13th September 2016

To   Payments Strategy Forum Secretariat
           Payment Systems Regulator
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From   Craig Tillotson, Chief Executive

FASTER PAYMENTS SCHEME LIMITED RESPONSE TO THE PAYMENT STRATEGY FORUM'S DRAFT STRATEGY

Faster Payments Scheme Limited, the regulated Payment System Operator (PSO) of the Faster Payments Service, welcomes the opportunity to provide feedback on the recently published draft strategy delivered by the Payments Strategy Forum - '*Being responsive to user needs*'.

Attached to this letter are specific answers to the questions raised in the consultation document. The remainder of this letter describes the Faster Payment Scheme and its objectives, outlines the role the scheme and some of its staff have played in the development of the draft strategy to date, and most importantly provides our high level view of the overall strategy and how it can be most successfully executed to meet the interests of service users and the UK economy. We have also attached an annex that provides more specific commentary on the proposed solutions.

## FASTER PAYMENTS SCHEME LIMITED – PURPOSE AND OBJECTIVES

The purpose of the Faster Payments Scheme Company is to develop, operate and enhance real time, 24/7 payment services that:

- Enable a vibrant and globally competitive UK Economy.
- Allow Payment Service Providers (PSPs) to deliver services that are:
  - Financially safe and secure, consistent, reliable, resilient, scalable and available.
  - Aligned to both real time and same day digital and physical business processes and business models of its customers and users.
  - Simple and easy to use.
  - Economically efficient with value oriented, fair and non-discriminatory cost recovery from PSPs.

- Stimulate and grow the UK payments market by:
  o Making it easy for new PSPs to enter, grow and compete.
  o Catalysing payments related innovation.
  o Attracting global PSPs and FinTechs to the UK to innovate and develop payments services and businesses.
- Are driven by the long term needs and aspirations of consumers, businesses, government, the third sector, and all types of PSP, including challengers and incumbents.

The Faster Payments Scheme is a not-for-profit company. It does not make a financial return or provide other advantages to its guarantors that are not available to all participants. Equally, it does not expose its participants to risks or liabilities without their express consent.

To deliver its purpose, FPSL has a hierarchy of strategic objectives and underpinning corporate structure, governance, resources, technology, investment funding and ownership model (see below):
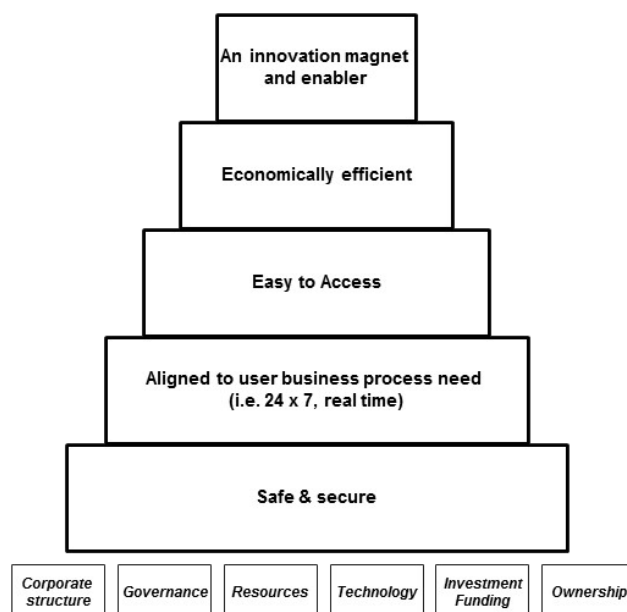
OUR CONTRIBUTION TO DATE TO THE DRAFT STRATEGY

Although FPSL has had no staff directly participating in the Payment Strategy Forum itself, we have been able to provide input and comment to its work through the Payment System Operators Consultative Group chaired by Ruth Evans, and through significant working level participation in the Securing Access to Markets (SAM) and End User Needs working groups. We have also provided some input to the Horizon Scanning and Fraud working groups.

FPSL also provided inputs and a response to questions to the SAM WG PSO Governance sub-group review chaired for the PSF by Carl Pheasey.

OUR OVERALL VIEW OF THE STRATEGY

'*Being responsive to user needs*' articulates well the gaps in provision of payments services to end users that need to be closed. It also does a good job of describing a new functional architecture for payments based around a core payments service and overlay services, and makes a well-reasoned case for some PSO consolidation and simplification to better support access. However, the particular technical architecture that the PSF is proposing in its strategy seems premature at this point given substantial uncertainties about the specific technical approach and its relative merits over alternatives. Finally, we consider that the expectations being placed upon the proposed technical architecture to transform the rate and ease of innovation in payments are unrealistic. In our assessment of the market, it is not generally technology that is the cause of innovation difficulties, but more fundamental challenges arising from mismatches between the broad public good and the natural private incentives of individual PSPs, a form of '*economic coordination failure*'.

- Service users and the economy in general, will benefit significantly if a request-to-pay/request-for-payment capability is developed to allow organisations and individuals of all types to safely and efficiently send requests for payment to other organisations and individuals which can then be electively satisfied using a Faster Payment, CHAPS Payment or potentially even a card payment. This solution will have particular benefits to financially challenged individuals for whom Direct Debit is a poor solution, but will have much broader application. A well structure solution will also solve, at root cause, some of the user challenges that payee validation can solve. However, payee validation for individuals and organisations will also have reliability and confidence benefits. Increasing the data carrying capacity of some older payments systems and the more general exploitation of this new capability (and the pre-existing capability in FPS), by PSPs may also provide benefits to the economy.

- Moving the UK payments business and technical architecture to a layered model, based upon a core 24 x 7 real time push credit system, with overlay services providing a variety of payment functions makes sense.

    o Moving towards one (or possibly two – see below) clearing and settlement services for all UK retail inter-PSP payments is a good target, particularly in terms of reducing complexity and using PSP liquidity more efficiently. However, the current plan for imaging paper cheques seems to be running in a different direction. FPSL would argue that given the publication of the draft PSF strategy, a review of the current direction of the cheque programme should now be undertaken. Firstly, to

reconsider the purpose of the programme – Is it to 'digitise' the current richly functional cheque and credit processing model in its entirety, or, given that cheques are naturally declining (volumes are down by almost 75 per cent since 2005), to provide a cost effective mechanism for enhancing the experience of the service users for whom current and future electronic alternatives, such as *request to pay* will still not work? Secondly, with clarity of purpose, if maintenenace of the rich functionality is required, then the current plan can be confirmed, or if a narrower need is identified then a new plan, more aligned to the PSF strategy should be considered. If the need is to deliver against a narrower set of service user requirements, then FPSL would argue that the development of the new cheque imaging service, should focus on converting a cheque into an image and an instruction to make a push payment, and then let PSPs move the funds using the Faster Payments Service, today, before migrating to a future core 24 x 7 real time push payment service when it is available.

o   This layered model is the approach that has been taken successfully with the Paym service, and is planned for the commercial Zapp/Pay by Bank service. And although more tightly integrated with the core payments platform, this is also the way Standing Order (SOPs) and Future Dated Payments (FDPs) are processed over the FPS core 24 x 7 real time payments engine as asynchronous payments.

o   However, while it seems clear that spontaneously generated individual payments such as Single Immediate Payments (SIPs), Paym payments, and cheques should be handled in this way, there are more open questions of efficiency associated with bulk payments such as Salaries and Direct Debits currently handled by the Bacs platform. While it may well be that the overall eco-system business case for moving bulk credits and Direct Debits to overlay services that sit on top of of a core 24 x 7 real time push credit engine is positive, this assumption needs to be properly tested. An alternative approach that exploits the pre-planned rather than spontaneous nature of these payments, the fact that many are not one-to-one but one-to-many or many- to-one flows should be properly considered. This might suggest the use of off-line clearing and netting to limit the processing burden on PSPs. Whichever approach makes most sense, this will be a divergence from the pure overlay model, in that these payments are either processed though special channels to a single clearing and settlement engine, or via a parallel bulk clearing engine. The architectural and technology decisions in this space will also be impacted by the capabilities, or otherwise of PSP systems, many of which are designed as batch processors.

- All this thinking also needs to consider what consequences a general move to real time 24x7 operation might have on PSPs. Even today, there are a number of PSPs that do not offer a 24x7 real time proposition to their customers, and do not have the underlying technology in their own systems to support it. This could have significant implications on their ability to fully participate in a new architecture. This is another area where technical aggregators could insulate individual PSPs from the demands of the rest of the eco-system

- There are still very significant economic and effectiveness uncertainties associated with the distributed, bilateral technical architecture being proposed for the Simplified Payments Platform (SPP) verses a set of more centralised new solutions:

  - *The internet is enabling as many centralised as distributed services.* Although parallels are drawn with the distributed ledger technology of the blockchain, and in more general terms, peer-to-peer internet service developments, there is an equally strong drive across the internet to develop and exploit centralised services. These centralised services are essentially what Cloud computing and Cloud based web services, such as Amazon Web Services and most Google services have been established to deliver. *'The cloud'* is exploiting the interaction of essentially zero cost communications across the internet from central data centres (the cloud hosting environments) to individual end user devices with the massive economies of scale and functionality that those central computing resources and storage can achieve when concentrated. Whether it is google search, google maps, or IMAP email, all these services operate, and have exploded in use, under centralised, not distributed processing models. By way of example, over the last five years email has not been moving from centralised IMAP servers like Gmail to individual enterprise email servers, but the other way around.

  - *Blockchain and Distributed Ledger raise many questions.* The use of a distributed ledger or blockchain technology to support large-scale retail payments remains highly speculative. As the 'Gartner hype-cycle' for distributed ledger moves on, it is becoming increasingly clear that the technology in its current form is poorly suited to supporting retail payments. If Bitcoin is taken as a reasonable example of its deployment in the payments space, then its costs, poor latency and questions of scalability need very significant further examination before it could be considered a credible technology to underpin part of the UK's critical national infrastructure.

  - *Other industries have moved in the opposite direction.* International roaming for GSM mobile voice calls, was established in 1994 on a small web of bilateral technical and commercial arrangements, but by the early 2000s most Mobile operators had to manage approaching 1,000 such arrangements each. When

International data roaming was established lessons were learnt and a small set of centralised hub services are now used to interconnect all players. But still today, until voice becomes a simple app on top of LTE mobile data networks, new entrants into to the mobile industry, if they are to offer credible international services simply have to connect to one or more of the international hub services for their data roaming, but must negotiate and deploy many hundreds of bilateral voice roaming arrangements. The economic and technical case for central hubs is clear in this particular case.

- o *The latest international developments in payments are not moving in this direction.* Internationally, two major real time payments development programmes are currently underway and have selected technical partners and solutions within the last 12 months. EBA Clearing is developing the SEPA Instant Credit real time payments programme in the Euro Zone having selected SIA as its technology partner and the The Clearing House (TCH) is developing its Faster Payments programme in the US having selected VocaLink as a key software supplier. Both of these programmes are developing 'greenfield' solutions and have selected their approach using competitive tenders. In neither the US nor Europe are there existing suppliers or technologies for these services, and apart from the procurers' considerations of efficiency, effectiveness, risk and flexibility, there are no known architectural restrictions applying to the solutions they have considered. Both of these major programmes have selected centralised technology deployments for their services rather than distributed models.

- o *The Simplified Payments Platform (SPP) distributed architecture does not address netting, settlement or settlement finality issues essential to making payments.* As described in the draft strategy, the bilateral model of message exchange is silent on how settlement risk and settlement risk positions will be managed between participants. As the SPP aspires to take on a systemically important role in UK domestic payments this seems like a significant gap. In subsequent discussion it has been suggested that some minimal central service might additionally be required in the SPP to complement the bilateral exchange of messages between PSPs and allow settlement risk positions to be managed. In our view this '*minimal central service*' is not materially less costly or complicated than the message exchanges required for a full centralised service, and therefore the bilateral message exchange in addition is simply adding more complexity and cost for no added functionality or performance.

- We cannot see how the proposed distributed technical architecture materially simplifies or enhances the delivery of innovation in retail payments. We contend that slow deployment

of innovation for the public or common good is a result of a classical economic coordination problem.

- In our practical experience with the development and enhancement of the Faster Payments Service as well as what we can see as a supplier of expertise to MPSCo, the operator of Paym, change and innovation proceed more quickly when that change is concentrated in central infrastructure, and is much slower to deploy when it needs to be implemented in participant PSP technology estates. In both companies, we are always encouraged by participants, both big and small, to concentrate innovation and change in the centre so as to avoid calling on their own constrained technology and operational change resources. Where such change in PSP systems is unavoidable, the case for change needs to be very strong.

  - Recent innovations in the Paym service have been most quickly adopted when they have had minimal impact on participant PSPs systems and operations. For example the recent deployment of SMS notification to unregistered end users which has been built upon the Paym central infrastructure alone.

  - In the Faster Payments Service, innovation over the last few years has likewise been concentrated in changes to the central infrastructure that have minimal impact on participants, for example: introducing the central monitoring of payment flows with Automated Scheme Protection Measures and system timer changes to reduce participant dependencies. Changes that have required significant change or testing in participants, such as increasing the scheme transaction limit (a parameter change in the centre), and the introduction of redirection for the CASS service have required much more extended deployment time lines to accommodate the necessary inter participant testing to ensure continued safe operation.

- The services that are the subject matter of the PSF's draft strategy are, perforce, those which need to be delivered in a cooperative/collaborative way. If they can be delivered in the competitive space by individual PSPs, then market forces will deliver them. These competitive solutions must be driven by business cases that support individual action by each PSP that choses to compete. In the collaborative space of the strategy, there can be no individual action PSP business cases, there can only be collective action PSP business cases. For collective action to proceed, a critical mass of PSPs, need to all agree to coordinated and cooperative action, often the coordinating role of a PSO. Unless the individual PSP benefits of taking this action are very significant, this is difficult to achieve. We cannot see how the technical architecture described as the SPP addresses this coordination problem,

and therefore how it will significantly accelerate innovation, especially given the points we make about practical management of change.

- The case for consolidating at least Bacs, C&CCC, FPSL and Paym (MPSCo) seems reasonably clear for a number of reasons:

    o Putting aside the detailed technical delivery options for the SPP, the clear statement of direction of a payments architecture built using a layered architecture of common connectivity, a core 24 x 7 real time push payments engine and overlay services would be best served by a single PSO.

    o The economic collective action challenge described above is likely to be more easily addressed if interbank strategic decision making is done in a single PSO, rather than distributed over a number of different entities, although a complete solution is likely to require continued regulatory support where the UK-wide business case for a change is clear, but private PSP business cases are less so.

    o Coordination of change priorities across the whole eco-system would benefit from more concentrated governance.

    o A consolidated PSO should be better able to attract and retain the skills and experience needed to drive through the substantial changes envisioned in the strategy.

WHAT SHOULD HAPPEN NEXT?

While there are a number of detailed elements of the draft strategy that FPSL has outstanding questions about, the general thrust is clear and represents a very effective statement of direction. Given this, FPSL proposes that the delivery of the core of the strategy can, and indeed for the benefit of payments users and to minimise financial stability risk should start soon. Although from a PSO perspective, we propose that the following '*straw-man*' plan should be considered:

- Before the end of this year the Bank of England and the PSR, Bacs, C&CCC, FPSL and MPSCo should plan and then prepare to execute a transition to a consolidated PSO. From a risk management perspective, given that this proposal is in the public domain, a clear direction needs to be agreed quickly to reduce uncertainty for the staff employed by the current PSOs so that that the continued and uninterrupted delivery of their core objectives today is not put at risk. As well as this there needs to be full clarity on the scope of the consolidated PSO (which PSOs, what other functions like standards and change delivery), the purpose, objectives and governance of the new entity and a clear and agreed business

case for change. This change is also an important facilitator   for much of the other change that follows.

- Concurrently with this work, the 5 PSOs (Bacs, C&CCC, CHAPS, FPS and LINK) should continue to work through and deliver the common PSO participation model under the auspices of the Interbank Systems Operators Coordination Committee (ISOCC) and individual PSO governance systems.

- Over the next 24 - 36 months the consolidated PSO should develop and then lead a coordinated change plan for the interbank payments eco-system that is sensitive to the demands of Structural Reform of banks and PSD2 delivery by PSPs. This plan will need to consider other regulatory priorities within PSPs and their own capacity for change and brings the following end-user focused changes to market:

    o Review the strategic and service user purpose of cheque imaging to determine whether to re-orientate the programme to separate the cheque clearing and imaging component from payment and settlement to exploit the current faster Payments Service and then the future 24 x 7 real time payments core to effect payment, or alternatively redevelop the current standalone model

    o Create a 'Request to Pay' overlay service that can operate with existing and future payment systems, exploiting APIs wherever possible.

    o Likewise, develop a payee validation overlay service to front end existing and future payment systems improving consumer and business confidence in payment routing accuracy exploiting the technology asset created for Paym and its API based JSON access model.

- Over the next 2 – 5 years the consolidated PSO should develop and then lead the delivery of the following technical architecture changes:

    o Create and then transition to a competitive connectivity layer that allows easier connection for PSPs to different central payment core and overlay services and each other.

    o Specify, tender and procure a new ISO 20022, 24 x 7 real time core payments engine that can underpin the growing number of overlay services and replace the current Faster Payment System when its contract terminates in 2020.

    o Reach out to service users, especially the 130,000 current direct submitters, and PSPs to start a strategic review of the evolution of bulk credit and direct debit services. Create a plan and business case for change to move to ISO 20022

potentially over the core real time platform or possibly over a parallel bulk processing engine depending on the economic case. Consider what newer technology options might be exploited.

- o Develop a long term strategic plan for further technology enhancements including blockchain/Distributed Ledger and future emerging technologies and standards when they become sufficiently mature and proven to support critical national infrastructure

- Collaborate with other industry players and regulators to support other PSF initiatives including:

  - o API development and the Open banking Initiative.

  - o Enhanced data capability deployment in PSPs and their customers.

  - o ID verification and Financial Crime Intelligence Sharing.

We look forward to working ever more closely with the BoE, PSR and PSF to do our part in converting this exciting future vision of payments in the UK into reality for all our service users and will continue to share our thinking and research wherever possible.

ANNEX: COMMENTARY ON SPECIFIC SOLUTIONS

The expressed focus of the strategy on responsiveness to user needs has to be at the heart of any plan for strategic change in our industry. This is a combination of meeting the unasked for, but vital, user needs of payment systems continuing to work all the time, completely reliably, while at the same time driving change across the whole payments eco-system to better serve end user needs, both directly via the introduction of new and enhancement of existing services, and indirectly via taking steps to enhance competition at the PSP and other customer facing layers that expand choice and value for consumers.

- **Request To Pay**. FPSL has been actively working to understand the consumer and business needs of an overlay request for payment/request to pay service for around 12 months. We have shared or research and findings to date with the End User Working Group, and will shortly be providing a detailed summary of the end user analysis we have completed and business case work we have started off the back of this analysis. We believe that there is a huge opportunity to expand the benefits that the Faster Payment Service has provided to the UK economy since 2008 as a push credit system by complementing this with an overlay service that allows a wide variety of businesses, charities and consumers to request payments from other entities, and which will allow those entities to satisfy those requests simply and easily using the Faster Payment and potentially other services. We consider that this service can be developed now, and built in a way that is consistent with the PSF's architectural vision, but can deliver value over existing and future payments systems. FPSL has been working to establish the end user needs and economics of this service for the last 9 months and will continue to share all our findings with the PSF.

- **Assurance Data**. It is clear that the current configuration of UK payment systems fails to give users enough confidence that they have sent their payment to the right account. The account name playback feature of the Paym service illustrates how this problem can be addressed. We recognise the importance of providing a **'payee verification'** solution for consumers, and also businesses setting up Direct Debit mandates for their customers. We would suggest that this is a more specific description of the solution than the more generic 'Assurance Data'. Our 'sister' company Mobile Payments Service Company, the operator of Paym, will respond to this consultation explaining how it believes it can exploit the technology it already has in production to provide a solution to this problem that can deliver to end users of current and future payment systems architectures.

- **Joined Up awareness Campaign**. We agree and are keen to work with all parties, especially trade associations to support this.

- **Access to sort codes**. Good progress is being made here and we continue to work with Bacs.

- **Access to settlement accounts**. We will continue to work with the Bank to identify what changes to legislation and settlement models might be needed to fully achieve the Bank's expressed strategic direction.

- **Aggregator Access Models**. FPSL has led the development and deployment of the technical aggregator model for access to payments in the UK and will continue to work to ensure access is extended to multiple services and schemes through individual aggregators.

- **Common PSO participation models and rules**. FPSL is playing an active role via the Interbank Operators Coordination Committee (ISOCC) to ensure that quick wins are delivered. Further change coming out from this work should be supported by PSO consolidation.

- **PSO Consolidation**. We are following the lead of the Bank and PSR and are ready to support the development of a change plan.

- **Moving to a Modern payments message standard / Common Messaging Standards**. We have already published a full two way mapping between our current standard ISO 8583 and ISO 20022 and will continue to support this work.

- **Layered payments Architecture**. We agree that a move to a layered connectivity model and separation of core payments from overlay services is the right direction to purse.

There are a number of areas of the strategy, that seem to be heading in the right direction, but where further understanding and development of details is needed:

- **End User APIs and Open Access APIs**. Further detail will need to be developed, and a fuller understanding of how these ideas might be extended to provide PSP access to Payment Systems.

- **API Governance**. It seems appropriate that governance of API development should be done in a consistent way for both PSD2 and the CMA remedies. It is less clear how this should work in relation to any specific APIs (typically not open) that need to be developed for systemically important payment systems.

- **Simplified Delivery Mechanism**. We are very supportive of the concept of a core 24 x 7 real time push payments engine – this is what FPS provides today with its SIP service. As

we have talked about earlier, there are some very significant open questions about the technical architecture that should be deployed to replace FPS and fulfil this role. There are also open questions about whether bulk payments should be paid over this system, verses a parallel off-line clearing, netting and settlement engine.

- **Overlay services**. We agree that the model of core plus overlays is correct. These overlays, even if in some cases supplied by the same vendor as the core, should be deployed so that this does not need to be the case. We also see that some more detailed thinking is required to differentiate between a possible overlay service such as bulk credit transfer, where the overlay service acts as a direct front-end or channel for the core payments engine, and other services like Paym, or Request to Pay, where the interaction between the overlay and core is always indirect and controlled by each PSP. This latter model is less like the ISO 7 layer stack model in communications and therefore needs to ensure that inappropriate analogies from the communications industry are not made.

While we agree with the broad thrust of the strategy, there are a few areas where we have some quite substantial questions:

- **Enhanced Data Capability**. We recognise the general point being made in this solution although we have a number of observations and questions.

    o From an FPS perspective we do not believe that this is a central payment system problem. FPS was built, and has always operated with the functionality to carry at at least as much data as the ISO 20022 SEPA credit system. Connected PSPs have not chosen to exploit this capability for their customers. This may well be a 'collective action' problem that the strategy can address, but will need to identify specific applications to get this moving in PSPs.

    o Although the focus of the strategy has been on the data carrying capabilities of the central payment systems, learnings from the Payments Council DWP Richer Data project run a couple of years ago identified that the key problem was the capture of information from end users to go with payments, not the carrying of that data once captured. That project identified some innovative and practical solutions using PSD2 that should be reconsidered as an important part of the solution, specifically in the government space.

    o Although the solution focusses on reconciliation data, we believe that there is an even more powerful solution that integrates reference data carried in payments with a series of vertical industry and horizontal application specific data repositories that cannot just reconcile payments to business processes, but fully integrate them.

- **Payment Transaction data sharing and data analytics**. While there are some good proposals being made in this area, there remain some important issues of privacy that will need to be captured. There also seems to be some inconsistency between the centralised approaches being proposed here and the decentralised technology architecture for the SPP.

Given limitations on our own resources and areas of expertise, we have no significant views on the following solutions, but to the extent they will touch upon our own industry responsibilities we will want to support the further development of these initiatives should that be proposed in the final strategy:

- **Guidelines for Id verification**.

- **Financial Crime Intelligence Sharing**.

- **Trusted KYC data sharing**.

- **Enhancement of Sanctions data quality**.

- **Indirect Access Liability Models**.