



THE DIGITAL POUND: A NEW FORM OF MONEY FOR HOUSEHOLDS AND BUSINESSES

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ICAEW welcomes the opportunity to respond to “*The digital pound: a new form of money for households and businesses*”, published jointly by the Bank of England and HM Treasury on 7 February 2023, a copy of which is available from this [link](#).

For questions on this response please contact ICAEW Financial Services Faculty: fsf@icaew.com quoting ICAEW REP 63-23.

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KEY POINTS

1. We commend the efforts of the Bank of England (BoE) and His Majesty's Treasury (HM Treasury) on proposals for a central bank digital currency (CBDC). Designing a 'digital pound' is no small undertaking.
2. Overall, we support the BOE and HM Treasury's initiative to consider the introduction of a digital form of Sterling to "maintain public access to retail central bank money, thereby anchoring trust in the monetary system in a more digitalised world and underpinning monetary and financial stability". The UK has a sophisticated and complex economy and whilst this potentially gives rise to some complex issues, the consultation paper is a good first step in the process for the UK to safely introduce a digital currency.
3. Nevertheless, we have three recommendations.

Recommendation 1: expand analysis to understand how implementation of a retail CBDC will impact upon the wider payments and banking ecosystem (see answer to question 2 and 11)

4. The operation of payments is not an activity that operates in a silo. It's part of a wider banking ecosystem and set of economics that supports commerce, investment, risk taking, liquidity, credit creation, financial and price stability, social cohesion, and trust within the economy and broader society.
5. As the economics of current transactional banking erode and where additional costs are introduced, to facilitate multiple payment systems, firms within payments will seek ways to either grow revenue or reduce costs. Consequently in opposition to the BOE's objectives for a CBDC we could see: greater marginalisation of low profit or higher risk customer groups as branch network closures accelerate; availability of cash is reduced; more explicit fees and charges levied on current account and wallet holders; higher interest rates on credit products as funding is ring fenced away from the banking system and higher interest rates are demanded on deposit products with banks; market forces that lead to undue market power by wallet providers; wider disintermediation that impacts the provision of credit cards, overdrafts, insurance and other services often sold alongside or within the context of transactional banking and payments.
6. It is in this context that we would encourage future proposals to take on a more holistic approach. Consideration should be given to the economics of current retail payment value chains: existing supply side incentives; how profit is derived and shared (including through lower customer acquisition costs for adjacent products and services); where revenues from payments support other services. For example, branch networks, online services, critical retail commercial and regulatory protections; explicit and implicit fees and charges levied on consumers and businesses and how different risks are managed and where they materialise into costs, shared.
7. Only then will we be able to fully appreciate the first and second order effects that might manifest should the status quo be significantly disrupted by widespread adoption of a retail CBDC. We may end up with a very efficient form of retail payment system but that comes at a higher overall cost when considering the wider ecosystem of benefits currently provided to consumers and businesses.
8. We recognise that the introduction of an alternative to existing retail payments provides for the opportunity for innovation, greater competition, and efficiency. It would also incentivise banks and other PIPs to develop and provide new services and/or new on-chain products derived from a government-backed digital currency. In time, banks will need to change and adapt their business models to this new environment and most importantly they need to advance faster technologically – either organically, or through cooperation with fintech companies working on viable products.
9. Indeed, we may find that on balance the prospects for disruption within payments are likely to lead to a net benefit with the inclusion of a retail CBDC. Nonetheless, we would recommend that caution is exercised, and analysis is expanded to include the likely scenarios that will

unfold and risks and opportunities that might materialise, depending on the parameters imposed in the CBDCs design.

Recommendation 2: where possible, seek to remove payment frictions and potential barriers to interoperability (see answer to question 7 and 8)

10. Adoption by consumers and businesses of a CBDC will only be widespread if their interaction with the payment system is at the very least as frictionless as existing means of payments. Therefore, at each stage of proposals, consideration should be given to the use cases and practical implications and to what extent the BOE will be reliant on the private sector to find solutions where new frictions are created.
11. It is apparent that with each design choice, whether this is to impose deposit caps, restrict access to consumers and UK residents or run a central ledger; there are several trade-offs to be considered which will impact upon the utility of the CBDC. The BOE has been thoughtful in such choices. However, where scope or design restrictions have been proposed to resolve one issue, we would recommend the BOE explore where this solution has the potential to introduce other challenges or risks.
12. For example, limits on holdings may provide the answer to many of the monetary and financial stability issues identified in the proposals should a CBDC instead be implemented unfettered by restrictions. We agree that these are material issues and should continue to be prioritised in the hierarchy of potential trade-offs.
13. However even in the event of technological solutions, they are likely to impose issues for wallet holders.
 - For example, in the event deposit limits are reached all CBDC account holders will need to have an alternative commercial bank deposit account. Further their wallet provider will need to be able to initiate payments to this respective account – diminishing the financial inclusion argument to a CBDC and introducing administrative burden on users and providers. The BOE will need consider grace periods and other options to ease these potential issues including access via ATMs.
 - Prohibiting corporates from CBDC deposit accounts may reduce the extent to which funding is ring fenced away from the commercial banking sector. However, it may result in challenges issuing refunds for defective or unfilled orders, where a recipients' commercial bank deposit account information would also be needed. The restriction means less flexibility and so less / little incentive to use the digital currency, overall, an impediment to its widespread adoption.
 - AML and fraud risks are potentially reduced by prohibiting non-UK residents' access to CBDC accounts. However, prohibition creates issues for consumers wanting to undertake cross border transactions and limits the opportunity to address well-known issues with settlement times and costs in retail foreign currency transactions.

Recommendation 3: Further consideration in proposals as to what regulatory framework and consumer protections will be required for different types of retail transaction (see answer to question 6)

14. It has been widely accepted that the implementation of a CBDC would introduce a risk-free digital asset for consumers and this would be the primary motivation for holding it over other forms of currency. While that is true to a certain extent, it is mainly in the context of the settlement and counterparty credit risk of the deposit provider.
15. Existing payment systems afford consumers and businesses with various other means of risk mitigation and protection. Many of which have supported widespread adoption including the rights to merchant refunds, recourse in the event of scams and fraud and access to branch networks. Many of these protections are set out in statute but others have been developed as part of commercial arrangements over time.
16. A retail CBDC could conceivably cover several different use cases: Person to person; online and instore merchant transactions; utilities; rent and mortgage repayments. There is a risk

that consumers could be forgiven for assuming that the current value additions and protections afforded to them when using a debit or credit card or when moving money via their commercial bank are at a minimum in place or indeed set higher when using a CBDC. For example:

- legislation affords certain rights when using certain existing payments. The absence of those same rights applying to a digital currency might be a potential impediment to the take up of the digital currency. Consideration should be given to whether existing rights should be also added via legislation and regulation to the digital currency and where this is not done, ensure that the reasons for delineation are explored and understood.
 - there are additional services offered with existing payment systems that are part of the means of competing for business. These are the result of competitive choices made by different providers.
17. Consumers may not necessarily understand the differences. So as the digital currency is rolled out it will need to be accompanied with an extensive consumer education process on the differences between holding digital currency and bank deposits, and the protections in law between digital payments and payments using cash, credit, or debit cards and other.
18. We also recommend that alongside CBDC proposals, a regulatory framework is mapped out. It should consider the gaps that currently exist between those additional features and protections that are afforded through existing regulation and those that exist commercially as part of payment or card scheme rules. If trust and confidence is to be supported through adoption of the CBDC, appropriate regulation will need to bridge the gap. Answers to specific questions

ANSWERS TO SPECIFIC QUESTIONS

Question 1: Do you have comments on how trends in payments may evolve and the opportunities and risks that they may entail?

19. The UK has and continues to benefit from the advancement in sophistication of its regulatory framework which has been the core driver to the development of what is referred to today as the payment ecosystem.
20. The regulatory changes have not in themselves changed the principle of what a payment is but rather created an environment where the value exchange, which was historically paper based, slow, and expensive, now allows for a much wider set of commercial technology operators to choose to step into the perimeter of regulation. These new operators have been responsible for the creation of additional channels of distribution of regulated products and services. This has benefited both consumers and businesses alike, whilst reaching a whole new customer audience.
21. The development of the payment ecosystem has resulted in unprecedented adoption within the market. The technology has proven to be reliable and efficient creating a frictionless and perceived valuable experience for the consumer. This, along with the regulatory standards, controls and protections has resulted in lower rates of fraud and very high rates of trust.
22. We have observed a rapid decline in cash usage over the last 13 years, from 55% of all payments to 15% (see [UK Finance stats](#)). Consumers and merchants have demonstrated a preference for card payments (debit and credit) and since 2017 debit cards have overtaken cash as the most prominent payment method. The success of card payments has brought significant benefits to consumers and merchants, with large amounts of investment having been made in, for example, reducing fraud and making payments safer, improved authorisation speeds, better merchant acceptance technology, and streamlined payment journeys.
23. These investments, and the increased take up, have been enabled by the economic model in card payments which balances incentives for the various market participants including acquirers and card issuers and schemes. In recent years, A2A payments such as faster

payments have grown in popularity, although currently remain a small proportion of overall volumes and are not currently well suited to retail use cases.

24. Regulators have sought to encourage new forms of bank-to-bank payments through The New Payments Architecture (NPA), and Open Banking enabled payments. Both are in their infancy and require further work to establish the appropriate commercial and economic model to reach full potential. This needs to balance incentives appropriately and ensure market participants have the right incentives to invest and grow these alternative forms of payment, as well to fund appropriate consumer protections. Their ability to change the future payments landscape remains uncertain.
25. Customers now benefit via digital wallets enabling contactless payments and providing the ability to manage finances in one place and provide low friction onboarding. Super apps are emerging where the experience between the payment provider and the merchant appear to merge, realising different needs of the user in financial, leisure, health & wellbeing, and lifestyle. Customer loyalty is a value differentiator and user behaviour is driving the evolution of digital wallets and super apps. Financial institutions are continually exploring various strategies to expand their existing product pool to extend value to the existing and new customer base.
26. The emergence of unregulated digital & crypto currencies (including stablecoin) and blockchain variants of assets has for some time created much interest in observers and a relatively small number of market evangelists. Programmable value exchange through smart contracts and tokenisation with improved automation and efficiency during settlement (via a distributed ledger rather than the traditional banking infrastructure) will continue to attract interest and investment.
27. Global payment trends continue to gravitate towards invisible payments. This is where the process of payments likely increases in frequency but also become embedded within the customer service experience or journey. For UK citizens to be able to access and enjoy the benefits of such 'new money' there is a push towards use of the latest technology in functional currencies such as a CBDC. This is particularly important for the presently c. 1.5 million UK adults who are unbanked.
28. Mass adoption though is unlikely until these technologies can demonstrate proven value and trust. The obvious risks of fraud and loss have been well documented in the press. More unique risks, due to the nascent technology may well reside in the hardware supporting the systems. As we have seen in government policy around 5G networks, the financial services industry will need to be convinced that the applications cannot be unduly affected by software running on critical infrastructure.
29. Whilst the direction of travel in blockchain or similar technology is inevitable, ubiquity in the system will not occur until value and trust can be demonstrated.

Question 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?

30. We would encourage the BOE to consider the likely business models that evolve in the event of widespread adoption of the CBDC.
31. Any payment method needs to be underpinned by an appropriate commercial model to balance incentives on the consumer and card issuer/wallet provider, and merchant and merchant acquiror sides of the market. If this isn't in place, insufficient adoption will result, and the payment system will fail to reach minimum viable market penetration.
32. Analysis is needed to understand how current service offerings would be impacted as existing economies of scope and scale are eroded, how private wallet providers would raise revenue from their activities and who this might adversely impact. Similarly, such wallet technology providers (or also custodians) are responsible for ensuring the resiliency of the technology. As such providing controls assurance reports for example ISAE 3402 or Service Organization Controls (SOC) Reports become fundamental in providing comfort to the users holding CBDC.

33. Any payment system incurs costs which need to be covered somehow. These costs include, but are not limited to:
- Consumer protection (e.g., \$75 on credit cards, Chargeback on debit cards). If protections are not provided on a card-type payment, this could leave consumers confused and vulnerable to fraud or merchant failure;
 - Fraud costs – fraud detection and prevention systems and the costs of reimbursing customers and merchants where appropriate. Significant ongoing investment is required in fraud systems to keep up with and harness new technology (e.g., DLT, blockchain etc);
 - Processing and authorisation costs;
 - Plastic or digital card issuance/statementing or other reporting (e.g., via app) to consumers on spending;
 - Payment system scheme fees to cover the cost of running and managing the payment system;
 - Consumer incentives such as cashback programmes or merchant discounts to encourage consumer take up. These may be particularly important in early stages of adoption; and
 - Costs of merchant payment acceptance, costs of onboarding and verifying merchants and enabling them to take the payment method.
34. At present, costs are typically recovered from the merchant side of the business in most successful payment systems, due to the greater willingness of the merchant to pay than the consumer.
35. They are also supported by revenues generated across broader commercial banking activities. The FCA sets out these revenue pools in its [Strategic Review of Retail Banking 2022 \(Annexes\)](#). Analysis included a calculation of the direct contribution from personal current account deposits and other revenues as well as the value of funding benefits from associated interest access savings accounts to commercial banks. At present there is a strong incentive to provide transactional banking free of charge with on average each account deriving an annual profit of £74.
36. Economically, the model raises questions around whether the business model of a wallet provider without access to the utility of the underlying deposits or wider banking service offering would provide for strong enough commercial incentives. Do we believe that given the costs that will need to be covered by the wallet provider, there is sufficient opportunity to raise revenues that at present are derived from a broader set of related banking activities.
37. The current payment mechanisms charge the merchant a transaction fee which is split with the gateways, acquirers, networks, and issuers/banks. Open Banking providers charge fees which are taken out of the flow of funds.
38. While proposals may negate the need for some of the current services of gateways, acquirers, networks, and card issuers and in doing so make the process less expensive for the service provider and the end user. It also likely provides for a more limited set of activities from which wallet providers can generate revenue.

Question 2.a: Do you agree that private sector digital wallet providers should not hold end users' funds directly on their balance sheets?

39. It is not clear whether it would be appropriate for all private sector digital wallet providers to hold users' funds directly on their balance sheets. At present commercial bank reserves, a high-quality liquid asset to a commercial bank is a liability on the Central Banks balance sheet. It is therefore not apparent that the inclusion of CBDC funds on a deposit taking institutions balance sheet, would constitute a significant departure from current undertakings other than the CBDC would not be entitled to interest income.

40. The benefit of such an approach would be to provide commercial banks with an additional form of high-quality liquid asset, which should lower the cost of liquidity for banks and might translate into lower financing costs. It may also allow the CBDC to facilitate a broader range of transactions including with recipients who do not have a CBDC account with the BOE. Financial inclusion and adoption might be supported as customers are able to more seamlessly open an additional CBDC account with their existing commercial bank current account provider.
41. However, the BOE would need to consider the trade-offs. These would include potentially longer settlement times as commercial banks act as an intermediary between the customer and the Central Banks ledger.
42. The prospect of wallet providers who do not currently have deposit taking permissions introduces a range of technical and regulatory considerations around capital, liquidity, and resilience. The digital wallet provider would likely need to hold capital and liquidity buffers at a cost to the institution for both operational risk and potential credit risk relating to any recourse arrangements consumers have to them in instances of fraud, scams, or refunds. For example, where the merchant is unable or unwilling to provide remediation. All of this without the benefit of creating credit.
43. Development costs would also need to consider feature development against two infrastructures rather than just the digital wallet providers internal system.
44. These increased costs would likely detract from investment into innovation resulting in lower levels of perceived benefits resulting in lower levels of adoption or high levels of dormant or underused accounts.
45. Alternatively, you may end up with a two-tier system. With private wallet providers who have deposit taking permissions and prudential regulated as such having the ability to hold users' CBDC funds directly on balance sheet, while those that are only payment initiate service providers being prohibited to do so.
46. The BOE would need to consider if this approach would support a level playing field and competition.
47. Another aspect for consideration is the interpretation of existing Accounting Standards (International Financial Reporting Standard) that would help private digital wallet providers determine if users' funds could be held directly on their balance sheets. Typically, such funds would be kept "off balance sheet" as rights and obligations, risk and rewards and control of the assets reside with the user however it is important to decipher the terms of agreement between digital wallet providers and clients.

Question 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?

48. We agree that the protection of data is paramount, and it is recognised that the Technology Working Paper, focuses heavily on the privacy and technology risks verses conveniences and that Data Privacy by Design is a central pillar of the proposal. It is also clear that the BOE is seeking to balance the resilience of the system operability and flexibility, security, and privacy concerns.
49. The papers speak to analytics, which it suggests would be suitably anonymised, and it repeatedly expresses concerns about confidence in the platform. It is accepted, however, that there would be an ability of traceability when matched with the digital wallet providers data. Whilst this would not be the intension (and require legal process) the perception may be viewed as suspicious in certain sections of the potential userbase.
50. To maintain the position of anonymity, it would need to be assumed that the process and responsibility of redress of payment failures and fraud would sit with the digital wallet provider, preventing the BOE to become surreptitiously in possession of end users' data.
51. Given the vast number of economic organisms being potentially built into and onto this network, each of whom would be responsible for maintaining regulatory standards of privacy

and resilience, the operational risk concentration would be increased. These risks are no different from the existing risks although the central ledger provides a larger single target.

Question 3.a: What views do you have on a privacy-enhancing digital pound?

52. A privacy-enhancing digital pound may sound counter intuitive, and the proposals speak of grades of privacy depending on use case. The dilution of privacy at the “topmost” tier may be considered anathema to customers’ expectation of privacy in transactions. There are various mechanisms to introduce privacy within the ecosystem such as zero knowledge proof (ZKP); a method to prove to another party on whether a transaction is true without revealing additional information. More information can be noted in question 5.
53. However, as described, the nature of the digital pound has the inherent ability of traceability which may not be attractive to all. But there will be those that would be prepared to share data in return for more advanced services, rewards, and increased user experience.

Question 4: What are your views on the provision and utility of tiered access to the digital pound that is linked to user identity information?

54. There is a firm view that the initial focus should be on the basic model of third-party providers supplying pass-through wallets. This would require the minimum standards and regulations necessary for a minimum viable proposition ‘MVP’ whilst allowing PIPs and ESIPs to innovate within these MVP constraints. Demand for additional features that would lean to a requirement for a tiered access approach can be reviewed post MVP launch.
55. A tiered access to the digital pound, could limit users to small value transactions unless they provide greater KYC information. As such, digital pound users could secure greater benefits from sharing data.
56. More broadly there is the question as to who grants the tiers of information, and what are the controls to judge and enforce who gets special access? That BOE proposes that the analysis should be no broader than current legal access. But the complex eco system may make the risk of leaked data, intentionally or unintentionally (e.g., via fraud, cyber-attacks, misconfiguration) high and increasingly higher as usage increases and the temptation and opportunity to breach privacy increases.
57. Policing the parties that fall into the categories of “higher tier” access appears to be a socio-political judgement as much as a technical one.
58. While a user may choose to use a disposable alias for a specific payment, their own wallet provider would still know who they are. The alias design allows privacy for the payer from the payee and vice versa, but not privacy from their PIPs. PIPs must still be able to fulfil their regulatory obligations around AML and KYC.

Question 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?

59. Allowing users to vary their privacy settings may result in allowing some small value transactions to have higher levels of privacy — e.g., through tiered identity verification or enhanced privacy controls.
60. The proposal speaks of aliases, e.g., tying a personal wallet to an identifier such as your phone or your email address, to allow sharing between certain designated parties, e.g., Family members (akin to something like an Apple Family Sharing plan).
61. To meet these requirements, a CBDC might have both a well-known and a disposable alias.
62. A well-known alias changes rarely and is something the wallet holder is happy to be shared with, and stored by, third parties. For example, users may choose to link their mobile phone numbers to their wallets so that a messaging service might use their phone numbers to facilitate CBDC payments.

63. A disposable alias, as the name suggests, is used for a short period of time. It is useful where a user wants to be able to conduct a transaction in private and not allow the recipient a record of their identity. For example, when buying groceries or coffee, users may elect to use a disposable alias.
64. Tiered privacy settings and privacy enhancing technologies are welcomed, but it fundamentally flows against the foundation of privacy inherent in current paper fiat.
65. The programming concepts proposed in the technical paper envisage the ability to share more or less personal information with certain parties, but ultimately, they cannot mask their identity from their wallet provider. Again, this is made analogous to current mechanisms like Debit Cards – your bank will inevitably know who you are and who you pay to. The BOE proposes tiers of privacy up to the same standard.
66. However: Aliases must be compatible with PIPs' obligations to comply with KYC and AML regulations.
67. The BOE currently proposes to conduct further research on how aliases and tiers of privacy can be implemented without impacting performance, but privacy concerns will also be central to consumer expectations of privacy.
68. Controllable privacy enhancement techniques are certainly all for the good and should be embraced and encouraged. However, the risks of technical alienation could mean that less technically proficient members of society default to using lowest common denominator settings which could expose them to greater dilution of privacy than could technically be possible or is currently possible.
69. This is not desirable and is as much a technical, cultural, and political concern, as a user interface design consideration. For example, strong passwords changed regularly are good cyber hygiene for all consumers, but few embrace this with enthusiasm, and tend to default to easily hackable, lowest effort solutions.
70. Our view is that significant research needs to be conducted into secure ways to capture and retain the current standard of KYC and transaction flow data, without exposing it to privacy breach risk (e.g., cyber-attacks, quantum computing attacks etc.), whilst managing the goals of efficient transaction completion and resilience to the system. For example, one such mechanism that could be deployed is Decentralized Identity (DID) whereby checks on KYC are performed once which user can then take to other organizations or Zero Knowledge Proof (ZKP) where a party can confirm a transaction without revealing additional information.
71. The technical paper speaks to the increasing risk of exposure that grows in line with increasing resilience of backups etc., and finding the balance of consumer confidence, interactive controls of privacy, and tiered bodies in the BOE's ecosystem having various levels of access to personal data, all need further refinement.

Question 6: Do you have comments on our proposal that in-store, online and person-to-person payments should be highest priority payments in scope?

72. We support the proposal to initially focus on in-store, online and person-to-person transactions. This assumes that account-to-account payment capability is included within the core proposition so that funds can be exchanged into and out of digital pounds. This by definition would then include all retail payments.
73. Given the UK's payment infrastructure is highly advanced and inter-connected, high rates of adoption would naturally result in third party providers integrating into all potential market areas.
74. The retail segment of the marketplace would potentially benefit the most if CBDC proposals lead to a lower cost alternative to the card acceptance model. The paper also refers to potential benefits in cross border transactions but given the complexities in interoperability, it is unclear how cross border payments would benefit, at least in the early stages.
75. Success of adoption in the retail sector would need to demonstrate that the digital pound would enjoy the same legal card scheme protections. As current regulations do not allow for prices to be differentiated based on the payment type, retail customers do not see the

merchant discount and may prefer to rely on the current protection mechanisms should equivalency of protection not be available.

76. We recommend that alongside CBDC proposals, a regulatory framework is also mapped out. It should consider the gaps that currently exist between those additional features and protections that are afforded through existing regulation and those that exist commercially as part of payment or card scheme rules. Regulation should look to bridge the gap.

Question 6.a Are any other payments in scope which need further work?

77. Consideration has been given to potential government to person payments that might be enabled through smart contracts and programmable payments through private sector innovation. The BOE should consider within its design approach how a CBDC might be used to enable greater programmability, for example for higher risk vulnerable individuals.

Question 7: What do you consider to be the appropriate level of limits on individual's holdings in transition? Do you agree with our proposed limits within the £10,000-£20,000 range? Do you have views on the benefits and risks of a lower limit, such as £5,000?

78. It is reasonable for there to be a limit on individual holdings, at least in the early stages of deployment. This would be required if only to protect retail deposit transfers of private money from the banking system. The analytical capability described in the paper could be used to review the appropriate level of the limits over time.
79. We would encourage the BOE to walk through the typical use cases in a retail context to establish what additional information might be required from wallet providers, merchants, and commercial banks in order to facilitate deposit caps. In this context, the additional administrative burden that might materialise can be identified for payers and payees. **In doing so the BOE will be in a better place to fully appreciate whether deposit caps will act as a barrier to adoption when compared to suitable existing alternatives.**
80. There are some perceived technical and functional considerations in that by setting up limits, mechanisms would need to be in place to ensure that any incoming funds breaching the threshold would not fail. For example, any incoming funds over the limit could be automatically directed to a designated commercial bank deposit account. But that would require relevant parties to have to hand account information.
81. It is unclear what the action would be if this involved a foreign national without a bank account in the UK. Additional rules would need to be in place to reject the funds or hold until the funds provenance is established. However, this may significantly disadvantage good actors and create disincentives to adoption.
82. A lower limit could potentially result in limited uptake of the digital pound due to limited use cases to low value transactions. However, these limitations could be offset by a potentially lower KYC hurdle, providing broader financial inclusion.

Question 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? Should all corporates be able to hold digital pounds, or should some corporates be restricted?

83. Our view is that it would seem to defeat the purpose of an account based CBDC if corporates were not provided access to CBDCs from the outset or in transition. **We see a challenge in that where certain businesses could accept, while others could not, this would give rise to scenarios where consumers are constantly having to reallocate funds between commercial bank deposit accounts and their CBDC account to facilitate purchases.** These accounts could in theory be with different wallet providers (i.e., current banking apps and additional firms that facilitate CBDCs in the future).
84. From a practical perspective, it may introduce two or three additional steps in a customer journey when attempting to execute payments. Consumers may therefore opt to avoid the additional friction and hold all their cash as commercial bank deposits. Observations from

other markets suggests that this lack of uniformity in access has resulted in poor take-up amongst those that the product has been directed at.

Retail transaction – definition:

85. It is suggested that clear guidance is provided on what constitutes a retail transaction, while retail to merchant is the obvious one, retail payments also include person to person, taxes & rates, charities, rent to landlords, interest and principal repayments or fines etc. It is not clear that there would be a wholly accurate way for the regulator and government to determine which sectors, sizes of business are or prospectively will offer retail goods or services in the future. In practice, this may result in the need to have detailed prescriptive rules on what is and what is not included. Such complexities, as observed in the Tax Code system, may result in an ever-increasing burden of principles making the product even more inaccessible and less economically attractive to operate.
86. We understand that proposals might seek to define the user rather than the type of transaction. However, if the intent is that all payments that households make are capable of using the digital pound (subject to limits) then “retail transactions” will need to be defined in order to determine a businesses or organisations account eligibility.

Complexities:

87. There may be a temptation to make business CBDC accounts effectively one way for business i.e., businesses are able to receive CBDCs but cannot pay out in CBDCs and instead these are automatically swept into commercial bank deposits. This in theory might add another level of complexity, for example, when merchants are dealing with partial or whole refunds or request for cash backs.
88. Potentially, this is the context in which the deposit limits imposed on businesses should be considered. If it is not envisaged that businesses use CBDCs for business-to-business transactions, then what are the other use cases that involve a business’s paying out or receiving that are outside the traditional retail payments? For example, should corporates be able to hold sufficient CBDCs to facilitate all transactions that involve business to individual payments. These would include refunds as described above but might also include monthly payroll to employees. Certain transactions with SMEs and Partnerships might also be eligible where the entities act a sole trader and the CBDC is being directed to an individual’s account.
89. Taken together, however, CBDC account limits on corporates might need to be both dynamic and in certain cases relatively high. For example, for large corporates who have thousands of employees. Corporate limits may need to vary over the business, economic calendar (e.g., Christmas sales, new licence plates, tax due date), dependent upon the nature of the business, etc. So further analysis is required, including considering a broad spectrum of organizations (charities, bodies like ICAEW, councils, government bodies). This again highlights complexities where the system becomes unworkable.
90. The deposit limits would also need to be reflective of the size of the business and extent of daily or monthly retail volumes. For example, a high street supermarket is likely to receive £100m’s on any given day, much higher than say in the context of a corner shop. However, introducing tiering adds complication and firms would be relied upon to self-report their necessary limits, which in many cases might change over time alongside business growth. Given the complexity and dynamism of the UK economy, this is unlikely to be practical.
91. In this scenario, where corporations hold significant balances in CBDC, the extent to which money is being drawn away from the commercial banking system could become more significant than current modelling suggests. As highlighted in the BOEs proposals this could have undue monetary policy and financial stability consequences.

AML/ Fraud checks:

92. Given that the approach is account based, even where corporates and in particular merchants are provided access, this will be another form of payment acceptance that they

will need to add on to a growing number that is already required to provide comprehensive payment options to consumers.

93. In this context and to ensure the right supply side incentives BOE should consider whether there is a mechanism by which those who currently have a commercial bank account are by default provided with access due to previous money laundering and fraud checks by their high street bank at the outset of opening their original accounts, coupled with the ongoing monitoring required by banks.

Question 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?

94. It is not clear if retail CBDC proposals are structured in a way that would support and or improve cross border retail transactions which are more than ever prevalent in ecommerce and travel sectors. High transaction costs for both merchants and retail customers are well known in retail cross border transactions, often due to ambiguous pricing involving bundling both FX and transaction costs, alongside interchange fees that are not capped. The proposal indicates that the BOE would not be minded to provide access to non-UK resident corporates which presumably then necessitate consumers opting for other payment options or converting CBDC back into electronic or paper money (only if not online). This would introduce further frictions into the system rather than simplify what is already a drawn-out value chain.
95. Whilst electronic or private and paper money is easily convertible into foreign currency, this is not achievable with CBDCs as that would assume that in all cases the counterparty has a CBDC account. Where that not the case CBDC would need to be converted in electronic or paper sterling which again introduces frictions rather than simplifying. This lack of fungibility is likely to be a barrier to commerce rather than an enabler.
96. Given non-residents' can exchange, hold, and transact in public money, it would seem consistent that they should be able to have holdings of digital currency on the same basis. This does introduce a regulatory complexity in that to have an account with a non-UK PIP, the non-resident would need to meet current KYC and AML eligibility requirements. This could be resolved where there was a reciprocal recognition regime in place where the non-UK PIP could demonstrate adherence to standards of equivalence. This does raise the question of ongoing oversight.
97. Consideration would be required to decide if a policy of 'one size fits all' which may exclude large numbers of non-residents or whether each market may have agreed individual characteristics. UK authorities could reserve the right not to grant access to digital pounds for non-residents from certain high-risk jurisdictions or individuals on S&E lists.
98. The availability of the CBDC to non-residents in frontier markets could give rise to a significant increase in money laundering on a mass scale where bona-fide individuals are paid spurious regular funds to spend in the UK as a means to legitimise the funds. The strategies of bad actors would need to be very clearly understood and there to be a high level of confidence that the funds can be identified and trapped before leaving the banking system.

Question 10: Given our primary motivations, does our proposed design for the digital pound meet its objectives?

99. While we believe the BOE's progress to date on proposals are heading in the right direction, we refer you back to our key recommendations for future analysis as set out in our executive summary.

Question 11: Which design choices should we consider in order to support financial inclusion?

100. Existing Payment Account Regulations (2015) provide that the nine largest personal current account (PCA) providers are legally required to offer basic bank accounts that are fee-free

for standard operations, with the aim of promoting financial inclusion. Institutions can refuse to open an account where it would be unlawful to do so, for example due to concerns about fraud or money laundering, or where customers cannot meet the identification requirements. Evidence provided to the TSC on Consumers' access to financial services indicates that in 2017 around 1.3 million UK adults were unbanked, either due to not meeting ID requirements, illiteracy, or not wanting a bank account.

101. According to UK Finance, this population has been declining in recent years, from 1.7 m in 2014 to 1.2 m in 2020. Given existing rules on provision of basic bank accounts, it's not clear that banks' incentives to provide these accounts are a relevant factor.
102. People without ID will presumably be unable to open a CBDC account, in the same way as they can't open a bank account. This is an important safeguard to prevent money laundering and fraud and opens up the question of how to verify the identity of individuals without driving licenses, passports, and credit records, those with no fixed address, and those not on the electoral roll. Similarly, within the web 3 space, there are various institutions working on the concept of Decentralized Identity (DID) such that there are less numerous repeated checks, data remains with the users (privacy is maintained) and less storage of data by third party organizations. Such techniques could assist in overall customer experience thereby enabling better financial inclusion.
103. Solving this problem could potentially support greater financial inclusion through the existing banking system – i.e., enable more people to open basic bank accounts. But a CBDC in its own right might not solve the problem.
104. Then there is a cohort of consumers who chose to use cash and stay away from the banking system for other reasons. Again, it is not clear that these individuals would be any more inclined to use a CBDC than a basic bank account, given risks (perceived or actual) to privacy.
105. FCA (2022) found that 6% of adults in the UK use cash to pay for everything or most things. There is some evidence from UK Finance that cash use has plateaued. It is unclear what the mechanism would be for CBDCs to accelerate the ongoing decline in cash usage in the economy.
106. Heavy cash usage is predominantly focussed on elderly customers and low-income households who have less access to digital payments (either due to financial inclusion issues or digital access issues) and are more confident to use cash for budgeting purposes. It is not obvious how CBDC business models could be specifically targeted at these types of consumers.
107. Elderly/digitally excluded consumers will struggle to manage a digital format currency as it will not give them the same visibility and control as cash – for example the ability to put cash in jars for different purposes and easily see how much you have in each pot, without the need to look on an app.
108. If enacted, the Financial Services and Markets Bill will give the FCA powers to ensure the reasonable provision of cash access services across the UK. The legislation is expected to come into force during 2023.
109. **We are concerned that the introduction of an alternative retail payments system may support disruption within transactional banking which exacerbates financial inclusion issues.** If commercial banks see significant erosion in the economies of scale and scope of their current transactional banking model. For example, declining revenues and higher costs as new payment systems are introduced, there might be a strong incentive to further reduce access to cash and branch networks.
110. We may also find that banks are incentivised to focus their offerings on profitable customers at the expense of low profit- or loss-making customer groups. We would encourage future proposals to take on a more holistic approach to introducing a CBDC. With consideration given to the economics of current retail payment value chains.

Programmability

111. We would recommend that more in depth research with low income/financially excluded groups or their representatives could help to inform the use case for a digital pound.
112. Our conversations with the low-income sector suggested that financial inclusion was more about how individual funds could be protected from automated variable account debits and budget allocation rather than the provision of an account itself. This has led to bank accounts being used as a conduit where funds are withdrawn to store in jam jars.
113. Programmability was considered as a feature that could potentially change the payment behaviours, but the solution design does not suggest the support of automated payments, the conclusion is that the design would only result in the current status quo where money is debited to the account and instantly withdrawn. It was recognised that the potential for the adoption could grow once familiarity of the system increased and potentially new features were introduced.
114. Possible design choices could consider emulating the jam jar management of money with programmability and automation wrapped around those sub-accounts. However, the lack of payment automation would not improve greater inclusion into the mainstream services available where protected automated payments are likely to be a pre-requisite. Without any appropriate form of automation, the use of the account would largely be funded and then converted to public money or transferred into private money, creating greater friction.

Question 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.

115. Contemporary research (e.g., PwC, 2023) estimates that c.20 million UK adults are underserved by the financial services sector. This is known as underbanked. Such underbanked, or even unbanked individuals, are likely to need policy support to assist them in transitioning to this new form of CBDC money.
116. This support may comprise of features such as education, technology access and even perhaps financial incentive. This latter point is one method that the Chinese used to encourage sign up of their equivalent Digital Yuan - a free red-letter digital lottery, with some prizes for new individual users. Consideration should also be given to those persons who deliberately resist a transition to a CBDC for reasons of beliefs, politics, privacy concerns, a desire for the status quo to be preserved or perhaps even to mitigate detection for their cash-only nefarious activities. In time, the number and proportion of such users will likely dissipate over time.
117. The rate of cash decline in the UK appears to have stabilised, at least for the time being, and the proposal does not advocate the withdrawal of physical public money. However, given the costs of providing bank branches and the ATM networks are supported by the commercial banking sector, further reduction in the use of cash may reasonably trigger the closure of further bank branches and ATMs with the potential to drive towards a spiral of inevitability.
118. Considerations may need to be given to ensure alternative agencies/partners such as the Post Office Counter Services as well as other high street brand names are integrated into the system to protect individuals with protected characteristics.