second 12-Month Review of Revised FATF Standards - Virtual Assets and VASPs	p69
		p13 Oct Global Finance Stability Report Chapter#2「The Crypto Ecosystem and Financial Stability Challenges」	Oct 【CPMI＋IOSCO】 Consultative Report: Application of the Principles for Financial Market Infrastructures to stablecoin arrangements p18-19	Sep Central bank digital currencies: executive summary (1) System design and interoperability (2) User needs and adoption (3) Financial stability implications p29-30	Sep 【T20 (Italy)】<Policy Brief> The Emergence of New Monies and the Need to Prepare the Financial System for the Digital Age	Oct Regulation, Supervision and Oversight of "Global Stablecoin" Arrangements "Progress Report on the implementation of the FSB High-Level Recommendations"	Oct Updated Guidance for a Risk-Based Approach for Virtual Assets and Virtual Asset Service Providers	p64-65
				p34	Oct 【G7】 Public Policy Principles for Retail Central Bank Digital Currencies (CBDCs)	Oct G20 Roadmap for Enhancing Cross-border Payments (First consolidated progress report)	p38-40	
			Oct Rise of the CBDCs: policy approaches and technologies 【Recent : Oct 2021】 Retail CBDC : 61 countires/areas Wholesale CBDC : 23 countries/areas	p33	Oct 【G7】 G7 Finance Ministers and Central Bank Governors' Statement on Central Bank Digital Currencies and digital payments	Oct Targets for Addressing the Four Challenges of Cross-Border Payments (Final Report)		
	2022 ～	Waiting for the announcement p27	Jan Release of【CBDC Survey #04】?			Feb Assessment of Risks to Financial Stability from Crypto-assets	p41-42	

【The reports framed in red are outlined on p8-42 and p62-70】

（Source）Made by IIMA using various sources

【Appendix #2】Trends in FATF（1/9）

June 2015
「Guidance for a Risk-Based Approach to Virtual Currencies」

- The FATF was established in 1989 as an intergovernmental organization to promote international cooperation and coordination in the prevention of organized crime. At the time of its establishment, the FATF's main task was to establish a financial system to prevent money laundering related to narcotics crimes. Since the September 2001 terrorist attacks in the United States, the FATF has also been working to promote international countermeasures and cooperation regarding the financing of terrorist organizations.
- In June 2014, FATF published its first report ("Virtual Currencies: Key Definitions and Potential AML/CFT Risks"), which focused on money laundering using crypto assets. It was not clarified whether or not a firm is a "financial institution, specified non-financial firm, or professional expert (DNFBPs)" subject to FATF regulatory standards.
- In its June 2015 "Guidance for a Risk-Based Approach to Virtual Currencies" (the "Guidance"), the FATF clarified that crypto asset exchangers are "financial institutions" subject to the FATF regulatory standards. In addition to clarifying that crypto asset transactions are included in the regulatory standards, the table on the right shows the provisions that national authorities should apply in order to address the risk of abuse of crypto asset transactions such as money laundering.

FATF Reports on Crypto Assets, etc. (in Chronological Order)

	Date	Name of the Report	
※	Jun-2014	Virtual Currencies : Key Definitions and Potential AML/CFT Risks	this page
※	Jun-2015	Virtual Currencies : Guidance for a Risk-based Approach	this page
※	Oct-2018	FATF Recommendations Regulation of virtual assets	go to p63
	Feb-2019	Public Statement – Mitigating Risks from Virtual Assets	
	Jun-2019	Public Statement on Virtual Assets and Related Providers	
※	Jun-2019	Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers	go to p63
※	Jun-2020	【FATF 12 Month Review #01】 12 Month Review of Revised FATF Standards - Virtual Assets and VASPs	go to p66- 69
	Sep-2020	Virtual Assets Red Flag Indicators of Money Laundering and Terrorist Financing	
	Mar-2021	Public consultation on FATF draft guidance on a risk-based approach to virtual assets and virtual asset service providers	
※	Jul-2021	【FATF 12 Month Review #02】 Second 12-Month Review of Revised FATF Standards - Virtual Assets and VASPs	go to p66- 69
※	Oct-2021	Updated Guidance for a Risk-Based Approach for Virtual Assets and Virtual Asset Service Providers	go to p64 - 65

（※）Reports presented in this document

Relevant Provisions of the FATF Regulatory Standards (Requirements) as Articulated in the Guidance

Number	Abstract of the Article (Request Matter)	Countries /Authoritie	Covered Entities
Article 1	Activate to identify, understand, assess and mitigate the money laundering and terrorist financing risks.	○	○
Article 2	Develop the national coordination mechanisms on anti-money laundering and terrorist financing. Also, cooperate among authorities.	○	
Article 10 Article 22	Undertake customer due diligence (CDD).		○
Article 11	Keep records of all transactions for a minimum of 5 years.		○
Article 14	Establish a registration or a licencing system for natural and legal persons providing virtual currency exchange services between virtual currency and fiat currencies.	○	○
Article 15	Identify and assess money laundering and terrorist financing risks relating to the development of new products, and new business practices.	○	○
Article 16	Establish the requirements for countries with respect to wire transfers (both cross-border and domestic).	○	
Article 18	Overseas branches / subsidiaries also comply with the law concerning anti-money laundering and terrorist financing of the country where headquarters is located.		○
Article 20	Report the "Suspicious Transactions".		○
Article 26	Consider amending legacy legal frameworks, as needed, to authorize affective anti-money laundering and terrorist financing regulation for decentralised virtual currency payment mechanisms.	○	
Article 35	Formulate an effective, proportionate, and dissuasive sanctions.	○	
Article 40	International cooperation on money laundering and terrorist financing risk (include Article 37, 38, and 39).	○	

【Note】Unlike “Recommendations,” with which member states are obligated to comply, the “Guidance” is merely a statement of policy. Therefore, the movement of countries to enact legislation on crypto assets was generally weak.

（Source）Extract from 「Guidance for a Risk-Based Approach to Virtual Currencies」(Jun 2015)」

【Appendix #2】Trends in FATF（2/9）

June 2019
「Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers」

- Since then, the FATF has continued its efforts to strengthen the regulation of such transactions, partly due to the spread of crypto asset transactions in 2017, and partly due to a series of high-value hacking incidents, including the Japanese company (Coincheck Inc.) in 2018, and its increasing use in criminal financing (see left table on the previous page).
- The October 2018 revised standard, "FATF Recommendations: Regulation of virtual assets," defines (1) the terms "crypto asset (VA)" and "crypto asset service provider (VASP: Virtual Asset Service Provider)" and (2) the Clarify that VASPs are subject to AML/CFT regulations in the revised "Recommendation #15: Preventing the misuse of new technologies" among the 40 recommendations of the FATF (left table). This standard revision was finalized in June 2019.
- The following June 2019 revised guidance (Guidance for a Risk-Based Approach to VA and VASPs) clearly establishes anti-money laundering and terrorism financing requirements for VA and VASPs. Following the adoption of the standards, a "Virtual Assets Contact Group" was established to engage in dialogue with the industry and monitor the industry's efforts to comply with the standards. It also agreed to conduct a "12-month review" to assess the implementation of the standards by each jurisdiction and the private sector.

Summary of「FATF Recommendations」(Oct 2018)

【Recommendations #15：New technologies】

To manage and mitigate the risks emerging from virtual assets, countries should ensure that virtual asset service providers are regulated for AML/CFT purposes, and licensed or registered and subject to effective systems for monitoring and ensuring compliance with the relevant measures called for in the FATF Recommendations.

【Terms & Deifinitions：″Virtual Asset Service Provider (VASP)"】

Virtual asset service provider means any natural or legal person who is not covered elsewhere under the Recommendations, and as a business conducts one or more of the following activities or operations for or on behalf of another natural or legal person:

i. exchange between virtual assets and fiat currencies;
ii. exchange between one or more forms of virtual assets;
iii. transfer(*) of virtual assets;
iv. safekeeping and/or administration of virtual assets or instruments enabling control over virtual assets; and
v. participation in and provision of financial services related to an issuer's offer and/or sale of a virtual asset.

* In this context of virtual assets, transfer means to conduct a transaction on behalf of another natural or legal person that moves a virtual asset from one virtual asset address or account to another.

（Source）Exract from「FATF Recommendations：Regulation of virtual assets」(Oct 2018)

Additional Information of「FATF Guidance」(Jun 2019)

(1)	All of the funds- or value-based terms in the FATF Recommendations (e.g., "property," "proceeds," "funds," "funds or other assets," and other "corresponding value") include VAs and that countries should apply all of the relevant measures under the FATF Recommendations to VAs, VA activities, and VASPs.
(2)	Countries should require VASPs (as well as other obliged entities that engage in VA financial activities or operations or provide VA products or services) to identify, assess, and take effective action to mitigate their ML/TF risks.
(3)	At a minimum, VASPs should be required to be licensed or registered in the jurisdiction(s) where they are created.
(4)	Countries should ensure that ordering institutions (whether a VASP or other obliged entity such as a FI) involved in a VA transfer obtain and hold required and accurate originator information and required beneficiary information and submit the information to beneficiary institutions (whether a VASP or other obliged entity such as a FI), if any. Further, countries should ensure that beneficiary institutions (whether a VASP or other obliged entity) obtain and hold required (not necessarily accurate) originator information and required and accurate beneficiary information.
	The required information includes the: (i) originator's name (i.e., the sending customer); (ii) originator's account number where such an account is used to process the transaction (e.g., the VA wallet); (iii) originator's physical (geographical) address, or national identity number, or customer identification number (i.e., not a transaction number) that uniquely identifies the originator to the ordering institution, or date and place of birth; (iv) beneficiary's name; and (v) beneficiary account number where such an account is used to process the transaction (e.g., the VA wallet)
(5)	Supervisors of VASPs exchange information promptly and constructively with their foreign counterparts, regardless of the supervisors' nature or status or differences in thenomenclature or status of VASPs.

（Source）Extract from「FATF Guidance for a Risk-Based Approach to VA and VASPs」(Jun 2019)

【Appendix #2】Trends in FATF（3/9）

Oct 2021
「Updated Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers」

- Then, in October 2021, further revised guidance, "Updated Guidance for a Risk-Based Approach for VA and VASPs," was released (reflecting public comments solicited in March and April of the same year).
- The 6 main revisions from the previous guidance (June 2019 version, see previous page) are as follows ;

(1) Clarify the definitions of VA and VASP to make clear that these definitions are expansive and there should not be a case where a relevant financial asset is not covered by the FATF Standards (either as a VA or as another financial asset),

(2) Provide guidance on how the FATF Standards apply to stablecoins and clarify that a range of entities involved in stablecoin arrangements could qualify as VASPs under the FATF Standards,

(3) Provide additional guidance on the risks and the tools available to countries to address the ML/TF risks for peer-to-peer transactions, which are transactions that do not involve any obliged entities,

(4) Provide updated guidance on the licensing and registration of VASPs,

(5) Provide additional guidance for the public and private sectors on the implementation of the 'travel rule',

(6) Include "Principles of Information-Sharing" and "Co-operation Amongst VASP Supervisors".

Main Description of Each Part of the「Updated Guidance for a Risk-Based Approach for VA and VASPs」

PART 1	INTRODUCTION
	・ For FATF's purposes, central bank digital currencies (CBCDs) are not VAs as they are digital representation of fiat currencies.
	・ Countries and their competent authorities should treat all varieties of VASPs, regardless of business model, on an equal footing from a regulatory and supervisory perspective when they provide fundamentally similar services and pose similar risks.
PART 2	SCOPE OF FATF STANDARDS
	・ Countries should identify, assess, and understand the ML/TF risks emerging from this space and ensure that measures to prevent or mitigate ML/TF are commensurate with the risks identified. Similarly, countries should require VASPs (as well as other obliged entities that engage in VA financial activities or operations or provide VA products or services) to identify, assess, and take effective action to mitigate their ML/TF risks
	・ While the potential for mass adoption is a factor relevant to all VAs, it is a particularly relevant factor to consider in assessing the ML/TF risks of stablecoins.
	・ The FATF definition of VASP is intended to cover activities related to ICOs (Initial Coin Offerings).
	・ A DeFi application (i.e. the software program) is not a VASP under the FATF standards, as the Standards do not apply to underlying software or technology. However, creators, owners and operators or some other persons who maintain control or sufficient influence in the DeFi arrangements, even if those arrangements seem decentralized, may fall under the FATF definition of a VASP where they are providing or actively facilitating VASP services.
	・ NFTs are generally not considered VAs under the FATF definition. However, it is important to consider the nature of the NFT and its function in practice and not what terminology or marketing terms are used. This is because the FATF Standards may cover them, regardless of the terminology.

（Source）Extract from 「FATF Updated Guidance for a Risk-Based Approach for VA and VASPs」（Oct 2021）

Oct 2021
「Updated Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers」(continued)

Main Description of Each Part of the「Updated Guidance for a Risk-Based Approach for VA and VASPs」 (continued)

PART 3	APPLICATION OF FATF STANDARDS TO COUNTRIES AND COMPETENT AUTHORITIES
	・ Countries should seek to understand the ML/TF risks related to P2P transactions and how they are being used in their jurisdiction.And may consider and implement as appropriate options to mitigate these risks at a national level.
	・ In deciding whether to prohibit or limit VA activities or VASPs, countries should understand the ML/TF risks associated with VAs and VASPs. Also, countries should periodically revisit the risk assessment basis underpinning this decision, as the associated ML/TF risks and the ability to enforce such a prohibition/limitation may evolve rapidly.
	・ Added considerations for the process of licensing and registering VASPs
	・ Further explanation of "travel rule" (e.g., the definition of transaction fees, how the travel rule applies to certain transactions with automatic refunds, etc.)
	・ In addition, the following items are clarified. (1) "how to approach due diligence on counterparty VASPs" and "information that should be collected in transactions with non-hosted wallets." (2) The FATF's approach to sanctions screening and travel rules, and batch (bulk) transfers. (3) How countries and VASPs should address "sunrise issues (events not in the past)."
PART 4	APPLICATION OF FATF STANDARDS TO VASPs AND OTHER OBLIGED ENTITIES THAT ENAGE IN OR PROVIDE COVERED VA ACTIVITIES
	・ The FATF Recommendations apply both to countries as well as to VASPs and other obliged entities that provide covered VA-related services or financial activities or operations (“other obliged entities”), including banks, securities broker-dealers, and other FIs.
	・ This part has been revised to mention the following (1) The relationship between correspondent banking and other similar relationships (2) Provide technical solutions to help VASPs comply effectively and efficiently with the "Travel Rule" (3) Counterparty VASP identification and due diligence (4) VA transfers to/from unhosted wallet (5) Key "red flag" indicators for VAs
PART 5	COUNTRY EXAMPLES OF RISK-BASED APPROACH TO VAs AND VASPs
	・ Provides an overview of various jurisdictional approaches to regulating and supervising VA financial activities and related providers (Example countries: Italy, Finland, Japan, Mexico, Norway, Switzerland, U.S.A.)
PART 6 (Newly Established)	PRICIPLES OF INFORMATION-SHARING AND Co-OPERATION AMONGST VASP SUPERVISORS
	・ The FATF Standards make clear that supervisors should exchange information promptly and constructively with their foreign counterparts, regardless of the supervisors’ nature or status and differences in the nomenclature or status of VASPs (but not binding on supervisors).

（Source）Extract from「FATF Updated Guidance for a Risk-Based Approach for VA and VASPs」(Oct 2021)

【Appendix #2】Trends in FATF（5/9）

June 2020
「12 Month Review of Revised FATF Standards - Virtual Assets and VASPs」

- In conjunction with the June 2019 revision of the guidance/finalization of the revised standards, it was agreed to conduct a "12-month review" to assess the implementation of the FATF standards by each jurisdiction and the private sector (see p63).
- The first "12-month review" report was completed in June 2020 (published on July 7, 2020). The status of introduction of regulations by national authorities (although there are some countries that have not yet completed the process) confirms the progress of domestic regulation by each country. According to the FATF survey, 32 of the 55 countries/regions covered have introduced some kind of regulation (registration or licensing system) (see table below).
- At this time, no clear need for revision of the current standards has been identified. That is, the review "did not identified any fundamental issues" that would require revision of the current standards at this time.
- On the other hand, it adds that "there is still a substantial amount of work to be done" (see next page).

Progress in Implementing VASP AML/CFT Regulatory Regimes

		FATF	FSRB*	Total
1.	Regulation of VASPs			
	AML/CFT regime permitting VASPs is established	24	8	**32**
	Regulations being developed / approved to regulate VASPs	9	4	**13**
2.	Prohibition of VASPs			
	VASPs prohibited with prohibition enforced	1	2	**3**
	Regulations being developed / approved to prohibit VASPs	2	0	**2**
3.	Yet to decide			
	Approach to VASPs under consideration	2	2	**4**
	Total	38	16	**54**

(*) FATF-Style Regional Bodies

- For the 32 jurisdictions which advised that they have established regimes permitting VASPs, 30 have introduced "Registration" or "Licencing" regimes.
  1) Introduced "Registration" Regimes : 18
  2) Introduced "Licencing" Regimes : 12
  3) Introduced bot "Registration" and "Licencing" Regimes : 2

  23 of these jurisdictions advised that they have begun licencing / registering VASPs.

- 18 jurisdictions advised that they have extended their regime to included VASPs incorporated overseas but which offer products/services to customers in their jurisdiction.

  20 jurisdictions advised that they have extended their regime to include VASPs conducting operations from their jurisdiction.

  19 jurisdictions reported that they had publicly available list(s) of VASPs that they have registered or licenced.
- Regarding suspicious transaction reporting, 19 jurisdictions provided STR data on reports from VASPs. These 19 jurisdictions reported 134,500 STRs reported by VASPs between 2018 and March 2020.
- 28 jurisdictions advised that they have allocated supervisory staff for VASP supervision.

  25 reported that they were undertaking a risk-based approach to supervision of VASPs.

  15 jurisdictions reported that they have already conducted on- and/or off-site inspections of VASPs.

  8 reported that they had imposed criminal, civil and/or administrative sanctions on VASPs for non-compliance with AML/CFT obligations.
- 34 jurisdictions reported that they had assessed the ML/TF risks posed by virtual assets and VASPs.

（Source）Extract from 「12 Month Review of Revised FATF Standards - Virtual Assets and VASPs」（Jun 2020） (Table1)

【Appendix #2】Trends in FATF（6/9）

June 2020
「12 Month Review of Revised FATF Standards - Virtual Assets and VASPs」(continued)

- One of the challenges is that among the countries that have legislated the new standards, about half (17 out of 32 countries/regions that have already introduced regulations) have not introduced the “travel rule”. The main reason cited is “with the delay generally attributed to the lack of adequate holistic technology solutions to comply with the rule”. The report therefore identifies a number of challenges to the implementation of the “travel rule” in order to support the effective implementation of the FATF standards through the early establishment of a comprehensive technical solution.
- Aspects other than the “travel rule” include "clarification of the definition of VA and VASP in the FATF standards”, "P2P (peeer-to-peer) transactions”, “so-called stablecoin risks”, and "international cooperation among supervisors on identifying VASPs that need to be registered and licensed in each country“, etc.

Challenges in Implementing the “Travel Rule”
A. Identifying counterparty VASPs
In order to comply with the travel rule, VASPs must be able to identify when they are "(a) transacting with another VASP (as opposed to a private wallet)" and "(b) whether the counterparty VASP is registered / licenced by a jurisdiction and adequately supervised for AML/CFT purposes". The best way to conduct counterparty due diligence in a timely and secure manner is a challenge.
B. Peer-to-peer transactions via private / unhosted wallets
Peer-to-peer transfers of virtual assets, without the use or involvement of a VASP or financial institution, are not explicitly subject to AML/CFT obligations under the revised FATF Standards.It may raise the risk that unnecessarily burdensome AML/CFT compliance obligations, including the travel rule, may incentivise greater use of peer-to-peer transactions via unhosted wallets, raising the risks and requiring further mitigation measures.
C. Batch and post facto submission and past transfers
Some VASPs have requested guidance on the extent to which the batched data submission of transfers of originator and beneficiary data is permissible under the revised FATF Standards.They have queried whether originator and beneficiary data could be submitted on the post facto basis (e.g. at the end of the day, or five to six business days later), instead of the immediate data submission on an individual virtual asset transfers. And, some VASPs have also requested further Guidance on the extent to which beneficiary and originator data should be collected on past virtual asset transfers.
D. Inter-operability of systems
For implementation of the "travel rule" to progress smoothly globally, different solutions need to be inter-operable, with adequate controls in place to address data sharing, storage and security. However, fragmentation may be driven by factors such as different rules for privacy and data protection, cyber-security or AML/CFT, such as where one jurisdiction requires “purpose of transaction” as mandatory information when another does not.
E. Sunrise issue
At this point in time, less than half of FATF members have introduced "travel rule" requirements for VASPs and this gap may be larger in the FATF’s broader Global Network. This means there is not yet a global framework for "travel rule" compliance. VASPs have raised this as a challenge as it means it is unclear what approach they should take in dealing with VASPs located in jurisdictions without the "travel rule" (the ‘sunrise issue’). This issue will remain until all jurisdictions have introduced the requirement.
F. Specific wording issues
Several specific wording issues with the FATF Guidance regarding VASPs were raised, including references to the "Legal Entity Identifier (LEI)", the term "account number", and "the address of an originator".

（Source）Extract from「12 Month Review of Revised FATF Standards - Virtual Assets and VASPs」(Jun 2020)

【Appendix #2】Trends in FATF（7/9）

June 2020
「12 Month Review of Revised FATF Standards - Virtual Assets and VASPs」(continued)

- Finally, since the AML/CFT regimes for VASPs in most jurisdictions are in their early stages, it is proposed that the FATF continue to actively monitor and support countries' regulatory implementation .

Future Work of FATF
A. The FATF need not amend its revised Standards on virtual assets and VASPs at this point in time, but should conduct a second 12-month review of the implementation of the revised FATF standards by June 2021 and consider whether further updates are necessary. (⇒ go to next page)
B. The FATF should release updated Guidance for the public and private sectors.
C. The FATF should continue to promote the understanding of the public and national authorities of the ML/TF risks involved in transactions using virtual assets and the potential misuse of virtual assets for ML/TF purposes. To this end, the FATF will make available information on "red flag indicators" associated with virtual assets transactions to the public in October 2020.
D. "The Virtual Asset Contact Group" should continue and enhance its engagement with the private sector. The FATF should seek to engage with the broader VASP community, as well as technical experts and academics, through the "FATF's Private Sector Consultative Forum" and other relevant forums.
E. The FATF should continue its program of work to enhance international co-operation amongst VASP supervisors.

＜Explanation of "Travel Rule"＞
When money is transferred from one VASP to another VASP, the information of the sender is given to the other party. This is expected to make it easier to ascertain "who sent to whom and how much".

（Source）Extract from 「12 Month Review of Revised FATF Standards - Virtual Assets and VASPs」(Jun 2020)

【Appendix #2】Trends in FATF（8/9）

July 2021
「Second 12-Month Review of Revised FATF Standards - Virtual Assets and VASPs」

- The report of the second "12-month review" was published in July 2021. Looking at the status of adoption of regulations by national authorities (the number of responding countries/regions increased from "54 (FATF:38/FSRB:16)" to "128 (FATF:38/FSRB:90)" compared to the first review), clear progress can be seen in domestic regulation by each country, but implementation is still far from "sufficient", especially in "the travel rule or the development of associated technological solutions" areas, suggests that many challenges remain in FSRB countries and regions (left table).
- As with the first review, "no clear need to amend the revised FATF Standards at this time". Rather, it argues that since the revision of the FATF standards, the VA sector has experienced robust and rapid growth in its markets as a result of increased international regulatory certainty and enhanced AML/CTF controls.
- Nevertheless, the report recommends further action by individual countries in the region (and by the FATF) to address the remaining challenges in implementing the current standards (right table).

Progress in Implementing AML/CFT Regulatory Regimes for VASPs

	FATF	FSRB*	Total
1. Jurisdiction has necessary legislation for AML/CFT regime for VASPs			
Permit and regulate VASPs	27	25	**52**
Prohibit VASPs	1	5	**6**
2. Jurisdiction is in the process of introducing necessary legislation/regulations for AML/CFT regime for VASPs			
Permit and regulate VASPs	7	19	**26**
Prohibit VASPs	0	0	**0**
3. Jurisdiction has decided its approach on VASPs, but has not yet commenced the necessary legislative/regulatory process			
Permit and regulate VASPs	1	5	**6**
Prohibit VASPs	1	5	**6**
4. Jurisdiction is yet to decide what approach to take for VASPs			
Approach to VASPs under consideration	1	31	**32**
Total	38	90	**128**

(*) FATF-Style Regional Bodies

Recommended FATF Actions

A: Prompt implementation of FATF standards for FATF/FSRB members
- The FATF should focus on the effective implementation of the current FATF Standards on virtual assets and VASPs across the Global
- Members of the FATF and its broader Global Network should implement the revised FATF Standards (R.15/INR.15) as a matter of priority.
- The FATF should publish its revised Guidance on virtual assets and VSAPs for the public and private sectors by November 2021.
  → Refer to "Updated Guidance for a Risk-Based Approach to VA and VASPs"
- The VACG (Virtual Assets Contact Group) should engage with the private sector after the publication of the revised FATF Guidance and report to the FATF's Policy Development Group on progress in implementation by June 2022.

B: Establishment of a "travel rule" regime for FATF/FSRB members
- The FATF should accelerate implementation of the travel rule by the private sector as a priority.
- FATF members, particularly those which are leaders in the field of AML/CFT regulation of VASPs, should work collaboratively with the private sector and each other to facilitate this.
- FATF members shall discuss implementation status through outreach by June 2022.

C: Monitoring of VA (and revision of standards and guidance if any)
- The FATF should monitor the virtual asset and VASP sector for any material changes or developments that necessitate further revision or clarification of the FATF Standards considering the fast changing business and technological environment of virtual assets, including through its revised Guidance project.
- While not further revising the Standards at this point in time, the FATF should introduce a technical amendment to "INR.15" to reflect the changes to "Recommendation 1" in the FATF Standards regarding proliferation financing.

（Source） Both table extract from 「Second 12-Month Review of Revised FATF Standards - Virtual Assets and VASPs」(Jul 2021)

【Appendix #2】Trends in FATF（9/9）

June 2020
「FATF Report to G20 on So-called Stablecoins」

- The G20 Finance Ministers and Central Bank Governors Meeting in October 2019 requested the FATF to consider AML/CFT issues related to stabled coins (SCs), particularly global stabled coins (GSCs). In response, the FATF published a report (FATF Report to G20 on So-called Stablecoins) in June 2020 that summarized its analysis.
- The report states that "SCs are covered by the current standards" and that the precautionary measures required of intermediaries have worked to reduce AML/CTF risks in existing SCs (thus, no need to revise the standards again). On the other hand, the report notes that technological innovation in the SC sector is fast and could rapidly become globally available while spreading its functions across many jurisdictions and stresses the importance of effective implementation of and compliance with the current standards and international cooperation among jurisdictions (Articles 67-68).
- It then identifies potential risks for SCs that may require further action and recommends ways to address them (four actions) (see right table). It also called for "the G20 to set an example" to support this, "ensure implementation of the current standards by member countries" and "similar actions in jurisdictions outside the member countries" (Article 80).

Potential Risks for SC that May Need Further Action
1. Coin based in jurisdictions with weak or non-existent AML/CFT frameworks. (i.e., coins based in jurisdictions where AML/CFT precautions would not be properly implemented)
2. Coins with decentralized governance structures. (i.e., coins for which there are no intermediaries to which AML/CFT measures can be applied)
3. Anonymous P2P transactions via an unhosted wallet. (i.e., when the transaction takes place without going through a regulated intermediary)

Whether the FATF Standards Apply to CBDC
a. As CBDCs are digital representation of fiat currencies and issued by a national government, they should be "differentiated from commercial so-called stablecoin proposals". They are also "not a crypto asset".
b. The revised FATF Standards however apply to central bank digital currencies similar to any other form of fiat currency issued by a central bank. Therefore, the activities of financial institutions, designated non-financial businesses and professions and VASPs using CBDCs would be covered as if they were using cash or electronic payments.
c. With their design at earlier stages, the FATF’s understanding of the ML/TF vulnerabilities of CBDCs is less clear. The ML/TF risks of CBDCs will however differ depending on their design described below. (i) Anonymity (ii) Portability (iii) Mass-Adoption

"4 Actions" that the FATF Proposes
a. The FATF calls on all jurisdictions to implement the revised FATF Standards on virtual assets and VASPS as a matter of priority.
b. The FATF will review the implementation and impact of the revised Standards by June 2021 consider whether further updates are necessary. This will include monitoring the risks posed by virtual assets, the virtual asset market, and proposals for arrangements with potential for mass-adoption that may facilitate anonymous peer-to-peer transactions.
c. The FATF will provide guidance for jurisdictions on so-called stablecoins and virtual assets, as part of a broader update of its Guidance. This will set out in more detail how AML/CFT controls apply to so-called stablecoins, including the tools available to jurisdictions to address the ML/TF risks posed by anonymous peer-to-peer transactions via unhosted wallets.
d. The FATF will enhance the international framework for VASP supervisors to co-operate and share information and strengthen their capabilities, in order to develop a global network of supervisors to oversee these activities.

（Source）Both table extract from 「FATF Report to G20 on So-called Stablecoins」（Jun 2020）

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<End>

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