

# UK Finance – Response to the BoE/HMT digital pound consultation

To: digitalpoundconsultation2023@bankofengland.co.uk

## 1. Introduction to the UK Finance response

UK Finance welcomes the opportunity to respond to His Majesty's Treasury (HMT) and the Bank of England (BoE) joint consultation on a proposed digital pound. UK Finance represents a diverse array of firms from all sides of the financial services industry and has a broad range of specialisms, and we are therefore in a strong position to reflect widely and in detail on the impacts and opportunities of a digital pound.

Our response is structured thematically. We have not answered each question sequentially but have highlighted in our response where certain elements relate to specific questions. We have first looked at those areas of the proposals that we think will deliver benefit to UK Plc; we then go on to discuss some of those areas where more analysis will be needed. The Annexes contain some more detailed reflections on individual topics.

The proposals for a central bank digital currency in the form of a digital pound would have transformative effects in innumerable areas of the payments and banking ecosystem and therefore this consultation has been treated as high priority by the industry. Industry is keen to position itself as a critical friend on this topic; we are committed to support HMT and the BoE to explore the full opportunities and risks of digital money in the UK.

We believe that it is vital that the private sector, given its knowledge and expertise in retail payments, must be closely involved in the next stages of the design phase. We believe that there are many areas where industry expertise and knowledge will be vital. Undertaking further work as a public-private partnership will help to incentivise intermediaries to provide digital pound related services in the future and leave room for private sector innovation and add-on solutions, which will lead to better value for the end-customer and enable a flourishing digital economy. This is particularly the case for the required infrastructure/system changes. Financial institutions should continue to play a key role in bringing digital money to end users and need to be involved in the detailed work of the design, with enough time and information to analyse options and related impacts.

Finally, we would like to flag that industry is treating this important piece of work as a 'marathon, not a sprint'. We have utilised this consultation response to highlight many areas where we believe the BoE and industry need to continue to work together. However, it has not been possible to complete analysis in all areas to the level of detail that we feel is required. We have been pleased to hear from BoE officials that they do not expect this consultation response to be the final word on these issues. Throughout our response, we have highlighted areas where our inputs only form the 'starting position' and we have ongoing work to develop research papers, data analysis and/or models.

## 2. Summary of key points from the consultation response

Overall, Members are supportive of work to explore and investigate the opportunities for digital money in the UK. However, a question remains on how a digital pound is linked to and instrumental to the objectives the BoE is trying to advance. More thought on how those objectives could be met, including with the use of other tools and solutions provided by the private sector, is warranted. At the same time, we feel it's imperative to conduct a proper cost-benefit analysis of launching a digital pound, that includes not only the infrastructure build, ongoing maintenance but also potential negative externalities or unintended effects. We recognise some of the drivers laid out by HMT and the BoE – the needs of consumers and businesses will certainly continue to evolve, and the industry understands that it will need to continue to evolve too, to meet those needs as effectively as it has done to date.

We believe that there could be better ways to achieve the aims of making digital central bank money available to UK retail customers, which could be explored simultaneously. Such alternatives to a pure CBDC could, we suggest, better continue the ethos of the current effective money system in the UK, where consumers and businesses can interchange seamlessly, and without being aware, between central bank and commercial bank money. **We can envisage a future where digital pounds are available to those that want them but they sit alongside technologically 'upgraded' commercial bank money.** We feel that this could meet consumer and businesses needs in a better way than only focusing on delivering digital central bank money.

Industry wants to work with the BoE and HMT in this process of discovery. There are also a range of alternative approaches that need testing. For example, a multi-asset infrastructure that could accommodate digital central and commercial bank digital money, e-money (and potentially in the future regulated stablecoins)<sup>1</sup>. By exploring this kind of approach, the UK could harness the ongoing economic advantages of the regulated money system and provide a platform for private sector innovation, whilst also securing itself a future-proof response to the decline of physical central bank money. Some of our members are, as the BoE knows from our conversations about the RLN project, at an early stage of exploring such alternative approaches (see section 6 for further information).

Our consultation response is the start of a journey between key stakeholders to explore what is the best way to meet the principles and aims set out by the BoE. Listed below are some of the key reflections in our response:

- Industry will continue work on analysing the impact of the current digital pound proposals. However, we believe that the BoE and HMT will need to put forward a complete and detailed impact assessment of their own. Industry and wider stakeholders need a way of assessing the overall impacts in order to consider how alternative models could mitigate these. A CBDC affects the whole payment ecosystem and there are not yet enough empirical studies to understand the impacts in their totality.
- Connected with this, we also believe that work is required to demonstrate how the digital pound complements, enhances, challenges, integrates and/or is interoperable with existing financial infrastructure, the existing and proposed retail payments initiatives in the UK, such as the New Payments Architecture (NPA) and Open Banking (OB). Recent outputs of experimentation such as Project Meridian do seem to suggest that the use of APIs and ISO20022 messaging standards can enable some connectivity between these systems.

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<sup>1</sup> For example, a unified ledger like the Regulated Liabilities Network concept. A RLN could become a new regulated Financial Market Infrastructure (FMI) operating a shared ledger, with central bank money, commercial bank money and electronic money on the same chain. See also BIS Annual Report, section 3: <https://www.bis.org/publ/arpdf/ar2023e.pdf>

- Any future proposition for a Digital Pound must have a functioning commercial model and a business case.<sup>2</sup> We have seen with other retail payments projects that, without this, adoption and innovation are slow and ineffective. As a general point, we note that any model should focus on market led commercial solutions rather than regulatory solutions.
- The BoE has acknowledged the continued importance of inside and outside money<sup>3</sup>. Any new CBDC developments should seek to reflect that importance as a design principle – the concept of a multi-asset ledger or robust interoperable systems should be a significant area of exploration.
- We believe that as part of the design phase, industry and the BoE need to have in place a robust modelling simulation on the economic impact of the digital pound in various scenarios. Other central banks (e.g. the Bundesbank) are already doing this. We are already starting work to explore how this model should be constructed. Please see Annex 2 for more information.

A well-designed infrastructure/system offering digital central and other regulated money, with the right platform design, privacy protections, security and resilience, would not necessarily need to feel like a significant departure from what consumers are used to today. After all, this will not be creating new money, but technologically upgraded money that complies with existing rules and principles. However, we think that the authorities should not underestimate the need to take the public and wider stakeholders on the journey with them on this topic. The vast majority of consumers currently have limited or no understanding of why a ‘Digital Pound’ would be any different to the digital pounds they have on their apps and in their bank accounts today. Again, this is in part due to the effective way that over decades the uniformity (or ‘singleness’) of money has made differences invisible. If the BoE were to go ahead with a digital pound, creating the right understanding and developing the ethical and legal frameworks around CBDCs both on the domestic side and also on interactions with CBDCs in other jurisdictions, will be essential to enabling their future success and use. Full and in depth civil society engagement on this topic is vital.

### Key areas of focus to ensure the success of digital central bank money

Being clear on the purpose and rationale	Continuing to think about the ‘why’ in more detail, including consideration of different ways of achieving the objectives. For example, upgrading central bank money alongside other regulated liabilities, thereby opening up the widest opportunity for innovation.
Financial stability and credit creation considerations	Striking the right balance between usability and mitigation of risks to financial stability and credit creation stemming from new direct central bank liability, particularly as regards the proposed holding limits. Simulation modelling of how retail digital central bank money would interoperate in the ecosystem is vital. Our response proposes holding limits between £3k-£5k.

<sup>2</sup> We reference here the work UK Finance led in 2022 on CBDC business models: <https://www.ukfinance.org.uk/policy-and-guidance/reports-and-publications/commercial-models-potential-uk-retail-cbdc>

<sup>3</sup> <https://www.bankofengland.co.uk/speech/2023/april/jon-cunliffe-keynote-speech-at-the-innovate-finance-global-summit>

Strategic prioritisation and holistic vision	Consideration of the longer-term retail payments roadmap in the UK, and where central bank digital money should fit, including the relative prioritisation against other industry projects. Retail payments is an environment of competing projects for limited specialised resources. This would apply also to any intended roll-out, which will require appropriate legal basis/redress/resilience etc.
A sustainable economic model	A clear economic model and business case, baked in from the outset, is needed, in order to ensure that intermediaries are incentivised for provision and uptake. An impact assessment and cost benefit analysis are vital to ensure that any project delivers value for money alongside any strategic goals.
Prioritisation of use cases	The right approach phased approach is needed to ensure that delivery is efficient and the infrastructure is resilient but also delivers tangible benefits.
Intermediaries	Clarity on the legal and regulatory status of intermediaries, their rights and responsibilities, their economic incentives
Fraud and economic crime resilience	High levels of fraud resilience built in from the start and enhanced capabilities to detect criminal activity utilising data and analytics.
Consumer protections/disputes/redress frameworks	A clear consumer framework built in from the outset, including the schemes or models required to ensure efficient redress and dispute management, and the economic models to support this.
Offline use / substitutability with cash	Appropriate balance of enhanced usability of offline, alongside recognition of the additional risks it may present.
Data privacy	Support 'privacy by design' but make sure proportionate commercial data uses to enable value add for customers and that public good uses (e.g. fraud, vulnerable customer protections) are not undermined inadvertently.

### 3. Being clear on the purpose and rationale (relevant to DP question 10)

The consultation paper lays out several considerations for why the further exploration of a digital pound may be valid. Two of the foremost considerations are (i) monetary (“the digital pound would help to ensure that central bank money remains available and useful in an ever more digital economy, continuing to bolster UK monetary and financial stability while safeguarding the UK’s monetary sovereignty in a changing global financial system”); and (ii) innovation in payments. These two aims may not always be compatible. Therefore, UK Finance and its members believe that as part of the impact assessment and cost-benefit analysis, which are a vital part of the design phase, the BoE must state clearly what objectives and needs the digital pound is expected to meet

and why it is best suited to meet those needs. It is not clear from the consultation what place in the market digital central bank money is expected to take. We also note that while one stated objective of the BoE is to have a monetary anchor, an equally important objective is confidence and financial stability. In reflecting adequately on that, and where there may be a trade-off between the two, we think the BoE should consider approaches that will minimise this challenge as much as possible.

As noted above, we believe that the real value for consumers, businesses and the wider economy may come if we consider how to facilitate innovation and upgrade all regulated money, not just the smaller portion of central bank money. Today commercial bank money makes up 97%<sup>4</sup> of the money in circulation. We should therefore aim to design a future infrastructure that maximises the opportunities to enhance both central bank money but also the majority of regulated monies (central, commercial and e-money) in circulation. This would deliver positive outcomes for the UK, whilst minimising the disruptions of the two-tier (central and commercial bank) monetary system, which could cause a significant shock to the UK economy. Therefore, in summary and in response to question 10, we do not think the proposals for digital central bank money currently fully meet the stated objectives.

#### 4. Where we see increased value for UK Plc

Many stakeholders have commented that one of the key features that is likely to unlock use cases and value for UK Plc is programmability/conditionality/composability of payments. We note that the Technology Papers states that “*the Bank will not program CBDC to restrict its use. But PIPs could, with user consent, implement programmability features which are designed to give users greater functionality from their wallets and CBDC holdings*”. If we look back to the work of the Payment Systems Regulator’s Payment Strategy Forum (PSF), for example, two core themes across all the identified stakeholder needs were control and transparency. Enabling digital central and commercial bank money on programmable wallets, with opportunities for consumers to control when and how they spend, may unlock many of the needs outlined by the PSF. Programmability of payments is also likely to lead to the kinds of private sector innovation that could deliver further enhanced competition and user experience, as well as the provision of new services.

The consultation paper calls out examples like fractional and micropayments, as well the foreign visitor use case (though the KYC implications, and possible enablement of monetary flight cross-border would need to be considered). These may indeed be use cases worthy of further exploration. Others, such as supporting the financial services industry to meet its obligations under new gambling requirements are also interesting. We also note that with the attention in the past few years on resilience and substitutability, a digital pound may provide a payment method of last resort. That is indeed one of the implicit roles of physical cash today. However, there are a number of challenges to that thesis, not least that unless offline functionality were a highly viable proposition, a digital pound is likely to be subject to some of the same structural vulnerabilities as other digital payment methods (e.g. reliance on national grid power and complex digital databases).

Another rationale for continued work on digital money might be the interest in wider non-retail use cases, particularly interbank wholesale or cross-border payments and associated alignment with e.g. the G20 goals. Digital cash solutions are important enablers of key innovations such as securities tokenisation. We welcome the Bank of England’s explorations of digital cash solutions and in its proposed upgrade of RTGS. We would welcome further guidance and clarity from the BoE on its expectations for digital cash used in the settlement of tokenised security transactions, as well as the BoE’s view on DLT-based wholesale CBDC in connection with retail CBDC and other forms of money.

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<sup>4</sup> Central Bank Digital Currencies: The future of money, Michael Lloyd, 2023

Finally, in considering the rationale for a digital pound we believe that it is vital to look to international peers to understand their approach and design parameters. We support the work of the BoE on joint projects with other central banks, as well as e.g. the BIS Innovation Hub. In Annex 3 we have provided an analysis of some of the key emerging questions and discussion points about the digital euro that may be of interest. We hope that this will help highlight areas where convergence (or divergence) may be helpful. We strongly encourage the BoE to pursue opportunities for cross-border collaboration (particularly with jurisdictions like the EU and US) and take into consideration the recommendations issued by global standard setters.

## 5. Issues requiring further analysis

The following section is a non-exhaustive list of areas, issues and questions to consider if the Bank want a digital pound to succeed. We look forward to working with the BoE on prioritising these and determining the most appropriate ways to explore them further.

### **5.1. Economic and financial stability impacts relating to holding limits: achieving the right balance of usability and financial stability (relevant to DP question 7 and 8)**

The holding limits proposed in the consultation (a range between £10-20k, for a transition period) are one of the issues that generated the most discussion and interest amongst member firms. This is an area where industry would strongly urge HMT and the BoE to consider our views carefully. **Many members believe the Bank's current proposals do not strike the right balance between functionality/usability and mitigation of risks to financial stability and credit creation stemming from the introduction of a new direct central bank liability.** We look forward to continuing to explore the evidence base on this issue with all stakeholders. As well as the analysis that we have compiled to support our assertions in this response, we are also working on producing a more comprehensive report on the issues of holding limits, credit creation and financial stability that we hope will be published later this year.

Given the character of the digital pound “for everyday payments needs”, it should be designed to reflect this objective (and not as a store of value) by alignment to the average daily payment needs of UK citizens.

Taking an evidence-based assessment of the existing payment trends and data, we believe that the current proposal for a £10-£20k holding limit for consumers doesn't provide a good balance between functionality and economic outcomes. It goes well beyond the design principles set out by the BoE (which talked about digitising physical cash use today – whereas this limit seems to represent an ambition to materially enhance the amount of central bank money in use), it will not necessarily lead to good consumer outcomes, risks undermining the balance between central and commercial bank money, and introduces significantly more risks to financial stability than benefits. We have therefore included in our response some initial analysis on alternative limits that we believe offer a more balanced opportunity/risk profile. There was not a ubiquitous member view on the precise alternative limit, but this lower range was considered much more proportionate.

We also note our report of last year on the topic of the [impact of a CBDC on credit creation and financial stability](#). We understand that the BoE took a different view on some elements of this report. But we stand by the concerns raised (e.g. material increase in stress vulnerability of the financial system and significant deterioration of credit conditions) and are keen to look at this again with BoE officials.

Annex 1 provides the analysis that sits behind our proposed alternative consumer holding limits. There was not complete member agreement on these limits but the majority of members were

supportive of lower alternatives. We have laid out a range: **between £3k and £5k**. As you will see from the data and calculations, we have drawn from a few different sources for what we consider to be comparable data – in short, we have sought to understand what transactional needs exist today, and might exist in the future. Both the lower limit and the stretch limit would meet the monthly payment needs of today’s consumers (not just of their cash payments but across all their electronic payments).

There is a great deal more to be done on this issue. Members raised a variety of different questions and considerations, including:

- Holding limits vs transaction limits – Members believe that much more analysis is required around the interaction of holding limits and transaction limits. If we look to the work of the ECB, we can see that they have presumed monthly transaction limits of roughly a third of the overall holding limit.
- Governance and processes for adjusting limits – members were clear that as well as setting limits that are proportionate and evidence-based, there needs to be a clear and robust governance framework for adjusting these limits (if required) over time. Confidence in the digital pound and market certainty will be greatly enhanced if stakeholders understand clearly the processes by which changes might be made.
- What infrastructure or technology would be required to ensure that holding limits were adhered to (confirming the total holdings of a single user across multiple wallets). The BoE and industry should further explore the value of a digital identity in meeting this need (see more on this below). Members also noted the possible operational challenges for intermediaries of maintaining the limits.
- The ECB recently [announced](#) that it will consider providing a replacement liquidity facility if banks experience a shortfall due to a decline in deposits. Potentially Liquidity Coverage Ratio (LCR) outflow rates might have to increase (or at least banks’ own Overall Liquidity Adequacy Rule (OLAR) stresses may increase). A liquidity mechanism is already provided for as part of the Sterling Monetary Framework but we would like to hear more from the BoE on its own thinking in this area, and what the options are.
- In relation to credit creation, we should not only consider the impact on funding etc, but also consider the increased credit cost arising from a loss of customer data. Banks can provide preferential rates to customers today as they have a solid understanding of a customer’s behaviour. If the digital pound is introduced this could remove access to this data for some customers, meaning banks may lose the ability to risk assess customers effectively, and in absence of this customers might need to pay higher rates.
- Payment in of salaries is not a helpful way to frame the design of a digital pound: it is not consistent with the rationale laid out by the BoE and is likely to trigger concerns from users about privacy and state interference. Individuals do not, by and large, get their salaries paid in cash today. Another significant area of practical disruption would be for e.g. payroll providers and employers, as it introduces a huge change to payroll systems, and implies that employees would need to be given different options for how to get paid.
- We are aware that the technical means of delivering holding limits might depend on whether there are any sweeping/waterfall or reverse sweep/waterfall functions. Any such proposals require careful consideration given the impacts for volatility of deposits. Furthermore, the end design of the technology will need to be able to manage, at scale, the on and off ramping to meet limits and be able to process seamlessly the required volume of transactional payments. Any disruptions may create reputational issues and a crisis of confidence in central bank infrastructure.

- Holding limits for businesses – More clarity and discussion is needed on how the BoE/HMT intend to determine which firms can hold digital pounds for "everyday payments", in addition to the calibration on the limit amount per firm, and how this may impact financial firms if their access was restricted because it may be deemed to be "wholesale financial activity". Members also noted that many sole traders and SMEs utilise individual bank accounts rather than business accounts and would therefore be held to a lower limit. Finally, members commented that the issues regarding disintermediation and stability are amplified in the case of business and corporate use, given the weight of their balances on the overall deposit volumes, the overall bank funding composition, and also the risk of rapid flight.
- During industry discussions, a frequently occurring theme was the differences between 'steady state' and 'crisis state'. A holding limit needs to work not only in normal conditions but also stressed conditions. Members believe that the BoE might find it challenging to maintain the 'goldilocks' zone of 'just the right amount' of digital pounds in circulation during a crisis – this is exacerbated considerably with higher limits.
  - A digital pound may not be perceived to compete with bank deposits when interest rates are higher; but in a low interest rate environment this may not be the case.
  - A CBDC is likely to increase risks to financial stability during a crisis by facilitating deposit flight. With the advent of social media fuelled instability (which can sometimes have no underlying substantiation) this is particularly a challenge.
- There is no consideration in the CP on the macro-prudential impacts of a CBDC and what this means for the PRA's competition objective. A number of banks have entered the market and provide competition for current accounts and savings accounts in the UK. A CBDC could have significant implications for the business model of these firms as it seeks to potentially monopolise current accounts in a CBDC. These impacts need to be considered by the BoE including the PRA.

We have undertaken initial analysis to suggest alternative holding limits for this response, but we believe a much more comprehensive piece of work is needed. A thorough impact assessment of the digital pound model is vital. Design options of the digital pound need to be tested using different scenarios (including stressed ones) and more extensive research undertaken involving the private sector, with weighing of the results relative to the defined objectives. Both macroeconomic impacts and societal aspects need to be taken into account. Being a public project, the impact assessment should also provide transparency on the expected costs, and who is going to fund them, consequences, and risks of introducing the digital pound for all involved stakeholders. Such an analysis should encompass all scenarios, including a negative interest rate environment, where, given the digital pound would have a 0% interest rate, it may become more attractive than bank deposits. On this theme, we note that the NS&I currently has an approach to ensure that their products don't cause financial instability (they note their requirement 'in line with our operating framework to balance the interests of our savers and taxpayers and the stability of the broader financial services sector'): we would be interested to discuss with the BoE and NS&I whether similar provisions would be valuable for a digital pound.

UK Finance and its members are at an early stage of exploring simulation modelling of a CBDC (see Annex 2 for more information). We note that, for example, the Bundesbank has commissioned detailed modelling of this kind and we believe it is vital that the BoE partners with industry to undertake this level of analysis to clarify design choice impacts and understand how different levers can have different results.



## 5.2. Competing infrastructure investment priorities

Alongside discussions on the financial stability impacts of a CBDC, another critical issue for further engagement and analysis is the implications of the CBDC proposals on current and planned retail payments infrastructure in the UK. The UK has a mature and well-evolved payments infrastructure and ecosystem. There are high levels of participation, and in the last decade or so innovation in the market has boomed. In the UK, consumers and businesses benefit from fast and reliable payment systems (even during times of crisis, the payment system in the UK is highly resilient).

The UK retail payments market was, before the announcement of a possible digital pound, already in the midst of a 'once in a generation' upgrade. The replacement of core infrastructure in the Bank's RTGS system and the retail payment infrastructure (the New Payments Architecture, NPA) are the most complex and expensive change programmes in the payments industry to date. Given the reliance on payment systems for the functioning of the whole UK economy, these are transformation projects that the industry has been treating as high priority. They come alongside other mandated or regulatory driven change, including Open Banking, and of course the innovation and change agendas that firms themselves want to implement, whether for customer proposition development, or, most importantly, as part of industry collaborative efforts to drive out fraud and scams.

Therefore, UK Finance members believe that it is critical that as part of the next stage of work on a digital pound, a considered and comprehensive analysis of existing strategic payments industry initiatives is taken to enable a realistic and fair assessment of what is possible, when it is possible, and crucially, what else may need to be de-prioritised.

Other member reflections include:

- The consultation paper does not reflect much on how the proposed platform model would interact with the existing payments rails. We have already been engaging with Pay.UK on this question and know they are also submitting a response to the consultation. This is a key consideration for firms, many of whom are already investing substantially in the NPA.
- Interoperability of digital pound with existing front-end solutions – many members noted that a digital pound must be embeddable in existing frontend solutions, and it should not be the sole ambition to establish a stand-alone infrastructure.
- There is a large open question around the model for rules, standards and technical/operational governance in a retail CBDC ecosystem. There could be various ways of doing this for CDDBC and there is the potential to have a more limited set of rules/lighter governance especially if the CBDC is seen simply as digital form of cash. For the digital euro a decision has been made that a scheme is required. It is also an approach that has worked well for the UK's retail payments infrastructure to date. A scheme model is one way of approaching the myriad and complex array of arrangements that will need to exist to support consumers and businesses using the digital pound. In the scheme model, there is often an 'authority' in place to act as broker on the standardisation of tech specs, security mechanisms, and to drive the delivery agenda for industry testing, etc. Any 'scheme' would set the functions, tasks, and competencies of the different levels (BoE, intermediaries, users). It is possible that the technological enhancements of programmable wallets may alleviate some of the challenges that schemes have typically been the answer for, but this still requires a great deal of exploration.
- In terms of designing and building the infrastructure for a digital pound, there is a limited pool of resource (particularly technical experts), limited change and testing windows, and

overall macroeconomic risks to compressing lots of large change projects into a short period of time.

- As one of the steps in the design phase, and possibly as part of the cost-benefit analysis, member firms would like to see the BoE undertake a comparison of the digital pound for retail use with Faster Payments. That analysis should also look at the potential for substitution of FP transactions with CBDC transactions. Any volume movement away from a new FP running through NPA will have an impact on the funding model to cover the NPA implementation cost. We note that the IMF in [this report](#) highlight that driving instant payments and CBDC in parallel will likely hinder the success of both.
- There was a persistent question from some members about how a digital pound would be funded alongside other investments and initiatives being carried out by the central bank and industry, and who will do the upfront funding. Members suggested that a cost allocation model would need to be agreed upfront.

### **5.3. A sustainable economic model**

The consultation states that a driving factor for a digital pound is payments innovation. Payments is a competitive market. Consumer and merchant choice has increased rapidly in recent years, benefitting users by reducing the cost of acquiring and improving efficiencies in payment provision. Consumers now have an increasing number of ways to pay at checkout, including account to account payments, card payments, Buy-Now-Pay-Later, traditional instalment credit and e-money. In order to maintain this competitive market and the associated benefits for consumers, regulators and legislative bodies should ensure all types of payment methods are given a level playing field to operate from.

Payments cost money to provide. This is often something overlooked by regulators, but this oversight further entrenches the difficulty of new service providers to thrive, because in turn it can make services based on interbank payments prohibitively expensive to provide. The cost of doing business and creating new business models in the payments industry is increasing. This is not just the cost of innovating and implementing both mandatory and non-mandatory change, but the operational and investment costs to all providers. This requires the development of sustainable commercial models, including to support customer protections and dispute processes. While particular incentives are required to establish a nascent market, this should be reviewed and rebalanced as markets evolve.

Many members feel that the discussion in the consultation paper on commercial opportunities lacks depth (e.g. Table D2). We welcome that the BoE has said they are keen to hear feedback from the market on commercial opportunities as that is where the expertise lies. However, we believe that given the overall impacts and scale of this kind of project, the BoE should be able to be clear and confident that the economics of this project can stand up to public scrutiny. The business case needs to include the incentivisation for various parts of the ecosystem, including PIPs, ESIPS, merchants, and intermediaries. The commercial model needs to reflect the costs that will be associated with the high performance levels and the cyber and operational resilience expected. Ultimately, a strong commercial framework allows resilient and effective market solutions to emerge and thrive.

#### **5.4. Prioritisation of use cases (relevant to DP question 6)**

As the work on the design phase continues, one area that we believe needs more analysis (particularly as part of the impact assessment) is identifying which are viable use cases for early adoption.

Several members did not recommend starting with Point-of-Sale (POS) payments given the complexity and dependencies. A staggered rollout approach was suggested, with implementation in the order below:

- I. P2P (Peer-to-Peer) makes sense as a phase 1 use case; it's the lowest impact scenario to the industry whilst adding value to the consumer, ensuring infrastructure is tried and tested and has a realistic chance of hitting milestones. We note that a study carried out by Kantar for the ECB found that consumers valued advanced tools that allowed them to manage their digital-euro budget, transfer cash to their peers and make offline payments.
- II. G2X (Government-to-person or business payment) may also be a better phase 1 use case than e-commerce in terms of overall impact and complexity.
- III. E-commerce is where complexities arise, and whilst we understand that for the digital pound to have value it must be able to be utilised, we think realistically this should be a phase 1b. The e-commerce scenarios will involve supporting multiple new flows in both the retail/wholesale markets. It therefore becomes more challenging to ensure readiness at a level to support a positive consumer experience. Issues around holding limits for businesses, which we touched on in the earlier section are also relevant. How limits will work for businesses, and the technical interoperability/functionality required (e.g. sweeping/automatic top ups) will be important. Further experimentation and simulations with merchants will be helpful in the next stage.
- IV. POS (Point-of-Sale) or in store may make sense in a later phase given the uplift for merchants and additional testing etc. that would be required. However, many members felt that this is an area that requires much greater analysis.

There could be further roll out stages that would likely result in at least one additional phase.

The design of the digital pound as a payments instrument could create high levels of transfer volumes and liquidity moving throughout the system. Whatever technology is used, its end design needs to be able to support large amounts of liquidity and transaction volumes. These volumes may peak in a crisis period and the BoE would need to be comfortable that its infrastructure is able to withstand high volumes – otherwise such a scenario may trigger a crisis of confidence in public infrastructure, the Bank of England and ultimately the pound itself.

#### **5.5. Digital wallets and the role of intermediaries (relevant to DP question 2)**

The future role and functionality of PIPs, ESIPs and other intermediaries in the digital pound model still requires a good deal of thought and consideration. Many questions on this topic were raised during industry discussions. We are pleased that the BoE already has further experimentation underway on the issue and look forward to receiving the data from that. Members raised the point that, in addition to the many practical, legal and functional considerations, the future role of PIPs may also lead to broader philosophical questions about the future of the current account. On the one hand, it may be that for a minority of consumers, a 'payments wallet' will meet their financial

needs fully. However, it is not clear the extent to which PIP wallets would or could meet the same vulnerability requirements as current accounts. There may therefore be a negative effect on consumer inclusion and vulnerability. There are also questions on what functions exactly those PIPs will perform, which would determine their regulatory framework.

Other questions raised included:

- How will PIPs be regulated? This is a very important issue. Many members feel that if they are carrying out all the functions described in the consultation, then they should be regulated as PSPs, with perhaps some of the wider requirements of current account providers.
- Will PIPs be required to offer digital pounds wallets, i.e. will offering them be mandatory?
- Would wallets be opened by firms to the same standard as today (KYC/KYB etc.) or a higher or lower standard?
- As has been discussed above, industry feels strongly that it is vital that the digital pound ecosystem needs to be built on a commercially viable basis. In the discussions in Europe, for example, the ECB is accepting of the fact that PIPs will need some form of remuneration for the costs of building and supporting the digital wallets and interfaces and providing the infrastructure.
- An issue for banks separate from the reduction in credit creation, is the question of whether the proposal not to remunerate the digital pound undermines the cost of providing the service? Wallet providers would possibly need to impose a CBDC wallet charge, like a bank account monthly fee, which may not be competitive with bank account fees given that they are not partly subsidised by the underlying interest.
- The issue of digital identity presents itself in the context of PIP wallets. Will the current methods of KYC be appropriate for the kind of consumer interactions that the BoE envisages for digital pound wallets? The requirement to maintain a holding limit for individual users leads to questions around how this could be assured given that each PIP would effectively still be operating in a silo. Users might presumably seek to open more than one PIP wallet as a way of circumventing limits. Therefore, questions about the need for collaborative digital identity systems arise, one that could flag in real-time whether a user has a pre-existing wallet. A more complex situation might arise if multiple wallets were enabled, and therefore live user values across all PIPs would need to be known. The topic of digital identity has come up in connection with CBDC a great deal. For some stakeholders, this idea raises further concerns about the role of CBDCs as a potential tool of the state. However, in an increasingly digitised world the ability to interact off the back of sovereign digital identity attributes clearly has a lot of merits. Industry will be keen to hear how the BoE approaches this question. In the EU, for example, the linkages between the digital euro and the eIDAS2 regulation are much clearer. We would propose further investigation of how re-usable digital identity provided by certified providers could enable the effective and efficient introduction and operation of a digital pound.
- The suggestions made in the consultation paper regarding tiered access to the digital pound connected with identity information available also lends itself to a slicker system of digital identity attributes. However, some members have concerns that a tiered approach may lead to a loss of consistency and potential disparity in the levels of KYC undertaken. There needs to be a minimum standard of ID across the board as there is with traditional financial institutions.

- Would a CBDC wallet have third party access (e.g. PISP/AISP under Open Banking)?
- Some Members were of the view that it should still be explored whether banks (as PIPs) could hold digital pound deposits on their balance sheet as this would make no real difference for end-users in terms of counterparty risk. Given the individual limits considered for a digital pound, and given that this would be well below the amounts that any individual are covered for under the deposit guarantee scheme in the UK, those members felt that it is unclear what the benefit would be for end consumers of holding that risk free form of digital money.
- Further clarity will be needed on the circumstances in which individuals could be refused a digital wallet.

## 5.6. Fraud and economic crime; data analytics

- In relation to financial crime, we would specify that responsibility for all economic crime checks (i.e. AML, ABC, Sanctions, Terrorism financing, sanctions, Fraud, cybercrime etc) needs to sit with the private sector providers. Traditional FIs need to have confidence that private sector wallet holders have equal standard of Economic Crime controls to enable trusted transactions to and from the digital pound and commercial bank money. In this regard, we would like to better understand:
  - the oversight mechanism and prosecution/ enforcement capability of the FCA and SFO; and
  - the powers that will be afforded to the Financial Ombudsman Service to pursue and recover funds on behalf of consumers; and
  - if the Financial Services Compensation Scheme will apply to private wallets maintained by private non-Financial Institutions. We presume it may not be needed if the only money in the wallet is central bank money. However, if the wallet also has other forms of money there may need to be some technical delineation between the forms (again speaking to the consumer education narrative). Further operational safeguards might be needed for wallets to protect consumers if a wallet provider system goes down. Perhaps operational risk regulation and operational risk capital requirements.
- As PSPs have to comply with AML/KYC rules, they need to have visibility on the information on the payee/payer and this cannot be performed on all offline transactions, thereby increasing ML/FT and fraud risks. In addition, since PSP fraud prevention systems are fed by all transaction data, they need data also from offline transactions. Ultimately, if transactions are made without the involvement of PSPs then disputes cannot be managed by them.
- Some members noted that often the practice of shielding personal data generated when making certain forms of digital payments for privacy reasons is known to have an enhanced money laundering risk. As such, we should not introduce processes/systems that may enhance the ability of illicit actors to move funds undetected. There may be money laundering and sanctions concerns where data detailing owners of CBDC are not held on central bank ledgers and made available to PSPs for legitimate needs. Many members believe that the transparency of transactions and ownership is a fundamental requirement for preventing financial crime.

## 5.7. Customer protection, liability and compensation frameworks

Beyond protection from fraud and scams, the retail payments industry also deals with the complexities of liability, redress and dispute management. Indeed, this is often one of the most complex and challenging parts of the ecosystem to solve, particularly as incentives are often misaligned. The recent report from the JROC, for example, speaks to this point.

This issue is not alluded to a great deal in the consultation, but it will be of critical importance to the functioning and use of the digital pound. It needs thinking about right from the outset, and not as an afterthought. Within the current payments ecosystem, there are a variety of approaches to dispute mechanisms. In the cards system, for example, the schemes have matured over decades to manage these challenges. The sophistication of the systems and processes we see in place today is testament to the difficulty (and cost) of this issue. The use cases laid out in the consultation paper are today predominantly served by the card schemes. We strongly recommend that the BoE works with this market to understand how those systems are designed to manage disputes and redress today. Even if the BoE does not expect to be directly involved in that element of the system, it needs to be full cognisant of the challenges and consider how the design of the digital pound platform can facilitate good outcomes for consumers and businesses when there are disputes. It is not the role of the BoE to be involved in setting the disputes framework necessarily and there are market-led solutions. Dispute resolution services could play an important role as a value-added service for the digital pound.

As noted above in the section on use cases, focusing early phases on use cases like peer-to-peer payments might enable the BoE and industry to work through implementation issues relating to the technology and structure, before embarking on use cases that will bring with them these additional issues.

- It is possible that programmability might enable the option for payment on successful delivery (DvP), or payment on confirmation of acceptance of products. This might reduce the challenges around consumer disputes in some sectors; though thought will need to be given to reducing complexity for merchants, particularly around liquidity flows and first party fraud.
- The BoE should work with the market to consider what technical functionality should be built in from the outset to facilitate effective consumer dispute resolution and redress. We know from working with the firms involved in e.g. the APP fraud and scams work that managing investigations and disputes is a largely manual and highly intensive task. This is often linked to the difficulty in sourcing data from different parties about the nature of the transaction and the dispute. Any design that can build that data flow in from the start would lead to a big improvement in efficiencies and consumer experience/outcomes.
- One of the interesting questions raised in any discussion of consumer disputes is the concept of whether future payment systems need unilateral dispute protection. Many of the highest costs associated with providing a payment system relate to the costs of managing fraud and disputes. At present, consumers don't always understand what protections they get with different payment types. Often, they understand that card payments come with more protections and tend therefore to conduct bigger purchases this way. There are some categories of payments that consumers will likely always want to have more protection on (for example, purchasing a flight or holiday). However, there are others where users might be happy accept limited or even no protection (for example, purchasing their morning cup of coffee). One opportunity in the function of programmable wallets might be to enable more choice and differentiation about how and on which payments consumers are protected. This might in turn lead to innovations and different commercial opportunities.

Clearly, there would need to be some thought given to ensure that vulnerable or less sophisticated users do not simply opt for the lowest cost options. Again, detailed engagement with the payment systems and merchants should lead to valuable insights on this issue.

### 5.8. Offline use / substitutability with cash

The issue of offline payments for the digital pound raises interesting tensions. On the one hand, offline functionality seems an important element for making the digital pound a proxy to cash and for unlocking financial inclusion use cases. On the other hand, offline functionality introduces a number of significant functional challenges, fraud risks, and limitations for certain uses. We note that the outputs of the BIS Project Polaris<sup>5</sup> and the Offline Handbook will be helpful in taking forward analysis and the possible technological components for delivering offline in a way that enhances the availability of the Digital Pound but does not introduce excessive risks to the system. They may also assist in further consideration of the challenges around digital exclusion.

The consultation references the 'Contactless Transit Framework' as a potential insight into how offline payments could work. The Contactless transit proposition is that a customer travels on public transport using an EMV contactless card (or device such as a phone or wearable) which has been issued by their bank or card company. Building on the success of contactless payments on the Transport for London network, and in recognition of customer demand outside of London to pay using contactless, UK Finance's predecessor UK Cards Association ran a project from 2015-17 to develop a [Contactless Transit Framework](#)<sup>6</sup>.

The Framework does certainly point to some technical options for delivering offline payments, but it also speaks to a key element of how that has been made to work, which is through detailed contractual liability arrangements. In that model, issuers (i.e. PIPs) might need to underwrite some/all of the payments made offline, potentially in conjunction with a much, much longer list of merchants. As noted in our liability section above, there is a lot to think about on this topic and the risks in the context of the digital pound (in terms of amounts and how it might be used) are much more varied.

Other points raised by members on the theme of offline included:

- Further exploration of what is required and needed for "offline". Will it be treated as more of a backup functionality or as a separate feature of the infrastructure designed to enable specific use cases? The architecture of the feature and how it ties into the non-offline digital pound functionality requires further elaboration. It will also be important to consider whether a new liquidity management solution for offline is required. This should be a consideration of any future cost-benefit analysis.

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<sup>5</sup> <https://www.bis.org/publ/othp64.htm>

<sup>6</sup> The Framework includes three Contactless Transit Models – Model 1, single pay as you go (for use on bus); Model 2, pay as you go with capping (the TfL model, now implemented across the UK); and Model 3, a pre-purchase model (for long distance bus and rail). The Framework was developed to support transit operators' own implementation plans; to enable delivery of a consistent customer experience; and to help achieve interoperability across regions and transport modes. Models 1 & 2 were enthusiastically adopted by major bus owning groups across the UK, and Covid further accelerated the move to contactless away from cash. For rail, adoption of the PAYG Models (1 and 2) was considered too high risk, given higher average fares, so focus was on Model 3, but partly due to politics between the train operating companies this was not pursued. As this is a delayed payment system (unlike cash or prepurchase), the card issuer effectively underwrites the journey by taking the first £10 of liability i.e. where a customer has insufficient funds the issuer will still guarantee the transport operator the first £10 of a fare.

- It may be necessary to put limits on offline payments, so as to avoid fraud/social engineering and maintain same AML controls.
- Consideration needs to be given as to how to implement holding limits with offline payment functionality. Will separate offline limits be required and deducted from the online limit?

## 5.9. End users

The consultation focused largely on consumers and businesses as the end users of the digital pound. We have provided some specific comments on the civil society issues raised by the consultation below. We have also touched on some of the questions around use cases and incentivisation in earlier sections. These are all major considerations on the topic of end users. Given the relatively early stage we are at with the design of the digital pound, the detail of how end users would interact with and use a digital pound are not yet clear. However, during our industry discussions questions were raised on important themes that we would want to see addressed as part of the next phase of work. These include:

### Financial / digital inclusion (relevant to DP question 11)

- CBDCs are sometimes talked about in the context of inclusion. In some jurisdictions, particularly those underserved by the banking system or with less reliable infrastructure, this may be a benefit. However, in the UK, which has a strong and inclusive banking system, the benefits of a CBDC for further financial inclusion are harder to identify. In particular, the idea that heavy cash users would migrate to a CBDC seems unlikely. Much of the research<sup>7</sup> over the past decade or more on the reasons for the use of cash by consumers has been fairly consistent on the appeal for that minority – they like it for its privacy, its ease of use, for physical control of their outgoings, and to help them to budget. UK Finance’s own projections are that cash will continue to decline as a means of payment, “in 2031 there are forecast to be fewer than three billion cash payments made in the UK, accounting for around 6% of all payments”<sup>8</sup>.
- It may be possible that some of the value of a digital pound for financial and digital inclusion will come connected with (i) the opportunities for programmability and conditionality; and (ii) digital identity. Many of the future use cases for digital central bank and/or commercial bank money will be materially enhanced by the possibility of giving users greater control and transparency over their payments. For lower income/vulnerable consumers this will be particularly important (though there will be a digital literacy challenge to overcome).
- One issue the industry has been focused on for many years is that of access to basic banking. Some members have questioned how a digital pound would interact with the basic banking framework. Will there be an expectation that the digital pound offering is part of any basic bank account provision? Over time, will consumers that rely on basic bank accounts migrate to digital pound wallets instead and what might the implications of that be?
- To what extent, if any, would a digital pound provide an opportunity for enhanced access to the banking system for those persons who are currently ineligible for a bank account; e.g. disqualified persons under the Immigration Act 2014/16 banking measures and ineligible persons for a basic bank account under the Payment Account Regulations? Conversely,

<sup>7</sup> See e.g. <https://www.accesstocash.org.uk/media/1087/final-report-final-web.pdf>

<sup>8</sup> <https://www.ukfinance.org.uk/policy-and-guidance/reports-and-publications/uk-payment-markets-2022>



consideration could be given to how a digital pound could support refugees in crisis scenarios where bank account opening challenges typically exist due to providers' AML/KYC obligations.

- UK Finance and its members work tirelessly to support vulnerable customers. Over decades, and particularly in the last few years, many different policies and protocols have been introduced to the banking system as a safety net for vulnerable users. It is not clear what the responsibilities would be for PIPs with regard to vulnerable customers. Again, the data point here is that with less data able to be accessed, PIPs may find it harder to undertake some of the analytics that enable banks and PSPs today to be alert to potential issues and prevent foreseeable harm. Similarly, if end users moved away from their bank accounts entirely in favour of a simple payments wallet, it might be harder to provide them with the same duty of care.
- **(This section is relevant to question 9)** The consultation talks about the digital pound being available to non-UK citizens. In principle, this is an interesting use case and could help to unlock e.g. additional tourist spending or P2P payments and remittances. However, there are a raft of considerations connected with this proposal, including AML/KYC, money laundering, and flight of sterling abroad. For this use case especially, we think the BoE would get a good deal of benefit from liaising closely with other partner jurisdictions (the US and the EU, for example) to consider how reciprocity between identity/wallet systems might be facilitated. Non-UK PIPs and ESIPs offering Digital Pound wallets and services would have to meet the same regulatory, legal and design requirements as those domiciled in the UK, but it is unclear at this stage how this would work in practice. Any licensing regime would need the cooperation of the counterparty jurisdiction/s, not just for initial assessment and authorisation but also for ongoing monitoring and supervision. Full ID&V of wallet holders would also need to be undertaken and it is unclear which financial institution would be responsible for doing so. This will be particularly important for efforts to tackle fraud, AML and CTF, as well as complying with sanctions. It is also not clear if UK PIPs and ESIPs offering Digital Pound wallets to non-UK residents would need to be domiciled and/or licensed to do so in their respective jurisdictions. Notwithstanding holding limits, it would be sensible to also assess the flight risk of Pound sterling abroad that could result from non-UK resident access to a Digital Pound. There is evidence that citizens in countries with fluctuating currencies have transferred assets to non-traditional money forms such as Bitcoin to retain value. Non-UK residents from these countries may do the same with the Digital pound, which may affect exchange rates and market forces, with implications for financial stability.

#### 5.10. Merchants

- The issue of incentivisation for merchants to use the digital pound is highly complex. The payment acceptance market is competitive and for larger merchants especially payment acceptance is a core part of their business model. Therefore, the issue of the overall impact of a CBDC for merchants, including cost and rationale/incentivisation is important.
- As part of the impact assessment for a digital pound, a full cost model is required to show the relative cost of a CBDC and associated liabilities, including merchant terminal upgrades. It is a huge endeavour that will involve upgrading and certifying many different types of terminals, distribution in acceptance networks, contracting with merchants, and upgrading backend systems. It would be interesting to understand whether public funding will be made available to facilitate what will be significant economic costs and investment?

- We also believe that given the reliance on hardware and devices, the BoE will need to consider the use and requirement for access to the secure elements of mobile phones and what may be required from phone manufacturers/telcos?
- We have touched earlier on in our response on the issue of liability frameworks in any future digital central bank money system. This is a very important issue for merchants, particularly where they need certainty on transaction finality and availability of funds.

#### **5.11. Data privacy / GDPR (relevant to DP questions 3, 4 and 5)**

The consultation states that neither the Government nor the BoE would have access to digital pound users' personal data except for law enforcement agencies under limited circumstances, prescribed in law, and on the same basis as currently with other digital payments.

Overall, we agree with this proposal. We also agree that the BoE should be able to access aggregated data to get insights for fraud prevention, and to better understand consumer behaviours (at the population level, not the individual level), etc. We think it is appropriate in theory for the Bank to have access to this information on an anonymised basis.

However, we have several points of nuance to raise:

- Some members believe that the assertion that 'the BoE will not see payment data' cannot be easily reconciled with the claims that digital pound holdings are, ultimately, a claim on the BoE, and that the BoE is continually in control of the amount of digital pounds in circulation. This requires further elaboration and is a key point to overcome doubts and fears in civil society about the central surveillance capabilities of the digital pound infrastructure.
- There is both technical and legal uncertainty about when data initially associated with individuals ceases to be 'personal data' from which individuals can be identified. The legal tests are not black-and-white; technologies exist that can at times reverse-engineer and 'de-anonymise' anonymised datasets and extract personal data from them. These technologies are likely to improve over time, meaning that even state-of-the-art systems put in place at the outset might become unreliable. A process of continual review and update would be necessary to maintain confidence in the effectiveness of the anonymisation applied to BoE-held data.
- The approach taken would also need to be able to adapt to changing potential uses of BoE-held data. For example, it may be appropriate to start sharing certain anonymous data with other authorities for cyber risk management purposes.

We fully appreciate that the provisions around data and privacy in the consultation are set out purposefully to make clear what the BoE does and does not expect to see with respect to data, and therefore how it proposes to respect the need for privacy (as opposed to anonymity).

However, we think that the proposals go too far in restricting the data that would be available to PIPs and EISPs for legitimate uses. At present, customers do not have the proposed level of customisability of data use, as GDPR does not require it. Furthermore, the proposed approach to consumer control risks bringing unintended consequences.

We understand that the Information Commissioner's Office (ICO) will be providing a focused response to this consultation, and we welcome that additional clarity. We utilised our specialist UK

Finance group on data ethics and privacy to collate some specific inputs on this issue. Some reflections can be found below.

### Analysis

The discussion paper states that firms should only see / access data associated with digital pound transactions that is necessary for legal compliance purposes (AML etc) and for actually processing transactions. As we have understood the proposal, consumers would have the option to opt into giving more data access than this. The split in the discussion paper between 'legal compliance' and 'commercial' data processing is not so clean in practice.

The proposal in the consultation paper is a much tighter framework than the one set up under GDPR, though it is unclear whether this reflects an actual intent to constrain all of the use cases that would likely be impacted. We note that the drafting of PSD2 sought to enhance data protection by including wording requiring customer consent to data processing in several places, which created confusion and necessitated complex guidance in both the UK and the EU to allow firms to navigate it in practice.

### GDPR framework

GDPR Article 6 lays out the six legal bases available to firms, one (or more) of which must apply in order for personal data processing to be legal. The BoE proposal appears to anticipate allowing intermediaries to rely on three of these. Paraphrasing, these are:

- Where processing is necessary to enter into or execute a contract.
- Where processing is necessary to meet legal obligations.
- Where processing has been consented to by the individual.
  - (It is important to note that 'consent' under GDPR has a specific meaning and only applies where the processing is entirely optional to the individual. If 'consenting' is a prerequisite to access a service, the consent is invalid. As such, it is primarily only relied upon for 'optional extras' such as marketing, or where required under other laws, such as in the context of cookies. See articles 4 and 7 of GDPR).

This model excludes three legal bases available under GDPR. Paraphrasing again, these are:

- Protecting the vital interests (life) of the individual.
- Processing necessary in the public interest.
- Processing necessary for a 'legitimate interest' of the firm or a third party, subject to a 'balancing test' whereby the firm must weigh up its interest in data processing against potential negative impacts on the individual.

The 'balancing test' required for reliance on legitimate interests provides a strong consumer protection – which does not apply to processing based on consent – as it obliges firms to consider the impacts on individuals and mitigate risks. Furthermore, where a firm relies on legitimate interests, the individual has a right under GDPR Article 21 to object to the processing. This provides an additional protection and means of control to the individual, though the firm can override the objection if it has a strong enough justification.

We also highlight, as it was left somewhat unclear in the discussion paper, that the same data can be used for multiple purposes and be processed under multiple legal bases. For example, the same data could be processed to make a payment for the customer (execution of a contract), AML compliance (legal obligation) and check for fraud (legitimate interests).

## Impacts

Restricting firms to only three of the six legal bases available under GDPR would reduce the amount of data available to firms. Furthermore, certain use cases for the public benefit and/or with low privacy impact would likely become infeasible.

'Vital interests' could conceivably be applicable at times, while 'public interest' is generally only available to public sector entities. However, 'legitimate interests' is a key legal basis that is relied on extensively by firms for a range of data processing activities.

In terms of commercial applications, it is unclear why payments data, specifically, would be subject to tighter controls than other personal data processing in the UK. Where a commercial use case passes the balancing test, it is unclear why processing of payments data, uniquely, should not be possible. In addition to the fact that this distinction is perhaps arbitrary, it raises level playing field concerns. As market players spread into other sectors and sectoral distinctions become less meaningful, there is a risk of competitive disadvantage if firms operating solely as financial services firms / PIPs cannot use their payments data for commercial purposes but firms operating across sectors with other sources of customer data (e.g. a social media platform offering financial services products) might be able to get equivalent or better insights from their non-financial services data sets. It might be helpful to aim for a single economy-wide Smart Data approach. Collaboration with ICO and other authorities (eg: through the Digital Regulation Cooperation Forum) could develop clear cross-sectoral expectations on this issue, rather than potentially creating a gold-plated approach for the digital pound.

Beyond directly commercial applications, legitimate interests is often relied on for a range of other processing, which is intended to achieve public policy goals in the public interest, and / or with low privacy impacts:

- Training models, including for AML and other compliance purposes.
- Market analysis and product improvements.
- Protecting vulnerable customers.
- Compliance processing.
  - Where firms have latitude as to how best to comply with a high-level obligation, the processing would not always be considered 'necessary for compliance with a legal obligation' so 'legitimate interests' must be relied on. In other instances, firms may go beyond legal minimums, for example taking extra steps to protect customers from fraud. For example, sharing data with CIFAS isn't technically a legal obligation but firms do it as a part of general fraud prevention.

We understand the goal of increasing consumer control over their personal data. However, by preventing firms from relying on 'legitimate interests' (in particular), the proposed approach would be likely to reduce firms' ability to use data for these and other purposes. Where data processing is based on consent, it must be 'off' by default and only activated when positively opted into by the individual. Given the tendency for people to not change default settings, this would lead to many not being covered by measures designed to protect against fraud, protect vulnerable customers, etc.

Similarly, if only the data of individuals who have actively opted in / consented can be used in model training, the available data may be insufficient to develop an effective model. At a minimum, model accuracy will be reduced due to the lack of data. There is also a risk of creating unfair bias

in the model outputs, in instances where certain groups are less likely to consent and are therefore underrepresented in the training dataset. This will impact not only models used for commercial use cases but also models used to protect customers (eg: from fraud) or for compliance purposes (eg: AML).

### Alternative options

In practice, the starting point should be that the data that is available through the retail payment systems today should be available for the digital pound. This will ensure that data analytics systems that are used to prevent fraud can continue to function well, and will help to support a realistic commercial model. As noted above, collaboration with the ICO and other authorities would assist, particularly as we move towards a Smart Data economy.

If the GDPR framework alone is considered to be insufficient, alternative privacy-enhancing options include one or more of the following:

- Building tools into the infrastructure to facilitate objections to processing under Article 21 of GDPR, providing a qualified 'opt out' ability, but allowing data processing to be 'on' by default.
- Industry guidance by the ICO, or indeed a statutory code using the framework under section 128 the Data Protection Act 2018, setting out safeguards and reasonable data use.

These options would be more adaptable to innovation or changes in regulatory expectations, and would more readily allow for use cases that are socially beneficial, commercially valuable and proportionate, and / or low privacy impact.

These further comments on PETs are relevant to question 6. Building on our comments above, we think that it is positive to build privacy-enhancing technologies (PETs) into the Digital Pound infrastructure. However, it is first necessary to confirm the policy settings about permissible data uses and legal bases before it is possible to give a view on specific PETs.

As outlined above, it may make sense to build tools for consumers to more easily object to data processing, but this would need to be thought through carefully to avoid unintended consequences, such as customers being manipulated into deactivating fraud prevention measures. (Indeed, if they opt out of protective data processing, what are the implications for them if they are defrauded?)

If customer control tools are ultimately built into the system – whether on an opt-in or opt-out basis – these should not apply to *all* use cases beyond legal compliance / contract execution.

Whatever approach is taken, it will be necessary to ensure a high degree of adaptability, so that the entities with access to data can be changed following a suitable policy process.

## **5.12. Use of the digital pound as a bridging asset**

The consultation paper makes mention of the use of a digital pound as a bridging asset for future payment stablecoins, but also states that it would need to be differentiated from them, in both legal basis and function. Today, one of the main use cases for stablecoins is for proprietary crypto traders to use as a store of value between trading positions. It is therefore interesting to understand whether the BoE envisages digital central bank money (or other digital 'regulated liabilities') being used for this purpose.

In terms of stablecoins being backed by central bank reserves, we note that this would have to be considered carefully. A stablecoin with central bank reserves and no parallel holding limits for example could put further pressure on money leaving the banking system, compounding the potential financial stability risks created by a digital pound, and the consequent impacts to the availability and cost of credit for the economy.

### **5.13. Impacts on physical cash**

Access to physical cash remains important to a significant minority of the UK. The industry is committed to facilitating access to cash for those that need it. We understand that the proposals for a digital pound are not intended to replace physical cash but to complement it. Current estimates are that cash will reduce to less than 6% as a percentage of all payments by 2031<sup>9</sup>. The reasons for the gradual decline to a ‘less cash’ society are numerous and complex.

As part of analysis regarding the introduction of a digital pound, the BoE should consider what further pressures this may apply to physical cash use in the UK. In principle, if the digital pound is designed in such a way so that it can realistically fit use cases currently best suited to cash, then that pressure may be amplified. Equally, it may be that for those consumers who currently strongly prefer cash (for reasons of convenience, simplicity, tangibility, and privacy), a digital pound may be unlikely to offer any particular attraction.

The UK cash ecosystem is already under some strain owing to a combination of fixed high-cost infrastructure and declining use and demand. If the BoE designs a digital pound that puts further downward pressure on cash use, then this may accelerate some of the challenges being experienced. The UK cash industry, as represented by the UK Finance Cash Services unit for example, looks forward to continuing to work with the BoE and HMT to consider how the UK can continue to benefit from a cash infrastructure and ecosystem that is resilient, efficient and sustainable, and support access to cash for those that need it.

### **5.14. Tax**

While it may be too soon to consider the taxation implications of a CBDC, UK Finance members were keen to ensure that this important element was not forgotten in ongoing discussions. There are still a number of design questions that would have a material impact on the tax implications, but we have included some high-level comments.

- The starting point from a corporation tax perspective would be to understand whether the digital pound is legally “currency” or “money” in the way that Sterling is. We assume that it would be. If it is classed as “currency” or “money” for accounting, legal, regulatory purposes, then there may not be many specific tax issues.
- If it is defined as “digital money”, or something that is not interchangeable with “traditional” money, then there could be potential tax questions which would need to be addressed; or the tax legislation could be amended to essentially state that the digital pound will be treated in the same way as normal money for tax purposes. Equating the digital pound to traditional Sterling should mitigate most of the tax issues that are relevant to e.g. cryptoassets.

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<sup>9</sup> UK Finance Payments Market Report 2022

- If the digital pound were classed as a new form of money / currency, then it might be a chargeable asset for capital gains tax purposes. If it is a chargeable asset, that could cause a significant admin burden for taxpayers.
- It would be useful to have confirmation that the digital pound would be a HQLA.
- The consultation states that private sector digital wallet providers will not hold end users' funds directly on their balance sheets. In which case, there would be no bank levy impact. If this design approach were to be modified, then further clarity would be required as to whether the digital pound is excluded equity / liability for bank levy purposes (like e.g. protected deposits, FSCS liabilities, clients' money all are).
- We assume that the Digital Pound is a chargeable consideration for stamp duty purposes (e.g. if UK shares are bought with digital pound, then there is stamp duty on the acquisition of those shares).
- We assume that the exemption from digital services tax for online financial marketplaces should apply to transactions involving the Digital pound.
- On the VAT side, if the "digital pound" can be exchanged for "traditional" currency then I would expect it to be treated as VAT exempt – following the principles established in *Hedquist*.

#### **5.15. Legal basis for a digital pound, role of the central bank, ethics, and other considerations**

- One reading of the FSM Bill is that it may give the primary legislative framework for a digital pound. UK Finance Members believe that for an evolution of the kind envisaged for the digital pound, further primary legislation should be required. Members believe that the implementation of something of this scale and import requires parliamentary scrutiny.
- Impact on the roles of central banks – Members also believe that the BoE as the UK's central bank needs to be very clear about the impact of a CBDC on their own role in the economy and the governance of the country. Most central banks have charters relating to the monetary management of employment and keeping inflation at a manageable level. The introduction of a CBDC may usher in an expansion of tools from the monetary to fiscal side. This may change the dynamic, particularly with regard to the relationship with ultimate end users in the economy. A CBDC may facilitate a raft of options for a future government e.g. direct fiscal stimulus or direct taxation, and could allow the central bank to cut interest rates below zero. There may also be an option to selectively enhance the impacts on different people/businesses (e.g. restaurant owners to receive a positive rate of interest vs. cash heavy tech companies). We accept that this is not the current proposal of the Bank, but we want to flag this transition from control over monetary levers to fiscal ones. The consequences and impacts of this need to be thoroughly considered by the Bank, wider society and government. We also note that, taken in the round, the proposals for a CBDC do not necessarily fully align with the new ethos for regulatory scrutiny and oversight as outlined in the Financial Services and Markets Bill (FSMB) as it gives the central bank a determining force in the retail payments market without any associated scrutiny. Members would like to hear more from the government about how oversight and scrutiny of a CBDC would be applied.

- Another consideration for the BoE is that regardless of efforts to create distinctions between the role of the central bank and the role of the private sector in distributing and facilitating the digital pound, the Central Bank will inevitably be seen to be culpable and find itself under far higher political and societal pressure than today. Today, financial and payment institutions are at the front line for making difficult decisions about payments: balancing fraud risks with market accessibility and implementing the law around what can and can't be purchased. If a digital pound were implemented, the BoE may also find itself subject to political pressures. The BoE should therefore think carefully on how it expects to navigate this future complexity and what safeguards and backstops can be put in place in advance.

## 6. Alternative approaches

The below is a non-exhaustive look at some possible alternative network configurations that may deliver on many of the objectives that the BoE hopes to achieve, including the provision of a service at lower cost, better liquidity management and reduction of existing pain-points in the system, including in cross border transactions.

### 6.1. RLN

- A subset of UK Finance members came together May-June 2023 to explore the Regulated Liabilities Network (RLN) concept.
- The RLN concept could bring several core factors together, including: atomic settlement, 24/7 availability, programmable functionality (e.g. leveraging locking/unlocking), and data+money. These factors together are the hypothesised value of RLN.
- As set out in the whitepaper, the RLN concept is “*a regulated Financial Market Infrastructure (FMI) that would operate a shared ledger that records, transfers, and settles regulated liabilities of central banks, commercial banks, and regulated non-banks.*”
- The Discovery Phase built on the original [RLN work in the UK](#) and sits alongside the [RLN work in the US](#).
- The output of the Discovery Phase will be a report, which will be shared more widely in due course.
- Members and UK Finance are now considering whether to move on to a possible Proof-of-Concept to further prove/disprove the benefits of a RLN.
- The RLN Discovery phase tested some core hypotheses:
  - Can shared ledger technology enable us to provide a more programmable payments and settlement, including with both central bank money and commercial bank money?
  - Can existing legal instruments be represented and transacted on shared ledgers without changing their legal nature?
  - Shared ledgers are able to represent multiple digital assets on a common infrastructure – could this enable us to build a less siloed financial infrastructure?
  - Could CBDCs be integrated into financial markets more easily and could this include private market infrastructure?
  - Can a shared ledger reduce frictions and delays in wholesale markets to enable more efficient collateral movement, especially in periods of stress?
  - How would RLN integrate and interoperate with the existing payment rails and market infrastructure?
  - Can bringing data and money closer together enable faster KYC, AML and sanctions processing?



- 6.2. Partior: Partior<sup>10</sup> is an inter-bank network that leverages blockchain technology and enables real-time multicurrency cross-border value transfer. It is built as an open industry platform, developed to transform and accelerate interbank value movements, allowing participating entities to transact 24/7 directly and securely with each other on a single, shared ledger. The benefits of a system like Partior are lower costs, optimisation of liquidity, and reduction of other pain-points related to payment processing.
- 6.3. As another example of a digital regulated money initiative, FIS has launched FIS CBDC & Digital Currencies Connected Ecosystem™, which allows CBDC and digital regulated money to coexist on a shared hierarchical ledger. FIS platform can be used by banks to issue digital regulated money (tokenised bank deposits) and any other type of digital asset including central bank money, cheque or money market funds.

## 7. Technology paper reflections

The Technology Paper accompanying the consultation is a useful document and gives insights into the areas that the BoE will be looking at more closely during the design phase. This helps industry to focus and target its own areas of analysis.

The Technology Paper also reflects one of the overarching challenges of designing an infrastructure for the digital pound, namely how high the technical and operational hurdles of the system would need to be (perhaps rightly so for core national critical infrastructure). This will mean that the firms that are able to invest the resources to meet these requirements may be more limited. This is an important consideration. The infrastructure of course needs to be highly stable and resilient. It might be that, as is the case in the retail payment systems today, a hub and spoke model might be more appropriate so that not every stakeholder has to invest in the same very high levels of infrastructure development.

UK Finance is closely involved in work on behalf of the industry in several of the key topics raised in the Technology Paper. We have taken the opportunity to provide some initial thoughts against some of those topics here.

### 7.1. Operational resilience

As the BoE will know, the financial services industry takes operational resilience as one of its most serious responsibilities. There are well-established mechanisms, governance and legislation designed to ensure the continued high resilience of the system. We suggest that more work be done to understand how we can leverage the industry's existing governance to support resilience.

- We suggest the BoE would seek to leverage the existing Sector Response Framework (SRF) which is a collection of organisations, guidelines and capabilities that can respond concurrently if the impacts of crisis (e.g., a significant breach) threaten to be/or are sector-wide. It can also be invoked on a modular basis e.g. only certain groups may stand up depending on the nature of the incident e.g. cyber incident or payments only.
- The following response groups exist and may stand up to coordinate information sharing and actions amongst and between members: UK Finance Business and Operational Continuity Committee (BOCC), UK Finance Incident Communications Group (ICG) and Financial Sector Cyber Collaboration Centre (FSCCC).

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<sup>10</sup> Partior <https://www.partior.com/> A global, independent company borne from industry collaboration, Partior was founded in 2021 by Temasek Holdings, J.P. Morgan and DBS. Standard Chartered joined in 2022 as a founding shareholder.

In 2021, we also responded to the Cabinet Office calls for a National Resilience Strategy and some of our reflections from that process are relevant here.

- A collaborative approach to building national resilience will help to strengthen the UK's ability to prevent, adapt, respond to, recover and learn from operational disruptions. Enabling collaboration across and between industry sectors is an integral part of building the resilience of the UK economy and should form the cornerstone of the Government's future strategy.
- Setting the right resilience approach for the digital pound would mean: identifying important business services; setting impact tolerances against those business services; and then mapping, documenting, and testing the people, processes, technology, facilities, and information that supports them.

The other element we called out in that response to improving the resilience of the UK was putting in place frameworks that support collaborative action to address systemic risks and recover from operational disruptions. The mapping of key interdependencies across services and sectors in an end-to-end approach is essential if we are to prevent and respond to the most serious disruptive events, and this can only be achieved through collaborative partnership within and across sectors, and with the support of the central Bank, regulators, and the Government.

## **7.2. Quantum computing**

- Quantum computing is a game changing technology. The issues it is now creating present the financial services industry (and indeed other industries) with both threats and opportunities. The ability to harness quantum computing power will almost certainly give a significant competitive edge. The sector as a whole will need to deal with the security implications of quantum and we agree that it is right that the BoE considers quantum carefully as it looks in detail at the design of a critical infrastructure fit for 2030 and beyond.
- "Post Quantum Cryptography" (PQC) algorithms may need to be pervasive at every level of the Digital Pound – participants in the Digital Pound infrastructure need to account for the potential for threats posed from technology which has yet to be full operationalised. While NIST's PQC programme is yet to land on a winning algorithm for the protection of data, the strongest current encryption options should be utilised wherever possible to delay or deter "store now – decrypt later" type attacks.
- We understand that government departments are also looking closely at this technology. We understand that BEIS is initiating a regulatory review of quantum, and encourage the BoE to make connections on that project.
- We are also working with members to advocate for a suitable legislative and regulatory environment that enables the technology to be harnessed effectively and mitigates the risks proportionately.
- We are setting up a Quantum Committee under our Digital, Tech and Cyber Product and Service Board to steer the direction of UK Finance's policy activity. We expect to develop further thought leadership in this area.

## **7.3. API harmonisation and intersections with Open Banking**

We are aware that the BoE is already doing significant work on APIs in collaboration with the BIS London Innovation Hub, Therefore, we have kept our comments here light at this stage. However,

given the importance of this technical element, and the significant work of the industry on other API architectures, e.g. Open Banking, we look forward to working more closely with the BoE on this.

We are advocating for open-source API standards delivered, maintained and governed in collaboration with industry. There would need to be a Trust Framework for PIPs/ESIPs – this could be provided through the market based on a standard. We wouldn't necessarily invite further concentration risk on the OBL directory which will be reviewed as part of a wider functional review required by JROC of OBL successor/Future Entity functions.

#### **7.4. Cyber**

Security by design is paramount - The security (confidentiality / availability / integrity) of the digital infrastructure that underpins any CBDC must be “baked-in” and not “bolted on”. As a novel concept, the integrity of the entire CBDC program is reliant on the trust that its users can reasonably place in it. To build and maintain that trust, organisations and individuals must know that security has been a core consideration throughout the program and that lessons learnt from comparable endeavours have not been ignored.

#### **7.5. Cloud and third party**

Robust third-party risk management practices will be critical for the successful functioning and overall security of the CBDC. It is possible that elements of the digital infrastructure for a Digital Pound will be, in part, reliant on public cloud services. The ubiquitous nature of the three “hyperscaler” public clouds in an increasing range of critical national infrastructures necessitate an unrivalled resilience posture. The Digital Pound will only add to the importance of the resilience of these entities, but may also be reliant on a vast swathe of other third parties which fall outside of the current (and proposed) regulatory perimeter. Robust third-party risk management practices will be critical for the successful functioning and overall security of the CBDC as existing regulation is highly unlikely to provide the level of assurance required.

## 8. Annex 1 – further detail to support the commentary around alternative consumer holding limits

- We have provided alternative evidence-based consumer holding limits in our response. These are based on a range of data (please see the table below). Our driving aim has been to suggest alternative limits that better protect financial and economic stability, reduce unintended consequences, whilst also maintaining usability and functionality.
- Our full response above gives the wider narrative for why we believe that the current proposed holding limits do not strike the right balance between financial stability and functionality/usability. As we noted there, there is not ubiquitous support for the precise figures in our proposed alternative, but there was strong support for this lower band.
- Our response does not go into as much detail on the risks of deposit substitution in terms of credit creation/financial instability, as these were covered in detail in our Credit Creation report last year, and we hope to revisit/update that report further. However, to reiterate, we do see significant risks and implications:
  - Implications for financial stability: Heightened stress vulnerability of the financial system – due to increased flightiness of deposits and greater reliance on wholesale funding
  - Implications for credit creation: Credit creation capacity diminished – due to displacement of deposit funding and larger holding of high-quality liquid assets to account for the aforementioned increased flightiness of deposits
- In undertaking the analysis for this section, it was also clear how nuanced the impacts of limits would be for each institution. The BoE should not expect that the e.g. the response to deposit substitution would be standard across all firms and this risk needs to be factored in.
- We understand that more work will be done in the design phase to consider how limits might work in practice, and of course this would also be impacted by technical implementations of any funding/de-funding mechanisms, for example.
- The data analysis that we have done does not at this stage include analysis for merchant limits or other options like transaction limits. This is, however, very important, particularly given the higher deposits that businesses will likely have.
- We are aware that the ECB has been much clearer with the market in the Eurozone about protecting financial stability. It would be valuable for the BoE to take a similarly forthright approach about the importance of financial stability and what measures they can take to reassure the market.
- As the data table below demonstrates, a range between £3-£5k per month holding limit would cover the average total consumer payments (even acknowledging some inevitable rise in these figures since the data was collected in 2021 owing to inflation). This is especially true when you look at figures for spontaneous consumer payments, which are likely to more closely represent the types of payments that a digital pound might cover. When measured against the ONS data, this range would also comfortably cover the mean monthly expenditure.
- As shown in the table, this range also accommodates the mean and median disposable income amounts.
- As part of the further work we expect to undertake on holding limits, we expect to explore in more detail how revised limits might impact on financial stability, including e.g. lower deposit outflows and reduction in the risks to credit creation.

## UK Finance Collated Data



Monthly and Weekly averages for consumer payments and disposable income.

Total consumer payments - average per adult per month- 2021		Spontaneous consumer payments- average per adult per month 2021		ONS - Mean weekly expenditure and disposable income (latest data is for 2021)					
		(Excluding regular bill payments such as mortgages and utility bills)		Year	Mean weekly expenditure	Mean weekly disposable income	Mean monthly expenditure	Mean monthly disposable income	Median disposable income
Total	£ 2,876	Total	£ 1,722	2011	£ 558	£ 836	£ 2,415.83	£ 3,623.23	£ 2,373.42
Cash	£ 89	Cash	£ 70	2012	£ 549	£ 813	£ 2,378.13	£ 3,522.74	£ 2,319.00
Cheques	£ 17	Cheques	£ 10	2013	£ 567	£ 800	£ 2,457.00	£ 3,468.31	£ 2,378.67
Debit Card	£ 1,053	Debit Card	£ 925	2014	£ 575	£ 840	£ 2,492.10	£ 3,638.48	£ 2,481.83
Credit Card	£ 305	Credit Card	£ 244	2015	£ 571	£ 864	£ 2,474.33	£ 3,743.48	£ 2,525.25
Remote banking	£ 562	Remote Banking	£ 457	2016	£ 572	£ 880	£ 2,480.40	£ 3,811.60	£ 2,593.42
DD	£ 681	Other	£ 16	2017	£ 596	£ 874	£ 2,580.93	£ 3,786.90	£ 2,531.42
SO	£ 151			2018	£ 603	£ 863	£ 2,613.43	£ 3,737.59	£ 2,552.08
Other	£ 18			2019	£ 606	£ 862	£ 2,624.27	£ 3,735.25	£ 2,656.92
				2020	£ 592	£ 909	£ 2,566.63	£ 3,938.35	£ 2,710.75
				2021	£ 482	£ 894	£ 2,086.50	£ 3,872.74	£ 2,695.75

\*Disposable income is defined as the amount of money households have available for spending and saving after direct taxes have been accounted for.  
<https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/expenditure/bulletins/familypendingincometomarch2021>

9

### 9. Annex 2 – The need for robust modelling and simulation as part of the digital pound design phase

UK Finance has had some initial discussions with members about the need for simulation/modelling of the digital pound in order to better understand the impacts, and what levers might have what effects. For any new critical infrastructure developments, we believe that an impact assessment is required, and that this can only be effectively delivered by the central bank if it has a reasonable view of the range of different impacts that might be felt across this complex ecosystem.

In the EU, the German Bundesbank commissioned FNA, for example, to put together a comprehensive agent-based simulation model of the digital euro. We believe a similar approach would have a lot of merits for the UK.

A retail CBDC simulation platform for the digital pound could:

- Create a customisable Agent Based Model (ABM) aligned to the UK's economic structure and to the specific 'questions' the UK wants 'answered' and parameterised in the model (i.e., questions around credit creation, impact on deposits, impact on payments mechanisms, and other financial stability points).
- The software and model would help to test parameters, output results, and create dashboard style outputs for use by individual stakeholders, or stakeholder cohorts.
- Customisability of the inputs would be key to enable the BoE and stakeholders to consider the optimal balance of risks versus opportunities, and without the risks of unintended consequences.

## 10. Annex 3 – comparison with the Digital Euro

In this annex we have provided a summary of stakeholder views on the digital euro. Given the digital euro work is further ahead than the digital pound we think it is helpful to reflect some of the market responses to that project here, as they are informative for the UK context as well.

On the topic of holding limits: It is noted that the ECB figure had been arrived at based on an estimate of the average amount of cash held by citizens across the EU. Limits are therefore focused on equivalent cash holdings.

We also note the ECB Kantar survey regarding the digital euro, which provided some useful end user perspectives:

- Most participants showed openness to trying some of the digital wallet features presented.
- Younger people were more likely to show willingness to adopt, or to at least try out, the digital wallet, while older respondents were slightly more wary. However, uptake of the digital wallet also appeared to depend on how it was introduced, and the role local commercial banks played in the process.
- The underbanked category was the only target group that felt uncomfortable with the idea of adopting a new digital payment solution. The willingness of merchants to adopt a new payment solution was firmly linked to customer demand and costs.

Finally, please find summarised here the European industry key points raised in response to the ECB's thematic consultations.

### European industry reflections on ECB thematic consultations

Use prioritisation	Case	<ul style="list-style-type: none"><li>- For a digital euro to <b>complement the current payment offering and not compete with it</b>, it should be <b>functionally different</b> from existing payment solutions and equipped with a sustainable remuneration model.</li><li>- A digital euro should <b>enhance and support innovation and should not be limited and targeted to the traditional use cases (P2P, PoS and online)</b>. It should also be <b>future-proof</b> and it should be explored how it could contribute to meeting the few unmet needs in the market today – such as offline person-to-person payments, M2M, IoT, micro payments.</li><li>- <b>Private-public cooperation is essential</b> in the development of a digital euro and would benefit the EU economy as a whole.</li></ul>
Foundational options	design	<ul style="list-style-type: none"><li>- <b>The industry suggests a two-tiers model for competitive features</b>, especially relating to <b>programmability</b>: a first tier of programmability linked to policy decisions (such as limits and caps) governed by the Eurosystem; a second tier enabling the provision of innovative services by PSPs that could be shaped according to market needs, for both retail customers and corporates.</li><li>- Industry agrees with the ECB that <b>full anonymity for transactions is not a desirable feature</b>. A programmable digital euro could allow to set rules of progressive privacy/disclosure of information on transactions and build those rules intrinsically in the digital euro.</li><li>- Should regulated PSPs role in the digital euro be equivalent to their role in the existing payment system, access to transaction</li></ul>

data is necessary so that they can continue complying with their legal obligations.

- Agrees that the digital euro should not be used as a form of investment/store of value on a large scale. Therefore, a digital euro should be introduced with a fixed upper limit on holdings. A digital euro should be provided, at least in its “basic use”, with very stringent hard caps built in by design and not only set legally, as a legal cap might be easily relaxed in times of crisis.
  - **A holding limit is a foundational requirement in support of the financial and monetary stability as it prevents uncontrolled deposit outflows into the digital euro.**
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#### Distribution model

- Any approach should allow for **evolution and expansion over time** to leave room for flexibility and innovation by market operators.
  - A key point is the business model associated with digital euro distribution and how it could be facilitated through a **scheme** – question of the fees for compensation of private companies’ services in the scheme.
  - **The scheme role should be to set the technical standards that would ensure the interoperability** of various payment solutions, which could then be developed and operated by the private sector.
  - The decision to introduce a retail digital euro will be based on a strategic political motivation that faces short- to mid-term economic trade-offs, a close public-private cooperation should try to manage the resulting discrepancies and mitigate or compensate for adverse commercial effects.
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#### Funding and de-funding and settlement models

- The industry agrees with the ECB’s basic ideas on **making funding and defunding the digital euro wallet as easy and as automated as possible**, while also enabling intermediaries to offer additional services.
- For these functionalities to work in a seamless, safe and resilient manner, a **commercial bank account needs to be connected with the digital euro wallet at all times.**
- The industry considers the **automated waterfall functionality** (automatic defunding for post-transaction amounts exceeding holding limit) crucial in terms of effectively **implementing a holding limit for the digital euro.**
- **Funding and de-funding should only be possible when a device is online** or connected to an online ATM – in case of device malfunction, alternative processes must be in place - to ensure that the **digital euro in circulation is accurately known** at any point in time.
- To offset the **risk of fraud: offline devices** would need to be online at specific intervals to run background checks; there should be **an upper limit for offline usage of the digital euro that should differ from the cap on holdings.**
- As for all other aspects, need to understand the **AML/CTF rules** that will apply to offline devices / assess options against AML/CTF risks.

- Implementing the funding and defunding functionalities in a safe and resilient way means significant investments for intermediaries into an entirely new infrastructure. Technical solutions should be identified and developed in a strong **public-private partnership** to make the solutions in use **easy to implement, understand and interoperable**, as well as lowering the investment costs for each individual intermediary.
- Some clarification is still expected on several topics: **post-settlement activities** should exclusively be undertaken by intermediaries, **check of limits** (who and how), **user wallets and sources of liquidity** (should be made clear that same source of liquidity can be linked to more than one wallet and that linking wallets to a source of liquidity is an optional feature and not a mandatory one).
- **ECB preference for a highly centralised validation and settlement model: the industry questions whether it would be a good choice with regards to scalability, performance, operational risk and resilience.**
  - o achieving full transparency over the amount in circulation for the ECB to maintain control over its balance sheet could also be achieved in a decentralised model
  - o continuous settlement of central bank money could raise operating costs for both the Eurosystem and intermediaries
  - o a highly centralised approach could be in conflict with both legal and supervisory principles that aim at addressing commercial and operational adverse effects resulting from a concentration of tasks
  - o privacy concerns could arise by the fact that information sent for validation and settlement are sent to the Eurosystem
- The digital euro should be subject to **similar security and operational resilience requirements as any other payment service currently available.**

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Programmability

**The digital euro must become a complement to existing forms of payment** and should allow from the start of issuance for intermediaries to develop programmable payments. **Agree with ECB that programmability should not be understood as programmable money, but rather as programmable transactions based on smart contracts.**

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Scheme access criteria and intermediary function

- Agree that **only regulated and supervised PSPs authorised to offer payment accounts should be able to intermediate the digital euro.**
- **No PSP or type of PSP should be obliged to distribute the digital Euro.**
- If the distribution of digital Euro requires a direct access to the Eurosystem infrastructure for PSPs that currently do not have such access, it is key to **set the criteria for such access.**
- All intermediaries must be subject to the same level of rules, obligations and supervisory practices.
- **Basic services to be provided by PSPs** should be onboarding,



funding and defunding of the wallet, waterfall link with bank account and digital euro transfers.

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End user onboarding and digital euro access and holdings

- **Initially, should allow one wallet per citizen to ensure the respect of holding limits.** This would be beneficial from the perspective of financial stability, operations, compliance, data protection.
- **Industry supports a zero digital euro holding limit for merchants.**
- It is key to **define the defunding mechanism**, however it is certain that the **conversion of digital euros into commercial bank euros must be automated** and made possible without any additional effort from the merchants.
- **Importance of having a sustainable business model for digital euro transactions:** digital euro transaction fees should reflect the costs of the infrastructure and the service and be set by market forces.

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Core, optional and value added services

- **Core services should not mean systematically free services = need an economically sustainable model that include a compensation model.**
- Key that **intermediaries have access to payment transaction data** in the same way that they currently do for other digital payment to fulfil their legal compliance obligations and to build more effective tools to protect users from fraud.
- For all services, it will be necessary to analyse whether the development and provision of these services needs to be supported by the Eurosystem or whether their development and provision can be left fully to the market. **Market needs sufficient flexibility to develop additional services to the core ones, to innovate and compete.**

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Dispute management

- It should be clarified **how existing legislation on dispute management will apply** to the digital euro.
- It also required a clear **classification of the different liability regimes** that will apply to digital euro transaction.
- When implementing dispute management processes for both the Eurosystem and intermediaries, **uniformity and consistency must be ensured to guarantee the credibility of the system.**
- **The high complexity of these processes and the associated costs must be factored into the digital euro business model** so that intermediaries can recover the costs of implementing and running the processes.

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Compensation model

- It is essential that the digital euro includes **compensation principles** that allow intermediaries to **develop a fair and sustainable business model and that does not hinder the ability to compete** of other means of payment.
- The industry supports that Eurosystem principles to follow a **market-driven approach consistent with the business model of existing payment solutions.**

## Roll-out

- **The industry does not support the ECB proposed staggered approach whereby the roll-out at PoS would be left to a later stage.** PoS should be part of the initial roll-out to ensure wide adoption from the start.
- The launch of the **offline functionality should be postponed** to a second phase.
- **Including the governments and authorities from the beginning is a key success factor** for a new payment method.
- The industry highlights the challenge for intermediaries, moving pieces (PSD2 review, etc.) impact on resources.
- It is important that the launch of the digital euro does not have unintended consequences, therefore the **digital euro should be launched with a low holding and transaction limit that is enough for private individuals to make their daily payments.**