HM Treasury

Future of Payments Review 2023: Call for Input

Response on behalf of Barclays Bank UK plc and Barclays Bank plc

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Submission by Barclays

Barclays is a universal consumer and wholesale bank with global reach, offering products and services across personal, corporate and investment banking, credit cards and wealth management. With over 330 years of history and expertise in banking, Barclays operates in over 40 countries and employs approximately 85,000 people. Barclays moves, lends, invests and protects money for customers and clients worldwide.

We welcome the opportunity to respond to HM Treasury's Call for Input to inform the Future of Payments Review.

Executive Summary

Innovation must be based on an identified customer need to effectively generate sustainable economic growth

There are plenty of options for innovation in payments. What matters most is identifying which have the best chance of being successful, and therefore which are best able to reach a level of ubiquity amongst consumers and merchants quickly and boast interoperability. To best be able to do this, any payment solution must offer something additional to solutions available today, to drive consumers away from existing known and trusted methods.

This 'something' could be many things, with potentials including increased protection (e.g. reducing the threat of fraud and scams through the use of digital ID and biometrics), broader ranges of use cases (e.g. something that can be used just as easily for P2P, C2B, and e-commerce), and intuitive user experiences by design (whether through mobile devices or integration into existing platforms).

Culture and context is crucial when drawing international comparisons

In looking to learn lessons from others, direct comparisons must be handled with caution. Economies, cultures, and context all contribute to why certain payment solutions are more successful in other jurisdictions. There is not one single world leading payments journey or infrastructure currently in place. Rather, many systems in different countries have world leading attributes such as speed, functionality, and other journey benefits. This distinction is important, since it helps the observer identify helpful common themes which we can learn from, without drawing conclusions that would not materialise if applied in our domestic setting.

Open Banking provides real opportunity for the UK

As Open Banking moves towards the future of Open Finance, there is a clear and pressing opportunity to unlock this potential for payments, potentially opening up some of the most sizable and achievable opportunities for innovation. But to secure these potential benefits, the Open Banking ecosystem needs urgent certainty in the creation and commitment to the design, funding, and governance of the future entity. Until this is achieved, progression with premium APIs – the likely vehicle for this innovation - will struggle as conversations become difficult to progress when funding and the opportunity for commercial pricing is unpredictable. Properly resolved, discussions can turn from governance to delivery.

New Payments Architecture

The original vision for the New Payments Architecture (NPA) was published in November 2016. However, the payments landscape has moved on significantly since then, with the Bank of England now progressing a range of other important innovations, most notably with consideration of a Central Bank Digital Currency (CDBC), which heavily bear on the strategic direction and impact of the NPA.

There is therefore a brief window of opportunity to consider whether, objectively, the NPA will help to carry the UK forward to deliver world leading payment solutions, and particularly to consider how it can be designed to still be relevant, and still justify investment if a CBDC is to launch within the next five years. This is an important opportunity that should not be missed, to ensure that the large sums of money and time already spent on the NPA deliver benefits, and a platform for the next generation of payments innovation. To enable and expedite this, we believe the only viable option is for Government to commission an independent review of the NPA at this juncture, tasked to deliver specific and actionable recommendations to ensure that the end-state NPA deliver tangible benefits for its stakeholders.

What is the "North Star" that regulation and inflight initiatives are aiming for?

Regulation can support innovation and collaboration, encouraging and empowering the industry to be ambitious. However, the regulatory agenda and inflight initiatives do not intentionally, and by design, align to a single clear vision. Whilst there is a "Payment Systems Memorandum of Understanding" (*emphasis added*), between the Bank of England, the Financial Conduct Authority, Payment Systems Regulator and Prudential Regulatory Authority, this is more for cooperation between the regulators and is focussed on payment systems. As we have set out in our response, focussing on payment systems alone is not adequate to generate the right levels of innovation (much of which happen within the authorisation layer). This memorandum is not the same as an aligned cohesive policy vision which we consider would empower the industry.

Rather, what is needed is a clear articulation – agreed by Government, regulators, industry, and end-users – of the types of problem that a payments system should be able to solve, as well as agreement on the necessary infrastructure and approaches required to enable delivery of these. This, again, is only likely to be possible with the direction of Government and regulators, and we therefore recommend a joint Government and regulatory statement of strategic direction for payments, providing clarity and long-term certainty to industry and end-users for their focus and efforts.

Barclays' Five Recommendations

1.	**Government to set a "North Star"** to bring cohesion so that there is a central point to aim for, allowing the industry to collaborate and pull towards a common objective with clear customer outcomes based on empirical evidence as identified by Government.
2.	Develop **Open Banking into Open Finance to stimulate and incentivise innovation** with broader, higher level commercial principles which provide the right guardrails but will incentivise participants in the Open Banking ecosystem to collaborate and innovate together. The UK has strength in its strong and well-established regulatory framework. This delivered Open Banking to such a standard that exceeded the requirements of EU Regulation[1]. Regulation can be a benefit that can be harnessed. Instead of seeing regulation as a stick to prescribe the implementation of certain specific solutions, it should be refocussed to create the right market place to support development of sustainable business models which address clear and currently un-met consumer and client outcomes.
3.	Commitment from **Government to play a central role in supporting the integration of digital ID** in payment journeys would provide industry with the long-term certainty and incentive to deliver a ubiquitous UK solution that could be integrated in an end-to-end solution, with the additional benefit of contributing significantly towards fraud and scam prevention.

[1] PSD3 is bringing the standard across the EU in line with the UK.

4.	Government should consider how it can **incentivise and support expansion of mobile payment functionality to extend to P2P payments, whilst mitigating the risks of Big Tech** harming healthy competition and worsening consumer outcomes.
5.	Government should support innovations in the **integration of retail payments within non-banking channels**. In doing so, it must consider how it can prevent and mitigate the fraud and scam risks at the outset, and properly incentivise big tech and social media platforms to take preventative action.

Consultation Questions

1. What are the most important consumer retail payment journeys both today and in the next 5 years? For example, paying a friend, paying a bill, paying businesses for goods and services, in the UK or internationally etc.

The Review identifies many of the main important payment journeys made today. However, "importance" is subjective; to the payer and beneficiary, every payment is important, and the degree and nature of importance of different payments is constantly evolving. Therefore, in responding to this question we have considered how payment journeys will change in the next five years; will the available solutions we have today meet/exceed consumer expectations; and if they will not, what needs to change?

As a starting point, our core assumption is that for a payment solution to be successful and reach ubiquity, it must be journey-agnostic. Successful payment solutions also need to be able to scale quickly (until they reach ubiquity, they are closer to failing than being successful), become widely adopted, and be interoperable. We use UPI in India in Question 2 as an example of a payments system that achieves all of these, largely – in our view – due to UPI being payment journey agnostic, which in turn enabled its rapid growth.

With respect to the types of retail payment journeys made today (and how they are made) we have set out below (Table A) a high-level illustration to structure our response. We then set out how this is likely to change in the future (Table B). Throughout our response we refer to these tables when discussing the opportunities for innovation.

Finally, as a contextual observation, whilst new payment methods and mechanisms will in part drive new growth (i.e., activity that was not previously there), after a point it will become a 'substitution game', with new methods supplanting old ones. Whilst this dislocation will cause impacts on the declining system, the overall impact is likely necessary and positive, and any change should be viewed through this lens – as indeed with any innovation.

Table A

High/Moderate/Limited = frequency of usage. N/A = not possible

Journey	**How is this done today (predominantly)**					
	Cash	**Cheque**	**Transfer – FPS and CHAPS**	**Card Payment**	**Direct Debit**	**Credit (BNPL/credit card)**
Friend (P2P)	H	L	H	M wallet only	N/A	N/A
Bill (e.g. utility)	L	L	H	H	H	M
Merchant/Retail	M	L	L	H	H	H
Government	L	L	H	H	H	N/A

Table B

	How could it be done in the future (*key changes highlighted only*)							
	Cash	**Cheque**	**Transfer – FPS and CHAPS**	**Card Payment**	**Direct Debit**	**Credit (BNPL/credit card)**	**A2A[2]**	**CBDC**
Friend (P2P)	M-L	L	H	M wallet only	N/A	N/A	H	TBC
Bill (e.g. utility)	L	L	H	H	H	M	H	TBC
Merchant /Retail	M-L[3]	L	L	H	H	H[4]	H	TBC
Governm ent	L	L	H	H	H	N/A	H	TBC

What are the consumer expectations for payments?

- Speed – there is today an expectation of rapid speed of transactions (with a starting expectation of near instantaneous unless there is a specific reason why not); and limited to no friction.
- Convenience – for example a mobile wallet removes the need to carry a physical card and device-based payments (with the right level of security (e.g., Apple Pay)), are not subject to a contactless limit.
- Safety – there is an expectation of integrated levels of consumer protection (Section 75, chargeback rights, APP mandatory reimbursement); and safety features on the payment instrument itself (for example, many consumers have more trust in mobile wallets which use biometrics for payment authorisation).
- Reliability – stable, predictable, and resilient payment systems are a fundamental expectation.
- Usability - an intuitive and well-designed user experience with additional extra services and benefits linked to customer data (e.g., budgeting based on payment spend; tailored loyalty rewards) are also pre-requisites for many, particularly when looking to shift from an existing payments system they are already familiar with.

As context for the changing landscape of payments, and beginning our substantive response to the question with the 'original' payment method, we have represented in Table B how cash – once the dominant payment form – has been and continues to be in decline, last year accounting for 15% of all payments made in the UK last year. Whilst it is expected to fall and by 2031 is expected to account for just 6% of all payments made in the UK, there are many advantages to using cash, and it remains an important payment instrument for consumers[5].

Cash is familiar, it gives instant settlement, it has no dependence on mobile phone data or Wi-Fi connection, and it has universal use as it is not limited to only being suitable for peer-to-peer payments (P2P). As cash

[2] In this context we mean an open banking-initiated payment (and the underlying payment is a Faster Payment transfer).
[3] Expected to continue to decline due to growth in online shopping, the rise of contactless payments, and increased acceptance of cards.
[4] The highest growth of all payment methods is expected to come from BNPL: https://www.bain.com/insights/five-insights-from-the-uk-experience-bnpl-report-2021/). Merchants like BNPL as order sizes are larger, basket abandonment is reduced, plus they benefit from their brand exposure through co-marketing driving acquisition of new customers.
[5] Page 8, UK Finance (August 2022), *UK payments markets 2022:* https://www.ukfinance.org.uk/policy-and-guidance/reports-and-publications/uk-payment-markets-2022

payments are invariably made in-person, the payer is likely to be satisfied they know who they are paying. However, it has clear disadvantages for many. There are no consumer protections like charge back rights, there is no traceability, and it is susceptible to counterfeit. For many cash is now a helpful back-up, as opposed to a core and preferred payment method.

Similarly, cheques are also in decline - accounting for only <0.5% of payments made in the UK[6]. While they are a preferred payment method for a small minority, it is our view that this should be viewed alongside their associated high fixed costs, meaning they are disproportionately expensive for the industry to service, weakening the commercial incentive to innovate in this respect. The progress to reduce the settlement time for cheques has also greatly reduced the opportunities for cheque innovation.

With respect to how cash is used, two key payment journeys where cash is predominantly used today are Peer to Peer (P2P) and Consumer to Business (C2B).

Do the cash alternatives that are available meet these expectations, and do they present opportunity for innovation?

Exploring this question, and properly understanding the extent to which non-cash payment methods meet – and potentially still do not meet – the above expectations, provides clear insight into the lessons that need to be drawn in creating the right environment for any future payments innovation.

As represented in Table A, P2P payments are most commonly executed through a Faster Payment (FPS) transfer (Faster Payments account for 34% of the total volume of payments, while cash closely follows at 31%[7]). The process of making an FPS payment is secure (through the implementation of strong customer authentication in PSP online services and mobile applications); but those security measures do not protect against Authorised Push Payment (APP) scams (the implementation of Confirmation of Payee has helped somewhat, but fraudsters have found ways to avoid that by either social engineering the victim or using PSPs that do not use the service).

However, the process of authorising and sending a payment can be a cumbersome process and cannot be described as the most intuitive and well-designed user experience. For example, the payer must log in to an online or mobile banking platform, add a beneficiary to a list of payees, apply two factor authentication, enter in the amount and the date, go through a confirmation of payee check, and finally answer further contextual questions about the purpose of payment so the PSP can provide an appropriate warning about the risks of fraud. Only after completing that process can a payment be sent.

These processes have been built to comply with well-intentioned but at times prescriptive existing regulations; voluntary initiatives to reduce the risk of APP fraud; and to meet the expectations of the Financial Ombudsman Service (FOS) (for example with respect to specific scams warnings). Different PSPs can use better designs to make it easier for payers to navigate these steps – and once a payee is in a customer's trusted payee list, initiating a payment to that payee is easier. However, the steps themselves cannot be avoided.

An alternative is a payment through a digital wallet like PayPal which is linked to a card or a bank account. However, in Table A we have represented this as "Moderate usage" for P2P payments. It is not always straight forward; it is an exclusive service that requires both the payer and the payee to have a PayPal account, and it is slow – it can take days to transfer the money from a PayPal account to a deposit account.

[6] Page 30 UK Finance (August 2022), *Ibid*

[7] Page 34 UK Finance (August 2022), *Ibid*

Given the above, we believe that P2P and C2B payments possess clear opportunities for retail payments innovation in the UK (we have provided some analysis of how this is done in other countries in response to Question 2).

What innovation needs to be unlocked?

Innovation should be aligned to clear consumer benefits and outcomes. We reference in detail the need for a North Star in our response to Question 3, but we iterate here the importance that innovation be supported to clearly address identifiable customer needs which are market specific to the UK, and the pain points and friction that a UK customer experiences, and which need to be resolved.

Channel

The channel used by a consumer is important for any payment solution to gain traction and adoption. Consumers do not like having to leave the environment they are in to make a payment, with the ideal being that the payment is fully embedded within another activity. For example, integration of a payment functionality into a mobile banking app is better than something standalone for specific payment functionality (e.g. PingIt[8], which sat outside of our Barclays mobile banking app).

Taking this learning further, there is clear opportunity for payment solutions to be integrated into a non-banking channel that consumers are familiar with – for example a social media platform. For example, a two-hour live shopping event on TikTok brought in more than a week's worth of sales at a flagship store[9]; and a live interactive shoppable (i.e. consumers were able to make payments direct through the app) event on Instagram garnered north of 40,000 comments driving brand engagement and sales. This trend is already happening, with commerce conducted through social platforms expected to grow at a +32% compound annual growth rate during 2022- 2028[10]. Payment solutions being integrated into non-banking channels is further demonstrated in the metaverse where users can play, buy and sell all within the one platform.

However, moving from embedding payment journeys within banking platforms to ones outside, brings risks, as well as opportunities. For example, with social media platforms accounting for the majority of fraud and scams origination (87% of APP scams were enabled by tech platforms[11]), and with there being no legal requirement for those tech platforms to take preventative action or contribute towards the cost of reimbursement, to facilitate the safe growth of payments on these platforms Government should consider how it can mitigate risk of scams on these platforms (see Barclays' latest recommendations in this regard). Consequently, it is not currently prudent for financial services firms to invest further in this form of payment, due to the risk of exposing their customers to an increased level of vulnerability; something that must be remedied to ensure incentives are aligned for all participants.

Summary: High potential for innovation to be successful.

Device

Mobile device ownership and use in the UK is very high, with high levels of familiarity for using such devices for a range of daily activities (some of which were only rendered possible with such devices - e.g. mobile banking). Indeed, the typical way for many consumers to make payments is through their mobile device,

[8] Barclays proprietary mobile payments service

[9] https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/social-commerce-the-future-of-how-consumers-interact-with-brands

[10] Business Wire (3 May 2022), *"United Kingdom Social Commerce Market Report 2022: Market is Expected to Grow by 37.5% to Reach $21.13 Billion in 2022 - Forecast to 2028 - ResearchAndMarkets.com"* https://www.businesswire.com/news/home/20220503006107/en/United-Kingdom-Social-Commerce-Market-Report-2022-Market-is-Expected-to-Grow-by-37.5-to-Reach-21.13-Billion-in-2022---Forecast-to-2028---ResearchAndMarkets.com

[11] Barclays (9 August 2022), *Eight in 10 Brits feel unsafe on social media due to scammers*: https://home.barclays/news/press-releases/2023/08/eight-in-ten-brits-feel-unsafe-on-social-media-due-to-scammers/

whether that is through their mobile banking app, a digital wallet provider (Amazon, PayPal), or their mobile wallet (Apple Pay, Google Pay).

in 2022, mobile wallets accounted for roughly half of global e-commerce payment transactions[12]. Further, it is predicted that in 2031 93% of adults will use remote banking[13]. This behavior is entrenched and only going in one direction, and so P2P payment innovation will have a stronger chance of adoption if it is enabled through using a mobile device (or, to put it another way, we cannot foresee any future payments innovation being successful unless they are inherently mobile or digital based). Table B illustrates the growth in payment methods available through mobile devices.

However, as highlighted in the FCA's Discussion Paper 22/5: '*The potential competition impacts of Big Tech entry and expansion in retail financial services',* there are clear competition risks associated with Big Techs who are incentivised to innovate in P2P and C2B solutions. Expansion of P2P and C2B payment solutions builds on the need for consumers to interact with their devices and platforms and keeps consumers in their controlled environments (for example, Apple Pay, Apple Cash, Apple Tap to Pay). The Discussion Paper highlights the risk that *"the competition benefits from Big Tech entry in financial services could be eroded if these firms can create and exploit entrenched market power to harm healthy competition and worsen consumer outcomes*[14]". We encourage Government to consider these risks and how they can be mitigated at the outset when looking to stimulate innovation in this area.

As a further observation in relation to retail and merchants, we are seeing a growing demand for "soft POS" capability from merchants, where a mobile device can be used in place of a card terminal. Whilst we know some consumers do not wish to make a card-based transaction by entering their pin onto someone else's mobile phone (concerns with storage of the pin, and fingerprints leaving evidence of the pin on the device) they are prepared to make contactless payments in this manner. At present, this is limited to contactless card payments, but it could be updated for retail A2A transactions, although there are some complexities with this which we have outlined in Question 3. The use cases here include micro merchants (e.g., window cleaners; trade fairs; and mobile food vendors) and corporates (e.g., delivery drivers; queue-busting in retails stores; and train operating companies using mobile phones to take payments on trains).

Summary: High potential for innovation to be successful.

Proxies

Proxy identifiers simplify the authorisation layer for interbank payments, replacing the formal banking identifiers (e.g. account and sort codes) with a different identifier. These can be attractive to consumers as they are simple – it is far easier to pay someone's email address than manually entering in both their sort code and account number, which causes friction to the payment journey and allows room for error.

For the payee, using a proxy identifier removes the need to memorise an account number and other information associated only with an account and not something they give for a range of purposes that is easily memorable. For the payer, it can often be a simpler payment experience. A proxy identifier could be a QR code, a registered company number, or even a form of digital ID (including for example, an Apple ID).

[12] Statista (August 2023), *Mobile payments worldwide - statistics & facts:* https://www.statista.com/topics/4872/mobile-payments-worldwide/#topicOverview

[13] UK Finance (August 2022) *Ibid*

[14] Page 4, Financial Conduct Authority (October 2022), *The potential competition impacts of Big Tech entry and expansion in retail financial services*: https://www.fca.org.uk/publication/discussion/dp22-5.pdf

One often cited proxy identifier is QR codes, with 28% of customers agreeing that their usage in payments enables seamless check-out journeys via, for example, A2A and card, digital wallets[15]. However, the conclusions are not as simple as that, with research commissioned by the ECB found that *"most participants consider payment via QR code slow compared with contactless payments, for instance via debit card*[16]*"*. In the ECB research, while participants considered customer-presented QR codes (where the customer presents their personal QR code to a merchant who scans it) a good user experience, they mostly rejected merchant-presented QR codes. They perceived the greater complexity, which derives from having to scan the code as cumbersome and less secure, and most said they would not use it. This complexity presented more of a barrier for older respondents in some focus groups[17].

Merchants are also hesitant to develop functionality for QR Code proxy IDs. Without knowing a customer will use it, the use case is not strong, particularly when accounting and payment reconciliation will be harder and require in-store system changes. For a merchant and consumer, there is an increased risk of fraud if the QR Code is not dynamic. For A2A payments using proxy identifiers, there is the risk of increased time at the till, as A2A currently relies on confirmation of cleared and settled funds.

More broadly, it is unclear what problem QR codes are looking to solve, particularly in the UK where consumers and merchants have a range of other near-instant payment methods to choose between, which offer all the benefits of QR codes, without the drawbacks. This is not to say that QR codes are without merit, and in countries without the UK's established payments systems they clearly have an important role to play, but as we stated in our introductory comments – context is everything. And in the context of the UK, and our consumers and business's needs, it is far from clear that QR codes have a key role to play, which likely explains the lack of demand for and innovation in them.

Summary: Low potential for innovation to be successful.

Digital ID

As we outlined earlier in our response, a key attribute of a successful and ubiquitous payments method is its safety. While card and digital payment methods offer many benefits, they are sometimes seen as lacking in this regard, particularly with respect to threats such as fraud and scams, or any situation where there is a lack of certainty as to whether the payer and payee are who they say are.

However, the integration of digital ID into a payment journey has the potential to 'solve' this, and to make P2P and C2B payments as safe as cash payments. Digital ID – in whatever form is pursued – enables the digital confirmation that individuals are who they say they are (beyond the level of certainty that is currently available today).

More broadly, customer interest in biometrics is growing - with ~80% confirming they would trust organisations more if they request biometrics to verify their identity[18]. Indeed, Brazilian company Payface, working with Mastercard, witnessed biometrics account for 20% of all payments in their initial online and in-store pilot[19]. Digital ID therefore has the potential to not only better secure payments, but also to provide greater reassurance to those who today may be hesitant about using non-cash payment methods.

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[15] Relevant (17 November 2021), *QR Code Payments Explained: Will 2022 Be The Year of QR?* https://relevant.software/blog/qr-code-payments-explained/

[16] Page 49 Kantar Public (March 2023), Study on digital wallet features: https://www.ecb.europa.eu/press/pr/date/2023/html/ecb.pr230424_1_annex~93abdb80da.en.pdf

[17] Page 50, Kantar Public (March 2023), *Ibid*

[18] Payments Journal (16 March 2022), *Why Merchants Should Embrace the Rise of Alternative Payment Methods in the UK and Europe:* https://www.paymentsjournal.com/why-merchants-should-embrace-the-rise-of-alternative-payment-methods-in-the-uk-and-europe/

[19] https://nilsonreport.com/

This development has potential to provide a level of security and consumer protection from fraud and scams, but could also be embedded in a merchant checkout journey. For example, banks could share digital ID data alongside encrypted payment tokens with third parties that are not only bound to our customer, account, and merchant, but also allow for fixed and variable payment options for our merchant clients. This would embed security throughout the payment, but also allow greater innovation.

Whilst Digital ID has been the subject of much interest and debate in the industry, progress has been slow. To remedy this, and deliver a critical building block for the next phase of payments innovation, it is our belief that Government should play a key enabling role to provide the foundations for the development of digital ID in financial services, including, (1) establishing a liability framework for participants in digital ID (relying parties and service providers) ; (2) providing clarity on the levels of standard interoperability with GPG45 and JMLSG, and international digital ID standards, to help support speed of adoption; and (3) details of technical depth to be implemented by a technology solution provider (e.g. if digital ID must be in digital reusable form, then the standard should precisely outline what this form would take e.g. cryptographic token).

We appreciate Government considers the market is best placed to develop this. However, little progress is being made at the moment, and this innovation has the potential to deliver benefits that flow far beyond the banking and payments sectors, positioning the UK at the forefront of the exciting technology and supporting the country's ambitions to be a science and technology superpower. For a small amount of time and convening investment, alongside necessary policy and regulatory support, the potential benefits could be dramatic.

Summary: High potential for innovation to be successful.

Digital Inclusion

In considering the UK's demographics – and importantly an on average aging population[20] - it is increasingly important to consider financial and digital inclusion when thinking about innovation. To encourage adoption of newer payment solutions, consumers will need confidence in the levels of protections provided, but also in their ability to use them. Government should consider how it is instilling consumer confidence in digital banking and more innovative payment solutions, for example with respect to protecting against fraud and scams, and ensuring people are who they say they are (see our previous comments on fraud and scams reform and Digital ID).

More broadly, industries clearly have a role to play here. We have committed to building confidence in our customers digital capabilities through our Digital Eagles programme[21], and encourage others to invest in a similar manner.

In response to changing customer needs, banks – including Barclays – are innovating by putting in place more dynamic channels of engagement with customers, including semi-permanent alternative formats, such as our flexible community presence Barclays Local, and permanent shared alternatives like shared banking hubs and shared ATMs. We believe there is scope to leverage our network to make CBDCs truly accessible, for example through Barclays' Digital Eagles and Eagle Labs where we already help to transform customer and client digital understanding and capabilities. Customers who struggle to use digital products could ultimately stifle CDBC adoption and digital payments innovation. Therefore, increasing the understanding and adoption of digital banking will lead to increased trust, and the skills necessary for consumers to comfortably engage with digital currencies.

[20] Page 6, Government Office for Science (2016), *Future of an Ageing Population*: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/816458/future-of-an-ageing-population.pdf

[21] https://digital.wings.uk.barclays/digitaleagleshelp/

Summary: High potential for innovation to be successful, and a necessary requirement to support other areas of innovation to reach levels of ubiquity and be sustainable.

Payment System

The payment clearing and settlement aspect should be distinct from the authorisation aspect of a payment. In considering payment infrastructure and operating systems, these should be designed to be cost effective, safe, secure, and resilient. It is much more difficult to bring innovation to this space. As it should be. As covered in Question 2, users need central infrastructure to be resilient, and not to be experimental and risk taking.

We have set out analysis on the NPA in response to Question 3 below.

Summary: Low potential for innovation to be successful. We recommend innovation is not focussed on this layer.

Summary

To conclude this section, we do not consider there to be an obvious "silver bullet" that would make the UK world leading in payments. However, based on the above analysis, and as summarised in Tables A and B, we believe there are a relatively small number of higher impact actions that – properly delivered – have the potential to collectively dramatically improve the levels of UK payments innovation. We would encourage HMT and the Review to consider these areas, which we summarise here:

High potential for innovation includes:

1. Enable Digital ID – Create the framework for the delivery of ubiquitous digital ID, which can be integrated into payment journeys.
2. Expansion of payment functionality through mobile device to allow seamless contactless P2P transfers.
3. Payment and channel integration – supported by greater fraud and scam prevention at source.
4. Digital inclusion to build consumer confidence and understanding of alternative payment solutions.

2. For these journeys today, how does the UK consumer experience for individuals and businesses compare versus other leading countries? For example, the quality of experience, security, or cost.

To understand how the UK consumer experience for individuals and businesses compares against other leading countries firstly requires identification of what would make another country useful for comparison, and what makes it leading.

Barclays recognise that there is not one single "world leading" payments journey or infrastructure currently in place. Rather, many systems in different countries could be described to have world leading attributes such as speed, functionality, and other journey benefits.

In this regard, many market analysts would describe the UK as a leading country for its payment's innovation and infrastructure. As referenced in the Call for Evidence, the UK was one of the first countries in the world to establish a system for instant payments when it launched Faster Payments in 2008. Today, the UK has a thriving and successful payments market which has been transformed in part by legislation designed to support competition, but also due to wider technological innovation and evolving user preferences.

Payment preferences are also economy specific. Some trends arise from available methods achieving dominance because of the meaningful absence of alternatives (e.g. mobile money in African countries like

Kenya); cultural norms (e.g. low level of credit card use in Germany and their perceptions to debt); and Government, central bank or industry initiatives (e.g. iDeal in Netherland, SWISH in Sweden, PIX in Brazil, UPI in India, EPI in Eurozone). The government-mandated payment methods were designed to address an immediate need, and these jurisdictions can be distinguished from the UK which has a well-developed and competitive payments market.

BIS Red Book statistics demonstrate these differences. Largely through iDeal, the average Dutch person makes nearly 100 more credit transfers than the average Brit; because of cultural preferences on debt, the average German only makes 2 credit card payments, and the average Korean makes 295[22]. The EU SPACE study finds similar differences[23].

Considering this, comparisons between countries need to be treated with caution. Even those that we could consider comparable may not be – e.g., the average Canadian writes eight and a half cheques in a year, the average American twenty-nine and a half[24].

Consumer expectations also vary. For example, in the UK consumers expect to be protected by the payment instrument / PSP if following a purchase, the goods do not arrive or are not as expected. However, in other countries services like iDeal in Netherland[25], UPI in India[26] and SWISH in Sweden do not offer such protections intrinsic to the payment instrument.

Merchant expectations vary too. For example, TFL threatened to remove Apple Pay from being available on its network (so commuters would not be able to use Apple Pay) because it was too slow which led to Apple making a change to speed up the authorisation process (utilising the PSD2 travel exemption).

In consideration of the success of UPI in India, there is much analysis of what is referred to as the "India Stack". According to the Bank for International Settlements "*The term 'technology stack' usually refers to a set of interconnected yet independent single-purpose technologies – called "platforms" – that work together towards general purpose tasks. This set is called a "stack" because it is modular in construction and its component platforms can be flexibly stacked upon each other to build a digital infrastructure."*[27]

The IMF describe the "India stack" as consisting of "four layers of infrastructure and standards: (i) digital identity; (ii) an inter-operable payments interface; (iii) digitalization of documentation and verification; and (iv) a consent layer." The IMF concludes that the first two layers make up the "inter-operable payments systems that characterizes the core of open banking systems in other jurisdictions"[28] and so we will only focus on those two layers in the rest of this response.

In the Indian digital identity layer, there is the service Aadhaar. By 2017 1.2bn Indians had enrolled into the Aadhaar service[29]. At the second layer – the payments layer – there is the Unified Payments Interface "UPI".

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[22] Table CT6c, Bank for International Settlements (April 2023), *BIS red book 2022: payments and financial market infrastructure:* https://stats.bis.org/statx/srs/table/CT6c

[23] European Central Bank (December 2022), *Study on the payment attitudes of consumers in the euro area (SPACE*): https://www.ecb.europa.eu/stats/ecb_surveys/space/html/index.en.html

[24] Table CT6c, Bank for International Settlements (April 2023), *Ibid*

[25] Page 17, Pay.UK (November 2020), *Consumer protections in payments: https://newseventsinsights.wearepay.uk/media/b4qb3xj5/consumer-protections-in-payments-summary-paper.pdf*

[26] Slide 49, World Bank (September 2021), *World Bank fast payments toolkit case study: India:* https://fastpayments.worldbank.org/sites/default/files/2021-10/World_Bank_FPS_India_IMPS_and_UPI_Case_Study.pdf

[27] Page 6, Derryl D'Silva, Zuzana Filková, Frank Packer and Siddharth Tiwari (December 2019), *BIS Papers No 106, The design of digital financial infrastructure: lessons from India*: https://www.bis.org/publ/bppdf/bispap106.pdf

[28] Page 16, Yan Carriere-Swallow, Vikram Haksar and Manasa Patnam (February 2021), *IMF Working paper: India's approach to Open Banking: Some implications for financial inclusion:* https://www.imf.org/-/media/Files/Publications/WP/2023/English/wpiea2023078-print-pdf.ashx

[29] Page 7 Yan Carriere-Swallow et al, *Ibid*

UPI was originally conceived as an "easy to use product over the existing IMPS -Immediate Payment Service – India's real-time payment system"[30] and UPI still uses much of the underlying infrastructure of IMPS – indeed for a bank to participate in the UPI it must also be live on IMPS[31].

An IMPS transaction looks like a UK Faster Payment – a remitter bank routes a payment through the central infrastructure and a beneficiary bank receives that payment. However, a UPI payment can involve third parties initiating payments to and from bank accounts held by other organisations. So, although UPI has many features you would find in a payment system and often is described as such, the revolutionary aspects of UPI lie in the ability for third parties to participate, use of proxy addresses to route payments, and payment authorisation. Arguably, UPI has greater comparability to the UK's open banking payment initiation standards than the UK's real-time payment system.

Considering this, we contend that in the context of a "**UK Payments Stack**" it is appropriate to separate the payments layer into two distinct layers:

(1) "authorisation and proxy ID" and
(2) "clearing and settlement."

The table below illustrates how the "UK stack" for interbank payments compares and is falling short against the India Stack which is well regarded to be "world leading".

		India Stack		**UK Stack**	
Digital identity		✓	Aadhaar	×	No ubiquitous solution
Inter-operable payments interface	Authorisation and proxy ID	✓	UPI	✓	**Authorisation:** Open Banking payment initiation, remote banking service or card payment instrument **Proxy ID**: No ubiquitous solution
	Clearing and settlement	✓	UPI/IMPS	✓	**Interbank payment:** Faster Payments (*but not real-time settlement*) **Card payment:** Card payment infrastructure (and CHAPS / FPS for merchant settlement)

In our construct, we consider that a card payment is simply an authorisation of a payment. The clearing and settlement of the payment happens later and in stages – via the card payment system's infrastructure, the Bank of England's RTGS service, and ultimately to merchants via the payments systems of CHAPS and Faster Payments. A contactless tap is an authorisation and liability shift not a payment. Constructing the "payment" like this enables the system to work in split seconds as the entire end-to-end payment journey does not need to be completed while the customer is at the till. It has also freed up card payment system operators and other third party provides to innovate on that authorisation journey to improve customer experience and provide additional services to merchants. The customer is also protected. For example, Amazon One[32] in the US is innovative, but it is the authorisation layer (use of a palm as identification) that is innovative, the ultimate payment journey is the same as any other card payment.

[30] Page 14 Yan Carriere-Swallow et al, *Ibid*

[31] Page 15, NPCI, UPI: India's unified payment gateway for real-time payment transactions: https://www.npci.org.in/PDF/npci/upi/Product-Booklet.pdf

[32] Amazon One is a payment interface which works on biometrics. It uses a palm print to link to a customer's Amazon Wallet enabling them to identify themselves and to make payments.

We have sought to set out some key aspects that shape the UK context, and explain some of the reasons for the usage volumes indicated by tables A and B in response to Question 1:

- Strong usage of cards:
    - Card payments in the UK are fast (Mobile wallets like ApplePay facilitate card payments to be even more convenient meaning no physical card needs to be carried, and a double-click is all that is required to pay), they are generally free to cardholders, reliable and safe.
    - They also protect the consumer in way that other methods do not (Section 75), and globally card alternatives tend not to have the same protections.
    - They are highly regulated.
    - They are often reward linked providing additional benefits, for example travel insurance, flight point schemes, and retail discounts/vouchers.
- The UK economy is not as reliant on P2P payments (for example in a marketplace where consumers are selling directly to each other). They only make up 3% of all spontaneous transactions.
- Faster Payments System
    - This underlying infrastructure is well established and works. It is reasonably fast, cheap, reliable, and stable. For example, PayM did not attract the volume of users it hoped to as Faster Payments were much cheaper by comparison, meaning users had little reason to shift.
    - This also provides some levels of protection through associated technologies and protocols (e.g. Confirmation of Payee and mandatory reimbursement).

3. Looking at the in-flight plans and initiatives across the payments landscape, how likely are they to deliver world leading payment journeys for UK consumers? For example, we welcome suggestions that you feel would support, or are essential to delivering, world leading payments for UK consumers.

Consumer expectations are increasing, and regulators are competing to ensure that national payment journeys and infrastructure are fit for purpose. In the next five years, we anticipate:

- AI and machine learning in payments becoming ever more prevalent albeit the risks this introduces must be fully understood. We welcome the Government's Foundational Model Taskforce on this subject, to ensure sovereign capabilities and broad adoption of safe and reliable foundation models – to help cement the UK's position as a science and technology superpower by 2030.
- Cryptocurrency transactions gaining wider acceptance in retail transactions, particularly with the Bank of England's potential launch of the digital pound; payments in the Metaverse; and Web3 payments which utilise blockchain technology.

Prediction of the success of the in-flight plans and initiatives to deliver world leading payment journeys for UK consumers is difficult without identification at the outset of a clear use case which they are trying to address. Barclays notes the PSR market review into card scheme and processing fees. We believe the outcome of this review will be important to consider carefully alongside in-flight plans and initiatives to see where innovation may help meet customer and market needs to deliver world leading payment journeys in the UK.

Unlike some other jurisdictions, the UK lacks a true "North Star" of clear consumer needs for which initiatives in payment innovation, and regulation, all work together, to ensure in-flight plans and initiatives are complementary and are pulling in the same direction. We set out the concept of a UK Payments Stack in Question 2. The lack of a unifying objective for the UK's payments industry, and the approach of specific interventionist regulation, means the industry often just meets the requirements instead of bringing with it competitive incentivised innovation (e.g., open banking, current account switching, and cheque imaging). This

also has an impact on capacity for the industry to truly be able to explore and develop more innovative solutions which will target a genuine consumer need (as set out in Question 1).

In considering how likely inflight initiatives will deliver world leading payment journeys, it is important to keep in mind how the UK is developing its UK Payments Stack, and whether this is overall by design; or, by accident. For example, the UPI framework is described as *"dramatically chang[ing] the dynamic between regulators and innovators. It enables a type of collaboration between the public and private sectors that harnesses the rapid force of private innovation while protecting the economy (and consumers) through the traditional guardrails of regulation. Notably, the Indian example has established that central banks can be proactive and equal partners with private sector counterparts when it comes to fostering technological innovation in the financial sphere*[33]*"*. We encourage Government to consider how it is stimulating innovation at all layers of the UK Payment Stack. Whilst it is evident this is done in the clearing and settlement layer, it is lacking thoughtful direction at the authorisation and proxy ID layer.

The in-flight plans and initiatives in themselves will not deliver world leading payment journeys; the participants in the payments eco-system will deliver these with high levels of take-up in response to well-designed services and features, but to do that, the current initiatives must facilitate it in the best way possible; identify potential roadblocks; and to the best extent mitigate those from the outset.

To achieve a world leading payments landscape, a user-centric long term strategic framework and plan is required that outlines the direction of development and focuses on the following possible attributes:

- Adherence to international standards e.g., ISO20022 XML, CPSS IOSCO standards and adoption of sound legal frameworks to support clearing and settlement and consumer protection of funds.
- Superior service user outcomes and benefits e.g., easy consumer access to funds and information, simple to use, low cost, speed.
- Superior security and resilience e.g., cyber security risk management, resilience to operational and security risks, Critical National Infrastructure Standards.

We are moving towards more efficient global payments. This requires sufficient international commitment and cooperation. Moving to international interoperability is key to enabling and sustaining real-time international transfers which sets the foundations for sustaining the UK as world leading in payments. However, it is complex, involving regulatory, legal, and operational considerations.

We have set out more detailed commentary on the two specific in-flight plans as set out in the scope of this Review, including, New Payments Architecture; and Open Banking and the JROC future roadmap.

New Payments Architecture (NPA)

We have set out our views on the NPA below. We have not sought to analyse the NPA progress and journey to date.

The UK should move to the ISO 20022 messaging standard. The world is moving to a common language in payments and the UK risks going backwards in payments if it does not adopt that standard. As we said in 2017, Barclays wants a UK retail interbank payment system that *"provides flexibility and choice for customers. That is easy for PSPs to access; is designed in a scalable, modular and futuristic way."*[34]

[33] Page 8, Derryl D'Silva, Zuzana Filková, Frank Packer and Siddharth Tiwari (December 2019), *Ibid*

[34] Paragraph 3.3, Barclays (September 2017), Blueprint for the future of UK payments – A Barclays response: https://www.psr.org.uk/media/d3fham2w/barclays-consultation-response.pdf?token=CNLUcSzX#:~:text=Barclays%20support%20a%20vision%20for,competition%20and%20differentiation%20between%20PSPs.

The "modular" concept is important. As set out in Question 2, the UK Payments Stack needs to be designed in a thoughtful and modular way to encourage and enable innovation to build upon strong and stable central infrastructure. This provides the clearing and settlement of UK retail payments and must be cost effective, safe, secure, and resilient. It is part of the UK's critical national infrastructure and should not be an area for taking risks or being overly innovative. Innovation should be enabled by the clearing and settlement layer but occur independently and separately from that layer.

When considering the New Payments Architecture, we suggest that Pay UK's vision for the NPA should be resilient infrastructure that does not prevent innovation within the payments' industry. The NPA must be fraud resistant as standard to meet consumer expectations; it is critical to the business case of the NPA. The NPA represents a "once in a generation" opportunity for the entire industry to agree to share data to combat fraud by default.

NPA and CBDC

We believe that digital money, such as CBDCs, can operate as an enhancement to our current financial system (e.g. in enabling programmable payments, promoting greater access to digital payments and other innovation). However, the design choice and defining the right use cases and opportunities are critical in achieving these objectives without incurring excessive risk. These opportunities could include cross border uses, financial inclusion and utilising the NPA as an FMI to avoid fragmentation.

In the event a digital pound is launched there will be a material impact on other financial market infrastructure that needs to be taken into account including certain financial market infrastructure that is currently being renewed, such as the Faster Payments transition to the NPA. Payments is a substitution game. The aggregate volume of payments grows in line with the economy and population growth. But how consumers and businesses make those payments changes. For example, in the UK card payments have substituted cash payments, but the volume of payments follows a predictable path. There were 37.5 billion payments in 2011 and there were 39.8 billion in 2022[35] – growth entirely in line with population growth over that period[36]. A CBDC would be an additional payment option for consumers to choose. We assume that HM Treasury and the Bank of England, should they choose to launch a CBDC, would expect it to be successful. It is not clear what transactions a digital pound would cannibalise. It could be cash, card, or interbank payments. Or more likely a mixture of all three, either way it will have an impact on the market and presents a risk to the NPA.

The Bank of England's consultation paper suggests holding limits that would enable up to *"95% of income earners in the UK to use their digital pound wallet to receive their salary without regularly breaching their holding limit."*[37] Salary payments are predominantly paid using the payment systems of Bacs direct credit and Faster Payments. The forecasts that underpin the financial model for NPA assume that salary and benefit payments will be made using the NPA. They also assume that the NPA would attract use in account-to-account retail transactions. It is not clear that the NPA could compete against a digital pound in such a way. The NPA would be left for transactions that a digital pound does not support – for example higher-value business-to-business payments and consumer-to-business collections. This further undermines the case for the current NPA design.

The NPA could serve as an "off-ramp" or "on-ramp" for a digital pound (and even for so called "waterfall payments" – when a holding limit is reached). However, the volume of these payments will be more akin to an ATM transaction than everyday transactions that underpin the NPA forecasts. For example, I may charge

[35] Page 63, UK Finance (August 2022), *Ibid*

[36] Payments growth of 6.1% between 2011 and 2021 versus a population growth over the same period estimated by ONS at 6.5%

[37] Page 80, Bank of England and HM Treasury (February 2023), *The digital pound: a new form of money for households and businesses*? https://www.bankofengland.co.uk/paper/2023/the-digital-pound-consultation-paper

my digital pound wallet once with £100 and then go on to make multiple payments to friends and to buy goods and services. But it will only be potentially one or maybe two NPA transactions.

Barclays is exploring relevant industry initiatives that could potentially provide orchestration between the BoE, PIPs, commercial banks, and other ecosystem participants and thereby enable similar operational characteristics across the digital pound and commercial bank money in order to mitigate the risk of fragmentation that could be created by the introduction of a CBDC. One of these initiatives, the UK Regulated Liability Network (RLN), 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. In addition, industry alongside UK policymakers could explore the possibility of utilising the NPA as an FMI for the same purpose.

In the Eurozone, the ECB believe that their TIPS payment system could form the underlying architecture for a digital euro[38]. The NPA could conceivably be reused in the same way. However, it is difficult to imagine the current governance and ownership structure being acceptable if it is used to support a digital pound. You would expect that the Bank of England would have to play a key role in the clearing arrangements for the digital pound.

The NPA and the UK payments stack

Clearing and settlement is a foundational aspect in the concept of a payments stack. However, it is crucial to separate (1) payment authorisation; from (2) the clearing and settlement of that payment.

If the authorisation process guarantees that payment will be made, it matters little when the payment eventually arrives with the merchant (see issues raised above in Question 1 with A2A payments and the benefit of separating the authorisation from the liability shift and ultimate settlement). Although getting the cash sooner does provide a cash-flow upside and reduces settlement / counterparty risks, cutting a few seconds off the end-to-end clearing and settlement journey of an interbank payment will not enable interbank payments to compete with a card payment. Card authorisation takes a fraction of a second and that guarantees the funds. It is also misconceived to propose changes to the way real-time payments work in the UK to minimise uncertainty about a payments' fate. A fraction of Faster Payments transactions are returned (0.087% in 2022)[39] – and the ability to accept a Faster Payment transaction with qualification yields significant benefits. For example, it helps when sanction screening payments originating overseas, so UK consumers can receive real-time cross-border payments instead of them being rejected.

Design considerations of real-time payment systems have changed since 2017 when the vision for the NPA was set out. Newer systems are different. According to a BIS report, the last time a deferred net settlement (DNS) real-time payment system launched was 2017. Since then, sixteen new real-time payment systems have launched, and they all settle payments in real-time. Similarly central banks have become more active in this area. In several significant jurisdictions, central banks have taken a leading role. The Australian Reserve Bank provides the fast settlement service for the New Payments Platform, the Brazilian Central Bank operates the PIX and SPI payment systems, the European Central Bank operates the TIPS payment system, and the Federal Reserve Bank in the USA has just launched its FedNow payments system[40].

[38] European Central Bank (July 2021), Digital euro experimentation scope and key Learnings: https://www.ecb.europa.eu/pub/pdf/other/ecb.digitaleuroscopekeylearnings202107~564d89045e.en.pdf

[39] Calculation based on Pay.UK (2023), *ANNUAL SUMMARY OF PAYMENT STATISTICS 2022*: https://newseventsinsights.wearepay.uk/media/e1mdcljg/annual-payment-statistics-2022.pdf

[40] Page 9, Bank for International Settlements (December 2021), Committee for Payments and Market Infrastructures, Development in retail fast payment systems and implications for RTGS systems: https://www.bis.org/cpmi/publ/d201.pdf

When it launches, in mid-2026, the NPA will settle in net three times a day and the Bank of England will have little involvement in the design or operation of the service (save for acting as settlement agent and its regulatory oversight role). The purpose of this diversion is not to say that the NPA design should change, or that the Bank of England should run it. More to observe that the design assumptions made in 2017 do not reflect current trends and are less likely to do so in 2026. In consideration of whether the inflight initiatives such as the NPA will help the UK to be "world leading" in payments, it is difficult to see how this would be so when settlement will not be comparable with these other countries.

A chance to reflect

Overall, we think the UK's real-time clearing and settlement layer should focus on the following goals:

- Adopting international messaging standards to make it easier for payments to cross-borders and interoperate with existing payment systems.
- Combating fraud.
- Ensuring resiliency and security of this crucial aspect of national financial infrastructure.

Activities to promote additional innovations, for example competition between payment instruments, should focus on enabling innovating in the authorisation layer not the clearing and settlement layer.

The UK has a brief window to consider what is the optimum approach to achieving the above goals in the UK's real-time payments clearing and settlement layer. As such, we ask that Government or Bank of England commissions an independent constructive review (independent of Pay.UK) under the new Financial Market Infrastructure Committee comprised of the Bank of England and supported by experts in payment systems. This review must answer a few simple questions:

- How does the NPA design meet current best practice for real-time clearing and settlement systems (if not, what should change), and is that design achievable?
- To what extent does the NPA facilitate prevention of authorised push payment scams?
- To what extent is the NPA viable in the event of a UK CBDC? If not, what must be changed to ensure the system remains relevant?
- What appropriate governance is required to support Pay.UK to navigate effective and timely delivery of such a complex programme?

Open Banking

It is well-established that Open Banking has been a major success story in the UK, as consistently recognised by the CMA and JROC: "*[Open Banking] has been a major success in improving competition in retail banking and securing positive outcomes for consumers and businesses*";[41] and "*[m]ore than 6.5 million consumers and SMEs in the UK already use open banking-enabled products and services, contributing to UK leadership in the fintech sector, with UK citizens and businesses benefiting from increased competition, choice and innovation*".[42]

Whilst Open Banking has met the requirements of the Retail Markets and Investigation Order, we would question to what extent it has truly stimulated sustainable competitive innovation within its layer of authorisation and proxy ID.

To build upon the success of Open Banking, it is important to consider the JROC Future Road Map as one of the in-flight initiatives and to consider how likely this is to deliver world leading payment journeys for UK Consumers. The themes of the Future Roadmap will help towards this, from levelling up availability and performance, to increasing and harmonising standards, to finalising the design of the future entity.

[41] CMA Roadmap Completion Decision, 12 January 2023

[42] The Future Development of Open Banking in the UK, Final report for the Joint Regulatory Oversight Committee, February 2023

We consider creation of the future entity as being crucial to unlocking the ambitions of JROC and the ecosystem, bringing stability and certainty to the future of open banking. We would strongly encourage JROC to focus its efforts in enabling the creation of and move towards the future entity before expanding the development of premium APIs.

Innovation flourishes best when there is competition in the market. Creation of the future entity will help drive innovation, which in turn will help the market to develop premium APIs to deliver world leading payment journeys. Any commercial pricing principles underpinning premium APIs will need to be carefully designed to incentivise the market and be conducive to stimulating innovation, ultimately creating a sustainable and thriving ecosystem.

For Open Banking to expand to include alternative payment methods, and for these to be confidently and safely adopted by consumers, there are key consumer protections which must first be prioritised and addressed:

(1) **Fraud Prevention** - it is crucial to improve Open Banking payment fraud prevention to minimise the ongoing risks to consumers before any further expansion of Open Banking payments. There should be little-to-no divergence in (comparative) fraud rates between Open Banking payments and other equivalent payment methods. Our data indicates that we are seeing proportionately higher rates of fraud in Open Banking payments, than in other payment types. If this trend is consistent across the market, and continues unabated, then this could ultimately lead to increased fraud and therefore customer harm, as well as a loss of trust in the payment method, and declining adoption. Mandatory data sharing through Transaction Risk Indicators (TRIs) would be a key enabler here; through increased data sharing, PISPs could help towards the enhancement of fraud decisioning/profiling and in turn create better customer outcomes.
(2) **Consumer protection** (like Section 75 Consumer Credit Act; and charge backs). In the ongoing VRP working groups, we would strongly recommend this is prioritised. Without these being in place, solutions such as RA2A payment methods will not be widely adopted.

Tokenised ID Payments

Today the UK market has little identity sharing; even within Government departments this is limited (although that is anticipated to change following the consultation on the draft Digital Government (Disclosure of Information) (Identity Verification Services) Regulations 2023). When comparing the UK to other countries for its payment innovation, it is important to understand the fundamental role which digital identity plays and the role governments have played to ensure these are adopted and successful. For example, the Nordics via BANK ID, India with Adahaar, and Canada with INTERAC. BANKID and INTERAC were both started by financial services providers and were supported by government (e.g., allowing a bank produced tokenised ID to log into government services). Governments enabled collaboration to create a ubiquitous solution, to share re-usable Digital Identities utilising already strong KYC requirements that a bank is required to comply with. Digital IDs in these examples began with financial services, the reason being that these, when associated with payments, can quickly become ubiquitous and can be re-used unlocking the potential for digital IDs in other industries and helping with delivering the Government's Smart Data initiatives.

Today, the Nordics and Canada are already moving into, not only re-useable digital identities, but also now integrating these digital identities into the payments process. They see that digital ID on its own is an enabler and simplifies a process, but when integrated into a payment can offer a single-step solution that can lower cost, friction, improve security and lower fraud risk; the pillars that any new payment system needs alongside ubiquity to get to a level of success.

We have touched on the importance of culture and context when making international comparisons, and this is true for comparisons on digital ID too. We know there is a nervousness and sensitivity in the UK with the concept of a digital ID. Even in the Government's consultation on how it was developing one ID to be used across Government departments, there was such nervousness that a "myth busting" set of FAQs had to be published to distinguish One Login from a mandated ID card.

We encourage Government to be ambitious in its consideration of progressing digital ID and the functionality, level of security, and innovation that could be achieved through embedding this in a payment journey. As has been done elsewhere, we recommend Government commits to enabling a financial services led creation of reusable digital IDs. To ensure this is possible, Government will need to educate and empower other policymakers and society generally so there is a distinction in the minds of consumers between a tokenised digital ID payment, and a mandated digital ID card.

ESG

When considering the future of payments, it is important to consider ESG implications. Merchant and consumer awareness, and net-zero Government and business commitments, are driving ESG-friendly payment initiatives. ESG-aligned products, services and solutions will attract and retain a more ESG-conscious consumer base. We are already seeing merchants wanting to make sustainable business and financial decisions, and as such are increasingly willing to pay more for eco- friendly products[43]. Payment providers are adopting eco-friendly cards, digital payment methods and cloud infrastructure, thought to generate 95% less carbon. There is also a drive to enable those clients that support the sustainable economy (e.g., public transport, EV charging) and to ensure they have integration of intuitive payment solutions.

[43] https://www.pwc.in/industries/financial-services/fintech/payments/integrating-esg-in-the-payments-ecosystem.html