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# Report on Exploratory Work: Private International Law Aspects of Central Bank Digital Currencies (CBDCs)

## I. Introduction

- 1 At its 2023 meeting, the Council on General Affairs and Policy (CGAP) mandated the Permanent Bureau (PB), in partnership with relevant subject-matter experts and Observers, to study the private international law (PIL) implications of CBDCs.<sup>1</sup> The PB was also mandated to prepare for and organise an online colloquium on this topic, subject to available resources.<sup>2</sup> This Preliminary Document (Prel. Doc.) reports on the outcome of the study on the PIL implications of CBDCs, including proposals for next steps. Based on the outcome of this study, the PB proposes that CGAP consider establishing an Experts' Group to study the applicable law and jurisdiction issues raised by digital cross-border payments systems, including the cross-border use and transfers of CBDCs and other forms of digital-money and cryptocurrencies as electronic means of payments.
- 2 On 5 July 2023, a Kick-Off Meeting was held online. It was attended by 38 subject-matter experts identified by the HCCH Member States, as well as representatives from three Observers. Prior to this meeting, the PB circulated a draft Scope Paper setting out a list of possible questions that may be relevant to the exploratory study phase of the CBDCs Project. This paper was the primary subject of discussion during the Kick-Off Meeting. A report of the Kick-Off Meeting is provided in Annex I.
- 3 On the basis of discussions during the Kick-Off Meeting, the PB proceeded to revise and circulate an Iterated Scope Paper, and invited the subject-matter experts to submit their written responses to the questions in the Iterated Scope Paper. The Iterated Scope Paper is provided in Annex II. The written responses are summarised in Section III of this Prel. Doc.<sup>3</sup>
- 4 On 5 October 2023, the PB held an online colloquium entitled "CODIFI Edition 2023 – CBDCs". The colloquium featured a series of pre-recorded video discussions, led by subject-matter experts of the CBDCs Project and other experts from academia, government and industry. The colloquium also included a live panel discussion and a live interview. Colloquium discussions and interviews were aimed at responding to one or more questions posed in the project's Iterated Scope Paper. A summary of the colloquium is provided in Annex III.

## II. Background: PIL Implications of CBDCs

- 5 The study of the PIL implications of CBDCs in this past year proceeded on the basis of the background provided to CGAP ahead of its past meeting in March 2023.<sup>4</sup> CBDCs are digital currencies<sup>5</sup> issued by central banks, which include as key features, (1) the designation as a central bank liability, (2) denomination in an existing unit of account, and (3) use as a medium of exchange

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<sup>1</sup> "Conclusions and Decisions of the Council on General Affairs and Policy of the Conference (7-10 March 2023)", C&D No 16, available on the HCCH website at [www.hcch.net](http://www.hcch.net) under "Governance" then "Council on General Affairs and Policy" and "Archive (2000-2023)".

<sup>2</sup> *Ibid.*, C&D No 17.

<sup>3</sup> The full text of the written responses received from the subject-matter experts are on file with the PB. The volume of responses received prevents them from being provided in full in this Prel. Doc.

<sup>4</sup> Prel. Doc. No 3B, CGAP 2023.

<sup>5</sup> The Bank for International Settlements (BIS) provides a succinct explanation of CBDCs, noting that there are two types of CBDCs, "[r]etail CBDCs (rCBDCs) are intended for the general public, aiming to provide a risk-free and digital means of payment for everyday transactions. Wholesale CBDCs (wCBDCs), on the other hand, are designed for use among financial intermediaries and operate like central bank reserves but with added functionalities enabled by tokenisation." See BIS / FSI Connect, "[Central bank digital currencies – Executive Summary](#)", undated.

and a store of value.<sup>6</sup> States may have different objectives in issuing CBDCs, which include: (1) improving access to payments and promoting financial inclusion, (2) increasing the payment system competition, efficiency, and resilience, (3) safeguarding monetary sovereignty and monetary and financial stability.<sup>7</sup> In 2022, it was estimated that 93% of central banks are exploring CBDCs, and that 58% consider issuing a retail CBDC in either the short or medium term.<sup>8</sup>

- 6 It has been assessed that CBDCs could alleviate existing frictions that may be caused by a lack of interoperability, standardization, as well as other challenges (e.g., high number of intermediaries) in cross-border payments.<sup>9</sup> However, PIL challenges arise with respect to CBDCs when they are used in cross-border payments, which are financial transactions where the payer and the recipient are based in different jurisdictions.<sup>10</sup> The study therefore concentrated on CBDCs with in which cross-border use and circulation is enabled, governed by legal frameworks promulgated by central banks and other State authorities. An example of the issuance of a CBDC as a digital token without a current-account relationship between the central bank and the holder,<sup>11</sup> and where intermediaries may provide services such as holding wallets and handling payments for users.<sup>12</sup>
- 7 Crucial legal implications therefore arise in the design choices underlying a CBDC<sup>13</sup> and significant PIL issues arise when CBDCs are used in cross-border payments. A systematised overview of different domestic and multijurisdictional CBDC initiatives is provided in Annex IV. In addition, two jurisdictions have adopted certain cryptocurrencies as legal tender, as is shown in Annex V.

### III. Outcomes of the Study – Responses of Subject-Matter Experts to the Iterated Scope Paper and Input from the Colloquium

- 8 Expert responses to the Iterated Scope Paper, and input from the colloquium, indicate that various approaches are being proposed and implemented at the national, bilateral and regional levels regarding the development of CBDCs, including projects for their cross-border circulation. The diversity of approaches taken by CBDC projects challenges fundamental assumptions of money and payments, giving rise to a need for a PIL framework. Experts were generally in agreement that CBDCs are typically not recognised as a form of digital asset in national legislations, as CBDCs and digital assets serve different purposes and have different legal implications.<sup>14</sup>
- 9 Experts' responses to the Iterated Scope Paper and the input received from the colloquium indicate that, in relation to PIL considerations, there is a need for work focused on cross-border payments

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6 IMF WP/20/254, "Legal Aspects of Central Bank Digital Currency: Central Bank and Monetary Law Considerations", November 2020, p. 6. A possible indirect structure is the issuance of the liability by a commercial bank which in turn is fully backed with central bank liabilities. This structure is not deemed as a genuine CBDC by some experts, because in the case of bankruptcy of the commercial bank the user would have a claim against such commercial bank, not against the central bank.

7 G. Soderberg, J. Kiff, H. Tourpe, M. Bechara, S. Forte, K. Kao, A. Lannquist, T. Sun, and A. Yoshinaga, IMF NOTE/2023/008 "How should central banks explore central bank digital currency?", September 2023, pages 9-11.

8 BIS PAPER/23/136 "Making headway – Results of the 2022 BIS survey on central bank digital currencies and crypto", pages 4 and 9.

9 BIS Report to the G20 "Central bank digital currencies for cross-border payments" July 2021, pages 13-14.

10 IMF NOTE/2023/008, pages 10, 20, 21, about CBDCs used for cross-border payments.

11 IMF WP/20/254 "Legal Aspects of Central Bank Digital Currency: Central Bank and Monetary Law Considerations", November 2020, p. 9.

12 J. Ho "Live Panel", Colloquium – CODIFI Edition 2023: CBDCs (Colloquium), online on the [HCCH YouTube channel](#). Experts consider that it would be too challenging for central banks to assume such tasks. Accordingly, intermediaries, such as commercial banks and financial institutions, are considered as more suitable for it.

13 In WP/20/254, pages 10-11. the IMF has identified these choices on CBDC design in terms of dichotomies between account-based vs. token-based; wholesale vs. retail; direct vs. indirect; and centralised vs. decentralised. In addition, in IMF NOTE/2023/008, pages 18-19, the IMF noted that different principles may be considered to assess the design options, such as interoperability, compliance with the laws and regulations, resiliency, upgradability, and others.

14 M. Di Cioccio Mueller, Expert Response to the Iterated Scope Paper (ERISP), on file with the PB; see also F.B.P. Polido, Colloquium and J. Alves Pinto, Colloquium.

systems that include the use and transfers of CBDCs. In particular, the question of the legal tender status of CBDCs, and the connecting factors that may be relevant to intermediaries that handle and transact in cross-border payments systems involving CBDCs, were two of the topics that had the most detailed responses from experts. This section summarises the input received on these two topics and lists the additional PIL issues that the experts raised. It then summarises the topics that, in the opinion of the experts, should be excluded from the scope of work.

## A. Legal Tender Status

- 10 CBDCs were described by experts as having essential characteristics aligning with physical money, such as mandatory acceptance at full face value with the power to discharge a payment obligation.<sup>15</sup> However, the implementation of CBDCs varies between legal systems, and the legal tender status of CBDCs depends on specific legal and regulatory frameworks of each jurisdiction. For example, a CBDC may be developed as a “digital representation” of a country’s currency, or a subset of a country’s currency distinct from physical money, or a distinct financial instrument taking into account unique features underpinning CBDCs.<sup>16</sup> Other non-payment functions are also relevant; for example, is the CBDC designed to be interest bearing, and is it freely convertible into deposits and bank notes?<sup>17</sup>
- 11 As a result, one significant point of discussion was the framework required to enable CBDCs acceptance across borders, potentially using the jurisdiction’s *lex monetae*<sup>18</sup> or legal tender statute as the authorising law. One expert perspective suggests that a CBDC should have legal tender status in its issuing jurisdiction, granting it the same status as physical money, and that consequently there would be no legal obstacles for using a foreign CBDC inside the territory.<sup>19</sup> In another expert perspective, foreign currency is generally not considered legal tender for the local jurisdiction, thus foreign CBDCs would not be legal tender in the jurisdiction, even if an authorising law granted legal tender status to the jurisdiction’s own CBDC.<sup>20</sup> A third approach suggests that cross-border payments would not hinge on any particular status accorded to foreign CBDCs; instead, central bank cooperation would enable interoperability of payments.<sup>21</sup>
- 12 The circulation of CBDCs across borders thus appears to find partial solutions in their designation as legal tender, though jurisdictions differ as to the necessity and relevance of this designation,<sup>22</sup> the overall effect of such designation on the cross-border framework, and whether current legislation on legal tender is sufficient to accommodate the introduction of CBDCs (including in a foreign jurisdiction.<sup>23</sup> Outside of legal tender statutes, recognition of a foreign CBDC may also be realised through bilateral treaties (which provide a legal framework for cross-border transactions), regulatory approvals (if foreign CBDCs comply with regulatory requirements of receiving countries), and international cooperation mechanisms (e.g., BIS, Financial Stability Board (FSB), or G20 roadmaps for enhancing cross-border payments).<sup>24</sup> This suggests that further work may focus on the variations in *lex monetae*, legal effects of legal tender legislation and other authorising

<sup>15</sup> P. Papapaschalis (representative for the ECB), “Money, Currency, Legal Tender and The Law Applicable to the Protection of Personal Data, Data Privacy, Transfer of Data”, Colloquium. Also see IMF NOTE/2023/008, p. 25.

<sup>16</sup> M. Di Cioccio Mueller, ERISP, explaining that the former is CBDC as money and the latter is CBDC as currency.

<sup>17</sup> J. Torregrossa, ERISP.

<sup>18</sup> *Lex monetae* refers to the law of the currency which, among other things, “determines which chattels are legal tender of the currency referred to, to what extent they are legal tender, and how, in the case of a currency alteration, sums expressed in the former currency are to be converted into the new one”, see C. Proctor, “[Norminalism. Private International Law, and the Lex Monetae Principle](#)”, in *Mann and Proctor on the Law of Money*, (8<sup>th</sup> ed.).

<sup>19</sup> D. Artecona, ERISP.

<sup>20</sup> J. Torregrossa, ERISP, also see di Ciocco Mueller, ERISP.

<sup>21</sup> P. Papapaschalis (representative for the ECB), Colloquium, see *supra* note 15.

<sup>22</sup> J. Torregrossa, ERISP. Another consideration is that many transactions are effected outside the legal tender framework, including payments with commercial bank balances.

<sup>23</sup> J. Torregrossa, ERISP.

<sup>24</sup> M. Milena di Cioccio, ERISP.

legislation, and the extent to which these frameworks will enable cross-border interoperability of CBDCs or create cross-jurisdictional conflicts.

## B. Intermediaries and Possible Connecting Factors

- 13 Intermediaries provide necessary services for the operation and implementation of CBDCs but the functions delegated to them, their location, and their method of integration into the CBDC system may raise PIL issues. Experts noted that intermediaries may be afforded varying degrees of functionality and independence depending on how they are included in the technical framework of a CBDC cross-border payment pilot project.<sup>25</sup> Complexities may arise in the analysis of *situs*.<sup>26</sup> In particular, experts noted that further study may be warranted on the legal rights and responsibilities of intermediaries with respect to (a) holding of CBDCs, such as in custody accounts; (b) customer conversion of CBDC balances into other forms of money; (c) CBDC issuance and redemption by the central bank; and (d) transfer of CBDCs.<sup>27</sup>
- 14 There was also much detailed input provided in relation to the various connecting factors that may be relevant to CBDCs. Potential connecting factors may depend on the infrastructure where a CBDC is issued. For example, a possible infrastructure could be on a distributed ledger located in multiple jurisdictions and without a central authority or validation point, where applying the *lex situs* or the PRIMA principle as a connecting factor may be difficult, especially in relation to intangible assets held therein.<sup>28</sup> While the implications of a certain infrastructure can presumably be clarified by the supervision of the central bank or another authority that is able to designate an applicable law to the system, it has been noted that the *situs* becomes less clear where, for example, the central bank's role is limited to identity verification or where technical ledger access and intermediaries play a greater role.<sup>29</sup> Other connecting factors mentioned by experts include the law chosen by the DLT network participants (*elective situs*), the law approved by regulators (*modified elective situs*), the residence of the participant who is transferring the CBDC or the residence of the encryption private master key-holder for the DLT system (PREMA).<sup>30</sup> Experts were generally in agreement that work in relation to the connecting factors relevant to the role of and transactions undertaken by intermediaries in cross-border payments systems would be timely and desirable.

## C. Additional PIL Issues

- 15 Other PIL issues identified by the experts include the following:
- a. Experts discussed contractual matters such as the possible legal framework in the absence of a contract<sup>31</sup> and the validity of choice of law clauses in relation to the contracts involving CBDCs.<sup>32</sup> Experts noted that the development of rules for determining the choice of law in contracts involving CBDCs, and a study on whether parties can choose the governing law for

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<sup>25</sup> Z.F. Quek, ERISP.

<sup>26</sup> *Ibid.*

<sup>27</sup> J. Cheng, ERISP and J. Torregrossa, ERISP.

<sup>28</sup> *Ibid.*; see also for example Prel. Doc. No 4 of 2021.

<sup>29</sup> J. Cheng, ERISP and J. Torregrossa, ERISP. An example is Project Tourbillon, see Annex IV.

<sup>30</sup> J. Torregrossa, ERISP. Previous exploratory work carried out by the PB already has identified connecting factors in the context of digital economy, including DLT, and could be a relevant input for future work, see Annex 1, Prel. Doc. No 4 of 2021.

<sup>31</sup> P. Papapaschalis (representative for the ECB), Colloquium, see *supra* note 15. In the absence of contract, the *lex monetae* would dictate whether payment in CBDC would be mandatorily acceptable, feasible or prohibited. As to the validity of the payment, the *lex contractus* applies, in the absence of the contract, the law of the jurisdiction most closely related to the transaction applies.

<sup>32</sup> P. Papapaschalis (representative for the ECB), Colloquium, see *supra* note 15, however noting that the borderline between PIL and monetary law must be preserved (e.g., parties cannot agree to choose an applicable law that rejects the legal tender of CBDC within the territory of the euro area, or which circumvents the consumer protection provisions).

- their CBDC transactions, would be of current interest to issuers (incl. central banks), intermediaries and users.<sup>33</sup>
- b. Experts identified the need for PIL rules relating to settlement finality as a priority for the effective cross-border functioning of CBDCs. Settlement finality arises when a CBDC is used as a settlement medium across platforms and requires the establishment of rules governing the discharge of the obligation by a CBDC payment. The involvement of intermediaries is also relevant to settlement finality.<sup>34</sup>
  - c. Experts noted that the requirement of residency for a valid use of CBDCs may raise PIL questions such as whether non-resident individuals would have access to the CBDC and to which extent,<sup>35</sup> and whether foreign intermediaries could offer digital wallets and other services.<sup>36</sup>
  - d. Where CBDC systems are intended to be freely convertible into deposits and bank notes, particularly in cross-border payments systems, experts identified the PIL considerations around issuance, redemption, and conversion to be of interest because of the parity that the law would require between a CBDC and its traditional counterpart.<sup>37</sup>
  - e. Experts appear to agree that the (cross-border) use and transfers of CBDCs may include proprietary rights, but that these would differ by jurisdiction and depend on the design of the CBDC, as well as the regulatory framework underpinning the CBDC.<sup>38</sup> Experts noted that further work on a coherent PIL framework relating to proprietary rights in CBDCs may be warranted.
  - f. Experts identified the need for a coherent PIL framework on the effects against third parties of the rights resulting from the holding of CBDCs, or of a disposition of CBDCs.<sup>39</sup>
  - g. Experts also noted that work is needed in relation to the treatment of CBDCs in cross-border restructuring and insolvency proceedings, including how CBDC assets and transactions should be handled in the event of a counterparty's insolvency in another jurisdiction.<sup>40</sup>
  - h. The question of the jurisdiction where CBDC-related disputes should be litigated,<sup>41</sup> including questions of jurisdiction over foreign intermediaries offering wallets of the local CBDC, if they are given access to provide those services<sup>42</sup> and the validity of choice of court clauses in transactions involving CBDCs, was identified as a topic meriting further work.<sup>43</sup> Experts also identified questions relating to the recognition and enforcement of judgments involving CBDCs in cross-border disputes<sup>44</sup>, or when a judgment regarding CBDC implicates a jurisdiction that prohibits the usage of CBDC, as issues that merit further study.<sup>45</sup>
  - i. The significance of offline payment features of CBDCs was also identified as a topic that would benefit from study from a PIL perspective.<sup>46</sup>

#### D. Excluded Topics

- 16 Experts noted that certain topics should be excluded from the scope of work at the HCCH. Public policy-related matters such as consumer protection, anti-money laundering and KYC (*Know Your*

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<sup>33</sup> M. Di Cioccio Mueller, ERISP.

<sup>34</sup> J. Cheng, ERISP.

<sup>35</sup> A Beaves, ERISP and S.L. Michal, ERISP.

<sup>36</sup> A. Beaves, ERISP.

<sup>37</sup> J. Torregrossa, ERISP.

<sup>38</sup> J. Cheng, ERISP and Z.F. Quek, ERISP.

<sup>39</sup> M. Di Cioccio Mueller, ERISP.

<sup>40</sup> *Ibid.*

<sup>41</sup> M. Di Cioccio Mueller, ERISP.

<sup>42</sup> Experts from the UK, ERISP.

<sup>43</sup> P. Papapaschalis (representative for the ECB), Colloquium, see *supra* note 15.

<sup>44</sup> Experts from the UK, ERISP; M. Di Cioccio Mueller, ERISP.

<sup>45</sup> P. Papapaschalis (representative for the ECB), Colloquium, see *supra* note 15.

<sup>46</sup> M. Di Cioccio Mueller, ERISP.

Customer) compliance<sup>47</sup> vary from jurisdiction to jurisdiction,<sup>48</sup> and is outside the scope of work generally undertaken at the HCCH. Similarly, experts were of the view that the HCCH should not seek to address substantive data protection regimes but only consider how these frameworks impact CBDC issuance and the applicable law issues when multiple frameworks can apply.<sup>49</sup>

#### IV. Digital Cross-Border Payments Systems

17 The general trend and conclusion of the study, including the discussions at the Kick-Off Meeting, the experts' responses to the Iterated Scope Paper, and the input from the colloquium, point towards the feasibility and desirability of work in relation to the PIL considerations triggered by the cross-border intermediated, retail use of CBDCs in payments systems.<sup>50</sup>

18 Experts identified by HCCH Members have noted that in some jurisdictions, national priorities have moved away from the pilot and issuance of CBDCs, to modernising the payments system through quick payments instruments,<sup>51</sup> including for cross-border payments.<sup>52</sup> One expert noted that motivations for the issuance of CBDCs include improving cross-border payments, and that legal certainty and a clear statutory framework for cross-border payments and the applicable law of such cross-border payments would be needed.<sup>53</sup> Another expert noted that work on harmonising PIL concerns stemming from the usage of CBDCs in cross-border payments systems is required.<sup>54</sup> Yet another expert noted that their jurisdiction has concluded that a CBDC could be designed to interoperate with foreign CBDCs to support and enhance cross-border payments systems, but that achieving interoperability would require advance cooperation between jurisdictions to establish common standards and legal frameworks.<sup>55</sup> Clarity as to applicable law considerations in payment systems interoperability would enable payments service providers to make payments across systems without concerns as to payments law and settlement finality.<sup>56</sup> As CBDCs systems used for payments would have similarities with existing payments infrastructure, one expert has noted that existing payments law would be a useful starting point for establishing PIL considerations.<sup>57</sup>

19 Latest developments also show that many jurisdictions are moving away from projects that frame CBDCs as “digital cash” or a “digital version of cash”, towards CBDCs as “an electronic means of payment” or a “digital payment system” that shares certain similarities with cash.<sup>58</sup> Accordingly, measures to limit the cash-like features of CBDCs as stores of value, and measures that aimed to limit the maximum holding amount by users of the CBDC, were included in the design of the CBDC.<sup>59</sup>

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47 J. Cheng, ERISP, M. Di Cioccio Mueller, ERISP.

48 J. Torregrossa, ERISP.

49 M. Di Cioccio Mueller, ERISP, J. Torregrossa, ERISP.

50 For example, the sending of remittances from immigrant to their families, and the interoperability of the systems where each CBDC is issued, distributed and circulated. H. Wang, “In conversation with...”, Colloquium, see *supra* note 15.

51 An example is the case of Uruguay, which also has no legal obstacle to admitting payments in CBDCs issued by central banks of foreign countries; see D. Artecona, ERISP.

52 Cross-border payments interoperability is a consideration that Mongolia is including in its study on CBDCs, see M. Ninjbadgar, ERISP.

53 A. Beaves, on behalf of the experts identified by the UK, ERISP, and also listing Project mBridge (BIS Innovation Hub Hong Kong Centre, the Hong Kong Monetary Authority, the Bank of Thailand, the Digital Currency Institute of the People's Bank of China, and the Central Bank of the United Arab Emirates), Project Jasper-Ubin (Canada-Singapore) and Project Inthanon-LionRock (Hong Kong-Thailand) as examples of cross-border payments systems on platforms based on DLT, upon which multiple central banks can issue and exchange respective CBDCs.

54 O.A. Bello Dinartes, ERISP.

55 J. Torregrossa, ERISP, referring to a 2022 Report by the United States Department of the Treasury, [Report on the Future of Money and Payments](#) (September 2022).

56 *Ibid.*

57 J. Torregrossa, ERISP.

58 S. Grunewald, “Insights from the Digital Euro – A Dialogue”, Colloquium, see *supra* note 15. The expert also mentioned that one of the reasons for this reframing is macroeconomic stability: it allows a framework to be put in place in order to prevent users from saving their money in CBDC format instead of commercial bank accounts, a situation that may lead banks to lose their deposits and, as a result, their main source of financing. This may lead to serious consequences for the current banking industry. On this issue, also M. Ninjbadgar, ERISP.

59 S. Grunewald, “Insights from the Digital Euro – A Dialogue”, Colloquium, see *supra* note 15.



The framing of CBDC use as a “digital system for cross-border payments” triggers PIL issues regarding the characterisation of the CBDC and the applicable law in cross-border situations.

20 Moreover, experts identified by HCCH Members noted that different jurisdictions treated non-CBDC forms of digital currency, including cryptocurrency and stablecoins differently. In some jurisdictions, for example, cryptocurrency is illegal.<sup>60</sup> In others, they are not considered legal tender.<sup>61</sup> A third group of jurisdictions recognise cryptocurrency as legal tender.<sup>62</sup> The different treatments of digital money, including CBDCs, may warrant the consideration of PIL issues about the interoperability of CBDCs with other forms of digital currency, including cryptocurrency and stablecoins, in particular in relation to cross-border payments systems.

21 Experts have noted that the specific features of CBDCs do not allow the PIL frameworks that already exist for cash payments to apply one-to-one. For example, having in mind the specific design of a certain CBDC, the *lex monetae* could have more predominance than party autonomy when determining the applicable law for some issues. Additionally, the participation of intermediaries would have an impact on the PIL analysis. Referring to cross-border payments, one expert noted that recipient States of a foreign CBDC could decide the extent to which they will authorise the denomination of contracts in foreign currency, and recipient countries’ treatment of a foreign CBDC is likely to be affected by the issuing country’s rules regarding that CBDC. The cross-border use of CBDCs and other digital currencies in cross-border payments systems would thus face PIL challenges including questions of the applicable law and forum that merit further work.<sup>63</sup> These PIL challenges would arise in both wholesale payments (as evidence by collative projects carried out by groups of central banks) and retail payments within the specific context of each country or jurisdiction.<sup>64</sup> Notably, one expert noted that the roles and responsibilities of intermediaries in cross-border payments and the status of intermediaries in cross-border insolvency regimes should be considered.<sup>65</sup>

22 In light of the above outcomes of the study undertaken by the HCCH this year on the PIL aspects of CBDCs, it is proposed that CGAP considers establishing an Experts’ Group to study the questions of applicable law and jurisdiction that arise in digital cross-border payments systems, including the cross-border use and transfers of CBDCs and other forms of digital money and cryptocurrencies.

## V. Proposal for CGAP

23 The PB invites CGAP to note the outcomes of the study on the PIL aspects of CBDCs and the issues described in this Prel. Doc. in relation to digital cross-border payments systems. The PB proposes the following Conclusions and Decisions for CGAP’s consideration:

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<sup>60</sup> An example is China, see M. Cai, on behalf of the experts identified by China, ERISP.

<sup>61</sup> Examples include the Eurozone, see P. Papaschalis on behalf of the European Central Bank, ERISP; France, see S. Delacourt, ERISP; Israel, see M.S. Livyatan; Singapore, see Z.F. Quek, ERISP; the UK, see A. Beaves on behalf of the experts identified by the UK, ERISP; the USA, see J. Torregrossa, ERISP; and Uruguay, see D. Artecona, ERISP.

<sup>62</sup> Examples of these jurisdictions include the Central African Republic and El Salvador, see O.A. Bello Dinartes, ERISP.

<sup>63</sup> H. Wang, [How to Understand China’s Approach to Central Bank Digital Currency.pdf](#) Para. 5.2.5 p. 27. Such PIL considerations, of course, would be subject to overriding mandatory regulations and other overriding considerations including monetary sovereignty, foreign exchange policies, and other regulatory and compliance requirements.

<sup>64</sup> As noted in Annex IV, there are pilots on both use cases: wholesale payments and retail payments. Cross border pilots have been mostly focused on wholesale payments, in collaborative projects carried out by groups of central banks. Moreover, some central banks are more active in implementation or experimentation of CBDC pilots, while others are more cautious. These differences are mainly explained because the design of a CBDC needs to address the specific context of each country, and some central banks have not identified the need to introduce a CBDC, thus conducting monitoring activities while others prefer the involvement of private parties (e.g. commercial banks) in more advanced stages. Regarding the country-specific circumstances to be considered for a CBDC design, see BIS Innovation Hub, “Project Polaris Part 4: A high-level design guide for offline payments with CBDC”, October 2023, pp. 33-37.

<sup>65</sup> J. Torregrossa, ERISP.

CGAP mandated the establishment of an Experts' Group to study the applicable law and jurisdiction issues raised by digital cross-border payments systems, including the cross-border use and transfers of CBDCs and other forms of digital money and cryptocurrencies as electronic means of payments.

## **ANNEXES**

## Annex I: Report of the Kick-Off Meeting

### I. Introduction

- 1 On 5 July 2023, the Kick-off Meeting for the Central Bank Digital Currencies Project (CBDCs Project) was held online from 11.15 a.m. to 4.45 p.m. (CEST). The meeting included 38 subject-matter Experts identified by the HCCH Member States, as well as representatives from three Observers, representing a variety of backgrounds including law professors, central bank legal advisors, and practitioners.
- 2 Prior to the meeting, the Permanent Bureau (PB) circulated a draft Scope Paper on 4 July 2023 setting out a list of questions that may be relevant to the exploratory study phase of the CBDCs Project. The draft Scope Paper was the primary subject of discussion at the Kick-off Meeting.
- 3 This report summarises the discussions that took place during the Kick-off meeting concerning each question in the draft Scope Paper. On the basis of this feedback, the PB revised and circulated an iterated Scope Paper. The subject-matter Experts were to provide their written responses to the iterated Scope Paper.

### II. Discussion of Questions in Draft Scope Paper

- 4 Experts underlined the importance of answers to Section I, as these could pave the way for further exploratory work and bring all of the experts to the same level of knowledge concerning the international practices regarding CBDCs. The PB clarified that the purpose of the questions in Section I (questions 1-3) is to create a survey of practices and legislation around the world. All experts were thus requested to answer Questions 1, 2 and 3 in their written submissions, and to provide information from their own jurisdiction or other jurisdictions with which they were familiar.

#### Section I – Background and Context

##### **Question 1 - Current and nascent practice: Which jurisdictions are exploring CBDCs or have issued CBDCs? Are there characteristics of their CBDC frameworks that may be relevant to the CBDCs Project?**

- 5 Experts discussed the distinction between “frameworks” in Question 1 and “legislation” in Question 2. The PB clarified that Question 1 was primarily concerned with technical frameworks, business plans, and economic policies for establishing CBDCs, while Question 2 was concerned with legislative developments.

##### **Question 2 - Current and nascent legislation: Have jurisdictions exploring or issuing CBDCs enacted legislation relating to private international law?**

- 6 Experts shared approaches taken in their respective jurisdictions. Some experts highlighted that the legislation currently being developed generally had a national scope and thus did not yet touch on aspects of private international law (PIL). However, the difference being drawn in some legislations between wholesale and retail CBDCs could give rise to PIL considerations. Experts reiterated the importance of a global survey on legislation relating to CBDCs and offered to circulate more documentation after the Kick-Off Meeting.

**Question 3 - Current and nascent international or cross-border projects: Are there relevant current or nascent international, regional or other cross-border projects that should be considered in the context of the CBDCs Project?**

- 7 Experts noted other parallel ongoing projects, such as work at the European Law Institute on its Principles on the Use of Digital Assets as Security, which addresses matters including applicable law and effectiveness of security interests in digital assets against third parties. To avoid fragmentation, experts noted that awareness of current and nascent international or cross-border projects is important.

**Section II – Definitions and Scope**

**Question 4 – Taxonomy: Is there a need to develop a taxonomy around CBDCs?**

- a. *Should the categories of CBDCs be differentiated (e.g. wholesale CBDCs, retail CBDCs, DLT- or non-DLT based CBDCs)? Do these categories present different questions of private international law? Are these categories similar, or do they require separate PIL frameworks?*
- b. *To what extent does the operating technology (e.g. DLT-based, private, hybrid) impact the legal frameworks around CBDCs? How can the outcomes of the CBDCs Project be as technology-neutral and future-proof as possible?*
- c. *If there is a need to develop a taxonomy around CBDCs, can / should this taxonomy be included in a more general taxonomy on digital assets? (see Question 8 below)*

- 8 Experts agreed that there was a need to explore the existing types of CBDCs and carefully think through possible categorisations so that the project definitions are meaningful and can include as many existing and future CBDCs as possible.
- 9 Experts debated whether categorising CBDCs under wholesale and retail CBDCs would be suitable. Some experts shared their jurisdiction's experience and highlighted that the notion of wholesale and retail CBDCs might be understood differently from one jurisdiction to another, and that some jurisdictions do not even make this distinction. Some experts noted that PIL rules could be influenced by the HCCH 2006 Securities Convention, as holdings through an intermediary could be a relevant distinction between wholesale and retail CBDCs. Some experts noted that it would be challenging for the CBDCs Project to aim at a technology-neutral and future-proof instrument as CBDCs and related technologies are still being developed.

**Question 5 - Areas of law: Which areas of the law relating to the issuance, circulation and use of CBDCs would benefit from coordinated guidance on PIL?**

- 10 Experts identified a number of topics which could benefit from coordinated guidance on PIL, such as issuance, redemption and conversion of money; maintenance at either the central bank or custodian level; transactional and property issues; issues regarding the initial property claims to a CBDC transfer; transfer of ownership outright and transfer of lesser interests; and issues relating to the creation of a security right, such as effectiveness against third parties and finality of transfers. Experts noted that the effect of the introduction and use of CBDCs is a fundamental change to cross-border payment systems, and that PIL issues arising from this change would need to be addressed.

- 11 Experts noted that the scope of the project should focus only on core PIL questions. Matters of policy such as internal regulatory conflicts and the competency of authorities to issue CBDCs should be excluded from the scope of the project. In this context, guidance on the application or limitations to application of a foreign law may be important.

### Section III - Characterisation and Applicable Law

#### Question 6: Characterisation: Is work on the matter of characterisation necessary?

- a. *What matters (e.g. proprietary, contractual etc) arise in respect of CBDCs?*
- b. *What domains are available for consideration?*
- c. *What purposes would guidance on each characterisation serve?*

- 12 Experts recommended that, due to the potential overlaps between question 5 on areas of law and question 6 on characterisation, the two questions could be merged in the iterated version of the Scope Paper. As for specific areas of future work, experts identified contractual restrictions in the circulation of CBDCs, and recognition of the CBDC of another country as money or a monetary obligation.

#### Question 7 - Connecting factors: What connecting factors be explored in determining the applicable law, with respect to each legal characterisation?

- 13 The PB clarified that the question was concerned with examining whether traditional PIL connecting factors, such as *lex situs*, could be applicable in the context of CBDCs, and if not, which connecting factors would be relevant for the study. Experts noted that this would depend on the specific scenario where the choice of law was unclear, as well as the characterisation of the issue. Some experts noted that the question may only be relevant in certain circumstances, as some CBDCs would have governing laws or choice of law clauses attached to them.

#### Question 8 - Proprietary aspects: Are CBDCs digital assets?

- a. *Do proprietary interests arise in the issuance, circulation and use of CBDCs?*
- b. *Do CBDCs fall within the category of “digital assets” for the purposes of property law?*

- 14 Experts agreed that proprietary interests may arise and that for the purpose of property law, CBDCs could be considered as digital assets. However, some experts noted that there are jurisdictions that have explicitly excluded CBDCs from the definition of “digital assets” in their national legislation. Experts suggested a reframing of this question to focus on whether CBDCs have unique characteristics and trigger unique issues which would require specific rules, beyond the ordinary treatment of digital assets. Some experts also mentioned the possibility of distinguishing between CBDCs themselves and interests linked to them for the purpose of work on proprietary aspects. In addition, experts raised questions and concerns concerning the expression of party autonomy in proprietary interests.

**Question 9 - Contractual aspects: Should the CBDCs Project also include considerations related to the applicable law rules in contractual aspects in transaction involving CBDCs?**

- a. *If the answer is yes, do considerations of party autonomy arise? If so, how can the principle of party autonomy be expressed?*
- b. *How would the choice of law rule apply?*
- c. *What considerations arise in situations without a valid choice of law?*

- 15 Experts noted that the HCCH Principles on Choice of Law in International Commercial Contracts should be the starting point of the work on applicable law in contractual aspects in transactions involving CBDCs. Experts started identifying potential areas to explore, such as: party autonomy; situations where parties did not validly express a choice of law; and weaker party protection, especially given the existence of large payment platforms which make power imbalances more significant.
- 16 Some experts also raised the question of whether it would be valuable to distinguish between transactions where CBDCs are used as payment and transactions where CBDCs are the object of the transaction, such as the granting of a security interest in a CBDC. Some experts noted that the PIL issues may circle back to the use of CBDCs in payments systems, as opposed to CBDCs as a storage unit for value (e.g. for interest-earning holdings).

**Question 10 - Banking law: Do CBDCs fall under the same legal framework as international banking? Is a sector-specific framework necessary?**

- 17 Experts discussed whether existing legal frameworks for international banking would encompass CBDCs. Experts explained that even if the same legal framework was to be applied, some changes in banking transactions would necessarily be triggered due to use of CBDCs, and that thus some additional PIL rules or guidance could be valuable.

**Question 11 - Securities law: Are CBDCs securities?**

- a. *Do CBDCs fall under within the scope of application of securities law? Is a sector-specific framework necessary?*
- b. *Can CBDCs be used / treated as collateral?*
- c. *Is there scope for application to CBDCs of the HCCH 2006 Securities Convention?*

- 18 Experts discussed approaches taken in their respective jurisdictions concerning the relationship between CBDCs and securities. Experts suggested that in some jurisdictions, CBDCs and securities would be treated under separate frameworks with potential overlaps, while in other jurisdictions, CBDCs were intended for use as a medium of exchange only, with no potential application as a security.
- 19 Experts agreed that sub-question 11.b concerning CBDCs used as collateral should be reframed, as the question appears to pre-suppose a relationship between CBDCs and securities. Experts additionally highlighted that collateral may in some jurisdictions be one of the main uses of CBDCs.

### Question 12 - Cross-border insolvency proceedings: What PIL considerations arise where CBDCs are involved in cross-border insolvency proceedings?

- 20 Experts suggested that the question to be asked first is whether or not insolvency is within the scope of the project. If insolvency is within the scope of the project, it would then be possible to examine a number of questions concerning cross-border insolvency and CBDCs.
- 21 Experts debated whether CBDCs would be treated in the same manner as other assets in an insolvency proceeding, and noted that CBDCs may require special treatment if they experience sharp value fluctuations—in such a situation, the CBDC value would suddenly differ from its value in paper money, affecting the outcomes of a clawback situation or an avoidance action.

### Section IV - Currency and Legal Tender

#### Question 13 – Money: Do CBDCs qualify as “money”, “currency”, “legal tender”, or as a distinct notion?

- a. *What is State practice as to whether CBDCs qualify as “money”, “currency”, “legal tender”, or as a distinct notion? What are the PIL implications arising from such State practice?*
  - b. *Do national legislations recognise CBDCs as legal tender (perhaps alongside currently-circulating fiat)? What are the PIL implications arising from the recognition of CBDCs as legal tender?*
  - c. *Would States need to adapt their legal framework prior to the adoption of standards of coordinated guidance on CBDCs?*
- 22 In general, the discussion focused on questions of interoperability, interchangeability and functional equivalence between CBDCs and money. Experts noted that answers could also differ between jurisdictions. Experts suggested exploration of: how CBDCs are similar or different from currencies used on electronic payment platforms; whether an obligation to pay in CBDCs counts as a monetary obligation; whether a monetary obligation can be satisfied by the payment of a currency of another State, or a CBDC of another State; and whether CBDCs could always satisfy a contract if the form of payment is not specified.

#### Question 14 - Cryptocurrency as legal tender: How does the adoption of crypto currencies as legal tender by some States interact with the adoption in these and other States of CBDCs?

- a. *Are there jurisdictions that recognise crypto currencies as legal tender (perhaps alongside currently-circulating fiat)?*
  - b. *Should the CBDCs project include PIL considerations relating to the adoption of crypto currencies as legal tender?*
  - c. *What are the PIL implications arising from the interaction between currently-circulated, non-digital fiat currency, CBDCs, and crypto currencies as legal tender?*
- 23 Experts suggested moving parts of question 14 to question 1 of the Scope Paper in order to integrate the treatment of cryptocurrencies into the survey on existing practices and legislation. Experts agreed that it would be interesting to monitor the implications of States’ recognition or non-



recognition of privately-issued cryptocurrencies as legal tender. Experts also reiterated the need to apply a technology-neutral approach.

- 24 Experts noted that there is a spectrum of possibilities in the approaches to digital currency. CBDCs and cryptocurrencies represent two extremes, whereas cryptocurrency accepted by a State government as legal tender appears to be between the two. In such a situation, it would be useful to understand why a State has chosen this approach and what kind of infrastructure is in place to realise the acceptance of cryptocurrency as legal tender. Experts noted that the relevant questions in relation to PIL would relate to the use of these digital currencies, including CBDCs and cryptocurrency, on payments systems.

## Section V - Cross-border Circulation and Payment Systems

### Question 15 - Cross-border circulation and transactions: What PIL issues arise from the circulation and use of CBDCs as part of cross-border payment systems?

- a. *In the case of cross-border circulation, what is the law applicable to CBDCs?*
- b. *Should the CBDCs Project focus on payments with retail CBDCs, or any cross-border transaction involving CBDCs (including both retail and wholesale CBDCs)?*
- c. *Is work relating to the harmonisation of PIL issues arising from cross-border payment systems necessary?*
- d. *Do the different methods of identification possible / in use in CBDC frameworks impede such harmonisation?*

- 25 Experts discussed whether “cross-border circulation” was fundamentally possible within an implementation of a CBDC, as CBDCs by design would likely be recorded on a central bank ledger with the law of that State designated as the applicable law—regardless of whether the CBDC is used outside of the borders of the issuing State. Some experts noted that the issue may relate to the use of CBDCs on cross-border payments systems. Experts discussed whether the analogy between CBDCs and cash was helpful, as the use of CBDCs in a way equivalent to cash would require agreements to operationalise cross-border circulation between banks. The PB suggested that a sub-question could be added concerning whether the architecture of a CBDC system had implications for its cross-border nature and the harmonisation of different approaches.

### Question 16 - Validity of payments: What law applies to govern the validity of payments?

- a. *If a party in a jurisdiction that allows the use of CBDCs makes a payment to another party in a jurisdiction that disallows CBDCs, is the payment valid? What law should be applicable?*

- 26 Experts expressed that in the situation where the obligation of payment arose from a contract, there are questions related to party autonomy and whether payments can be made in CBDCs, as well as questions related to the applicable law in the absence of a choice of law clause. Experts also identified potential work regarding the applicable law and whether payment can be made in CBDCs in situations where the payment obligation did not arise from a contract, referring for example to tort. An observer also noted that a distinction could be made between a State which does not allow or has not yet legislated on CBDCs and a State which prohibits CBDCs as a matter of *ordre public*.

**Question 17 - Credit transfers: Credit transfers: How do CBDCs interact with cross-border credit transfers? What law is applicable?**

- a. *Is it necessary to differentiate between wholesale and retail CBDCs when considering credit transfers?*
- b. *How does the UNCITRAL Model Law on International Credit Transfers (1992) interact with CBDCs?*

27 Experts shared approaches taken in their jurisdictions regarding whether a distinction was to be made between wholesale and retail CBDCs when considering credit transfers, as claims are held against different entities.

**Section VI - Data Protection**

**Question 18 - Law applicable to data protection: What is the law applicable to the protection of personal data in the cross-border circulation of CBDCs?**

- a. *Can / should existing rules on data protection apply to CBDCs?*
- b. *What data requires protection (e.g. data used in the design of the CBDCs, data generated with the CBDC is used)?*
- c. *Which parties require protection (e.g. the user? Consumers generally? Is there a weaker party?)*
- d. *Can / should consideration of rules on applicable data protection be included in the scope of the CBDCs Project?*

28 As an initial matter, experts discussed whether these questions could impact matters of public policy—either in the context of a public policy exception to recognition under PIL, or more generally. Experts noted that transactions would attract data protection and data privacy concerns when there is outsourcing and reliance on third party services for operation of a CBDC. On the other hand, some experts voiced some reservations as to the relevance of including data protection in the scope of the CBDCs Project, as the interaction between data protection frameworks may be a separate matter of PIL. A unique angle involving CBDCs would have to be identified for monitoring or future work. Experts also asked if it would be more desirable for this project to focus on other questions which did not risk addressing these matters that touch upon public law.

**Section VII - Intermediaries**

**Question 19 – Jurisdiction: Which court has jurisdiction in relation to intermediaries?**

29 There were no requests for the floor in response to this question.

## Section VIII - Recognition and Enforcement

**Question 20 - Jurisdictions prohibiting CBDCs: Jurisdictions prohibiting CBDCs: What impact does the prohibition on CBDCs envisaged or in effect in some jurisdictions have on PIL considerations relating to the recognition and enforcement of judgments in CBDC systems?**

*a. In the case the CBDCs Project also considers the use of cryptocurrency as legal tender, do the same considerations arise?*

- 30 Experts reiterated some matters previously discussed, such as the classification of CBDCs versus cryptocurrencies, the notion of cryptocurrencies as legal tender, and public policy considerations. Experts stressed the importance of providing detailed examples in order to better understand the architecture of a CBDC and how risks are managed.
- 31 Experts additionally voiced the importance of this study considering digital cross-border payment platforms, which could represent the actual practical usage of CBDCs or cryptocurrency.

**Question 21 - Issuing authorities and foreign jurisdictions: Issuing authorities and foreign jurisdictions: What considerations arise in relation to the coordination between the law of the issuing authority and a freezing order issued in a foreign jurisdiction?**

*a. Do the same considerations arise in relation to interim (injunctive) orders?*

- 32 Experts suggested that, as a preliminary matter, it would be better to identify the core issues of focus for the project, and that this may fall outside of the study until other primary issues relating to applicable law and jurisdiction are considered.

**Question 22 - Recognition and enforcement of judgements: Recognition and enforcement of judgments: How will judgments in CBDC systems be recognised and enforced in different jurisdictions?**

- a. How will judgments in CBDC systems be recognised and enforced in different jurisdictions, in particular where the receiving jurisdiction either is not a CBDC system, or has prohibited the use of CBDCs?*
- b. Does the recognition and enforcement of judgments in CBDC systems fall within the HCCH 2019 Judgments Convention?*
- c. Does the recognition and enforcement of judgments in CBDC systems fall within the work currently being developed by the UNIDROIT Working Group on Effective Enforcement?*

- 33 An expert described ongoing work at the UNIDROIT Working Group on Effective Enforcement, noting that there could be an overlap between work in this project on enforcement of judgments and the Working Group's study. The expert noted that the Working Group is dealing with complex matters that may be relevant to CBDCs, but it is not a PIL-focused project. Thus, it would be beneficial to coordinate on matters such as nomenclature in order to understand whether the projects were referring to the same matters. The PB noted that these questions would be retained in the Scope Paper so that experts could submit written observations.

## Annex II: Iterated Scope Paper

- 1 The iterated Scope Paper sets out the questions that were discussed at the online Kick-Off meeting on Wednesday 5 July 2023. The objective of the Kick-Off meeting was to identify all questions that may be relevant to the Central Bank Digital Currencies Project (CBDCs Project).

### I. Background and Context

- 2 Section I aims at providing an overview of the current and prospective legal and regulatory frameworks, projects, and practices on the national, regional and international levels, linked to CBDCs. The aim is to provide an overview of the current situation in order to make informed decisions on the next steps of this Project. Experts are invited to answer all questions in Section I, and to provide information of their respective jurisdictions as well as other jurisdictions with which they are familiar. Experts are invited to supplement their responses with documents, including the relevant legislation and court decisions, in their original language and, if possible, with a translation in English or French.

#### 1. Current and nascent practice:

- (a) Which jurisdictions are exploring CBDCs or have issued CBDCs?*
- (b) Are there characteristics of these CBDC frameworks (including their business plans, technical frameworks, or economic policies) that may be relevant to the CBDCs Project?*
- (c) Do CBDC technical frameworks allow the intervention of intermediaries in the handling, control and / or use of CBDCs? Are there examples of participants that may commonly act as intermediaries in the handling, control and / or use of CBDCs?*
- (d) Are there jurisdictions that recognise crypto currencies as legal tender (perhaps alongside currently-circulating fiat)?*
- (e) Is there practice as to whether CBDCs qualify as “money”, “currency”, “legal tender”, or as a distinct notion?*

#### 2. Current and nascent legislation / Current jurisprudence: Have jurisdictions exploring or issuing CBDCs enacted legislation or reached judicial decisions relating to PIL?

- (a) Which jurisdictions recognise foreign CBDCs? What status do these jurisdictions give foreign CBDCs? Do these jurisdictions recognise foreign CBDCs as a valid method of payment, or as sufficient to satisfy monetary obligations? What PIL considerations arise in the case of such recognition?*
- (b) Are CBDCs recognised as a form of “digital asset” in national legislation? Are CBDCs specifically excluded from the definition of “digital assets” in national legislation? Are there differences in categorisation as “digital assets” of CBDCs as opposed to interest in CBDCs?*

**3. Current and nascent international or cross-border projects: Are there relevant current or nascent international, regional or other cross-border projects that should be considered in the context of the CBDCs Project?**

**4. Areas of law: Which domains or areas of the law impacted by CBDCs should be prioritised?**

3 Examples of the areas of law that experts may want to consider include regulatory conflicts, the impact of the transfer of CBDCs outright as opposed to the transfer of lesser interests, the law applicable to cross-border payment systems, the issuance and redemption of CBDCs, the conversion of CBDCs to other types of money, as well as the maintenance of CBDCs at the central bank and at the custodian level.

## II. Taxonomy

4 Section II aims at exploring existing taxonomy around CBDCs and assessing the need for further work on developing a coordinated taxonomy. Experts are invited to consider if a taxonomy around CBDCs is desirable and, if so, to identify categories of CBDCs that could benefit from further examination, define these terms, and provide existing definitions (if any) from their jurisdictions.

**5. Taxonomy: Is there a need to develop a taxonomy around CBDCs?**

*(a) For the purposes of PIL considerations, what are the noteworthy categories of CBDCs?*

*(b) What categories adjacent to CBDCs may be relevant for the purposes of PIL considerations (e.g., payment systems and the practice of some jurisdictions accepting crypto currency as legal tender)?*

*(c) Do these adjacent categories present different questions of PIL to those presented by CBDCs?*

**6. CBDCs as money or legal tender: Do CBDCs qualify as “money”, “currency”, “legal tender”, or as a distinct notion?**

*(a) What are the legal implications of State practice categorising CBDCs as “money”, “currency”, “legal tender”, or as a distinct notion? What are the legal implications of such categorisation? What are the PIL implications arising from such State practice?*

*(b) Is an obligation to pay with CBDCs the same as an obligation to pay with money? Is such an obligation satisfied with payment with the CBDCs of another State or jurisdiction?*

*(c) When private parties contract with CBDCs, what are they contracting for? Is the contract performed as if it were made for a monetary payment?*

*(d) Is there a distinction between transactions involving CBDCs (as payment for services and / or goods) as opposed to transactions with CBDCs as the subject of the contract (with the CBDC as the grant security interest)?*

*(e) What are the default PIL rules relating to CBDCs in the absence of a contract?*

*(f) Is payment by a national electronic payments platform the equivalent of payment with a CBDC?*

- (g) *What are the PIL implications arising from the recognition of CBDCs as legal tender by some national legislations?*
- (h) *Would States need to adapt their legal framework prior to the adoption of standards of coordinated guidance on CBDCs?*

**7. Crypto currency as legal tender: How does the adoption of crypto currencies as legal tender by some States interact with the adoption of CBDCs in these and other States?**

- (a) *Should the CBDCs Project include PIL considerations relating to the adoption of crypto currencies as legal tender?*
- (b) *What are the PIL implications arising from the interaction between currently-circulated, non-digital fiat currency, CBDCs, and crypto currencies as legal tender?*

### **III. Characterisation and Applicable Law**

5 Section III aims at assessing which areas of law, in terms of applicable law issues, would be desirable and feasible for the CBDCs Project to explore due to the unique issues arising from the use of CBDCs. Experts are invited to provide examples of legislation or discussions being held in their respective jurisdiction or jurisdictions with which they are familiar.

**8. Characterisation: What work on characterisation is necessary?**

- (a) *Where the subject of the transaction involves CBDCs: What law applies to proprietary issues involving CBDCs?*
- (b) *In relation to the nature of the CBDC itself: What law applies to determine whether a CBDC is an object of proprietary rights, or a monetary obligation?*
- (c) *What purposes would guidance on characterisation serve?*

**9. Connecting factors: What connecting factors should be explored in determining the applicable law, with respect to each legal characterisation (e.g., *lex situs*, *elective situs*, *modified elective situs*<sup>1</sup>)?**

**10. Proprietary aspects: Do CBDCs require specific guidance in relation to proprietary rights and interests?**

- (a) *What aspects of CBDCs may make them different from other types of digital assets in relation to considerations around proprietary rights and interests? Are there examples in national / regional legislation or judicial decisions that treat CBDCs differently from other types of digital assets?*
- (b) *Do unique proprietary rights and interests arise in the issuance, circulation and use of CBDCs?*

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<sup>1</sup> [Prel. Doc. 3C of 2020, "Developments with respect to PIL implications of the digital economy, including DLT"](#). Please see "Annex I – Overview of connecting factors".

- 11. Contractual aspects: What considerations related to the applicable law rules in contractual aspects should be included in the CBDCs Project?**
- (a) Should the CBDCs Project include considerations related to the applicable law rules in contractual aspects in transactions involving CBDCs (whether involving CBDCs only as a payment or as the subject matter of the contract)?*
  - (b) If the answer to Q11(a) is yes, do considerations of party autonomy arise? If so, how can the principle of party autonomy be expressed?*
  - (c) How would the choice of law rule apply? Are choice of law clauses valid in relation to contracts involving CBDCs? Do CBDCs warrant specific rules in addition to the HCCH 2015 Principles on Choice of Law in International Commercial Contracts?*
  - (d) Should there be a separate set of rules on weaker party protection for CBDCs? Does the same set of rules apply to large payment platforms, or should there be a separate set of rules for these large payment platforms? Should different sets of rules on weaker party protection be developed for B2B contexts as opposed to B2C contexts?*
  - (e) What considerations arise in situations without a valid choice of law?*
- 12. Banking law: Do CBDCs fall under the same legal framework as international banking? Is a sector-specific framework necessary?**
- 13. Securities law: Are CBDCs securities?**
- (a) Do CBDCs fall within the scope of application of securities law? Is a sector-specific framework necessary?*
  - (b) Is there scope for application to CBDCs of the HCCH 2006 Securities Convention?<sup>2</sup>*
- 14. Payments law: What aspects of payments law may be relevant to the scope of the CBDCs Project?**
- (a) Do CBDCs function as payment instruments? If so, what PIL considerations may arise from the use of CBDCs as payment instruments?*
- 15. Collateral: Can CBDCs be used / treated as collateral?**
- 16. Cross-border insolvency proceedings: Do unique PIL considerations arise where CBDCs are involved in cross-border insolvency proceedings?**
- (a) Should considerations related to cross-border insolvency proceedings come within the scope of the CBDCs Project?*
  - (b) Can / Should CBDCs have the same treatment as fiat currency for the purposes of cross-border insolvency proceedings, or are there distinct characteristics of the nature of CBDCs (e.g., volatility of price, cross-border exchanges with intermediaries) that require specific guidance where CBDCs are involved in cross-border insolvency proceedings?*

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<sup>2</sup> Convention of 5 July 2006 on the Law Applicable to Certain Rights in Respect of Securities held with an Intermediary.

## IV. Circulation and Payment Systems

6 Section IV aims at examining PIL issues arising from cross-border payments using CBDCs. Experts are invited in particular to look at how CBDCs fit into existing payment systems and identify unique PIL issues arising from the specificities of CBDCs compared to other payment methods (e.g., cash) or other areas requiring clarification or harmonisation.

### 17. Circulation and transactions: What PIL issues arise from the circulation and use of CBDCs as part of payment systems?

- (a) *Do CBDCs circulate in the same manner as non-CBDC fiat currency? Are there unique characteristics of CBDCs that distinguish them from non-CBDC fiat currency and, if so, is the law applicable to CBDCs different than that which applies to non-CBDC fiat currency?*
- (b) *Is work relating to the harmonisation of PIL issues arising from the use of CBDCs in cross-border payment systems necessary?*
- (c) *Do the different methods of identification of users and holders currently in use or anticipated in various CBDC structural frameworks (e.g., account-based, token-based) affect the harmonisation of any PIL issues that may arise?*

### 18. Validity of payments: What law applies to govern the validity of payments for contractual and non-contractual (e.g., satisfaction of a judgment for damages in tort) obligations?

- (a) *If a party in a jurisdiction that recognises the use of CBDCs makes a payment to another party in a jurisdiction that does not recognise CBDCs, which law determines the validity of payment where:*
  - (i) *the parties elect the governing law of the relevant obligation;*
  - (ii) *the parties specify CBDC as the means of payment; or*
  - (iii) *the parties do not choose governing law of their obligation?*

### 19. Credit transfers: How do CBDCs interact with cross-border credit transfers? What law is applicable?

- (a) *Is it necessary to differentiate between wholesale and retail CBDCs when considering credit transfers?*
- (b) *How does the UNCITRAL Model Law on International Credit Transfers (1992) interact with CBDCs?*

## V. Public Policy Considerations

7 Section V aims at examining the wider public policy considerations that may arise in the context of the CBDCs Project. Examples include the desirability and feasibility of work on data protection in relation to cross-border circulation of CBDCs. Experts are invited to broaden the discussion by including other general considerations on public policy and mandatory overriding provisions in the context of CBDCs.



- 20. What public policy considerations arise in the context of CBDCs?**
- (a) As CBDCs involve questions of public law and private law, what public policy considerations may take some questions relevant to the CBDCs Project outside the scope of the Project?*
  - (b) In current / nascent legal frameworks around CBDCs, is there sufficient protection for the public?*
- 21. Law applicable to data protection: In the circulation and use of CBDCs, what is the law applicable to the protection of personal data, data privacy and the transfer of data?**
- (a) Can / should existing rules on data protection apply to CBDCs? Can / should considerations of rules on applicable data protection be included in the scope of the CBDCs Project?*
  - (b) What data requires protection (e.g., data used in the design of the CBDCs, data generated with the way CBDC is used)?*
  - (c) Which parties require protection (e.g., the users and holders? Consumers generally? Is there a weaker party?)*
  - (d) Where data protection is outsourced to third party contractors, especially across borders, what considerations relating to the law applicable to data protection arise?*

## VI. Intermediaries

8 Section VI aims at discussing PIL issues that arise where CBDCs are handled, controlled and / or used by intermediaries.

**22. PIL issues relating to intermediaries: Where intermediaries are active in the handling, control and / or use of CBDCs, what PIL considerations arise?**

**23. Jurisdiction:**

- (a) Choice of court clauses: Can parties to a transaction involving CBDCs that are being handled, controlled and / or used by intermediaries include valid choice of court clauses in their agreements?*
- (b) Absence of valid choice of court clause: Which court has jurisdiction in relation to intermediaries in the absence of a valid choice of court clause?*

## VII. Recognition and Enforcement

9 Section VII aims at assessing the need for and feasibility of work targeting specifically the recognition and enforcement of decisions involving CBDCs.

**24. Jurisdictions prohibiting CBDCs: What impact does the prohibition on CBDCs envisaged or in effect in some jurisdictions have on PIL considerations relating to the recognition and enforcement of judgments in CBDC systems?**

- (a) In the case the CBDCs Project also considers the use of crypto currency as legal tender, what considerations arise?*

25. Issuing authorities and foreign jurisdictions: What considerations arise in relation to the coordination between the law of the issuing authority and a freezing order issued in a foreign jurisdiction?
- (a) *What considerations arise in relation to interim (injunctive) orders?*
26. Recognition and enforcement of judgments: How will judgments in CBDC systems be recognised and enforced in different jurisdictions?
- (a) *How will judgments in CBDC systems be recognised and enforced in different jurisdictions, in particular where the receiving jurisdiction is not a CBDC system because it does not issue CBDCs, does not recognise CBDCs, or has prohibited the use of CBDCs?*
- (b) *Does the recognition and enforcement of judgments in CBDC systems fall within scope of the HCCH 2019 Judgments Convention?<sup>3</sup>*
- (c) *Does the recognition and enforcement of judgments in CBDC systems fall within the work currently being developed by the UNIDROIT Working Group on the Best Practices for Effective Enforcement? Is a coordinated nomenclature necessary?*

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<sup>3</sup> Convention of 2 July 2019 on the Recognition and Enforcement of Foreign Judgments in Civil or Commercial Matters.

## **Annex III: Summary report of the Colloquium: CODIFI Edition 2023 – CBDCs**

### **I. Introduction**

- 1 On Thursday 5 October 2023, an online colloquium on selected topics related to the CBDCs Project was held. The colloquium, titled “CODIFI Edition 2023 – CBDCs”, featured a series of pre-recorded video discussions, led by subject-matter experts of the CBDCs Project and other specialists of academia, government and industry. The colloquium also included a live panel discussion and a live interview. Colloquium discussions and interviews were designed to respond to one or more questions posed in the project’s Iterated Scope Paper, which was developed in consultation with subject-matter experts of the project. The colloquium had a total broadcast time of about 6 hours, and the content of the event was made available online for on-demand viewing.<sup>1</sup>

### **II. Agenda**

- 2 The Agenda of the colloquium, “CODIFI Edition 2023 – CBDCs” was as follows

#### **HCCH CODIFI Edition 2023 – CBDCs**

#### **A Colloquium on CBDCs and Private International Law**

##### **Welcome**

Christophe Bernasconi, Secretary General, HCCH

##### **The Private International Law Implications of CBDCs – an Introduction**

Gérardine Goh Escolar, Deputy Secretary General, HCCH

##### **Choice-of-Law Issues Relating to Security Interests in CBDCs**

Edwin Smith, Partner at Morgan, Lewis & Bockius LLP

Neil B. Cohen, Professor of Law at Brooklyn Law School

##### **Interview with...**

Fabício Bertini Pasquot Polido, Partner, L.O. Baptista, Associate Professor of Private International Law, Comparative Law and New Technologies, Universidade Federal de Minas Gerais

##### **Money, Currency, Legal Tender and The Law Applicable to the Protection of Personal Data, Data Privacy, Transfer of Data**

Panos Papapaschalis, Senior Lead Counsel, European Central Bank

##### **Insights from the Digital Euro – a Dialogue**

Seraina Grünewald, Professor and Chair for European and Comparative Financial Law, Radboud University Nijmegen

Gérardine Goh Escolar, Deputy Secretary General, HCCH

##### **Proprietary Aspects of CBDCs**

Quek Zhao Feng, Senior Legal Counsel, Monetary Authority of Singapore

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<sup>1</sup> The recordings of the colloquium are available for on-demand viewing on the [HCCH YouTube channel](#). Reference in the footnotes in this Annex refers to these recordings.

**Interview with...**

Heng Wang, Professor, Yong Pung How School of Law, Singapore Management University

**Panel: The Private International Law Implications of CBDCs – What questions arise?**

Gérardine Goh Escolar, Deputy Secretary General, HCCH

Emily Lee, Associate Professor, Director, The Asian Institute of International Financial Law  
Faculty of Law, University of Hong Kong

Juliano Alves Pinto, Head of the Division for International Legal Cooperation, Ministry of  
Foreign Affairs, Brazil

John Ho, Head of Legal and Financial Markets, Standard Chartered Bank

Josué Liévano Paz, Minister Counsellor, Embassy of the Republic of El Salvador, The Hague

Priskila Penasthika, Assistant Professor, University of Indonesia

**Interview with...**

Caroline Kleiner, Professor, Université de Paris

**Conclusions**

Gérardine Goh Escolar, Deputy Secretary General, HCCH

**III. Summary of Discussions and Presentations****A. Features of CBDCs**

- 3 Experts discussed different options for the design of a CBDC and its platform, noting that the use of CBDCs in the “retail” implementation and across borders is most likely to require the support of a conflict of laws analysis.<sup>2</sup> One expert provided the example of parties located in different jurisdictions who may seek to execute payments using a CBDC that may be recognised in one, but not both, jurisdictions.<sup>3</sup> The different designs of CBDCs might also have an influence on the liabilities and the discharge of obligations of parties, as well as the roles and liabilities of intermediaries. In such situations, the access to or use of a “foreign” CBDC would have significant implications for private international law (PIL).
- 4 Experts generally suggested that CBDCs may require a different treatment than digital assets in relation to PIL considerations, in particular in relation to matters relating to applicable law and jurisdiction. Some experts also noted that certain domestic legislations have explicitly excluded or differentiated CBDCs from digital assets.<sup>4</sup>
- 5 One major differentiator between CBDCs and other digital currencies lies in the status of CBDCs as legal tender, according to some experts.<sup>5</sup> Experts noted that privately-issued digital currencies generally do not have the status of legal tender,<sup>6</sup> with some exceptions.<sup>7</sup> In this regard, the definition of the legal nature and character of CBDCs (incl. their status as legal tender and the full implications of that status), the law applicable to the relationship between CBDC holders and issuing banks, and, subject to the chosen design, how CBDCs may constitute a liability for central banks, are issues to be considered from a PIL perspective.<sup>8</sup> The character of CBDCs as a legal

<sup>2</sup> C. Kleiner, *Interview*, and *Live Panel*.

<sup>3</sup> C. Kleiner, *Interview*.

<sup>4</sup> J. Alves Pinto, *Live Panel*; also F.B.P. Polido, *Interview*.

<sup>5</sup> J. Ho, *Live Panel*,

<sup>6</sup> *Ibid*,

<sup>7</sup> J. Liévano Paz, *Live Panel*.

<sup>8</sup> Z.F. Quek, *Proprietary Aspects of CBDCs*, on file with the PB (not online due to a request made by the speaker).

tender in a certain jurisdiction may depend on a consideration of the following core features: mandatory acceptance, full-face value, and the power to discharge a payment obligation.<sup>9</sup>

- 6 Experts discussed whether an obligation to pay in a domestic CBDC may be deemed as the same as an obligation to pay with money, in particular in the context of cross-border payments systems.<sup>10</sup> Exploring this concept, experts discussed if CBDCs would always be able to discharge a monetary obligation to the same degree as cash payments. Experts noted that implementing a CBDC with the same characteristics as cash may have unintended consequences, such as undermining commercial banks and destabilising the financial system. As a result, CBDCs may be designed to specifically exclude certain features of cash, such as the ability to act as a store of value. The particular design of CBDCs would have important implications on whether CBDCs will be accepted as an equivalent to cash and will be able to discharge obligations to the same level as cash.<sup>11</sup>
- 7 There were discussions of the different design option for CBDCs. Some of these designs fully duplicated the features of cash, while others intentionally focused on other functionalities such as digital payments systems with cash-like features, rather than a full “digital equivalent” of cash. Due to the varying approaches, there is a need for PIL rules to unify different standards and practices, in particular in relation to cross-border payments systems.

## B. PIL Issues arising in the use of CBDCs in Cross-Border Payments Systems

- 8 Many speakers focused on the use of CBDCs in cross-border payments systems, including the interoperability of CBDCs with digital and other currencies, including cryptocurrencies. In assessing the law applicable to the use of CBDCs in cross-border payments or transfers, speakers noted that the issuing state’s *lex monetae* or monetary law would likely govern certain aspects of the use of CBDCs. This may be supplemented by the law of the issuing authority, given the role and autonomy of central banks regarding the issuance of CBDCs, as would be the case with the digital Euro.<sup>12</sup> These bodies of law would need to be considered alongside other law in the context of cross-border transfers, which may involve the application of:
- a. the law of the location of a payment (*lex loci solutionis*, as the state where the payment is made can govern whether CBDCs are permissible for payments);
  - b. the law of the underlying obligation that justifies a payment (*lex causae*);
  - c. the law applicable to any intermediaries that are providing services to the paying parties or their banks;<sup>13</sup> and
  - d. privacy and data protection law,<sup>14</sup> cybersecurity regulations,<sup>15</sup> and consumer protection law.<sup>16</sup>

Some speakers also noted that central banks may rely on commercial banks for tasks like AML, KYC and regulatory compliance. There are no common standards on these matters and, since national approaches may differ, PIL rules may have to take these frameworks into account.<sup>17</sup>

- 9 Due to the various design possibilities and technical features of CBDCs, experts noted that it would be useful to have specific PIL guidance in relation to identification of the law applicable to

<sup>9</sup> S. Gruenewald, *Insights from the Digital Euro – a Dialogue*.

<sup>10</sup> P. Papaschalis, *Money, Currency, Legal Tender and The Law Applicable to the Protection of Personal Data, Data Privacy, Transfer of Data*.

<sup>11</sup> S. Gruenewald, *Insights from the Digital Euro – a Dialogue*.

<sup>12</sup> C. Kleiner, *Interview*; also H. Wang, *Interview*.

<sup>13</sup> C. Kleiner, *Interview*.

<sup>14</sup> *Ibid.*

<sup>15</sup> E. Lee, *Live Panel*

<sup>16</sup> F.B.P. Polido, *Interview*.

<sup>17</sup> H. Wang, *Interview*; also J. Alves Pinto, *Live Panel*.

proprietary rights and interests in CBDCs. Such PIL rules (in particular, those relating to applicable law) may need to be considered separately from PIL rules that apply to digital assets, as some jurisdictions have differentiated CBDCs and digital currencies from the scope of digital assets. These issues would include, for example, legal matters such as ownership, possession, custody, determining who controls a digital currency or CBDC (which may be complex in cases of shared or joint custody) and the use of multi signature wallets.<sup>18</sup>

- 10 Speakers noted that contractual issues with respect to CBDCs and PIL may arise in a number of situations. Parties may agree in a contract to use a CBDC as the means of payment.<sup>19</sup> This has implications on the validity of payments, especially in a cross-border payments system, and it may be necessary to consider what law would be applicable in this context, and whether the *lex contractus* would be appropriate.<sup>20</sup> Moreover, some experts noted that when CBDCs are the subject of a transaction, rather than the medium of payment, the CBDC may be treated as a commodity.<sup>21</sup> These situations implicate various issues related to commercial contracts, including application of the principle of party autonomy to choose the applicable law, with possible guidance from The HCCH Principles on Choice of Law in International Commercial Contracts;<sup>22</sup> consumer protection; and overriding mandatory rules for weaker party protection. Automated execution of transfers, such as by smart contracts, was also identified as a potential area to explore.<sup>23</sup>
- 11 Experts identified the need to develop choice of law rules where CBDCs intersect with securities markets in several scenarios: (1) the CBDC is treated as collateral; (2) the CBDC is treated as proceeds of other collateral; and (3) there is a right to receive future payments in the form of CBDC as collateral. Choice of law rules are needed to determine the law governing various aspects of these scenarios, such as characterisation of the collateral as a CBDC, effectiveness of a security interest in CBDCs between the parties and against third parties, and priority of security interests in CBDCs.<sup>24</sup>
- 12 Experts generally noted that cross-border payments will require interoperable systems, especially between different CBDCs, as well as with other digital currencies. In this context, interoperability will require PIL rules for legal certainty.<sup>25</sup> In this context, intermediaries may operate on platforms based on distributed ledger technology (DLT), and financial transactions may also be linked to smart contracts based on DLT. If pre-established conditions are met, the (cross-border) transaction may be automatically concluded. Experts point out that this means that pre-established conditions, including PIL considerations and interoperability, are crucial in cross-border payments systems in order to guarantee that the transaction is secure and based on integrity. A robust PIL framework will allow for legal certainty, coordination, predictability and harmonisation.<sup>26</sup>
- 13 Finally, some speakers noted that central banks may rely on commercial banks for tasks like AML, KYC and regulatory compliance. There are no common standards on these matters and, since national approaches may differ, PIL rules may have to take these frameworks into account.<sup>27</sup>

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<sup>18</sup> F.B.P. Polido, *Interview*.

<sup>19</sup> P. Penasthika, *Live Panel*.

<sup>20</sup> P. Papapaschalis, *Money, Currency, Legal Tender and The Law Applicable to the Protection of Personal Data, Data Privacy, Transfer of Data*.

<sup>21</sup> *Ibid.*

<sup>22</sup> P. Penasthika, *Live Panel*.

<sup>23</sup> F.B.P. Polido, *Interview*.

<sup>24</sup> N. Cohen and E. Smith, *Choice-of-Law Issues Relating to Security Interests in CBDCs*.

<sup>25</sup> F.B.P. Polido, *Interview*.

<sup>26</sup> *Ibid.*

<sup>27</sup> H. Wang, *Interview*; also J. Alves Pinto, *Live Panel*.

## Annex IV – Selected Survey of Domestic and Multijurisdictional CBDC Initiatives (CBDCs<sup>1</sup>)

### Selected Domestic initiatives in relation to Central Bank Digital Currencies (CBDCs)

Location	Description Use case (retail/wholesale) <sup>2</sup>	Relevant framework document
Argentina	The Central Bank of Argentina announced in October 2023 that it is currently working on the legislative framework for the creation of a CBDC, the Digital Argentinian Peso.	
Australia	<p>The Reserve Bank of Australia (<b>RBA</b>) started research on its own CBDC, the eAUD, in 2017.</p> <p><b>Project Atom:</b> This project considered a CBDC for wholesale financial market transactions and asset tokenisation's benefits for efficiency, risk management, and innovation.</p> <p><b>Project Dunbar:</b> This project unites BIS Innovation Hub Singapore Centre, Reserve Bank of Australia, Bank Negara Malaysia, Monetary Authority of Singapore, and South African Reserve Bank to enhance wholesale cross-border bank payments. The Project showed that allowing financial institutions to directly hold and transact in CBDCs from different jurisdictions on a shared platform could reduce the dependence on intermediaries and, therefore, reduce the costs and time taken to process cross-border transactions.</p> <p><b>Project Ecosystem</b> involves a small-scale CBDC pilot (eAUD) operating in a confined environment for a specific duration. The aim is to include a pilot CBDC that is a real claim on the Reserve Bank.</p> <p>The Digital Finance CRC will implement the pilot CBDC platform, while the RBA will handle CBDC issuance, redemption, oversight, and regulation. This standalone platform is dedicated to CBDC issuance and transactions.</p> <p>This CBDC pilot project is focused on domestic participants and use cases and the participation for all end user eAUD holders in the project requires invitation by an approved use case provider. Accordingly, identity validation for eAUD holders will be conducted by their use case provider or an approved KYC (know-your-customer) service provider. The eAUD may be stored in a 'custodial' wallet by a use case provider or a 'noncustodial' wallet directly managed by the end user.</p>	<p><a href="#">Australian CBDC Pilot for Digital Finance Innovation White Paper</a></p> <p><a href="#">Project Dunbar – International settlements using CBDCs</a></p>
Brazil	<p>The <i>Banco Central do Brasil</i> (BCB) has been developing its CBDC, the DREX, since 2020. In February 2023, the BCB provided updated guidelines for the DREX testing project, which commenced in March 2023 and is expected to be concluded in late 2024.</p> <p>The DREX Platform aims to promote innovation and financial democratisation whilst allowing automated, programmable, standardised intelligent financial services. This platform favours the inclusion of new service providers as it allows transactions with digital assets and the signing of smart contracts. The DREX uses DLT technology and banks, or other intermediaries, provide wallets to the users. During this pilot, offline payments are not possible.</p>	<a href="#">Banco Central do Brasil - DREX</a>

<sup>1</sup> “Proposal for Exploratory Work: Private International Law Aspects of Central Bank Digital Currencies (CBDCs)”, Prel. Doc. No 3B of January 2023 for the attention of CGAP 2023, available on the HCCH website at [www.hcch.net](http://www.hcch.net) under "Governance" then "Council on General Affairs and Policy" then "Archive (2000-2023)".

<sup>2</sup> Use case: (1) Retail: [a form of CBDC that could be considered a digital alternative to cash that could be a widely accepted medium of exchange and a store of value, used by individuals to pay businesses or other individuals (a retail CBDC)]; (2) Wholesale: [accessible only to a more limited range of participants, used by financial institutions or other wholesale market participants to settle trades in financial markets or other transactions (a wholesale CBDC). See BIS, BIS Innovation Hub work on central bank digital currency (CBDC)”, [www.bis.org/about/bisih/topics/cbdc.htm](http://www.bis.org/about/bisih/topics/cbdc.htm).

<p><b>Canada</b></p>	<p>In 2017, the Bank of Canada launched <b>Project Jasper</b> to study CBDCs. Most recently, from 8 May to 19 June 2023, the Bank of Canada held a public consultation on the features that could be included in a digital Canadian Dollar in which over 85,000 Canadians participated. The results of the consultation include the following findings: a) the public prefers cash for its anonymity, safety and acceptance; b) privacy control features related to the use of personal information and transaction data were considered more important than other features of a CBDC, such as the ability to hold funds anonymously or recover them in case of loss or theft.</p> <p>The Bank of Canada has previously stated that the need for a Canadian CBDC may be determined by the issuance of CBDCs by foreign countries, stablecoins become widely used in Canada, or Canadians dramatically reducing their use of cash in day-to-day transactions.</p>	<p><a href="#">Bank of Canada – Digital Dollar Bank of Canada - Results Consultation on Digital Dollar</a></p>
<p><b>Chile</b></p>	<p>During 2022, the Central Bank of Chile commenced research on CBDCs. No decision was taken with regard to the issuance of a Chilean CBDC, but it was decided to monitor developments in the field and promote local discussion on the matter.</p>	<p><a href="#">Central Bank of Chile – Exploration on CBDCs</a></p>
<p><b>China, People's Republic of</b></p>	<p>China started research on CBDCs in 2014 and announced the development of a digital RMB in 2017. In April 2020, testing began in four Chinese cities (Shenzhen, Suzhou, Chengdu and Xiong'an) and has continuously expanded through the years.</p> <p>In May 2021, Chinese authorities prevented financial institutions and payment companies from offering services related to cryptocurrency trading and warned investors not to get involved in cryptocurrency trading.</p> <p>In January 2023, China included e-CNY in its currency circulation calculations. The e-CNY represented 0.13 percent of cash and reserves held by the central bank.</p> <p>The People's Bank of China issued the CBDC to authorised operators for further circulation to the public. Authorised operators are responsible for AML compliance and investing in technology. E-CNY wallets are not necessarily linked to bank accounts. Offline payments are possible with SIM card-based e-CNY wallets with the SIM's NFC function.</p>	<p><a href="#">Chinese authorities prevent the use of cryptocurrencies</a></p>
<p><b>Colombia</b></p>	<p>The Central Bank of Colombia is conducting studies on the design and macroeconomic effects of issuing a CBDC. A recent study on “Macroeconomic effects of issuing a retail CBDC” concludes that there are no major macroeconomic risks, yet that, if issued, holding and spending limits would have to be very clearly established. The design could be a collaboration between the public sector (the Central Bank of Colombia) and the private sector (commercial banks), on an unpaid basis.</p> <p>In June 2023, the software company Ripple announced that it had signed an agreement with the Central Bank of Colombia to explore CBDC technology. The CB had utilised the platform before, for land distribution (the authentication of deeds, for example), and will now be used for high value payments.</p>	<p><a href="#">Central Bank of Colombia – Study on retail CBDCs</a></p>
<p><b>Denmark</b></p>	<p>Denmark monitors the development of CBDCs.</p>	
<p><b>El Salvador</b></p>	<p>In June 2021, El Salvador became the first country in the world to adopt bitcoin as legal tender. Notwithstanding, the issuance of a CBDC is still under consideration by the Salvadorean authorities.</p>	
<p><b>Eswatini</b></p>	<p>Since 2021, the Central Bank of Eswatini has been exploring the creation of a retail CBDC, the Digital Lilangeni, and it is currently conducting a proof-of-concept in a sandbox testing with selected participants, including customers, business owners and financial services providers.</p> <p>If issued, the Digital Lilangeni aims not to replace cash, but to complement cash and other existing means of payment and transacting. The Digital Lilangeni is envisioned to have legal tender properties similar to cash, convertible to Lilangeni at par value, and mandatory acceptance. There are no interest payments considered for the Digital Lilangeni, as it is conceived primarily as a means of payment and not as an investment medium.</p>	<p><a href="#">Central Bank of Eswatini – CBDC Project</a></p>



<b>Euro Area</b>	<p>The European Union has prepared relevant legal framework proposals and design options to launch a CBDC for the European Union, the Digital Euro, as a complement to Euro coins and banknotes.</p> <p>The project considers the Digital Euro as the digital equivalent of Euro banknotes and particularly as an electronic means of payment for retail payment. Accordingly, the Digital Euro will be a liability for the European Central Bank, but it will be circulated and distributed to the public through authorised intermediaries.</p> <p>The project also considers establishing a limit on Digital Euro holdings and privacy protection.</p>	<p><a href="#">European Central Bank – Digital Euro Project</a>  <a href="#">European Commission – Proposal on the establishment of a digital euro</a></p>
<b>Georgia</b>	<p>The National Bank of Georgia has been conducting research on the issuance of a CBDC, the Digital Lari. In November 2023, the company Ripple was selected as technology partner for the pilot project.</p>	<p><a href="#">National Bank of Georgia – News on CBDC Pilot</a></p>
<b>Ghana</b>	<p>The Bank of Ghana has been exploring the possibility of creating a retail CBDC, the e-Cedi, since late 2019. The Bank of Ghana partnered with Giesecke+Devrient (G+D), a global security technology group, to launch a pilot.</p>	<p><a href="#">Central Bank of Ghana – Hackathon CBDC</a></p>
<b>Guatemala</b>	<p>The Bank of Guatemala is conducting research on a CBDC, the iQuetzal.</p>	
<b>Honduras</b>	<p>In June 2021, the Central Bank of Honduras announced the commencement of research on CBDCs.</p>	<p><a href="#">Bank of Honduras - Press Release</a></p>
<b>Hong Kong SAR</b>	<p>During 2021, the Hong Kong Monetary Authority, in partnership with BIS Innovation Hub's Hong Kong Centre and the Hong Kong Applied Science and Technology Research Institute, participated in <b>Project Aurum</b> to test a retail CBDC technology prototype, comprised of a wholesale interbank system and a retail e-wallet system, setting up two different types of tokens: intermediated CBDC and stablecoins backed by CBDC in the interbank system. The prototype considered the principles of safety, flexibility and privacy.</p>	<p><a href="#">BIS – Explanatory Note</a></p>
<b>Iceland</b>	<p>In 2021, the Central Bank of Iceland released a research paper on CBDCs and continues to monitor the development of CBDC.</p>	<p><a href="#">Central Bank of Iceland – Research Paper</a></p>
<b>India</b>	<p>In 2022, the Reserve Bank of India started the design of the Digital Rupee (₹) and launched a pilot programme during 2023.</p>	<p><a href="#">Reserve Bank of India - Concept Note on CBDCs</a></p>
<b>Indonesia</b>	<p>Since May 2021, the Bank Indonesia has been conducting research and developing a CBDC, the digital rupiah. The Bank Indonesia released a white paper in November 2022 outlining the plan for launching the digital rupiah first as a wholesale CBDC and later as a retail CBDC.</p>	<p><a href="#">Bank Indonesia – White Paper</a></p>
<b>Iran</b>	<p>Reportedly, the Central Bank of Iran has been conducting research on CBDCs since 2018. Since 2022, the Central Bank of Iran has been developing the Digital Rial, and is conducting pilot tests in partnership with selected banks.</p>	
<b>Israel</b>	<p>The Central Bank of Israel started research on CBDCs in 2018, and during 2022 launched a pilot programme to test the Digital Shekel.</p> <p>The Digital Shekel was envisioned as a central bank liability towards holders of the currency, the public does not directly approach the bank to receive, redeem, or pay Digital Shekels, but this is enabled through “payment service providers” – which may be banks, other financial institutions (such as credit card companies in Israel), fintech firms, and more.</p>	<p><a href="#">Bank of Israel – Digital Shekel CBDC</a></p>
<b>Jamaica</b>	<p>After a pilot in 2021, during 2022 the Bank of Jamaica issued a CBDC, the JAM-DEX, to be in a wallet. The JAM-DEX can be stored in wallets provided by banks and authorised service providers, and it can be exchanged at par for bank notes and coins.</p>	<p><a href="#">Bank of Jamaica - CBDC</a>  <a href="#">Bank of Jamaica Act, 1960 (with amendments to 2015)</a>  <a href="#">Bank of Jamaica (Amendment) Act, 2022</a></p>

<b>Japan</b>	The Bank of Japan started research on CBDCs in 2021 and recently, in May 2023, concluded a pilot programme to test the technical feasibility of a Digital Yen. Furthermore, a CBDC Forum will be established with a view to proceeding with institutional arrangements for CBDCs in an appropriate manner, and ideas and insights set out by private businesses related to retail payments will be drawn upon to deepen the study.	<a href="#">Bank of Japan – Research on Proof of Concept 2023</a> <a href="#">Bank of Japan – Approach to CBDCs</a>
<b>Jordan</b>	At the request of the Central Bank of Jordan, the International Monetary Fund (IMF) conducted a mission in 2022 to assist the authorities in exploring retail Central Bank Digital Currency (rCBDC) and laying the foundations for a feasibility study report. In February 2023, the IMF released the report concluding that a cross-border CBDC would be especially beneficial to Jordan.	<a href="#">IMF – Report on retail CBDC in Jordan</a>
<b>Kazakhstan</b>	The National Bank of Kazakhstan (NBK) commenced research and the development of the CBDC Digital Tenge in 2021. The project focused on developing a retail CBDC but, in 2023, more sub-projects and initiatives were considered for covering wholesale applications and usage, including securities settlement, stablecoin-related initiatives, and cross-border and social payments, thus becoming more of a “general purpose” CBDC than the initial retail proposition.  The NBK has a roadmap for the period 2023 to 2025 in order to issue the Digital Tenge.	<a href="#">National Bank of Kazakhstan – Digital Tenge</a>
<b>Laos</b>	In 2023, the Central Bank of Laos started testing their CBDC, the Digital Lao Kip (DLak).	
<b>Malaysia</b>	The Central Bank of Malaysia conducts research on CBDCs. Some use cases considered for an eventual CBDC include: automated coupon payment upon bond maturity, automatic routing of tax payments to the authorities at point of sale and automated settlement of vehicle or real estate purchase upon confirmation of the transfer of legal title.	<a href="#">Central Bank of Malaysia – Financial Sector Blueprint 2022-2026</a>
<b>Mauritius</b>	The Central Bank of Mauritius announced the pilot of its retail CBDC, the Digital Rupee, in November 2023. The design considers a model where the Central Bank issues the Digital Rupee to commercial banks, which will in turn distribute it to their customers.	<a href="#">Central Bank of Mauritius – Press Release</a>
<b>Mexico</b>	The Central Bank of Mexico monitors the development of CBDCs.	
<b>Montenegro</b>	In 2023, the Central Bank of Montenegro concluded an agreement with Ripple to develop a strategy and pilot programme to launch a CBDC or national stable coin.	<a href="#">Central Bank of Montenegro – Press Release on partnership to develop CBDC</a>
<b>Morocco</b>	Since 2021, the Central Bank of Morocco has been conducting research on CBDCs.	
<b>Namibia</b>	Since 2021, the Central Bank of Namibia has been conducting research on CBDCs.	
<b>Nepal</b>	Since 2021, the Central Bank of Nepal has been conducting research on CBDCs.	
<b>New Zealand</b>	The Reserve Bank of New Zealand has been conducting research on CBDCs since 2021.	<a href="#">Reserve Bank of New Zealand – Research on CBDCs</a>
<b>Nigeria</b>	The Central Bank of Nigeria (CBN) launched the CBDC, eNaira, in 2021. The eNaira is deemed as legal tender and the digital form of the Naira; it requires a wallet to be accessed, held and stored.  The CBN designs, issues, and stores the eNaira and distributes it to financial institutions and international money transfer operators. Those entities distribute the eNaira to individuals and businesses.	<a href="#">Design Paper for the e-Naira</a>
<b>Norway</b>	The Central Bank of Norway has been conducting research on CBDCs since 2016. Notably, during 2022, the Central Bank of Norway started working with the BIS to explore how CBDCs can be used for international retail and remittance payments. Currently, the Central Bank of Norway is assessing the necessary legislative amendments for launching a retail CBDC, considering such issues as: (a) the impact on Norwegian banks’ deposit funding and the Central Bank liquidity policy; and (b) the comparison between blockchain-based solutions and account-based solutions; among others.	<a href="#">Central Bank of Norway – CBDC Project</a>
<b>Pakistan</b>	The Bank of Pakistan is currently conducting research on CBDCs aiming to launch a digital currency in 2025.	
<b>Peru</b>	In March 2023, the Central Bank of Perú published a research report on a possible CBDC for Perú, which included a survey to market actors.	<a href="#">Central Bank of Perú – CBDC Project</a>

	The report, entitled “CBDC: Promoting digital payments in Perú”, considered that a CBDC may help to improve the inclusion in digital payments for demographics without access to banks.	
<b>Philippines</b>	In January 2023, the Central Bank of the Philippines announced that its pilot project, which tests wholesale CBDCs, will run until 2024 with selected financial institutions.	<a href="#">Central Bank of the Philippines - CBDCs</a>
<b>Poland</b>	The National Bank of Poland monitors the development of CBDCs.	<a href="#">National Bank of Poland – Press Release</a>
<b>Republic of Korea</b>	<p>The Bank of Korea (BOK)’s last Payment and Settlement Systems Report explored the potential of a retail and wholesale CBDC and its use alongside already established payment platforms.</p> <p>The BOK is keen on exploring cross-border payments with the CBDC and even wider use cases stemming from the use of smart contracts. The banking regulators noted that it would deploy near-field communication (NFC) technology for offline payments to ensure financial inclusion.</p>	<a href="#">Payment and Settlement Systems Report 2022 Bank of Korea - CBDCs</a>
<b>Russian Federation</b>	<p>In August 2024, the Central Bank of Russia commenced a pilot testing of the digital Ruble on real transactions with the participation of 13 banks and a limited number of their clients.</p> <p>The issuance of the digital Ruble for broad use depends on the results of the testing and provided that the pilot testing of all the scenarios of digital Ruble transactions is completed successfully.</p> <p>It is projected that, from 2025, both individuals and businesses will be able to actively use the digital Ruble.</p> <p>The first stage of the pilot testing is intended to check all basic transactions, including the opening of digital Ruble accounts (digital wallets) and money transfers to them, person-to-person digital Ruble transfers, simple automatic bill payments, and QR code-based payments for goods and services.</p> <p>In 2024, the number of digital Ruble transactions will increase to include dynamic QR code-based payments and business-to-business digital Ruble transfers. The list of templates for simple automatic bill payments will be expanded as well.</p> <p>The Digital Ruble Bill makes amendments to Russia’s Civil Code, specifically articles related to the regulation of non-cash funds, adding rules for using digital Rubles. Under the law, the Bank of Russia is tasked with storing digital Ruble assets and will be the principal operator of the digital Ruble infrastructure, making the digital currency an official CBDC.</p>	<p>Federal Law No. 34-FZ of 18 March 2019</p> <p><a href="#">A Digital Ruble Consultation Paper</a></p> <p><a href="#">Digital Ruble Bill</a></p> <p><a href="#">Central Bank of Russia – Press Release on Pilot Program Digital Ruble</a></p>
<b>Saudi Arabia</b>	<p>In January 2023, the Saudi Central Bank (SAMA) announced that it is increasing its research efforts into CBDCs, with a focus on domestic wholesale CBDC use cases with local commercial banks and fintech partners.</p> <p>During this phase of the project, SAMA seeks to explore CBDC economic impact, market readiness, and potential robust and fast applications of a CBDC-based payment solution. In addition, SAMA seeks to review policy, legal and regulatory considerations before moving to the next phases of the CBDC journey to contribute to achieving the objectives of Saudi Vision 2030.</p> <p>Previously, in 2019, SAMA with the Central Bank of the UAE conducted the “<b>Project Aber</b>” to examine whether distributed ledger technology could contribute to seamless cross-border payments.</p>	<a href="#">Saudi Central Bank – Research on CBDCs</a>
<b>Singapore</b>	<p>The Monetary Authority of Singapore (MAS) has been actively developing projects for a CBDC as a cross-border payment system.</p> <p>Since 2022, the MAS has conducted <b>Project Orchid</b> to build the infrastructure and ‘technical competencies’ for a Digital Singapore Dollar.</p>	<p><a href="#">Payment Services Act 2019</a></p> <p><a href="#">Purpose Bound Money Technical Whitepaper</a></p> <p><a href="#">Project Orchid Programmable Digital SGD</a></p>
<b>South Africa</b>	In March 2019, the South Africa Reserve Bank (SARB) commenced research on a CBDC.	<a href="#">South Africa Reserve Bank – Research on CBDCs</a>

	Particularly, in 2021, the SARB released a report on the study of the feasibility, desirability and appropriateness of a CBDC as electronic legal tender, for general-purpose retail use, complementary to cash.	
<b>Sweden</b>	<p>The Central Bank of Sweden has been conducting research on CBDCs since 2017, focusing on the possible issuance of its own CBDC, the e-Krona, which has already been tested in two pilots (2021 and 2022).</p> <p>The e-Krona is envisioned as a retail CBDC, similar to cash, with the ability to be exchanged by a Krona at par value. In addition, it is expected that the e-Krona could strengthen the resilience of the payments market and complement the supply of money and payment services from the private sector.</p> <p>During 2023, the Central Bank of Sweden has worked on: (i) investigating the effects of an e-Krona on the Swedish economy; (ii) testing of the technical solution for the e-Krona prior to the e-Krona pilot focusing on offline payments; (iii) investigating whether and how an e-Krona affects the Central Bank of Sweden current mandate and what legal amendments are needed for the Central Bank of Sweden to issue an e-Krona; (iv) having a dialogue with different authorities and the market, for example, via the external dialogue forum launched in 2022; (v) performing user studies aimed at end-users and traders; (vi) following developments internationally.</p>	<a href="#">Central Bank of Sweden – CBDC Project</a>
<b>Switzerland</b>	<p>The Swiss National Bank (SNB) has been conducting practical research on CBDCs since 2019.</p> <p><b>Project Helvetia</b> involved collaboration between the SNB, the Bank for International Settlements (BIS) and SIX Group Ltd, operator of the Swiss financial market infrastructure. This project focused on the issue of wholesale CBDCs in the form of central bank tokens for financial institutions, and also on the creation of an interface between a DLT-based financial market infrastructure and the Swiss Interbank Clearing payment system.</p> <p><b>Project Jura</b> explored settling foreign exchange (FX) transactions in Euro and Swiss Franc wholesale CBDCs as well as issuing, transferring and redeeming a tokenised Euro-denominated French commercial paper between French and Swiss financial institutions.</p> <p><b>Project Helvetia Phase II</b> continues the exploration of tokenised asset settlement in wholesale CBDCs. It is a joint experiment by BIS, the SNB and SIX. Phase II also included five commercial banks. The project shows that a wholesale CBDC can be integrated with existing core banking systems and processes of commercial and central banks. Issuing a wholesale CBDC on a distributed ledger technology (DLT) platform operated and owned by a private sector company is operationally and legally feasible under Swiss law. The experiment explored the settlement of interbank, monetary policy and cross-border transactions on the test systems of SIX Digital Exchange (SDX), the Swiss real-time gross settlement system – SIX Interbank Clearing (SIC) – and core banking systems.</p> <p><b>Project Marlana</b> explored the cross-border trading and settlement of hypothetical Swiss Franc, Euro and Singapore Dollar wCBDCs between simulated financial institutions using new decentralised finance (DeFi) technology concepts. The project's proof of concept (PoC) relied on: (i) a common technical token standard as used by a public blockchain to facilitate exchange and interoperability between the different currencies; (ii) bridges for the seamless transfer of wCBDCs between different networks; and (iii) an Automated Market Maker (AMM), a specific type of decentralised exchange, to trade and to automatically settle spot FX transactions.</p> <p><b>Project Tourbillon</b>, developed along with by the BIS Innovation Hub Swiss Centre, proposed a retail CBDC with a concept of payer anonymity, providing cash-like anonymity to the payer, although not for the payee. For example, a consumer paying a merchant using CBDCs does not disclose personal information to anyone, including to the merchant, to the bank or to the central bank. However, the identity of the merchant is disclosed to the merchant's bank (as part of the payment) and is kept confidential there. This concept also helps to reduce tax evasion or illicit payments. The central bank is able to see the transaction amount but remains unaware of any details regarding the consumer or the merchant.</p>	<a href="#">Swiss National Bank – Projects on CBDCs</a>
<b>Tanzania</b>	The Bank of Tanzania is currently conducting research and monitoring on CBDCs.	<a href="#">Bank of Tanzania – Press Release on CBDCs</a>
<b>Thailand</b>	The Bank of Thailand is actively developing a retail CBDC the latest pilot of which is the Project Bang Khun Phrom (late 2022 to late 2023). The Bank of Thailand considers that: (i) a CBDC contributes to the public and business sector by	<a href="#">Bank of Thailand – CBDC Project</a>

	<p>upgrading payments to be efficient, fast, accessible and convenient; and (ii) the programmability of the CBDC may help financial service providers to develop innovations and connect with other service providers swiftly, at low cost, which will help create new financial services.</p> <p>Additionally, the Bank of Thailand participated in the Project mBridge with the Hong Kong Monetary Authority, Digital Currency Institute of the People's Bank of China, the Central Bank of the United Arab Emirates, and Bank for International Settlements Innovation Hub in Hong Kong.</p>	
<b>The Bahamas</b>	<p>In October 2020, the Central Bank of The Bahamas launched the Sand Dollar. This CBDC became available for use by all Bahamian citizens upon release, while integration with the commercial banking system has been subject to a gradual rollout.</p> <p>The Sand Dollar is issued by the Central Bank of The Bahamas through authorised financial institutions (AFIs) and its features and services are progressively developed.</p>	<a href="#">Project Sand Dollar: A Bahamas Payments System Modernisation Initiative</a>
<b>Tunisia</b>	<p>The Central Bank of Tunisia conducts research and pilots on CBDCs.</p> <p>During 2021, the Central Bank of Tunisia and the Bank of France conducted a round of wholesale CBDC exchange trials, involving wire transfers between commercial banks in each country.</p> <p>The Tunisian Government's post office has an "e-Dinar" and a smart card that has been in circulation since 2015 but does not involve the Central Bank of Tunisia and it is not a CBDC.</p>	<a href="#">Project – Tunisia and France e-dinar Smart</a>
<b>Türkiye</b>	<p>In December 2022, the Central Bank of the Republic of Türkiye (CBRT) announced that it had successfully executed its "first payment transactions" using the Digital Turkish Lira.</p> <p>In the scope of the first-phase studies of the Digital Turkish Lira Project, conducted under the leadership of the CBRT, the first payment transactions on the Digital Turkish Lira Network were executed successfully. The CBRT will continue to run the limited, closed-circuit pilot tests with technology stakeholders in the first quarter of 2024. Findings obtained from these tests will be shared with the public via a comprehensive evaluation report.</p> <p>In 2023, the CBRT expanded the Digital Turkish Lira Collaboration Platform to involve selected banks and financial technology companies, and will unveil advanced phases of the pilot study that will further widen the participation. Against this backdrop, the CBRT will continue to run tests for authentic architectural setups designed in areas such as the use of distributed ledger technologies in payment systems and the integration of these technologies with instant payment systems.</p> <p>Studies on the legal aspects of the Digital Turkish Lira demonstrate that digital identification is of crucial importance for the project. Therefore, studies on the economic and legal framework of the Digital Turkish Lira as well as its technological requirements were prioritised throughout 2023.</p>	<a href="#">Central Bank of the Republic of Türkiye – Press Release on Digital Turkish Lira</a>
<b>Ukraine</b>	<p>In 2021, the National Bank of Ukraine (NBU) launched the first pilot for the "e-гривня" ("e-Hryvnia"). The e-Hryvnia is deemed as the digital form of the Hryvnia and it is aimed to perform all functions of money and supplement cash and non-cash forms of Hryvnia, as well as to be accessible to all population groups, legal entities, State authorities, banks, and non-bank payment service providers.</p> <p>The NBU continues to work on the research and development of the e-Hryvnia.</p>	<a href="#">National Bank of Ukraine – e-hryvnia</a>
<b>United Arab Emirates</b>	<p>The Central Bank of the United Arab Emirates has developed joint projects with other Central Banks. Project Aber, developed jointly with the Saudi Central Bank, focused on a wholesale CBDC as a settlement unit for domestic as well as cross-border commercial bank transactions between the UAE and Saudi Arabia.</p>	<a href="#">Central Bank of the UAE - The Digital Dirham</a>

<b>United Kingdom</b>	<p>The Bank of England and HM Treasury is currently conducting research on CBDCs. In 2023, these entities released a consultation paper for the assessment of the case for a retail CBDC, namely 'digital pound', which considers that a publicly provided infrastructure that is open to use by all could catalyse innovative and efficient payment (and other) services provided by the private sector.</p> <p>The Bank of England and the BIS Innovation Hub's London Centre conducted "Project Rosalind" to explore how Application Programming Interfaces (APIs) could be used to support CBDC systems, by developing prototypes for an API layer in a two-tier retail CBDC model.</p>	<p><a href="#">The Bank of England – Research on the Digital Pound</a>  <a href="#">BIS – Project Rosalind</a></p>
<b>United States of America</b>	<p>The Federal Reserve has been conducting research and monitoring on CBDCs. In 2023, the Federal Reserve released "Money and Payments: The U.S. Dollar in the Age of Digital Transformation" to foster public discussion on CBDCs.</p> <p>It is considered that a potential CBDC should be intermediated. Under an intermediated model, the private sector would offer accounts or digital wallets to facilitate the management of CBDC holdings and payments.</p> <p>The Federal Reserve highlighted its commitment to ensure the safety and availability of cash and is considering a CBDC as a means to expand safe payment options, not to reduce or replace them. Other key policy considerations include how to preserve the privacy of citizens and maintain the ability to combat illicit finance.</p> <p>The Federal Reserve has made no decision on issuing a CBDC and would only proceed with the issuance of a CBDC with an authorising law.</p> <p>In addition, members of the US banking community conducted the wholesale CBDC project, "Regulated Liability Network (RLN) US Proof-of-concept (PoC)", the purpose of which is to explore the technical feasibility, legal viability, and business gains of a new structure concept to execute payments utilising a shared ledger system, regarding domestic interbank payments including transfers in tokenised bank deposits through a wCBDC and cross-border payments in USD.</p>	<p><a href="#">Federal Reserve – Discussion Paper</a>  <a href="#">RLN – Website</a></p>
<b>Uruguay</b>	<p>In 2017, the Central Bank of Uruguay announced and launched the pilot e-Peso. The e-Peso was deemed as legal tender as the digital form of the Uruguayan Peso. The Central Bank of Uruguay authorised the provision of a wallet and the payment service provider RedPagos distributed the e-Peso to the authorised wallets and allowed circulation among the participants of the Project.</p> <p>Uruguay continues to research and monitor the issuance of CBDCs.</p>	
<b>Venezuela</b>	<p>In 2018 Venezuela launched its CBDC Petro. It is backed by selected commodities (such as oil, gold, iron, diamonds, coltan and gas) aiming at the stabilisation of their valuation.</p> <p>The wallet to hold Petro is provided by the PetroApp and it can be used to pay for goods and services in authorised businesses or institutions through the Biopayment provided by the Central Bank of Venezuela or any means of payment authorized by the regulator.</p>	<p><a href="#">Official website Petro</a></p>
<b>Viet Nam</b>	<p>The State Bank of Vietnam has been conducting active research on CBDCs since 2021.</p>	<p><a href="#">State Bank of Vietnam – Press Release</a></p>

## Selected Multijurisdictional initiatives in relation to Central Bank Digital Currencies (CBDCs)

Jurisdictions	Initiatives	Purpose	Status	Potential Legal / PIL Challenges
<p><b>Thailand, Hong Kong SAR, China, the United Arab Emirates</b></p>	<p><b>mBridge</b></p>	<p>Wholesale</p>	<p>Project is at the phase of testing a new blockchain specialised and flexible for multi-currency cross-border payments in CBDCs. The project is focused on developing a single technical platform to allow different central banks to exchange multiple CBDCs. The project will explore the possibility of a legal and governance framework across jurisdictions as a next phase.</p> <p>More information:  <a href="https://www.bis.org/about/bisih/topics/cbdc/mcbdc_bridge.htm">https://www.bis.org/about/bisih/topics/cbdc/mcbdc_bridge.htm</a></p>	<p>The project investigated several methods and safeguards to broaden CBDC access internationally, while ensuring central banks' monetary sovereignty.</p> <p>The report states that the settlement finality could be established through specifically developed legal agreements between central banks and their corresponding commercial banks, and it should be further enhanced by operating terms of the platform customised on a per-jurisdiction basis.</p> <p>Data privacy and governance pose challenges from a PIL perspective due to the different regulations across jurisdictions.</p>
<p><b>Anguilla, Antigua and Barbuda, The Commonwealth of Dominica, Grenada, Montserrat, Saint Christopher and Nevis, Saint Lucia and Saint Vincent and the Grenadines</b></p>	<p><b>Project DCash</b></p>	<p>Retail</p>	<p>The pilot for Project DCash was launched on 31 March 2021 with the purpose of achieving efficiency and welfare gains, when DCash is used for financial transactions between consumer and merchants, and person-to-person transactions, using smart devices. The project outage was in January 2022, and its assessment was that public education as well as the marketing of a CBDC, the compelling value proposition, and robust merchant network is crucial for the success of a CBDC.</p> <p>More information:  <a href="https://www.dcashec.com/about">https://www.dcashec.com/about</a></p>	<p>Since this project focuses on assessing the potential efficiency and advantages achieved through DCash, the assessment largely concerns the promotion and stabilisation of the usage of the CBDC.</p>
<p><b>Australia, Singapore, Malaysia, and South Africa</b></p>	<p><b>Project Dunbar</b></p>	<p>Wholesale</p>	<p>Project is at an exploratory stage to examine how a common platform for multi-CBDCs could facilitate efficient cross-border payments, accompanied by the finding that the concept of multi-CBDCs was technically feasible, and to overview benefits and challenges of a multi-CBDCs platform. The project will work further on reviewing legal and regulatory frameworks across participating jurisdictions, developing a platform guideline, and studying cross-border transactions.</p> <p>More information:  <a href="https://www.bis.org/about/bisih/topics/cbdc/dunbar.htm">https://www.bis.org/about/bisih/topics/cbdc/dunbar.htm</a></p>	<p>The project's central aim is to develop design approaches to address three challenges; access of non-resident banks to CBDCs, streamlining cross-border payments processes while respecting regulatory variation across jurisdictional boundaries, and governance to maximise universality and autonomy by establishing confidence in a common, shared platform, all while ensuring a certain level of autonomy and control over each jurisdiction's domain area.</p> <p>To ensure the platform consistency, a shared set of rules would apply to all participants, established through consensus among the involved central banks, whilst these central banks could still insist on retaining sovereignty and autonomy in key areas such as currency issuance, enforcing local rules and regulations at the currency- and jurisdiction-level, and upholding their mandate to their national legislation, and data policy.</p> <p>Introducing a new multi-CBDC solution might call for a regulatory change and necessitate further work to</p>

				<p>address variances in policies and seek harmonisation across jurisdictions.</p> <p>The project expects that multi-CBDC platforms will more likely be implemented as a series of regional platforms rather than a single global platform. Thus, once multi-CBDC projects have been developed on a regional level, establishing mechanisms to guarantee connectivity between multi-CBDC projects follows.</p>
<b>Israel and Hong Kong SAR</b>	<b>Project Sela</b>	Retail	<p>The project focuses on designing CBDC systems and enabling CBDC access with consideration for the reduction of liquidity and settlement risk as well as the enhancement of cyber security.</p> <p>More information:  <a href="https://www.bis.org/about/bisih/topics/cbdc/sela.htm">https://www.bis.org/about/bisih/topics/cbdc/sela.htm</a></p>	<p>The project mainly focuses on the enhancement of access towards end-users and cyber security, rather than PIL issues, and the report states that “cross-border transactions are beyond the project’s direct scope”.</p> <p>The main conclusion of this project is the introduction of a new type of intermediary, called AE (Access Enabler)s which do not hold an end-user’s CBDC, and the final report emphasises the distribution of the role and responsibilities of central banks and supervised private sector intermediaries.</p>
<b>Israel, Norway, and Sweden</b>	<b>Project Icebreaker</b>	Retail	<p>The project’s focal point is the enhancement of using rCBDCs in international payments. The project proposes the model which guarantees a high level of autonomy for central banks, whilst making it possible to engage in a structured interlinking arrangement for cross-border payments.</p> <p>More information:  <a href="https://www.bis.org/about/bisih/topics/cbdc/icebreaker.htm">https://www.bis.org/about/bisih/topics/cbdc/icebreaker.htm</a></p>	<p>The project concentrates on technical research to interlink rCBDC systems for interoperability, but the report briefly mentions that it is necessary to address legal considerations, including “a sound legal basis for the Icebreaker hub, the potential conflict of laws and regulation between connected rCBDC systems, and conflict resolution”.</p>
<b>France, Singapore, and Switzerland</b>	<b>Project Mariana</b>	Wholesale	<p>The project aims at testing the cross-border trading and settlement of wholesale CBDCs, using new DeFi technology. The project concluded that wCBDCs with algorithms enable FX transactions priced and executed automatically and settled immediately, offering potential approaches for incorporating an international aspect into ongoing wCBDC design efforts.</p> <p>More information:  <a href="https://www.bis.org/about/bisih/topics/cbdc/mariana.htm">https://www.bis.org/about/bisih/topics/cbdc/mariana.htm</a></p>	<p>The project focuses on developing models for enhancement of interoperability and technical standardisation regarding cross-border wCBDCs payments. The final report suggests the potential to expand the scope of experimentation to the monetary policy implementation in a tokenised financial system, building on the openness and composability of DeFi and smart contracts.</p>
<b>France and Switzerland</b>	<b>Project Jura</b>	Wholesale	<p>The project mainly focused on the direct transfer of Euro and Swiss Franc wCBDCs on a single DLT platform operated by a third party. The report mentioned that intricate policy issues could ensue from giving regulated non-resident financial institutions direct access to CBDC.</p> <p>More information:  <a href="https://bis.org/about/bisih/topics/cbdc/jura.htm">https://bis.org/about/bisih/topics/cbdc/jura.htm</a></p>	<p>Circulating multiple wCBDCs on a single platform would require a certain level of coordination between central banks.</p> <p>“Policy equivalence” of wCBDC vis-à-vis central bank reserves, such as requiring remuneration of wCBDC and adjustments to monetary policy operations, would mitigate possible negative outcomes of market fragmentation and the undermining of the singleness of the currency.</p> <p>Regarding the access of non-residential institutes to CBDC, the report pointed out that there are differences in access policies among central banks: one group allows access to regulated non-bank financial</p>



				<p>institutions, while the other group of banks does not allow such access.</p> <p>International oversight mechanisms may be established for multi-currency and multi-jurisdiction systems.</p>
<b>France and Singapore</b>	<b>Onyx/Multiple wCBDC</b>	Wholesale	<p>The Monetary Authority of Singapore and Banque de France experimented with cross-border payments and settlements using wCBDC as a common network, supported by Onyx blockchain, between two States in order to improve cross-border payments.</p> <p>More information:  <a href="https://www.mas.gov.sg/news/media-releases/2021/monetary-authority-of-singapore-and-banque-de-france-break-new-ground-in-cbdc-experimentation">https://www.mas.gov.sg/news/media-releases/2021/monetary-authority-of-singapore-and-banque-de-france-break-new-ground-in-cbdc-experimentation</a></p>	<p>The experiment focused on building a multi-currency shared ledger infrastructure to engage in direct cross-border transactions.</p>
<b>Canada, the United Kingdom, and Singapore</b>	<b>Project Jasper</b>	Wholesale	<p>The project consists of multiple phases, with the initial stages focusing on exploring the viability and feasibility of settling wholesale interbank payments within a DLT system. In the most recent phase, Phase 4, the project examines a cross-border, cross-currency settlement system.</p> <p>More information:  <a href="https://payments.ca/sites/default/files/2022-09/jasper_report_eng.pdf">https://payments.ca/sites/default/files/2022-09/jasper_report_eng.pdf</a>  <a href="https://www.bankofcanada.ca/research/digital-currencies-and-fintech/projects/">https://www.bankofcanada.ca/research/digital-currencies-and-fintech/projects/</a>  <a href="https://www.mas.gov.sg/-/media/Jasper-Ubin-Design-Paper.pdf?la=en&amp;hash=EF5857437C4857373A9287CD86F56D0E7C46E7FF">https://www.mas.gov.sg/-/media/Jasper-Ubin-Design-Paper.pdf?la=en&amp;hash=EF5857437C4857373A9287CD86F56D0E7C46E7FF</a></p>	<p>The project focuses on experiments of different types of DLT systems for settling wholesale interbank systems in Phases 1 and 2, and the design consideration and technical aspects of implementing DLT for cross-border payments in Phase 4.</p> <p>The white paper suggests that the interoperability for global financial markets could be advanced through the efficient access to information related to economic contracts between parties, and even more when combined with the potential for automated contract enforcement integrated into the solution. The Jasper-Ubin Design paper suggests that further study is needed on the regulatory or legal aspects.</p>
<b>Saudi Arabia and the United Arab Emirates</b>	<b>Project Aber</b>	Wholesale	<p>The purpose of the project is to investigate the potential for introducing a new digital currency based on DLT for settlement between commercial banks in different jurisdictions and domestically. It affirmed that DLT is a viable mechanism for both domestic and international settlement, while also confirming the technical viability of a jointly issued digital currency by central banks.</p> <p>More information:  <a href="https://www.sama.gov.sa/en-US/News/Documents/Project_Aber_report-EN.pdf">https://www.sama.gov.sa/en-US/News/Documents/Project_Aber_report-EN.pdf</a></p>	<p>The project's aim is to demonstrate the feasibility of a single digital currency for cross-border settlement, and also studied the its interoperability with other CBDCs.</p> <p>The final report states that further exploration with regard to the issuance of a single digital currency should focus on assessing its impact on the monetary policies and regulatory aspects of participating States.</p>
<b>[BIS Nordic Centers]</b>	<b>Project Polaris</b>	Retail	<p>The aim of the project is to develop security and resilience frameworks to assist central banks in the design, implementation and operation of secure and robust CBDC systems in order to mitigate the risks arising from cyber threats or operational failures. As part of the project a handbook was published for offline payments with CBDCs and a security and resilience framework for CBDC systems, and the project is now carrying out further work on offline payments with CBDC.</p> <p>More information:  <a href="https://www.bis.org/about/bisih/topics/cbdc/polaris.htm">https://www.bis.org/about/bisih/topics/cbdc/polaris.htm</a></p>	<p>The project concentrates on the design and framework for security and resilience of CBDC systems, with limited focus on PIL concerns.</p> <p>The handbook states that cross-border offline payments would be infeasible in reality, due to the difficulty in devising compatibility and interoperability.</p> <p>The framework mentioned that cross-border CBDC transactions might necessitate assistance from interconnection models or multi-CBDCs.</p>

<p><b>Malaysia, Singapore, Indonesia, Philippines, Thailand</b></p>	<p><b>Project Nexus</b></p>	<p>Retail and Wholesale</p>	<p>The project worked on a model to interlink different national payment systems with an international network, enabling rapid cross-border payments.</p> <p>More information:  <a href="https://www.bis.org/about/bisih/topics/fmis/nexus.htm">https://www.bis.org/about/bisih/topics/fmis/nexus.htm</a></p>	<p>This project concentrated on the technology to connect domestic payment systems for cross-border payments. Regarding PIL concerns, the project mentioned that the challenges for cross-border payments include conflicts in sanctions and data protection rules among countries.</p>
<p><b>United States of America and Singapore</b></p>	<p><b>Project Cedar/Ubin+</b></p>	<p>Wholesale</p>	<p>The aim of the project is to examine a future digital currency landscape where central banks can enable interoperability of wholesale CBDCs to facilitate more efficient cross-border payment flows interlinked with the distinct central bank currency ledgers without the need for a central clearing authority or the establishment of a shared central network.</p> <p>More information:  <a href="https://www.mas.gov.sg/publications/monographs-or-information-paper/2023/project-cedar-phase-ii-x-ubin">https://www.mas.gov.sg/publications/monographs-or-information-paper/2023/project-cedar-phase-ii-x-ubin</a></p>	<p>This project primarily carries out technical research on how to improve global financial systems.</p> <p>The report mentions briefly that differences among participating countries' signing policies can have an influence on the increase in the length of time for cross-border transactions.</p>

## Annex V – Jurisdictions Adopting Cryptocurrencies as Legal Tender

Country	Description	Relevant framework document
<b>Central African Republic</b>	On 22 April 2022 the Central African Republic gave cryptocurrencies the status of legal tender. However, in March 2023, legislature was introduced which removed the legal tender status but still permits transactions on cryptocurrencies.	Law No 22.004 Governing Cryptocurrency
<b>El Salvador</b>	On 7 September 2021, El Salvador enacted the “Bitcoin Act” in order to establish the cryptocurrency “Bitcoin” as legal tender.	<a href="#">Bitcoin Act</a>