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Digital Pound Consultation
CBDC Unit
Bank of England
Threadneedle Street
London EC2R 8AH

By email: Digitalpoundconsultation2023@bankofengland.co.uk

CBDC
HM Treasury
1 Horse Guards Road
London SW1A 2HQ

By email: CBDC@HMTreasury.gov.uk

Dear colleagues,

Bank of England and HM Treasury Consultation on a Digital Pound

The Institute of International Finance (**IIF**) welcomes the opportunity to respond to the Bank of England (**Bank**) and HM Treasury (**HMT**) (together, the **UK authorities**) joint consultation paper, The digital pound: a new form of money for households and businesses? (**Consultation Paper**).

We welcome the intensive and consultative work that has gone into the development of the Consultation Paper and the accompanying Bank Technology Working Paper.

The IIF and its members have devoted effort to developing a substantive response to the Consultation Paper in view of London's importance as a global financial center and the consequent extent to which other financial authorities can be expected to pay close attention to decisions taken by the UK authorities on this issue.

As a global membership-based organization representing around 400 of the world's largest global financial institutions (**FIs**), the IIF is particularly concerned to ensure that the cross-border dimensions and implications of any central bank digital currency (**CBDC**) are fully considered, alongside all appropriate domestic cost–benefit and political economy considerations.

The IIF would observe that the value of an occasion to build a new payment system, such as the one under consideration in this Consultation Paper, is in the opportunity to create a multi-asset system that envisions the incorporation of a range of digital currencies and tokenized assets. In this context, if built, infrastructure supporting a CBDC should not be envisioned as entirely independent from such a multi-asset system. There is little-to-no value in settling for recreating parallel systems that could tie up capital and liquidity, face similar pain points, and be expensive. As envisioned, for a digital pound to achieve the objectives of UK authorities, a CBDC would need to operate on platforms where other digital currencies otherwise operate.

In **Annex 1**, we set out our answers to the questions in the Consultation Paper. We note that the Consultation Paper and questions are focused primarily on a retail CBDC, and we have approached the task of crafting answers to the consultation questions in that light. We note at the outset that a possible wholesale CBDC may present a different range of costs/risks and benefits, and acknowledge the Bank has explored possible benefits of a private sector solution for wholesale payments. We would note that the recently launched omnibus account structure may deliver some of the possible benefits of a wholesale CBDC, including for example the

ability to facilitate a tokenized cash leg for security settlement, and there are also alternative structures being trialled by different FIs that may achieve similar objectives.

In **Annex 2**, we set out the policy considerations we consider key to any decision to take forward a retail CBDC, together with our initial observations of the extent to which the considerations appear to have been addressed in the Consultation Paper.[1] We commend the UK authorities for their careful consideration of many of the key policy considerations that we have previously identified.

We broadly welcome the forward movement of the UK authorities into Phase 2, but would also caution that there are a large number of important issues to be resolved in that phase, including some fundamental governance and financial stability questions that have yet to be answered completely by any jurisdiction to date. Some of the main gaps or areas for further consideration we feel need to be addressed in Phase 2 are:

- We believe the proposed individual holding limits are too high and should not be transitional in nature. By comparison with proposals from other central banks, they are unusually high, and bringing them down significantly could lower risks of bank deposit disintermediation and reduce pass-through consequences such as the reduction of the weighted average net interest margin of British banks. Further analysis of the impacts of a CBDC on bank deposit funding, and the banking sector's ability to support economic growth through lending, would be desirable. In particular, we think a sensitivity analysis estimating the impacts on deposit and lending volumes and rates at different individual and corporate holding limits, also taking account of the possibility of the presence of well-regulated stablecoins, should be undertaken by the Bank as a matter of priority in Phase 2 and published for review by interested parties and academics. Recent bank collapses have raised questions regarding the correlation of the speed of bank runs with the ease of digital value transfers and power of social media.
- The suggestion that limits could be removed after the introductory/transition period is concerning for the same reasons. We encourage the investigation of additional mitigants beyond limits on individual holdings, such as transaction limits. Of course, the ability to enforce any limits will be critical to their effectiveness. We would expect that should a CBDC be launched and determined to present risk to the banking system, UK authorities would wish to have the tools immediately available to make a rapid adjustment should it be required.
- A number of key decisions – such as that the digital pound would be unremunerated, or the level of the limit on individual holdings – seem to be made subject to the possibility of unilateral amendment by the Bank. We suggest a decision to remove or increase the limit beyond a routine adjustment for inflation would be significant enough to substantiate the agreement of HM Treasury.
- Further specificity on the privacy model would ideally lay out necessary details as to how the proposed limits on individual holdings may be enforced across multiple wallets if personal information is not to be collected at the level of the central ledger.[2] Further attention will also be required to address the ease with which data may be deanonymized or re-identified.
- While there is discussion of legal liability in the Consultation Paper, it is limited to the need for a liability and compensation framework for instances of fraud in the digital

[1] Similar considerations formed the basis of our previous submissions to the U.S. Federal Reserve and the European Commission concerning their respective considerations of a possible U.S. dollar-denominated CBDC and a digital euro.

[2] In that regard, we observe in our response to the Technology Working Paper in Annex 3 that zero-knowledge proofs by themselves may not enable accurate tracking, in real time, of whether an individual's or corporate's CBDC holdings, across wallets that may be issued by multiple intermediaries, exceed the applicable limit.

pound system.[3] We feel further work around this topic is warranted to bring further clarity before any issuance of a digital pound.

In **Annex 3**, we also submit answers to some of the key questions in the Technology Working Paper. Again, we welcome the considerable consultative work that has gone into this paper and the care with which the project is proceeding.

Lastly, in **Annex 4**, we raise some points and questions in response to the Consultation Paper which we feel are deserving of further thought in Phase 2, that are not covered in the consultation questions.

In line with the above, we would stress the importance of the UK authorities developing their thinking around a potential digital pound in close collaboration with the private sector. Additionally, while UK authorities are right to prioritize local considerations, an approach to any CBDC should be reached with the global context held strongly in mind, and with a goal of enabling a technologically superior international financial infrastructure that has tangible benefits.

The IIF stands ready to assist further with these deliberations, for example by convening or attending roundtables or bilateral discussions as appropriate, or by assisting with data gathering. Please do not hesitate to contact us with any follow-up questions or invitation for further dialogue.

Yours sincerely,

Jessica Renier
Managing Director, Digital Finance

[3] At p. 60.

Annex 1 – Answers to consultation questions

Question	IIF answer
1. Do you have comments on how trends in payments may evolve and the opportunities and risks that they may entail?	The Bank of England and HMT should comprehensively look at the challenges and opportunities in the UK market, what initiatives are being developed to address some of the issues already identified and determine what the outstanding problems and issues are in this context. This means looking outside the digital currency landscape and considering alternatives to solving existing issues in the first instance. It also requires considering where pursuit of this project may have unintended consequences for other programs underway. The IIF would observe that the value of an occasion to build a new payment system, such as the one under consideration in this Consultation Paper, is in the opportunity to create a multi-asset system that envisions the incorporation of a range of digital currencies and tokenized assets. In this context, if built, infrastructure supporting a CBDC should not be envisioned as entirely independent from such a multi-asset system. There is little-to-no value in settling for recreating parallel systems that could tie up capital and liquidity, face similar pain points, and be expensive. As envisioned, for a digital pound to achieve the objectives of UK authorities, a CBDC would need to operate on platforms where other digital currencies otherwise operate. For instance, if an objective of the Bank is for a digital pound to be a substitute for a private digital currency (or stablecoin), this objective can only be achieved if the digital pound operates on the platform/market in which that private digital currency is otherwise meeting consumer needs that are enabled by that market/ecosystem (or that the Bank be capable of deploying a more attractive ecosystem that meets all of those needs and more). For this reason, it is essential that the Bank clearly align any objectives it has with the required design to meet them, and subsequently the decision whether to proceed to issue a digital pound. Of course, there are opportunities when creating a new system – such as improving fraud detection and creating preventative controls – depending on infrastructure design. In Phase 2, funding and investment considerations around multiple and competing payments projects should be explored in detail. For example: • How would a digital pound be funded alongside other investments and initiatives, and who will bear the cost? For instance, in the case of a cost allocation model, if one is considered, it should be agreed at the outset. • Conflicts or overlaps between the objectives of existing initiatives and those of a digital pound should be identified.

Question	IIF answer
	• Impacts on other initiatives should be mapped or prioritised. Resources in the private sector working on existing initiatives are already limited, and the digital pound would compete for those already scarce resources such as developers. We note, for instance, resources to be dedicated to advancing the G20's Roadmap on Cross-Border Payments and the challenge that already exists to prioritize areas of progress within it.
2. Do you have comments on our proposition for the roles and responsibilities of private sector digital wallets as set out in the platform model?	We welcome the platform model and the public-private partnership approach, as this promises to retain the current roles and strengths of the public and private sector in payments. We would also note that the principle of "same risk, same regulatory outcome" needs to be applied to all intermediaries in a platform system, including new entrants. If all digital wallets must provide minimum functionality, then all digital wallet providers should be subject to a set of regulatory requirements that guarantee the same regulatory outcome.
Do you agree that private sector digital wallet providers should not hold end users' funds directly on their balance sheets?	This is an important decision that would have significant wider effects and therefore should be carefully evaluated. Both the distribution model and where funds reside are two key questions in any CBDC structuring decision. The negative impact of the risk of bank deposit disintermediation is partly due to the digital pound not being on banks' balance sheets. As an alternative model, it is conceivable that banks could hold their customers' digital pounds directly on balance sheet. This would presumably constitute the wallet provider a creditor of the deposit-holder, with an asset (the CBDC) to match that liability. The IIF, however, recognizes this model may call into question the purpose of a CBDC when existing commercial bank money already operates in a similar manner. In such a model, it would be important that banks be allowed to include digital pound deposits in their liquidity ratio calculations, at the same level of treatment as customer deposits. This may help to maintain a level of maturity transformation by commercial banks and other lenders that are wallet providers comparable to the level of maturity transformation in the absence of a CBDC.
3. Do you agree that the Bank should not have access to users' personal data, but instead see anonymised transaction data and aggregated system-wide data for the running of the core ledger?	Firstly, it is not clear that wallet identifiers would not count as "personal data" within the Data Protection Act 2018, given the broad definition of that term. If they do, the extent to which the Bank would be subject to the Act in the performance of its duties with regard to the digital pound needs to be made explicit. As well, the nascent literature around de-identifying and re-identifying personal data suggests that re-identifying personal data may be easier than is supposed.[4]

[4] See, for example, Anonyme Labs (2020), Re-Identification of "Anonymous" Data is Scarily Simple, December 17

Question	IIF answer
	As such, a high degree of assurance needs to be provided that wallet identifiers will be accessible only in a controlled way to those with a need to know, and that they will not be stored with other data (such as wallet balances, or transaction information) in such a way that reidentification by the central bank will be feasible. There may need to be an exception made to this principle to enable policing of individual holding limits (see next answer).
What views do you have on a privacy-enhancing digital pound?	The Consultation Paper does not make clear how the proposed limits on individual and corporate holdings will be enforced. The discussion in section 5.2 of the Bank's accompanying Technology Working Paper is quite tentative in this regard. We query whether zero-knowledge proofs or zero-knowledge range proofs by themselves would enable accurate tracking, in real time, of whether an individual's or corporate's CBDC holdings, across wallets that may be issued by multiple intermediaries, exceed the applicable limit. It seems to be implicitly assumed that responsibility would be placed on intermediaries to aggregate wallet balances in real-time, either horizontally or via a bureau, which could be onerous and add to already very large compliance costs borne by financial institutions. This may be further detrimental to financial institutions' balance sheets. Another approach could be to place the responsibility for such monitoring (including initial system design such that this is possible, while maintaining strong privacy policies) on the central bank. There may need to be an exception to the principle that the central bank should not see personal identifying information, in order for the central bank to be able to fulfil the holding limit function. In Phase 2, efforts should redouble to explore whether technical means can be found to carry out this function while complying with that principle.
4. What are your views on the provision and utility of tiered access to the digital pound that is linked to user identity information?	To achieve objectives outlined by the Bank, a tiered access model enabled by an effective digital identity solution may be required. However, the main challenge with any tiered access model would be to balance the need to provide for financial inclusion reasons for "low-doc" wallets, against the danger that criminals or terrorists could open many "low-doc" wallets for the purposes of evading AML/CFT controls, or other users may look to evade the holding limits for other reasons. Unless an effective and cost-effective means of identifying when a single individual or corporate has opened multiple "low-doc" wallets is developed, which should be incorporated into the initial design of such a system by the central bank, the IIF's members' own, and the UK authorities', risk appetites for money laundering or terrorist financing may be exceeded.

Question	IIF answer
	We welcome that the UK is legislating a framework for digital verification service provision.[5] We also observe that citizens may be more comfortable using bank-issued digital ID such as BankID in Sweden than sovereign-issued digital ID. For this reason, we anticipate that bank-issued digital ID may be a key part of the solution space for identity verification around a digital pound.
5. What views do you have on the embedding of privacy-enhancing techniques to give users more control of the level of privacy that they can ascribe to their personal transactions data?	The IIF supports the general principles of user centricity, such that the user should have the right to consent to the sharing of their personal data including, unless they opt-in to a time-limited persistent consent for one or more use cases, each instance of data sharing, and that users should also be able to initiate a revocation of consent.[6] While we acknowledge the potential role of privacy-enhancing technologies (**PETs**), we would also raise the question of the funding of any user consent dashboards or similar infrastructure. We also believe it would be necessary that data and technical standards relating to PETs be promulgated to ensure alignment across ecosystem actors and reduce the need for mappings and translations down the track.
6. Do you have comments on our proposal that in-store, online and person-to-person payments should be highest priority payments in scope?	We do not recommend starting with Point-of-Sale (POS) payments given their complexity and dependencies. We would support a phased rollout with implementation in a defined order by use case or payment category, starting with lowest impact to industry while adding value to the consumer, ensuring infrastructure is tried and tested before moving to the higher-impact tiers.
Are any other payments in scope which need further work?	No comment.
7. What do you consider to be the appropriate level of limits on individual's holdings in transition?	**Level of limits** We consider the proposed limits on individuals' holdings to be too high. By comparison with proposals from other central banks, they are unusually high, and bringing them down could lower risks of bank deposit disintermediation and reduce pass-through consequences such as the reduction of the weighted average net interest margin of British banks. We note the initial proposal for a much lower holding limit of EUR 3000 for the digital euro, which is purportedly designed to mitigate the same risks of bank deposit disintermediation in normal times and heightened bank run risk in stressed circumstances. A lower limit may align with the digital pound being used more for everyday payments, whereas a higher limit may align with it being used as a store of value, which may be problematic for financial stability due to the risks mentioned.

[5] Data Protection and Digital Information (No. 2) Bill
[6] See IIF (2022), Principles for Digital Trust Networks, p. 7

Question	IIF answer
	As to what the precise limits should be, we consider that further analysis of the impacts of a CBDC on bank deposit funding, and the banking sector's ability to support economic growth through lending, would be desirable. In particular, we think a sensitivity analysis estimating the impacts on deposit and lending volumes and rates at different individual and corporate holding limits, also taking account of the possibility of the presence of well-regulated stablecoins, should be undertaken by the Bank as a matter of priority in Phase 2 and published for review by interested parties and academics. The UK authorities could set limits (say, X% and Y%) on the target levels of bank deposit disintermediation in normal times and in stressed times and, given elasticity of demand for CBDC, work backwards to individual holding limits. More analysis and consideration is therefore needed before determining limits for corporates and individuals. **Transitional nature of limits** The suggestion that limits could be removed after the introductory/transition period is concerning for the same reasons. Recent bank collapses have raised questions regarding the correlation of the speed of bank runs and the ease of digital value transfers and power of social media. **Removing or increasing the limit** We believe a decision to remove or increase the limit on individual holdings beyond a routine adjustment for inflation may be significant enough to substantiate the agreement of HM Treasury. **Policing the limits** The Consultation Paper does not make clear how the proposed limits on individual and corporate holdings will be enforced. See our answer to question 3, sub-question 2. The Bank should also consider what happens when the limit threshold is breached and how it will manage the off-ramp for digital pounds received into a wallet in excess of the threshold, including for those who do not hold bank deposit accounts. **Other mitigants beyond holding limits** In our view, there may be a need for mitigants to bank deposit disintermediation – in stressed and possibly in normal times – beyond individual holding limits. For example, it may be necessary to limit the amount of transactions or the amount of purchase of CBDC in stressed times. We support leaving negative interest rates off the table, but for that reason would also support further work being done on this general topic.

Question	IIF answer
	Lastly, there should be more clarity on likely measures the central bank would deploy in case, due to high levels of disintermediation of bank deposits, banks' funding base were significant affected, such that lending volumes to the real economy were affected. These measures should be well understood prior to launching a digital pound so that a rapid correction could be made in real-time, if necessary, prior to significant damage being done to the banking industry.
Do you agree with our proposed limits within the £10,000–£20,000 range?	See above. We believe limits in this range to be too high.
Do you have views on the benefits and risks of a lower limit, such as £5,000?	See above. We would be more supportive of this figure, but still consider that further analysis needs to be done to better motivate the choice of a particular level of limit.
8. Considering our proposal for limits on individual holdings, what views do you have on how corporates' use of digital pounds should be managed in transition?	Similar considerations regarding bank deposit disintermediation and its effect on the cost and availability of credit and on financial stability should be taken into account in the case of corporates. This is particularly so given the weight of their balances in the overall deposit volumes, overall bank funding composition, and the risk of rapid flight. While a normal interest rate environment may incentivize corporate holders (more than individuals) to sweep CBDC balances nightly into bank deposits, a zero- or near-zero-interest rate environment, or a negative rate environment, would reduce and even reverse this incentive. This would imply that limits on the holdings by corporates should be imposed, and that such limits not be purely transitional. As to the level of such limits, we consider it desirable to clarify the purpose of permitting corporates to hold digital pounds. If it is mainly for the purpose of allowing salaries to be paid in that form, then holding limits for corporates may need to be large, to avoid that corporates purchase small amounts of CBDC with commercial bank money in tranches to pay each salary or batch of salaries, but could be tiered by size, by number of employees, or by payroll. However, this would have large implications in terms of potential bank deposit disintermediation in normal circumstances. Further analysis on the impact this could have on the fractional reserve system would therefore be desirable. Consideration should, however, be given to whether financial institutions should be exempt from corporate holdings limits to the extent needed to conduct their ordinary activities, particularly those as intermediaries in a digital pound system. See also our answer to question 2, second sub-question above concerning the possibility of FIs holding CBDC on balance sheet.
Should all corporates be able to hold digital pounds, or should some corporates be restricted?	One-person or two-person proprietary companies should arguably be limited to a zero or very low balance, to avoid a proliferation of corporates to avoid individual holding limits.

Question	IIF answer
9. Do you have comments on our proposal that non-UK residents should have access to the digital pound, on the same basis as UK residents?	It may be prudent to initially provide access to digital pounds only to UK residents (potentially also including temporary visitors such as tourists and business travellers). Making digital pounds available to non-residents could have undesirable effects on other monetary systems, particularly in emerging markets, though there may also be positive effects that should be taken into consideration. Limiting access to non-residents would bring with it issues such as how to define non-residents and how to treat citizen non-residents, how to enforce any such limits, as well as the role of foreign Payment Interface Providers (**PIPs**). It would be helpful to better understand the pros and cons of non-resident access for the UK authorities in Phase 2 to explicitly set out the envisaged use cases for non-resident access to a digital pound. While the Consultation Paper mentions tourist use cases, existing payment instruments including commercial bank money, and debit or credit cards already cater to them. The likely incidence of other uses such as speculation and/or store of value would likely deserve closer consideration. That said, close coordination with other international jurisdictions is encouraged to agree on common standards. We note the role that CBDCs may have in affecting the objectives of the G20 Payments Roadmap, and broadly, the objectives of global standard-setting bodies regarding cross-border payments. Any system for aggregating individual wallet balances that relies on UK-specific identifiers may not be effective for non-residents. Residents of third countries may find digital pounds a safe haven asset and demand for such holdings may be somewhat unpredictable, but theoretically no more so than demand for GBP as a reserve currency today. At the extreme, in times of stress, demand may affect market forces and exchange rates, if overall demand for GBP is affected, though the consultation paper suggests the effect will be minimal given that wholesale market flows predominate.
10.Given our primary motivations, does our proposed design for the digital pound meet its objectives?	Generally, we believe that the proposed design for the digital pound meets the "primary motivations" and possibly the other motivations identified in the paper. However, it is important to note that these motivations are high-level policy and systemic objectives, rather than being driven by clear customer or market needs or requirements that have been identified. In some cases, analysis is required to show how a digital pound would address the full range of motivations. We would advocate that possible trade-offs among these motivations be worked through, and that impacts on those objectives of any mitigants against systemic risk be estimated. A digital pound is of course not the only option to achieve those goals and may be an inferior means in some instances.

Question	IIF answer
	While welcoming the platform model and the public-private partnership approach, we continue to question the commercial viability of participating in such a system. Revenue and expense models are much more complex than alluded to in the consultation.
11.Which design choices should we consider in order to support financial inclusion?	We have elsewhere stated that for resilience reasons during natural disasters or major incidents, offline capability of any CBDC would appear to be essential and that AML/CFT and financial crime risks must be mitigated, likely through holding limits, either at the individual or device level.[7] The use of devices offering offline capability (such as smartcards) as an alternative to smartphone apps could help ensure that a digital pound is usable by those who may be less digitally literate. One of the primary reasons for financial exclusion from current systems is strict onboarding requirements, which are in turn linked to AML/KYC regulations. A digital pound, without adjustment to or exception from such regulations, would be unlikely to support financial inclusion.
12.The Bank and HM Treasury will have due regard to the public sector equality duty, including considering the impact of proposals for the design of the digital pound on those who share protected characteristics, as provided by the Equality Act 2010. Please indicate if you believe any of the proposals in this Consultation Paper are likely to impact persons who share such protected characteristics and, if so, please explain which groups of persons, what the impact on such groups might be and if you have any views on how impact could be mitigated.	No comment.

[7] IIF (2022), Response to U.S. Federal Reserve Discussion Paper on central bank digital currency, May 20, p. 5.

Annex 2 – Key policy considerations and extent to which addressed

Key policy consideration	Extent to which the consideration has been addressed in the Consultation Paper and/or the Technology Working Paper
1. We believe that the following threshold considerations are crucial prior to any proposed launch of a digital pound (retail or wholesale):	
a. the **public policy objectives** sought to be advanced by a digital pound are clearly enunciated and prioritized;	Mostly addressed. The "other motivations" are said to "include" several identified motivations, so there may be some unspoken motivations. All motivations (objectives) should be fully enunciated.
b. it is determined that **a digital pound would be more effective than other means** in achieving those public policy objectives;[8]	Partly addressed. More work should be undertaken on this question in Phase 2.
c. **trade-offs** between those objectives have been clearly enunciated and determined;	Not addressed. The paper mentions that trade-offs will need to be identified in Phase 2.
d. the **preferred scope** – e.g., whether retail or wholesale – is clearly defined;	Addressed.
e. **infrastructure and an economic and liability model** required for implementing the preferred scope of CBDC is determined.[9]	Partly addressed. It seems to be contemplated that intermediaries would be free to charge for their services, and to extract value from payments data, with client consent and subject to data protection laws. This is a positive development. However, the basis on which the CBDC infrastructure would be made available (free, cost recovery, etc.) has not been clarified. While some aspects of liability have been addressed, others have not.
2. Any digital pound should be introduced only after it has successfully passed a **robust pilot phase**, including stress testing	Partly addressed. The paper mentions that "If we decide to move into a build phase, it would involve developing a prototype digital pound technology in a

[8] The IIF would not expect a digital pound to be more effective than other means on every metric in achieving those public policy objectives; however, when considered as a whole, the cumulative effectiveness of a digital pound in achieving those policy objectives should be determined to, on substantial grounds, be superior to those achieved by other means. Other means could include changes to the law or regulation, or technical means or initiatives, including forms of private money or ongoing innovations or policy changes in existing payment systems.

[9] This should be determined in close coordination with FI intermediaries. This could be facilitated through establishment of a mechanism similar to that of the European Central Bank's Market Advisory Group for the digital euro project.

Key policy consideration	Extent to which the consideration has been addressed in the Consultation Paper and/or the Technology Working Paper
for market operations and major operational risks, including AML/CFT[10], privacy, cyber security and operational resilience. Iterative and close engagement with the private sector, specifically **FIs** and payment service providers (**PSPs**)[11], would be essential at this stage, prior to launch, particularly in a two-tier distribution framework.	simulated environment, before moving to live pilot tests." It should be clarified that stress testing would be part of those pilot tests.
3. Any CBDC should strengthen, not weaken, the financial system. In particular:	
a. any CBDC should not materially harm the financial system's ability to finance the real economy through lending and maturity transformation, including through mortgage and SME lending, or materially threaten financial stability, including in times of crisis;[12]	Partly addressed. We believe the proposed individual holding limits are too high and should not be transitional in nature. There may be a need for mitigants to bank deposit disintermediation – in stressed and possibly in normal times – beyond individual holding limits. For example, it may be necessary to limit the amount of transactions or the amount of purchase of CBDC in stressed times. We support leaving negative interest rates off the table, but for that reason would also support further work being done on this general topic.
b. any CBDC should **interoperate** with private sector means of payments and existing infrastructure. This entails integrating CBDC with existing payment instruments like credit transfers, payment cards and mobile money. It requires interoperability with other cross-border CBDC systems and with government payment and collection streams; [13, 14]	Partly addressed. The Bank's accompanying Technology Working Paper discusses the options for enabling interoperability between the digital pound and cash, and the digital pound and bank deposits respectively. However, the topic of international interoperability appears to be underdeveloped in the Consultation Paper and Technology Working Paper.
c. any CBDC could be based on an **"intermediated" system** where the private sector would offer accounts or digital wallets. This public-private cooperation, often	Addressed.

[10] As used in this submission, the term "**AML/CFT**" (anti-money laundering and countering the financing of terrorism) includes countering financial crime or financial crime risks, and also screening for politically exposed persons (PEPs) and sanctioned individuals/entities.
[11] In this submission, the term PSP is used to cover both PIPs and External Service Interface Providers.
[12] To that end there may be merit in exploring whether and, if so, how the fractional banking model could operate upon customer-held CBDC balances operated by deposit guaranteed institutions. This would involve a range of implications and evaluation of whether changes to bank capital or liquidity regulation would be necessary.
[13] Auer et al, (2022), Central bank digital currencies: a new tool in the financial inclusion toolkit?, *FSI Insights* No. 41.
[14] A broad range of use cases could facilitate wider adoption of a potential CBDC. Preferably, a CBDC would make use of existing acceptance infrastructure that is linked to the user's existing devices and accounts. This would make adoption easier for both consumers and merchants and would be crucial to maximize the day-one ubiquity of the system and minimize complexity of adoption for users and merchants.

Key policy consideration	Extent to which the consideration has been addressed in the Consultation Paper and/or the Technology Working Paper
referred to as a "two-tier" CBDC, is critical to ensuring an open and competitive payment ecosystem characterized by strong innovation; and	
d. access to the system should be provided only to **regulated FIs or payment service providers (PSPs) subject to effective oversight and supervision** who are eligible to hold central bank master accounts.	Partly addressed. We note that non-bank PSPs have had access to the real-time gross settlement (**RTGS**) system since 2017. We seek assurance that PIPs will not be admitted as digital pound intermediaries other than PSPs who would otherwise be eligible to be provided with access to the RTGS system under the 2019 reforms. We note that a separate category of External Service Interface Providers (**ESIPs**) has been identified. It is stated that "ESIPs might provide non-payment, value-add services, such as business analytics, budgeting tools and fraud monitoring." In Phase 2, we would urge more effort be made to delineate the regulatory regime applicable to PSPs and ESIPs.
4. The **economic and liability model** should be clearly resolved and adequate incentives for participation by regulated FIs or PSPs should be considered. A business model that sees significant cost (for example, for AML/CFT compliance) and risks (for example, around cyber theft from customer wallets) placed onto the intermediary layer without commensurate reward may not attract any intermediaries other than business models that depend on extracting maximum economic value from user data (in other words, BigTech providers).	Partly addressed. See further our notes on 1e. above and our notes on 4b. below.
a. The ability of intermediaries to deploy viable business models that encourage further innovation and investment in the development of value-added services will be important for operationalizing a CBDC.	
b. Costs of connecting to central infrastructure and funding cyber security investments, and liability for cyber attack or AML/CFT risk, should be transparent and clarified *ex ante*.	Not addressed. This needs to be clarified during Phase 2.

Key policy consideration	Extent to which the consideration has been addressed in the Consultation Paper and/or the Technology Working Paper
c. We would note that arriving at a workable business model, as of yet, is proving challenging for our members. Collaboration with regulated FIs and PSPs on this point, as well as potential design aspects of a CBDC, would be critical.	
5. **Mitigants for identified risks**, including risks to financial stability, and **other design features** should be identified and evaluated for their effectiveness and their effects on the financial system *ex ante*.	Partly addressed. Only one mitigant for bank deposit disintermediation risk – limits on individual holdings – has been identified, and it is not clear it will be workable given the privacy model adopted. Additionally, the Consultation Paper envisages this mitigant as transitional in nature with the possibility of removing it. [15]
a. Reductions arising from such mitigants in the effectiveness of a CBDC in delivering the public policy objectives should be acknowledged and included in the assessment referred to above.	Not addressed. The UK authorities are strongly encouraged to try to more accurately model bank deposit disintermediation risk – in stressed and normal times – and other effects, including on the size of the Bank's balance sheet, in the presence of particular mitigants such as individual and corporate holding limits of definite size.
b. Mitigants should not open arbitrage opportunities between a CBDC and cash on the one hand, and a CBDC and commercial bank deposits on the other. In other words, they should not threaten fungibility or the "singleness" of the unit of account.	Partly addressed. It is not clear that remuneration – negative or positive – has been completely taken off the table. It should be, in which case this would be fully addressed.
c. Similarly, design features should be carefully evaluated in terms of risks including as to fungibility (in the case of programmability, for example, which programs (if any) should be deployed).	Partly addressed.
6. The **international dimension** of any CBDC is critically important. In this regard, crucial considerations to be assessed include:	
a. the possible contribution (or lack thereof) of a CBDC to the attractiveness of the GBP as a reserve currency;	Not addressed.

[15] See point 7a. below.

Key policy consideration	Extent to which the consideration has been addressed in the Consultation Paper and/or the Technology Working Paper
b. the possible effects on the UK or on other economies, particularly but not exclusively emerging economies, of "digital dollarization", including the possible tendency of those in low- or zero-interest rate economies to accumulate large holdings of digital dollars;	Partly addressed. Further modelling should be undertaken in Phase 2, in particularly to understand the size of the effects – that are described as "probably limited" in the Consultation Paper – on capital flow volatility.[16]
c. possible market impacts, including on exchange rates, that may arise from foreign demand for a digital pound; and	As per 6b.
d. the further work that would be required to develop international interoperability standards.[17]	Partly addressed. The consultation paper refers to ongoing experimentation through the BIS Innovation Hub but makes limited reference to the need for international interoperability standards.
7. **Privacy controls** need to be further articulated for any CBDC to proceed.	
a. It is not sufficient simply to delegate all privacy aspects to the intermediary layer. Any personally identifying information held by the operator(s) of the core CBDC infrastructure should be subject to a legally binding privacy regime. For example, restrictions on individual or corporate holdings, assuming multiple intermediaries, or applying to offline capability, would seem to require at least pseudonymity at the level of the core ledger.	Partly addressed. See our answer to both sub-questions of question 3 in Annex 1.
b. Privacy expectations should also be set for intermediaries in a legally binding and user-centric way which does not discriminate against regulated FIs or PSPs. At the same time, payments data plays an essential role in the provision of financial services, e.g., to analyze risks better and provide credit more accurately and at a better price. Intermediaries should therefore be allowed **to access transactional data to provide value-added**	Addressed. We are supportive of the model whereby the Data Protection Act 2018 (UK) regulates access to and use of customer's transaction data.

[16] Annex 1 of the Consultation Paper argues that "Non-residents' holdings of the digital pound over and above non-residents' existing holdings of sterling assets, could amplify capital flow volatility. That is because the digital pound might be vulnerable to sharp inflows or outflows in response to shocks from abroad. The magnitude of movements in such holdings and their impact would probably be limited, however."

[17] This work could build on technical work already undertaken by the Bank for International Settlements (**BIS**) such as Project Dunbar, and perhaps include agreement on a Common Domain Model similar to that which has been developed for the derivatives industry, and/or build on applicable financial messaging standards such as ISO 20022.

Key policy consideration	Extent to which the consideration has been addressed in the Consultation Paper and/or the Technology Working Paper
services, while complying with applicable data protection legislation.	
c. A particularly critical aspect to be tackled is the degree to which intermediaries would be permitted to earn remuneration by monetizing user data, and potential impacts on protecting consumer privacy. Explicit and well-informed user consent must be at the heart of any data monetization, as should maintaining the principle of "same business, same risks, same regulation" as between regulated FIs and PSPs on the one hand, and any other permitted wallet providers (including BigTech providers) on the other.	As per 7b.
8. **Cyber security** (resistance and resilience), particularly with regard to hostile state and state-sponsored actors, and **operational resilience** will both be fundamental. Any sustained outage of a retail CBDC system would (depending on take-up) be highly disruptive to the UK economy and potentially more widely.	Partly addressed. The Consultation Paper shows an awareness of the importance of cyber risk, and states that "Given the possible single point of failure risk with the platform model, it would be necessary to ensure the infrastructure is protected to the very highest standards", yet it does not engage nor propose any particular mitigants to address cyber risk. The paper does not consider the enormous complexity of mitigating fraud and cyber risk across a retail CBDC ecosystem. Retail payment systems have significantly more endpoints than the wholesale payments system, with each opening offering a potential point of vulnerability. To effectively secure a retail CBDC from both foreign and domestic threats, central banks will need to deploy ecosystem-level monitoring tools that are global in scope, relying on partners to provide critical intelligence from beyond their own borders.
a. To mitigate cyber risk, there may be scope for multiple banks or other trusted parties to act as validators of transactions in a consensus mechanism.[18]	Not addressed.
b. Another mitigant could be to provide for segregation of systems operating any retail CBDC from those operating any wholesale CBDC. This could provide for the continued	Not specifically addressed.

[18] In this regard, we acknowledge the observations of the Financial Stability Institute (**FSI**) to the effect that DLT has both positive and negative cyber-security aspects. See Auer et al, (2022), Central bank digital currencies: a new tool in the financial inclusion toolkit?, *FSI Insights* No. 41.

Key policy consideration	Extent to which the consideration has been addressed in the Consultation Paper and/or the Technology Working Paper
availability of commercial bank money even if the retail CBDC were offline.	
9. For resilience reasons during natural disasters or major incidents, an **offline capability** of any CBDC would appear to be essential. AML/CFT and financial crime risks must be mitigated, likely through holdings limits, either at the individual or device level. This may require establishment of a, possibly tiered, digital identity solution to be effective.	Partly addressed. The Bank's Technology Working Paper states that the Bank will examine various approaches to managing double spend risk, spanning technology, operational, policy and legal implications. The handbook recently published as part of Project Polaris highlights that this is not straightforward with many choices and trade-offs.
10. The **energy and climate footprint** of any CBDC should be evaluated.	Partly addressed. The Bank's Technology Working Paper states that during the design phase, the Bank will evaluate the environmental impacts of architectures and components considered for any CBDC system. That will include engaging with stakeholders and experts to establish comprehensive non-functional requirements related to environmental impact and energy efficiency.
11. **Independent oversight** of adherence of the CBDC system to applicable regulatory and technical standards would be an expectation of our members. An independent body could be set up to oversee compliance in this regard; for instance, an inspectorate, reporting directly to the Bank's governing body, and independent of the operation and planning of the CBDC system, could be established to ensure operational resilience of the system. Such a body would also usefully cooperate with other global, regional, or national bodies internationally with similar CBDC oversight responsibilities.	Not addressed. Neither the Consultation Paper nor the Technology Working Paper identify a governance mechanism that would be independent of the Bank and would oversee the CBDC's compliance with applicable regulatory and technical standards. As such, there is a danger that technical requirements such as reliance and availability standards would be under-addressed or simply not met, with limited accountability for such failures.
12. The applicable **standards** should be based on appropriate models such as the CPMI–IOSCO Principles for Financial Market Infrastructures, and be available to intermediaries to aid them with their own resilience planning.	Partly addressed. The Consultation Paper states that the CBDC system must be available 24/7, but there is very limited detail beyond that as to resilience standards and expectations. At very least, the Design Phase should clarify which of the Principles for Financial Market Infrastructures (**PFMIs**) (if any) should apply to the CBDC system, and which, if any, special-purpose standards will apply.

Key policy consideration	Extent to which the consideration has been addressed in the Consultation Paper and/or the Technology Working Paper
Conclusion: In our view, the issues around a digital pound are of such fundamental importance to the future of the economy, including the ability of the banking sector to support the real economy through mortgage and SME lending that, before determinations are made about key design choices or on the larger question of whether to proceed with issuing a digital pound, there should be a **quantitative and qualitative impact assessment** by the UK authorities and/or other relevant agencies. The assessment should, at a minimum, attempt to model: • a range of possible designs for a retail CBDC; • a range of mitigants against identified risks (including systemic risk); and • the effects of those designs and mitigants on the financial system's ability to service the real economy, including through mortgage and SME lending. Critical elements of such a study would include impacts on bank funding costs, lending rates and volumes, bank strength and capital ratios, and broader measures of the real economy. It is important that these are sufficiently understood and tested prior to concluding that a retail CBDC should be pursued. [19]	Partly addressed. So far, the exploratory work by the UK authorities has provided only very high-level numerical indications of key parameters. See further our response to questions 7 and 8 in Annex 1.

[19] Such an assessment would preferably be done in close collaboration with regulated FIs.

Annex 3 – Answers to selected questions in Technology Working Paper

Question	IIF response
Technology design considerations	
Based on the policy objectives outlined in the digital pound CP, the Bank assesses that privacy, security, resilience, performance, extensibility and energy usage are foundational technology considerations for CBDC (Section 3).	
1. Do you agree that these six considerations are foundational technology considerations for CBDC?	Yes.
Are there additional or alternative technology considerations that the Bank should be focused on? (Section 3)	Interoperability with other forms of the pound (including cash and commercial bank money) and with other CBDCs should be another foundational technology consideration.
2. Which privacy-enhancing technologies, or other privacy mechanisms, might support the proposed policy objectives, and how might they be used? (Section 3.1)	We believe the Bank has been comprehensive in identifying current state of the art PETs. However, we question whether zero-knowledge proofs or zero-knowledge range proofs by themselves would enable accurate tracking, in real time, of whether an individual's or corporate's aggregate CBDC holdings, across wallets that may be issued by multiple intermediaries, exceed the applicable limit. Similarly, there is no mechanism proposed for aggregating offline or "low-doc" wallets at present in the paper. These seem to be significant gaps. See further our answers to both sub-parts of question 3 in Annex 1 concerning privacy.
3. Are the provisional requirements and metrics discussed in the paper, particularly for uptime, transaction throughput and transaction speed, realistic and appropriate? (Sections 3.3 and 3.4)	We would observe that a 99.95% uptime objective is not very high for an instrument that is intended to be cash-like.
Illustrative conceptual model	

Question	IIF response
The illustrative conceptual model features the core ledger, API layer, alias service and analytics as part of the Bank-managed infrastructure, while programmability and devices are featured as aspects of the CBDC ecosystem infrastructure. It also considers offline payments and interoperability with other forms of money (Section 4).	
4. Are there other significant components or activities that the Bank should consider in designing a CBDC? (Section 4)	Individual holding limits that are to be aggregated across wallets would normally require a bureau service to perform such aggregation.
6. Other than those described in this paper, are there additional important factors to consider related to ledger design? (Section 4.1)	The nascent literature around de-identifying and re-identifying personal data suggests that re-identifying personal data is often easier than is supposed.[20] See further our answers to both sub-parts of question 3 in Annex 1 concerning privacy.
7. What are the most appropriate approaches or technologies for collecting and analysing aggregate transaction data? (Section 4.2)	In the first instance, we would see this as an issue where market forces, within the framework of the Data Protection Act 2018 (UK), should be allowed to operate to seek the most efficient methods over time. In the cross-border payments space, we have advocated against the imposition of a substantive new data reporting "lift" for firms.[21] Should the official sector choose to collect and analyse aggregate transaction data, it should take all reasonable measures to ensure that individual end users are not identified or identifiable. See also our answer to question 6 above. Beyond that, it should also ensure that FI-specific commercial sensitive data relating to particular FIs is not reconstituted, or, if reconstituted, that it be made subject to appropriate data governance, data security and confidentiality controls.
8. Do you agree with the need for aliases (both well-known and disposable)? If so, should the alias service be hosted as part of the Bank-managed infrastructure, or should it be distributed across the CBDC ecosystem? (Section 4.3)	Yes. It is not clear how the alias service could be hosted as part of the Bank-managed infrastructure consistently with the statement that the central bank will not access personal information relating to end users. On the other hand, any alias service "distributed across the CBDC ecosystem" needs to be better defined in terms of who the operator(s) would be and what their business model

[20] See, for example, Anonyme Labs (2020), Re-Identification of "Anonymous" Data is Scarily Simple, December 17
[21] IIF (2022), Submission to Financial Stability Board on Cross-Border Payments Targets, July 31

Question	IIF response
	would be (subsidized, cost recovery, for-profit, etc.). Existing models for alias services, such as those underlying Australia's PayID model, could be adapted for CBDC use cases. We welcome that the UK is legislating a framework for digital verification service provision.[22] We also observe that citizens may be more comfortable using bank-issued digital ID such as BankID in Sweden than sovereign-issued digital ID. For this reason, we anticipate that bank-issued digital ID may be a key part of the solution space for identity verification around a digital pound.
12.Is programmability and smart contract functionality an important feature of a CBDC system? If so, what is the best approach to enabling such functionality? (Section 4.7)	While we consider programmability of payments to be a desirable feature that could be offered to users, and payment intermediaries should be free to offer programmable payments deliverable in CBDC, we do not believe this requires the CBDC to be itself programmable. In fact, we believe that making the CBDC itself programmable may detract from its usefulness and may even call into question the ""singleness"" of the currency, particularly as it may give rise to temptation in the sovereign to distribute time-limited vouchers in the form of CBDC and other similar scenarios.
13.How important is offline functionality in a CBDC system? What are the most effective ways to implement offline capability? (Section 4.8)	We have elsewhere stated that for resilience reasons during natural disasters or major incidents, offline capability of any CBDC would appear to be essential and that AML/CFT and financial crime risks must be mitigated, likely through holding limits, either at the individual or device level.[23] This may require establishment of a, possibly tiered, digital identity solution to be effective. Some members believe offline capabilities should be limited to offering service continuity in areas or situations where a connection is not always guaranteed. With this approach, some temporary and limited solutions can be considered.[24] Having said that, it must be acknowledged that some consumers might continue to hold precautionary reserves of cash, and may fall back to this in preference to an offline CBDC functionality, given the ease of use of cash. The recent findings on European consumers' diverse preferences as to the use of cash as a store of value may be of some relevance.[25]

[22] Data Protection and Digital Information (No. 2) Bill
[23] IIF (2022), Response to U.S. Federal Reserve Discussion Paper on central bank digital currency, May 20, p. 5.
[24] IIF (2022), Response to the European Commission Targeted Consultation on a Digital Euro, June 14, p. 8.
[25] Muñoz, M. and Soons, O. (Mar 2023), Public money as a store of value, heterogeneous beliefs, and banks: implications of CBDC, ECB Working Paper No. 2801

Annex 4 – Other observations on Consultation Paper

Page	Text	IIF response
8	we will maintain a dialogue with all stakeholders, including firms – large and small, new and established – to ensure the digital pound's design meets their needs.	It will be essential for the UK authorities to listen carefully to the voices of FIs that are intermediaries as they will be both vital partners in any digital pound and potentially seriously affected via the disintermediation channel.
11	the user's holdings of digital pounds are recorded anonymously on the Bank's core ledger, in order to safeguard their privacy, and the wallet simply passes instructions from the user to the core ledger.	Presumably, the identifier stored at the central bank would be limited to a wallet identifier. The intermediary would presumably link the wallet identifier to the individual's ID. It is not clear therefore how the individual wallet size limit would apply. See further our answer in Annex 1 to both sub-questions of question 3.
12	HM Treasury and relevant regulatory authorities would consult on the details of a regulatory regime in future.	Who would be the "relevant regulatory authorities"? What will be the respective roles of the Bank, FCA, Prudential Regulation Authority (PRA), Payment System Regulator (PSR), or other bodies?
16	funding arrangement for any such build phase is still to be decided.	In Phase 2, there needs to be further work done around the likely costs of the scheme and who would bear those costs, in the first instance and via possible cost-shifting.
18	Experience from overseas digital currency projects, and from digital innovation more generally, indicates that building user familiarity and understanding, and ensuring that innovative and customer-friendly applications emerge will be critical to success.	We note early indications of low levels of use of CBDCs where operational or in extended pilots (e-Naira and e-Yuan). We also note with concern the significant operational issues that affected the Eastern Caribbean CBDC, taking it offline for an extended period in early 2022.
25	The stability of the UK economy and monetary system relies on the uniformity of money: that all forms of money – both bank deposits and cash – are valued equally ('at par' or 'face value'), denominated in a common currency (sterling) and interchangeable with each other.	This aligns with submissions we have made to the U.S. Federal Reserve Board and the European Commission in which we have argued that interest rates on CBDC could break par.[26]
32	The digital pound's support for greater efficiency in retail payments in the UK would complement the Bank's efforts to enhance wholesale payments through RTGS Renewal.	It is not clear how the Bank can legitimately assert a digital pound would make for "greater efficiency in retail payments" in the absence of any detail about the cost of the system and who would bear that cost.

[26] See footnotes 23~~24~~ and 24~~25~~.

Page	Text	IIF response
32	Importantly, the digital pound should not crowd out or prevent other forms of digital innovation by the private sector.	This principle is strongly supported, but it will be difficult for the U.K. authorities to respect this principle in practice. Any subsidy of a digital pound infrastructure will be problematic from a crowding-out perspective, while at the same time charging the true cost to the public may not be politically feasible.
40	This is uncertain and very difficult to forecast. And it would probably vary between transition, steady state and stress.	It may be very difficult to forecast, but this is the U.K. authorities' job if they are to introduce these instruments into the market. We agree that at least steady state and stress are different states that need to be modelled separately. If they cannot reasonably confidently answer these questions, they should not proceed as the risk to the banking system and financial stability could be substantial. See further the Conclusion at the end of Annex 2.
40	the impact of even a very high degree of deposit disintermediation on credit conditions in steady state would likely be modest. Assuming around 20% of commercial bank retail deposits migrated to new forms of digital money (equivalent to the total amount of non-interest-bearing deposits in the UK), bank lending rates were estimated to rise by around 20 basis points in steady state, although there is considerable uncertainty around this estimate.44	In particular, we think a sensitivity analysis estimating the impacts on deposit and lending volumes and rates at different individual holding limits, also taking account of the possibility of the present of well-regulated stablecoins, should be undertaken by the Bank as a matter of priority in Phase 2 and published for review by interested parties and academics. Recent bank collapses have emphasized the speed of bank runs may have permanently increased given the ease of digital value transfers and the power of social media. We would also note that other estimates of the level of bank deposit disintermediation in the presence of a CBDC in normal times have ranged up to 55%.[27]
40	During that period, there would be uncertainty about the extent of deposit outflows, and for a given amount of outflows, banks' ability to replace lost retail funding with wholesale funding in a timely and cost-effective way.	This seems simplistic. Heightened bank run risk as a result of a CBDC may lie dormant for many years until triggered. This may be well past any "transitional" period identified *ex ante*. Therefore, the issue of bank run risk in stressed circumstances should not be seen as a transitional one. Different mitigants (such as transaction limits) may also need to be contemplated to mitigate that risk, particularly if individual holding limits cannot be aggregated across wallets. See further our answers in Annex 1 to questions 7 and 8.
41	using the digital pound as an additional tool for the transmission of monetary policy is not a policy motivation for it.	We support this stance, given (among other considerations) the complexities for monetary policy that arise from multiple policy rates, the implications of negative rates on digital cash, and the disintermediation risk that positive rates would exacerbate.
42	These effects on the monetary transmission mechanism could be larger in times of stress if, as described above,	While we are supportive of the need for possible backstop measures, we would strongly counsel against reliance on these measures, given the likely increase in the cost of credit

[27] Li, "Predicting the Demand for Central Bank Digital Currency: A Structural Analysis with Survey Data," Bank of Canada, 18 November 2021.

Page	Text	IIF response
	demand for the digital pound becomes particularly strong. To maintain banks' provision of credit to households and businesses in such circumstances and ensure that monetary policy continues to be transmitted effectively the Bank could conduct liquidity and lending operations.	arising from significant levels of bank deposit disintermediation. In any case, more detail would be desirable on what such operations would mean for the structure of the economy and the size of the Bank's role in it (as well, perhaps, as any impacts on its perceived legitimacy).
44	As a result, banks may choose to hold more high-quality liquid assets against the increased possibility of high demand for withdrawals.	Would they "choose" to do so, or could prudential rules require them to do so? The constraining impact of regulatory requirements on bank behavior should be studied in greater depth in Phase 2 on this and other questions.
49	If the digital pound were introduced, and if it paid a negative interest rate, depositors could still convert their deposits to cash so long as cash were available, so applying a negative interest rate on the digital pound would not reduce the effective lower bound (ELB).	To the contrary, it would reduce the ELB to some extent, given the additional holding and security costs of cash.
49	any decision to revisit our approach to remuneration would be preceded by a review with full consultation.	This seems to directly contradict the indication elsewhere in the paper that CBDC would be a zero-interest instrument, which seemed to be unqualified. We strongly support that the digital pound would be a zero-remuneration instrument and consider this to be a fundamental part of the regime. We suggest any decision to introduce remuneration for a CBDC would be significant enough to require the agreement of HM Treasury. The IIF does not support an interest-bearing model.
51	Based on the primary motivations set out in Part B, we have identified a set of criteria for the model of provision of the digital pound.	It is not clear what additional conceptual work the "criteria" perform. We would advocate for a simpler approach where the "primary and other motivations" are acknowledged as the policy objectives and the assessment of CBDC is made against those policy objectives. Any trade-offs among the objectives should be explicitly acknowledged. A retail CBCD should be adjudged to be better than other salient alternatives at delivering the policy objectives overall.
52	Publicly provided infrastructure that is open to use by all could catalyse innovative and efficient payment (and other) services provided by the private sector.	More work should be done in Phase 2 on the competition aspects of the new infrastructure being contemplated, and the possible crowding-out effects of its being subsidized. There needs to be more explicit consideration also of the effects on the Bank's seigniorage stream of a retail CBDC instrument and how this additional stream would be spent.

Page	Text	IIF response
53	The Bank would receive payment messages instructing transfers on the core ledger in anonymised form and would not know the identity of the payer and payee.	Is it envisaged that the unique wallet identifier would be passed unencrypted to the Bank? It is suggested that the Technology Working Group or the Bank investigate PETs that may avoid even that being passed to the Bank. See also our answers in Annex 1 to both sub-questions of question 3.
53	In the platform model, a payment made in digital pounds between two users would be processed and settled by a transfer on the Bank's core ledger.	We assume there will be scope for off-ledger transactions, with settlement only taking place in net amounts (equivalent to Layer 2 for crypto-assets). See also our answer in Annex 1 to question 2.
54	Diagram D.1: The platform model of the digital pound	Is the reference to "authorised and regulated firms" in the Intermediaries layer of Diagram D.1 intended to refer to two alternative ways to become a PIP/ESIP, or will all PIP/ESIPs be both authorized and regulated? We assume the former but suggest that this be clarified.
55	media, e-commerce and technology firms might integrate digital pound wallets to add payment functionality to their digital business	Any distribution or intermediation model that sees significant cost and risks placed onto the intermediary layer without commensurate compensation may only attract intermediaries with business models that depend on extracting maximum economic value from user data (in other words, BigTech providers).
55	PIPs are unlikely to need extensive prudential regulation that is typical of some other types of financial institution.	We would advocate for the rule of "same risk, same regulatory outcome". To the extent that intermediaries are handling client assets they should be subject to the same or similar rules with regard to those client assets as apply to FIs undertaking the same function. See further our answer to question 2 in Annex 1.
57	Commercial use of data Subject to the legal and policy considerations set out in Section D.2, PIPs might use transaction data to improve existing operations or to offer new customer-facing services.	The IIF and its members welcome that intermediaries will be able to use transaction data to improve existing operations or to offer new customer-facing services.
57	Fees might apply on high-value, international and business-to-business payments.	It should be clarified that wallet providers could, if they chose, also apply fees to low-value transactions (acknowledging that competition from new entrants means they most likely would not). As stated above, any distribution or intermediation model that sees significant cost and risks placed onto the intermediary layer without commensurate compensation may only attract intermediaries with business models that depend on extracting maximum economic value from user data (in other words, BigTech providers).

Page	Text	IIF response
57	Affordable fees would be needed to ensure access to public money.	The topic of fees should be left to market forces and healthy competition, subject to competition law, rather than regulation. While seemingly benign, the requirement that fees be "affordable" begs many questions such as, by what yardstick? Who will judge? We also note that cost-plus or cost-recovery regulation can incentivize actors such that costs control is not maintained.
58	As operator of the digital pound system, the Bank would likely impose principles for operation for PIPs and ESIPs, including technical standards, alongside regulatory requirements.	In line with our recommendations to the U.S. Federal Reserve and European Commission, independent oversight of adherence of the CBDC system to applicable regulatory and technical standards would be an expectation of our members. An independent body could be set up to oversee compliance in this regard; for instance, an inspectorate, reporting directly to the governing body of the Bank, and independent of the operation and planning of the CBDC system, could be established to ensure operational resilience of the system. Such a body would also usefully cooperate with other global, regional or national bodies internationally with similar CBDC oversight responsibilities
59	Security and resilience: effective end-to-end risk management to ensure services are available, secure and protected from threats.	There should be binding standards on recovery times. Given the centrality of the Bank as operator of the system, such standards should be stricter on the Bank (or the Bank's delegated operator of the CBDC core ledger) than on individual PSPs.
61	We judge that a delegated model is less effective at meeting our criteria. In this model, the PIP rather than the Bank has a record of a user's holdings of digital pounds. This could undermine how clear and direct the user's claim on the Bank is. This approach also places greater technical and operational requirements on PIPs. That may be advantageous in reducing risks of the core ledger as a single point of failure, but could increase mobilisation requirements, making it harder for smaller firms to act as PIPs	See our answers in Annex 1 to the two sub-questions of question 3.
76	a recognition regime to determine which non-UK Payment Interface Providers and External Service Interface Providers could offer digital pound wallets and other services.	In Phase 2, work should be undertaken to further define this "recognition regime" and the circumstances in which UK oversight would be permitted or required. In our recent submission to HM Treasury on cryptoassets and stablecoins, we stated that we would in principle support the use of an equivalence regime where this would allow

Page	Text	IIF response
		mutual recognition of other jurisdictions' frameworks based on outcomes and alignment with international standards and other regimes.[28]
79	Were the approach to remuneration to change after the digital pound was introduced, it would follow consultation and the Bank would provide adequate lead time, so that holders of digital pounds were able to exit from, or enter, the system in an orderly manner, if they wished to.	The wording suggests the Bank will determine the remuneration model. We would suggest that this be a matter that is determined together with HMT, possibly through legislation.
79	using the digital pound for monetary policy reasons is not a motivation for its introduction	We agree that using the digital pound for monetary policy reasons should not be a motivation for its introduction.
79	it would not compete with bank accounts as a way to hold savings.	Of course, an unremunerated digital pound would compete with bank deposits in a zero- or negative-interest rate environment.
80	is important during the introductory period as we learn about the impact of the digital pound on the economy.	As commented above, the bank run risk is not a transitional issue and may not become evident for a considerable (and arbitrarily long) period. And yet, when a bank run presents, it occurs very rapidly with little time to react.
81	(a) Monthly disposable (post-tax) income from the Household Finances Survey (HFS) (April 2019 – March 2020);	We assume the individual holding limit would be individual- and not household-based, and seek confirmation in that regard. A household-based limit would be significantly harder to enforce.
86	Adoption among the financially excluded could be hampered by an unwillingness or inability to use digital payments. Digital inclusion therefore needs to be promoted alongside financial inclusion.	We agree that digital inclusion is a necessary building block of adoption of a digital pound. Digital inclusion is distinct from financial inclusion, with the latter being unsupported without achieving the former.
89	the role of trusted intermediaries was identified as very important for a potential roll out of the digital pound, as especially vulnerable individuals would need support from trusted third parties to become comfortable with a new payment method;	We would take away that intermediaries in charge of digital pound wallets must have and hold a high degree of public trust. As financial institutions tend to be highly trusted to hold personal information,[29] any other type of PSP should also be expected to demonstrate very high levels of trustworthiness to manage and control personal data, through a rigorous licensing or registration process and a strong supervisory framework. These elements need to be fully worked out in Phase 2 ahead of any decision to move ahead with issuance.

[28] See IIF (2023), Submission to HM Treasury on crypto-assets and stablecoins, April 30
[29] See BIS (2021), Whom do consumers trust with their data? US survey evidence (bis.org)

Page	Text	IIF response
105	The Bank has several mitigants in place to manage these [central bank] balance sheet changes, as it would do for the digital pound.	What are those mitigants? The paper is not explicit on this point.
107	those who were more confident with technology found it more appealing than other participants.	This may imply that the financial inclusion benefits may be oversold or hard to realize.
108	Thirty per cent of participants said they would be likely or very likely to use the account.	This relatively low number squares with the experience with CBDCs including the eNaira where uptake has been underwhelming to-date.[30]

[30] See Bloomberg (25 October 2022), Digital-Currency Plan Falters as Nigerians Defiant on Crypto; and, CoinDesk (24 February 2023), Why Nigerians Aren't Turning to the eNaira Despite Crippling Cash Shortages