



BANK OF ENGLAND

June 2018

# ISO 20022 consultation paper: a global standard to modernise UK payments



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<sup>1</sup> Note: the sections have been written such that they can be read on a standalone basis.



# Foreword

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Payments form the cornerstone of our financial system and our economy. Every year, over 8 billion payment messages are exchanged across CHAPS, Faster Payments and Bacs, the UK's three main interbank payment systems.<sup>2</sup> These messages ensure businesses can pay their suppliers and staff, allow individuals to buy goods and services, support corporate treasury operations, and channel government spending and revenue.

Today, each of the UK's main payment systems uses a different 'language' (or messaging standard) to send information. These languages were developed at different points in time and in response to specific needs, and helped to put UK infrastructure at the global leading edge in speed and resilience.

However, the demands on payment systems are changing rapidly, and the UK's fragmented and restrictive messaging standards mean today's systems are not best placed to respond. Inconsistent standards make it difficult and expensive to move customers' payments seamlessly across domestic systems, complicate the management of operational outages, and pose barriers to competition and innovation by requiring new payments providers to develop bespoke technology to access each system. Narrow messaging standards limit the amount of information that can be provided to support crucial business processes such as reconciliation and compliance, increasing costs for payment service providers and end-users. And a lack of harmonisation between the United Kingdom and other countries impedes the smooth transmission of cross-border payments.

The introduction of a common global messaging standard, known as 'ISO 20022' offers the opportunity to make payment systems work better for everyone. The Bank of England has committed to introduce ISO 20022 for the high-value payments system CHAPS. And the UK retail schemes moving to ISO 20022 was a key requirement of the Payment Systems Regulator (PSR) when it concluded its market review into effective competition of central infrastructure services.

This consultation document marks the first step in the transition of CHAPS, Faster Payments and Bacs to ISO 20022 and proposes a format for a new, common messaging standard to payments made in these systems. The format has been developed jointly by the Bank and the UK retail payment systems via the newly established New Payment System Operator (NPSO)<sup>3</sup> and in close collaboration with payment providers. The new messaging standard has also been designed to be consistent with the emerging consensus for similar messages in other countries, marking a major step forward in harmonisation not just domestically but also for cross-border payments.

Introduction of the new standard is being made possible by the technology renewal programmes currently underway at the Bank (for its Real Time Gross Settlement System, which underpins CHAPS) and at the NPSO (for the New Payments Architecture). A detailed implementation plan for the new standard in CHAPS, consistent with the Bank's broader plans for the RTGS Renewal Programme, is included in this document.

The coordinated adoption of a single standard across UK payment systems should bring many benefits for payment providers, and for the businesses and households they serve. Risk will be reduced by allowing payments to be rerouted more effectively between systems, and by standardising and improving data supporting detection of fraud and financial crime. Payments will flow more easily across international borders. Entry costs will fall, supporting competition and facilitating the development of new services for users. Richer data, including the purpose of the

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<sup>2</sup> [Annual Summary of Payment Statistics 2017](#)

<sup>3</sup> NPSO brings together Bacs, Faster Payments and Cheque Clearing into a single consolidated organisation.

payment and parties involved, will help streamline compliance and reconciliation processes, and facilitate innovative data services to users. And, in aggregate form, the enhanced data will help to build up a better real time picture of economic activity and financial flows across the United Kingdom, supporting policy makers, including the Bank, in taking more informed decisions.

Realising these benefits to the full, and preparing our payments systems for the future, will require material changes, not just by payment providers, but by many others across the payments chain, including some end-user companies and individuals. That will require close co-ordination across a wide range of separate bodies, over several years. The Bank and NPSO, as payment system operators, and the PSR, as economic regulator of payment systems, are committed to using all the tools at their disposal to help deliver the broadest possible adoption of the standard. We will work closely together to minimise disruption and maximise the benefits for the United Kingdom. But to plan effectively for that transition, we need to hear from as wide a range of participants as possible – from the largest banks through to end-users. We want the final plans to reflect input from, and have the wholehearted support of, all UK payment system users. We strongly encourage your input, and look forward to hearing from you.



Andrew Hauser  
Executive Director,  
Bank of England



Paul Horlock  
Chief Executive Officer,  
New Payment System Operator



Hannah Nixon  
Managing Director,  
Payment Systems Regulator

## Who should respond to this consultation?

- Any organisations or individuals who make a significant volume of payments via CHAPS, Bacs, or Faster Payments on a regular basis;
- Payment service providers who are direct or indirect participants of any of these systems;
- Technology vendors who provide financial institutions or corporations with solutions for initiating, processing or reconciling CHAPS, Bacs credit or Faster Payments messages;
- Trade associations or industry groups which represent any of the above;
- Government departments, regulators, agencies, or law enforcement bodies with an interest in UK payments strategy; and
- Any other organisations or individuals with an interest in the future of sterling payments.

Responses need to be submitted by **18 July 2018**; see Section 1.5 for further information on how to respond.

# 1 Executive summary

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## 1.1 Introduction

1. The major UK payments systems are moving to the new global messaging standard for payments known as 'ISO 20022'. This consultation seeks views on the proposed strategy for aligning credit payment messages across CHAPS, Bacs, and Faster Payments with the new global standard.<sup>4</sup> More specifically, it also seeks views on how this Common UK Credit Message (CCM) should be implemented by the Bank within CHAPS, the costs and challenges in doing so, and the migration path and timelines to get there.

### Box 1: What is ISO 20022?

Any payment system requires a messaging standard, i.e. a common set of rules for exchanging relevant payment information in order to enable efficient communication with participants and related infrastructures. Messaging standards cover such things as:

- How senders and receivers identify each other;
- How key properties of a payment message, such as currency, amount and value date, are represented; and
- What additional information can be included alongside settlement data, and in what format, to enable onward transport and processing of the payment.

First published in 2004 by the International Organization for Standardization (ISO), ISO 20022 is a globally-agreed and managed method for creating financial messaging standards which has the following key features:

- *Open Standard*: Specifications are freely available, development is open and the standard can continually evolve to meet users' needs.
- *Network Agnostic*: The syntax (language) can be read by a wide number of computer operating systems.
- *Increased data carrying capacity and improved structure*: It allows better identification of the originators and end beneficiaries of payment instructions, better understanding of the purpose of a payment, and avoiding data truncation when sending messages.

2. The Bank committed to move CHAPS messaging to ISO 20022 as part of a wider renewal of its RTGS infrastructure.<sup>5</sup> Delivery of ISO 20022 supports many of the renewal programme's objectives: increased resilience, greater access, wider interoperability, improved user functionality, and strengthened end-to-end risk management. Similarly, the design of the New Payments Architecture (NPA – the new UK retail payments system replacing Bacs and Faster Payments) will be based on ISO 20022, as required by the PSR's 2017 Market

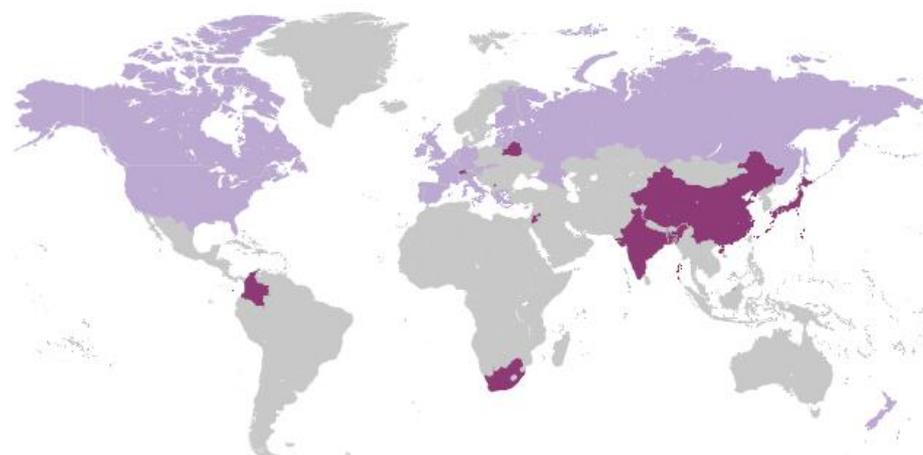
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<sup>4</sup> Faster Payments allows for instant payments up to a value of £250k; Bacs enables direct debits and has historically been the main scheme for salary payments; and CHAPS is the UK's high value system, with no value threshold, settling over £300bn of payments a day in real time. Throughout this document any reference to 'UK payment systems' will only refer to these three systems and the NPA – the planned new UK retail payments system that will replace Bacs and Faster Payments.

<sup>5</sup> As set out in the [Bank's RTGS Renewal Blueprint](#) in May 2017, the Bank's proposal to adopt ISO 20022 received 98% support from respondents to the Bank's earlier consultation, reflecting an industry-wide expectation of significant benefits from migration to ISO 20022.

Infrastructure Review.<sup>6</sup> And globally, many other payment systems have already migrated or are planning to do so: by 2023, more than three quarters of the volume of high value payments across the world are expected to be based on ISO 20022 messaging (Diagram 1).<sup>7</sup>

Diagram 1: Adoption of ISO 20022 in High Value Payment Systems by 2023



High Value Payments Systems which use or plan to use the ISO messaging standard

| Planned        | Live         |
|----------------|--------------|
| Belarus        | Bangladesh   |
| Canada         | Brunei       |
| Eurozone       | Colombia     |
| Hong Kong      | China        |
| Malaysia       | India        |
| New Zealand    | Japan        |
| Russia         | Jordan       |
| Singapore      | Kosovo       |
| United States  | South Africa |
| United Kingdom | Switzerland  |

Source: SWIFT ISO 20022 Migration Consultation Study

3. The proposals set out in this paper have been developed in close consultation with a wide range of stakeholders. Over the past 18 months, the Bank, in conjunction with the retail systems, has engaged with over 50 organisations<sup>8</sup> from across the UK payment landscape, through:
- **Data and Interoperability Working Groups**, incorporating a diverse range of organisations to provide input on the innovative design and implementation of the new standard;
  - An **External Advisory Board**, set up to advise the RTGS Renewal Programme on a range of issues, including ISO 20022, and comprising a broad range of experienced senior payments executives; and
  - **Other bilateral and multilateral engagement** with bodies such as the Wolfsberg Group,<sup>9</sup> the Association of Corporate Treasurers (ACT), UK Finance, and techUK.<sup>10</sup> The Bank has also participated in international work with other market infrastructure providers to develop a harmonised international standard via a group known as HVPS+ (more information on which is contained in Section 1.3).

## 1.2 Key drivers and benefits of change

4. The move to global standards for payment messaging will drive change and deliver benefits across the United Kingdom and internationally, as the Bank's Governor noted in March 2018.<sup>11</sup> There are potential benefits for everyone involved in payments: the Bank, the NPSO payment systems, payment service providers (PSPs), and most importantly the organisations and households making payments. For the Bank this will deliver benefit across its many roles – as CHAPS operator, as provider of RTGS infrastructure, in pursuing its financial stability objective, and in supporting wider UK public policy objectives. These benefits largely fall in three main areas:

<sup>6</sup> <https://www.psr.org.uk/psr-publications/market-reviews/IMR-consultation-remedies>

<sup>7</sup> <https://www.swift.com/standards/iso-20022-migration-study>

<sup>8</sup> [Terms of Reference and Minutes from the Working Groups.](#)

<sup>9</sup> The Wolfsberg Group is an association of globally systemic banks which aims to develop frameworks and guidance for the management of financial crime risks, particularly with respect to Know Your Customer, Anti-Money Laundering and Counter Terrorist Financing policies

<sup>10</sup> techUK is a trade organisation with over 950 technology companies as members, representing around half of all technology sector jobs in the UK

<sup>11</sup> [The Future of Money – speech by Mark Carney, 2 March 2018](#)

- (i) **Increasing resilience and reducing risk (drivers 1, 2, and 3 in Diagram 2 below):** The introduction of uniform data formats and structures to the fragmented landscape in the United Kingdom will help ensure payments can be redirected between payment systems should operational disruption occur. New data requirements will ensure the Bank and NPSO have greater oversight of the payments most critical to system wide stability. And the new messaging standard will also be able to carry more data allowing accurate insight into the parties utilising payment systems, and improving financial crime detection.
- (ii) **Improving UK productivity and outcomes for users of payments (drivers 4, 5, and 6):** The introduction of an aligned standard will reduce barriers to entry for PSPs in the United Kingdom, encouraging competition and innovation in payment services, and is expected to enable innovative value-add services to be developed for end-users. It is part of an international framework that aims to reduce frictions in cross-border payments, improving speeds and reducing costs for users of such services. And the universal application of ISO 20022 in business and banking processes across the United Kingdom can drive automation in a variety of functions from payment initiation through to invoice reconciliation.
- (iii) **Enabling organisations, households and policy makers to take more informed and effective decisions (driver 7 below):** the capacity of ISO 20022 to carry richer data will help ensure the users of payment systems receive better services; it will support greater competition in the provision of value-added services across PSPs; and is a resource to ensure policymaking is effective and timely. Widespread and consistent adoption of ISO 20022 can ensure each stakeholder group maximises the returns to the richer data on offer.

Diagram 2: Key drivers and benefits of moving to ISO 20022

| Drivers  | Outcomes for the UK  | Outcomes of particular relevance to the Bank of England’s objectives                  |
|--|--|---|
|  <b>1</b> Operational Resilience      | Reduce the impact of an operational outage   | Reduce single points of failure in the payments ecosystem                             |
|  <b>2</b> Risk management             | Help firms control liquidity and credit risks  | Strengthen management of end-to-end systemic risk                                     |
|  <b>3</b> Fraud and financial crime   | Help firms to identify fraud and economic crime  | Facilitate objectives of other UK authorities to target fraud and economic crime      |
|  <b>4</b> Competition and innovation  | Support development of products and services providing enhanced customer functionality | Support greater innovation in risk-reducing technologies                              |
|  <b>5</b> International harmonisation | Create efficiencies in cross-border banking  | Support continued provision of cross-border banking services                          |
|  <b>6</b> Efficiencies in processing  | Improve the reconciliation of payments, and increase straight-through processing rates | Streamline our own payment operations to deliver a better experience to our customers |
|  <b>7</b> Richer Data                 | Provide end-users with data-driven services  | Enable better informed macroeconomic and macroprudential policy decisions             |

- 5. For more information on how the specific proposals in this consultation will deliver these outcomes, see Section 2.8.
- 6. The success of the introduction of ISO 20022 in achieving these outcomes is dependent on the universal and uniform adoption of the standard. ISO 20022 will need to be adopted widely across the United Kingdom – by payment systems, PSPs (both direct and indirect participants within payment systems), end-users, and those supplying payments software. It will also be important to ensure that the adoption is common and uniform across all these parties so that data can flow freely, driving delivery of many of the expected benefits.

7. For example, improved fraud and financial crime prevention, productivity improvements via efficiency gains and better data driven decision making are all dependent on the universal presence of enriched data, sourced and transmitted from throughout the payments chain.
8. The Bank and NPSO, as payment system operators, and the PSR, as economic regulator of payment systems, are therefore committed to pursuing an effective UK wide adoption of ISO 20022, and will use all of the tools at their disposal to ensure that this is achieved. The Bank and NPSO will engage with a wide and diverse range of affected stakeholders to ensure that the introduction of ISO 20022 is successful for the United Kingdom. The PSR is also committed to reducing barriers to the effective use of data in payments.<sup>12</sup> The *Introductory Phase* of the migration within CHAPS is not expected to take place until 2021 at the earliest, and NPSO plan to migrate on a similar timeline: work to ensure an effective adoption will therefore begin well in advance of that, and likely continue for a period of years after.

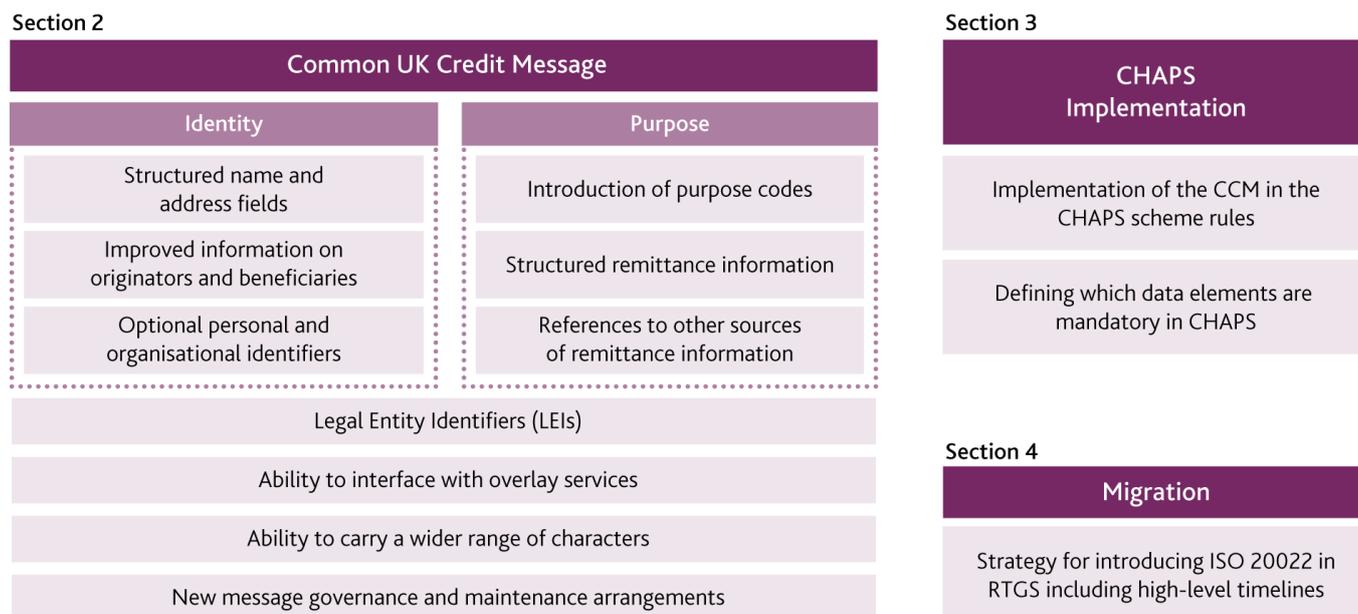
### 1.3 Summary of key proposals

9. There are three complimentary key proposals in this document, summarised in **Diagram 3** and the text below, and set out in more detail in the sections indicated.
10. The first proposal, set out in Section 2, is to establish a common message format for credit payments across CHAPS, Faster Payments and Bacs, referred to as the Common UK Credit Message (CCM). The CCM is capable of carrying richer information than the messages used by the UK payments systems today, particularly regarding the identity of the payment originators and beneficiaries, and the purpose of the payment.
11. The second and third proposals, set out in Sections 3 and 4, cover how the Bank as CHAPS operator plans to move from the legacy format to a CHAPS-specific version of the CCM. These proposals cover both content (including the Bank's intention to make a broad set of data elements within the CCM mandatory in CHAPS), and the timelines and phasing for moving CHAPS payment messaging from its existing format to an enriched ISO-20022 compatible format.
12. As the design of the NPA matures, the NPSO plans in due course to consult on the specific proposals for implementation of the CCM in the retail payments systems. The Bank and NPSO will seek to implement changes in as harmonised a way as possible, while respecting differences that arise from the different types of payments sent through the different systems.

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<sup>12</sup> More information is contained in a forthcoming PSR discussion paper on Data in the Payments Industry.

Diagram 3: Outline of key proposals



## A Common UK Credit Message (CCM) (Section 2)

13. The most far-reaching proposal relates to the creation of the CCM. The CCM includes all the fields used in CHAPS, and is aligned to the emerging design of the NPA credit payment under the ISO 20022 standard. Each payment system will adopt its own implementation rules for the CCM governing which fields are available for use, reflecting the different operating requirements of each system.
14. The proposal for the CCM is the cornerstone of the universal and uniform implementation of ISO 20022 across the United Kingdom. It is expected to drive a number of the benefits, such as enhancing operational resilience and financial stability, as well as reducing barriers to entry for both PSPs and technology firms. Nevertheless, its adoption would require extensive change and coordination.
15. As well as the work undertaken to date with UK stakeholders, the CCM has also been designed within an international harmonisation framework, known as HVPS+. <sup>13</sup> The HVPS+ guidelines are particularly important for CHAPS as the payment system that carries the majority of cross-border payments traffic within the United Kingdom. Aligning international implementations of ISO 20022 will provide efficiency gains for those PSPs who make international payments, positively impacting end-users of payment systems through reduced costs and increased speed.
16. The proposed CCM will bring changes to a number of key areas regarding structure, content, format and scope of the payment message. In particular the CCM contains much more space to carry structured information about the identities of the parties involved in the transaction, the purpose of the payment and any additional remittance information associated with it.
17. The key areas of the CCM design are discussed in Section 2, accompanied by the key questions for feedback. It includes a variety of case studies to illustrate how the CCM will deliver benefits.

<sup>13</sup> [https://www.swift.com/news-events/news/high-value-payments-plus-hvps\\_the-next-stage-step-towards-iso-20022-harmonisation](https://www.swift.com/news-events/news/high-value-payments-plus-hvps_the-next-stage-step-towards-iso-20022-harmonisation)

## Delivering effective change in CHAPS

### *Implementing the CCM in CHAPS (Section 3)*

18. The specific design proposals for implementing the CCM in CHAPS are set out in Section 3. The most significant change is that the Bank proposes to make **several pieces of information, not currently transmitted in CHAPS payments messages, mandatory to complete in a CHAPS payment message**. For instance, the Bank proposes that payments between financial institutions in CHAPS must include a Legal Entity Identifier (LEI) and information on the purpose of a payment. The intention is to introduce these mandatory changes as part of the phased migration to ISO 20022.
19. Section 3 summarises the Bank's proposals to phase in the data enhancements in the CCM around identity, purpose codes, remittance information and character sets for CHAPS credit messages. It also explains the Bank's intention to make use of the ISO Business Application Header in CHAPS. While this section focuses on changes to CHAPS credit messages, the Bank will migrate all messaging within CHAPS and ultimately within RTGS, including messages for management of reserves accounts and settlement instructions for deferred net settlement schemes, to ISO 20022. The Bank expects that any changes required to the other message types will be much less significant in scope and impact than the changes discussed here. Further information on these messages will be published separately to this consultation, at a later date.

### *Migrating CHAPS to ISO20022 (Section 4)*

20. Implementing ISO 20022 and the CCM into CHAPS will require a significant programme of change for the Bank, PSPs and users of CHAPS payments. The Bank is therefore proposing that the migration for CHAPS direct participants to ISO 20022 should be phased, starting no earlier than 2021. These proposals have been designed to balance risk, complexity and cost with early realisation of benefits. Feedback is sought on whether that balance has been effectively addressed. The final migration strategy will be dictated both by this feedback and the wider RTGS Renewal Programme timelines. The implementation of ISO 20022 in CHAPS is expected to be delivered in four main stages, these are set out in Section 1.4 below. Section 4 provides further detail.

## Delivering effective change across the UK payments systems

21. In addition to the detailed proposals covered in this consultation document, the Bank and NPSO recognise that there is a wider programme of change by PSPs and end-users to facilitate messaging changes for CHAPS, Bacs and Faster Payments. Section 2 sets out some of the expected costs and risks associated with the adoption of ISO 20022 across CHAPS, Bacs and Faster Payments. The Bank and NPSO are keen to gain further information on these, in order to help shape final plans for the adoption of ISO 20022, and understand how the Bank and NPSO can facilitate a smooth industry transition to ISO 20022. In due course, and in light of the responses to this consultation, the NPSO will set out its own approach to implementation of ISO 20022 aligned to the emerging design of the NPA.
22. Key to the success of the implementation of ISO 20022 across these payment systems will be how widely messaging standards are adopted throughout end-to-end payments chain. This will be critical for driving down ongoing costs, once the burden of migration has passed. In particular, the Bank and NPSO recognise that the benefits of the ISO 20022 migration can be maximised, and costs reduced, by seeking widespread and uniform changes to the greatest extent possible.
23. With that in mind the Bank, in partnership with the NPSO and working with payments trade bodies, plans to establish a broad-based **senior advisory group to support the Bank and NPSO in ensuring an effective delivery of ISO 20022**. The Bank and NPSO also plan to set up industry working groups to support this advisory group by

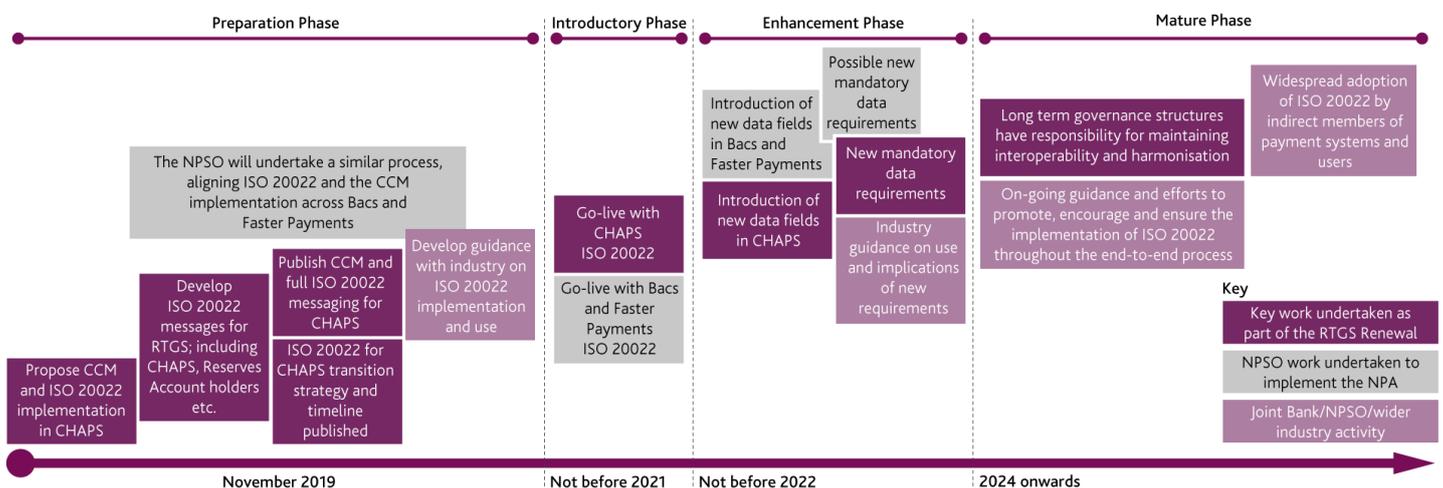
helping deliver implementation guidance, including authoring wider payments initiation and cash management messaging; looking at wider interoperability issues; and advising on continued change management requests for the CCM.

## 1.4 A strategic plan for adoption of ISO 20022

24. This consultation document lays the foundation for the introduction of ISO 20022 in key payment systems in the United Kingdom; successful implementation will be a complex and multi-phase process. **Diagram 4** below sets out the Bank's initial perspective on how this process could be organised for CHAPS; full details are provided in Section 4. **Diagram 4** also indicates where NPSO anticipates undertaking similar processes. The Bank has identified four distinct phases for the ISO migration in CHAPS:

- **Phase 1: Preparation Phase** – publishing the final messages for use within CHAPS;
- **Phase 2: Introductory Phase** – go-live with like-for-like ISO 20022 messaging; i.e. there are no extra data fields or requirements over and above those required with the current messaging standard; it is proposed that there is no period of dual running MT messaging and ISO 20022 messaging;
- **Phase 3: Enhancement Phase** – introduction of new data fields to utilise the additional functionality of the full CCM, some of which will be mandatory to complete. All PSPs will need to be able to receive, process and pass on any optional fields to customers in order to be compliant with Wire Transfer Regulations. Many of the most material system and process changes proposed within this document are expected during this phase;
- **Phase 4: Mature Phase** – It is expected that there will be further additional data requirements in the long term, as well as a regular maintenance programme (see Section 2.7). Many of these changes are dependent on wider (non-technical) conditions being met. A programme of work is required to embed ISO 20022 into end-to-end payment flows and fully realise the benefits of migration to the CCM.

**Diagram 4: High level migration plan**



25. There are key benefits which cannot be fully realised without a universal and uniform adoption of ISO 20022 in the United Kingdom. The CCM is one part of the strategy to achieve this. As part of the wider strategic plan to implement and adopt ISO 20022, the Bank is committed to cooperatively driving change required as a result of the renewal of the RTGS service and the emerging design of the NPA.

26. The strategy and governance proposed to support these long-term aims are explained in Section 2. The Bank seeks feedback on how to achieve the most effective implementation of the CCM and ISO 20022 across the United Kingdom, and not just in CHAPS. It anticipates working closely with key partners in doing so.

## 1.5 How to respond to this consultation, and next steps

The Bank is seeking responses to this consultation from the widest possible range of stakeholders with an interest in the future of sterling payments. Given the scope for ISO 20022 to drive change across a range of business activities, organisations responding to the consultation should ensure that they provide a holistic and strategic response. The Bank encourages respondents to consider a diverse range of issues where relevant to their business including compliance, payments processing, data science, risk, and product development, as well as technical architecture.

Responses should be completed **by 18 July 2018**. To register to provide a survey response, please go to the [Bank's website](#).

27. Responses to questions about the CCM (Section 2) relating to participants in or users of Bacs and Faster Payments may be shared with the NPSO for input into work on design and implementation of the CCM within the NPA.
28. The responses to this consultation will also be used to help shape the Bank's final plans on the implementation of the ISO 20022 CCM in CHAPS. The Bank plans to publish a response to this consultation by the end of 2018 alongside a summary of responses received.
29. The Bank does not intend to publish any responses verbatim, though in accordance with the paragraph above some information may be shared with the NPSO. Information provided in response to this consultation, including personal information, may nevertheless be subject to publication or release to other parties or to disclosure, in accordance with access to information regimes under the Freedom of Information Act 2000 or Data Protection legislation or otherwise as required by law or in discharge of statutory functions. Respondents should indicate if they regard all, or some of, the information they provide as confidential. If a request for disclosure of this information is received, respondents' indications will be taken into account, but no assurance can be given that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by a respondent's IT system on emails will not, of itself, be treated as constituting notice that such respondent regards any information supplied as confidential. The full Privacy Notice (required under GDPR) can be found on the survey link.

### Review of the full message schema

30. The Bank has published a draft schema for the full pacs.008 CCM (the equivalent of the MT103 message in CHAPS today) for review and comment. This can be accessed via either of the following links:
  - Standards Source, which is a standards repository operated by the NPSO. Users can register for a free account here: <https://npsostandardslibrary.org/>.
  - MyStandards, which is a global repository for standards operated by SWIFT. Users must first register for a free account with SWIFT, and then request to join the Bank of England's community. MyStandards can be found on the [SWIFT website](#).

Please email [ISO20022@bankofengland.co.uk](mailto:ISO20022@bankofengland.co.uk) with any comments on the draft schema. Comments may be provided until end-August 2018.

## 2 Proposal for a Common Credit Message across UK payment systems

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### 2.1 Introduction

1. This section explains, and seeks feedback on, proposals for a *Common UK Credit Message (CCM)* which is expected to be shared across CHAPS and the emerging design of the New Payments Architecture (NPA) for retail payments in due course. Sections 3 and 4 set out how the Bank proposes to implement the CCM in CHAPS. In due course the NPSO will outline its own implementation plans for retail payments.<sup>14</sup>
2. The proposals for the main elements of the CCM are set out in this section. They cover:
  - The *identity* of the parties involved in a transaction, both organisations and individuals (Section 2.2);
  - The *purpose* of the payment (Section 2.3);
  - The *remittance information* that can be included within a payment message (Section 2.4);
  - Other elements of the CCM that will help facilitate *innovation and change*, including the ability to use extended character sets (Section 2.5); and
  - The *governance and maintenance* of the CCM, which will be shared between the Bank and NPSO (Sections 2.6 and 2.7).
3. This section also outlines how moving to the CCM delivers the Bank's, and broader stakeholders', desired outcomes (Section 2.8), and the key costs and risks associated with the adoption of ISO 20022 (Section 2.9).
4. Implementation of the CCM would benefit many groups across the payments landscape:
  - *PSPs* would be able to rationalise the required data, and its structure and format, across CHAPS, the NPA and cross-border payments. As such, the CCM is seen as a key facilitator of interoperability.
  - *Organisations and individuals* would find that the data they send and receive via a retail payment will be closely aligned to the data they send and receive via a high value payment. This would include richer transaction and remittance information. For example, invoice references, electronic addresses and tax codes would all follow the same structure, encouraging automation of processes.
  - *Technology suppliers* would be able to develop better systems and tools to improve reconciliation and cash management. Harmonisation across payment systems would allow the creation of scalable systems that can operate effectively across different infrastructures.
5. However, delivering these benefits will also require considerable change across PSPs and some users. The migration to ISO 20022 will require investment across the end-to-end payment chain. During this period there will be a burden on service providers to mitigate the challenges that adopting ISO 20022 will create; the Bank and NPSO will ensure that the migration strategy reduces the scale of these costs and associated risks. Section 4 seeks views on the proposal for the ISO 20022 migration in CHAPS.
6. There are ongoing costs for stakeholders across the economy to maintain interoperable and efficient messaging. The Bank, NPSO and PSR are committed to driving a widespread and coordinated adoption of ISO 20022 to minimise the ongoing cost and ensure benefit realisation. For example the widespread use of structured

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<sup>14</sup> Both the NPA and CHAPS will utilise other ISO 20022 messages for business processes such as account management beyond the use of ISO 20022 for credit payment instructions (the CCM). For more details on the other ISO 20022 messages that will be used in CHAPS, please see Appendix 2.

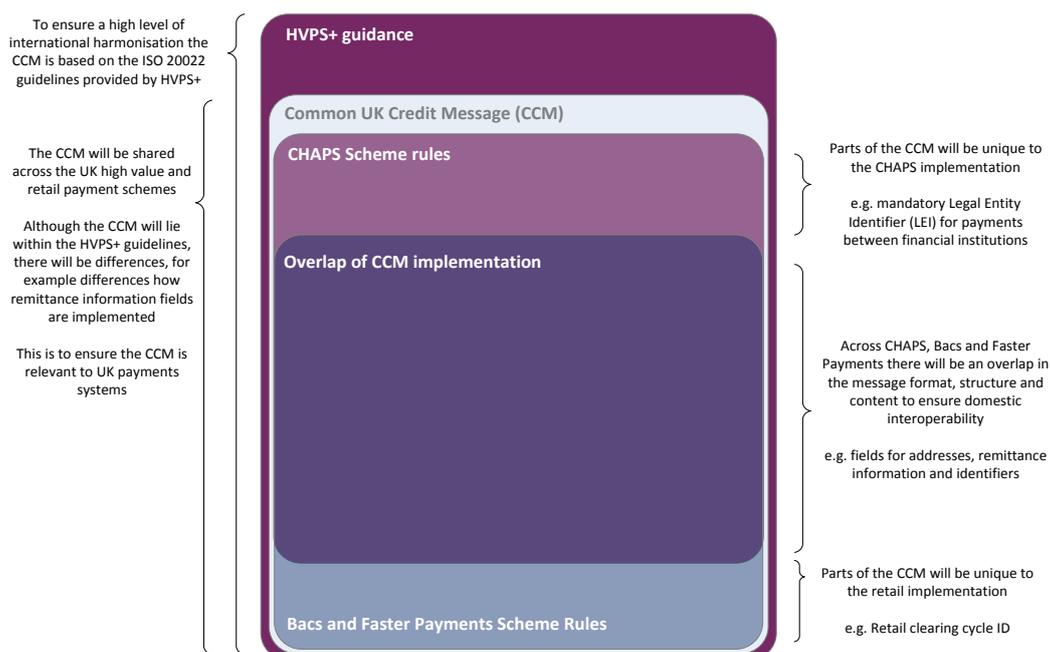
addresses, or LEIs, can drive the maximisation of the benefits described in Section 1, such as productivity gains and outcomes for end-users.

7. With this in mind, the Bank and NPSO would welcome detailed responses to the questions in Section 2.10.

## Domestic interoperability and international harmonisation

8. At present, CHAPS, Bacs and Faster Payments all have separate information requirements, methodologies, formats, standards and rulebooks for constructing a payment in each system. This creates numerous inefficiencies, including making it difficult and expensive to move customers' payments between the different payment systems. It also makes it challenging for new providers seeking to become participants of these payment systems, owing to the costs associated with simultaneously using many different standards.
9. The proposed CCM would provide a common set of definitions, structures and rules for inputting data into a payment message for PSPs and users. Domestic adoption of the CCM will ensure that the majority of the content in high-value and retail payments is aligned, as illustrated in **Diagram 5** below.
10. As well as seeking domestic harmonisation, the CCM has been developed to deliver a significant degree of harmonisation with adoptions of ISO 20022 overseas. The CCM uses guidance for international implementations of ISO 20022 provided by HVPS+. This is a task force formed by SWIFT, along with major global banks and market infrastructures (including the Bank), to define and refine global implementation standards for high-value payments. The resulting HVPS+ guidelines will be adopted by many major global high-value payment systems, such as Fedwire (US Dollar) and Target 2 (Euro), and is also being proposed by SWIFT as the basis for cross border transactions across its network.<sup>15</sup> In practical terms, this should mean that a cross-currency payment from a UK organisation to, for example, a firm based in continental Europe via a US correspondent will require similar data arranged in a similar structure at each stage of the process, thus improving efficiency and accuracy of cross-currency payments.

**Diagram 5: How the UK CCM relates to HVPS+ guidelines, and CHAPS, Bacs, and Faster Payments scheme rules**



<sup>15</sup> For more information, please see SWIFT's ISO 20022 migration study, available at: <https://www.swift.com/standards/iso-20022-migration-study>

## Box 2: How the CCM will help improve operational resilience

The Bank has a statutory objective to protect the stability of the financial system. A key component of financial stability is the operational resilience of the supporting infrastructure operated by the payment systems and firms that provide payment services to their customers. Even in the event of operational disruption, there should be sufficient continuity of critical services to avoid a significant impact on the real economy.

If, for example, a PSP cannot send payments for an extended period because of operational disruption affecting a given payment system or channel, there can be serious consequences both for those directly involved (the PSPs and their customers) and for the system as a whole if the disruption impacts the financial markets and the real economy. In a serious outage, money market and foreign exchange transactions could fail to settle and it could be impossible to make payments for salaries, suppliers, trade finance, and housing transactions.

These adverse impacts can be mitigated if PSPs are able to transfer payments from the affected payment system to an unaffected channel or payments system. However, a number of factors make it difficult to do this today, amongst the most important of which are the different messaging standards used between CHAPS, Bacs and Faster Payments. For example, different data requirements and formats mean that PSPs wishing to redirect a CHAPS payment through Faster Payments require large teams of staff and ad hoc procedures to manually intervene and reformat the messages. This can ultimately cause further delays, and costs and errors, in the event of an operational incident.

The CCM would remove the messaging barrier to redirecting payments between payment systems. The shared data elements, format and structure will make it easier for PSPs to automate redirection. The CCM would also reduce the likelihood of data loss for any such redirected payments. This has the potential to improve the customer experience during an operational disruption significantly, and reduce the impact on the real economy, subject to supporting changes being made by PSPs.

## 2.2 Identity

11. Identifying the parties initiating or receiving a payment is essential.<sup>16</sup> Beyond simply facilitating the accurate transfer of funds, it enables fraud and financial crime prevention, invoice reconciliation and market intelligence gathering. PSPs face a range of challenges when capturing data on identity. There are regulatory requirements to screen payments against sanctions lists. At the same time, end-users expect ever faster, cheaper payment services. ISO 20022, and the proposal for the CCM, assists with both these expectations, ultimately improving payment processing for user and service provider.
12. The fields used to capture identity information in current CHAPS, Bacs and Faster Payments messages are constrained in length and unstructured. ISO 20022 messaging facilitates more structured identity fields that can carry more data. Structured data better enables automatic processing and screening by PSPs and users, reducing the processing time and cost of transactions. It also enables a richer range of data to be captured regarding a given agent in a payment,<sup>17</sup> assisting identification, compliance and reconciliation checks, again improving the service users of payment systems can expect to receive.

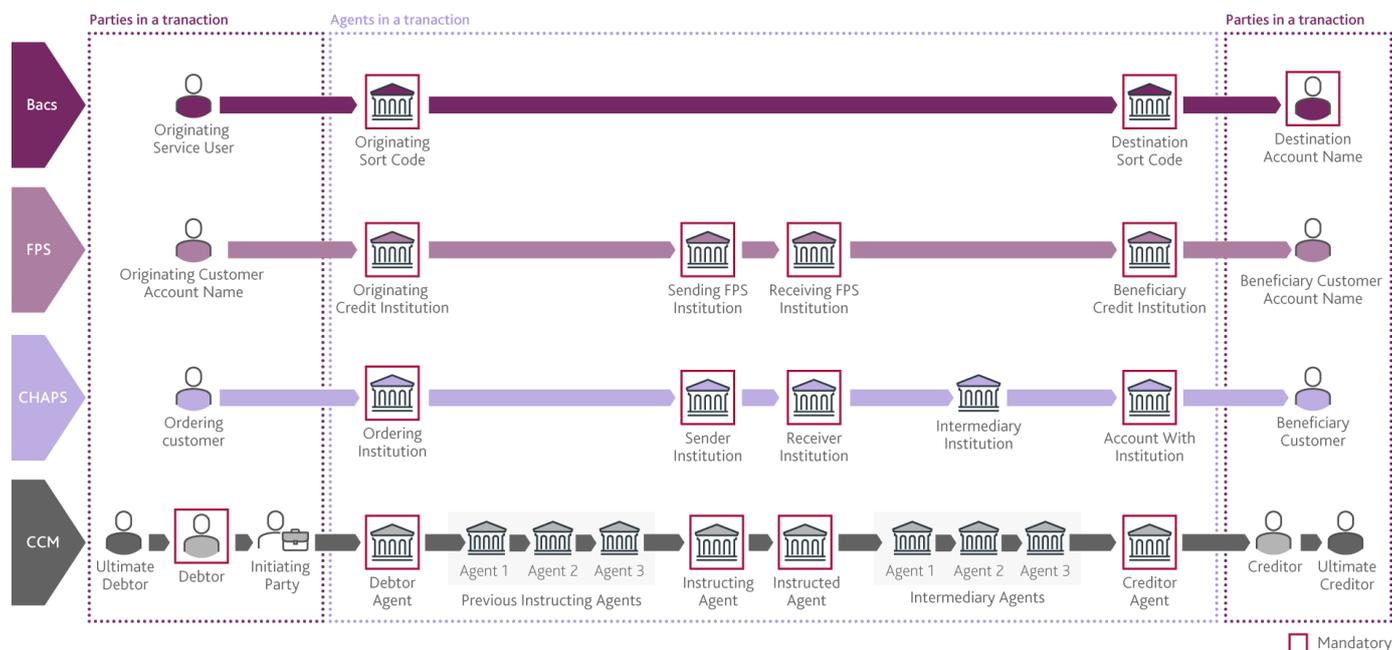
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<sup>16</sup> **Parties** are the individuals or organisations initiating or receiving a payment.

<sup>17</sup> **Agents** are PSPs undertaking the movement of funds on behalf of the parties in a transaction.

13. In addition, by following HVPS+ guidelines, the CCM allows details of up to ten agents to be entered in a transaction, as illustrated in **Diagram 6** below. This greater capacity to capture details of all parties to a transaction makes it possible for a more complete record of a transaction's history to be shared throughout the payment message. This has significant benefits for PSPs undertaking due diligence checks and can help ensure cross-border banking relationships remain accessible for users of payment systems.<sup>18</sup>

**Diagram 6: Parties and Agents represented in the CCM**



14. The CCM proposals to enhance the identification of parties and agents to transactions include:

- Better information on the ultimate originators and beneficiaries of a transaction;<sup>19</sup>
- Structured name and address fields;
- facilitating organisational identifiers such as a company number or tax number, and specifically introducing Legal Entity Identifiers (LEIs); and
- Specifying personal identifiers such as date of birth, passport number and more.

## Improving information on originators and beneficiaries

15. There is an increasing need to include more information about the ultimate beneficiary and originator in payments. Clear data on these parties is critical for preventing economic crime, as explained in recital 9 of the Wire Transfer Regulations:

*'The full traceability of transfers of funds can be a particularly important and valuable tool in the prevention, investigation and detection of money laundering or terrorist financing.'*

16. Furthermore, FATF<sup>20</sup> recommendation 16 states that 'countries should ensure that financial institutions include required and accurate originator information..... and that this information remains with the wire transfer or related messages throughout the payment chain'.<sup>21</sup>

<sup>18</sup> <http://www.fsb.org/2018/03/fsb-action-plan-to-assess-and-address-the-decline-in-correspondent-banking-progress-report-to-g20-finance-ministers-and-central-bank-governors-meeting-of-march-2018/>

<sup>19</sup> 'Ultimate beneficiary' may also be referred to as 'ultimate creditor' or 'ultimate payee'; and 'ultimate originator' may be referred to as 'ultimate debtor' or 'ultimate payer'.

17. The existing messages across CHAPS, Bacs and Faster Payments do not have designated fields for ultimate beneficiary and ultimate originator information. The proposal for the CCM includes designated fields for ultimate originators and ultimate beneficiaries. The CCM will not mandate these fields are completed but will facilitate PSPs' responsibilities to ensure that information required by regulations, such as the Wire Transfer Regulations, accompany the transfer of funds. This is in line with HVPS+ guidelines, which seek to align international regulatory compliance. It is expected that UK Finance, PSPs and the Bank will engage in producing guidance and expectations on the use of these facilities.

### More structured name and address fields

18. Unstructured data lead to inconsistency and reduce the ability to process payments automatically. They can result in delays and costs if sanctions checks require manual intervention. Reducing unstructured transaction data can improve the efficacy of technology to mitigate financial crime.<sup>22</sup>

19. In Bacs and Faster Payments there are currently no structured fields to house name and address information in the message, instead this information is carried in an unstructured format. CHAPS has an optional structure for name and address, but unstructured addresses are most commonly used.<sup>23</sup>

20. The CCM will follow HVPS+ guidelines in relation to introducing structured name and address data, as shown in **Diagram 7** below. A structured option will be available for all parties and agents in the payments chain (as identified in **Diagram 6** above), and will be the only option available for new parties and agents introduced as part of the ISO 20022 message. The structured fields will become mandatory in the CCM once ISO 20022 has been fully implemented in CHAPS and the NPA. The retention of the unstructured option is to mitigate the burden of migration. The universal and uniform implementation of structured addresses throughout the UK payments chain is a key driver of productivity gains, the Bank will therefore look to promote this throughout the *Mature Phase* of ISO 20022 implementation.

21. It is not uncommon for UK addresses only to contain a building name, not a building number (for example, 'Bank of England, Threadneedle Street, London'). To encourage the widespread implementation of structured addresses, the Bank therefore proposes to add a new field to the ISO 20022 standard for 'building name'. To facilitate this, the Bank, working with the NPSO, has submitted a request to ISO to ensure that UK-specific addressing conventions can be carried and accurately represented in the UK CCM. It is expected that the NPSO will shortly make available further documentation on address formatting.

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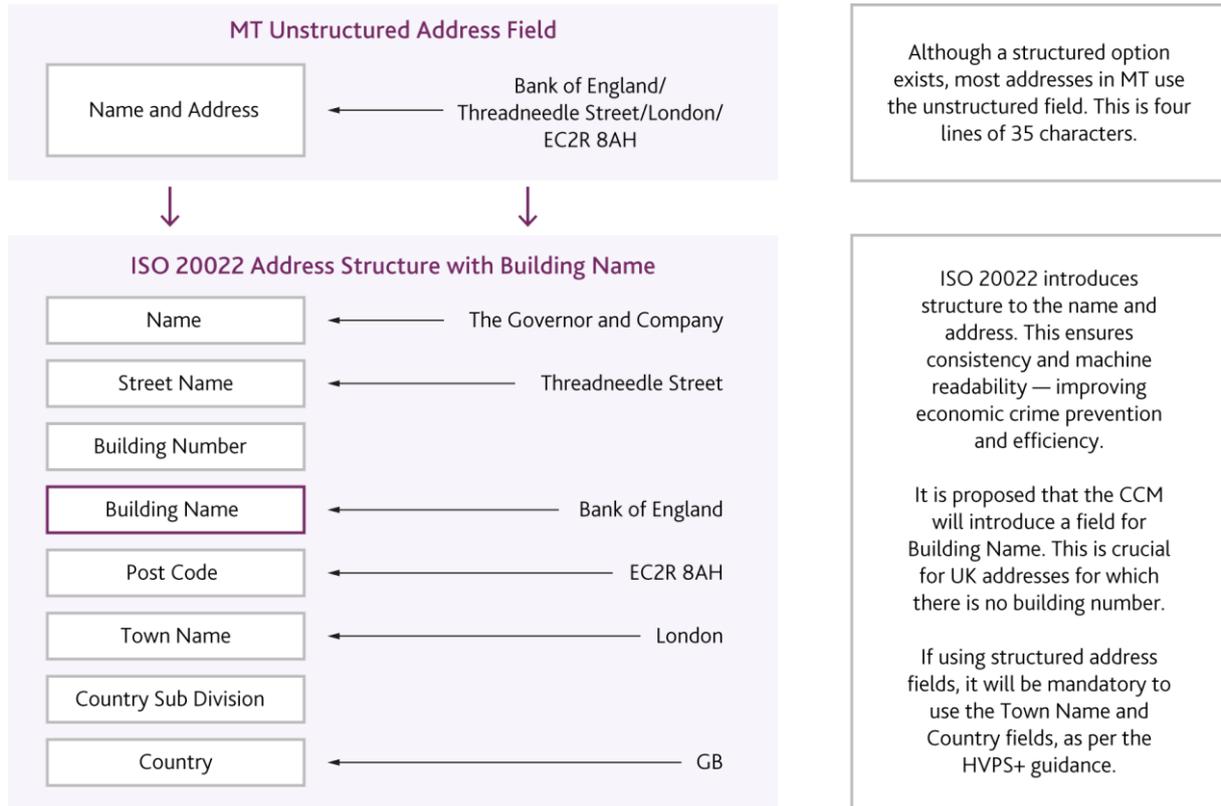
<sup>20</sup> Financial Action Task Force

<sup>21</sup> <http://www.fatf-gafi.org/publications/fatfrecommendations/documents/fatf-recommendations.html>

<sup>22</sup> See, for example, speech by Megan Butler, Executive Director of Supervision at the Financial Conduct Authority <https://www.fca.org.uk/news/speeches/turning-technology-against-criminals>

<sup>23</sup> The structure introduced as part of the CCM is far richer than the current structure offered in MT messages.

Diagram 7: Example - Comparison between unstructured and structured name and address fields



## LEIs and other organisational identifiers

22. Organisational identifiers are unique references that act as efficient mechanisms for the identification of a specific entity. They can assist with compliance and fraud screening, risk reporting, or payments processing – for instance, ensuring that a payment is sent to the correct legal entity within a large corporate group. Numerous organisational identifiers exist (for example company numbers and tax numbers), but more recently, the global standard of Legal Entity Identifiers (LEIs) has seen rapid adoption in the financial services sector (see Box 3 below for more information on LEIs).
23. The messages used in CHAPS, Bacs and Faster Payments today have no designated, structured field to carry organisational identifiers. The new CCM would include designated fields for the optional inclusion of organisational identifiers in a structured format:
- **LEIs:** the CCM would contain a designated field for LEIs at each point an agent is identified. This field will mirror the format of LEIs, meaning that only LEIs can appear in this field, and not, for example, random free text strings.
  - **Other organisational identifiers:** space would be allowed in the CCM for a limited number of fields that can hold a set range of organisational identifiers, such as a company number or tax number.
24. It is expected that LEIs will become a commonly used identifier throughout the UK economy. Please see **Box 3** for more information. As a consequence of widespread uptake of this identifier, it will become more viable to mandate use of this tool in a broader set of payments. Section 3 sets out how LEIs would be mandated in CHAPS as part of the ambition for uniform and universal adoption of ISO 2022.
25. Full details of the organisational identifiers that would be facilitated in the CCM can be found in Appendix 1.

### Box 3: Legal Entity Identifiers (LEIs)

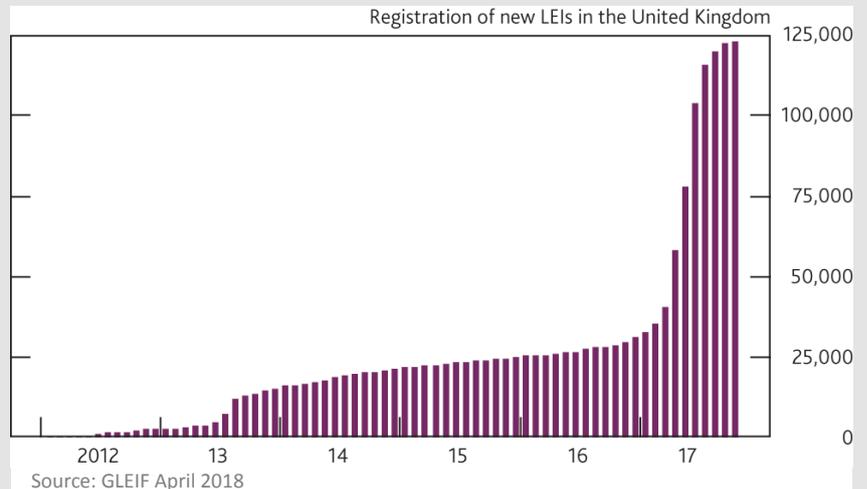
#### Background

LEIs enable consistent and accurate identification of legal entities on a global basis. Their introduction was pioneered by the Financial Stability Board (FSB) following the financial crisis as a means of precisely identifying counterparty risks and exposures.

The LEI is a 20 digit, unique reference, defined by ISO 17442, linked to a publicly available database of information about the registered entity. This database contains a rich source of contextual information about legal entities such as legal addresses, company numbers, and information on a given entity's group structure.

Whilst LEIs are now well established in financial services owing to various regulations such as MiFID II, they are not yet widely used or facilitated in payments or supply chains.

The Bank believes that further growth in LEI uptake would be of great benefit, both to individual organisations, and to the UK economy as a whole.



#### Setting up for success: encouraging proliferation of LEIs in the United Kingdom

Supporting the use of LEIs in payments can act as a catalyst to bring them into wider use in the United Kingdom. There are many public good benefits from the widespread use of this single unique reference number. Precise and accurate identification of legal entities engaged in financial transactions enables firms and regulators around the world to gain an improved understanding of the aggregate risks of entities and their counterparties across asset classes and markets.

There is recognition that more widespread adoption would deliver a range of benefits to business processes, from enhancing due diligence to efficient data resource management and deeper market insight, given the wide range of metadata associated with an LEI.<sup>(a)</sup> This could improve financial crime prevention, enhance productivity and enable more data-driven decision making. The Global LEI Foundation (which is responsible for maintaining the LEI database), is actively taking steps to improve the quality of the data within the LEI database, further developing the utility of this tool.

As acknowledged in the Wolfsberg Group Payment Transparency Principles (2017), for the full benefits of LEIs in payments messages to be realised, there needs to be a significant increase in adoption of LEIs in small and medium-sized enterprises throughout the United Kingdom. There are a number of challenges to achieving this ambition, such as cost, ease of access and awareness across the supply chain. The Bank plans to work with the government and other interested stakeholders to consider how to realise this objective, and considers the implementation of changes to the messaging standard a vital step in this journey. Section 2.8 highlights the range of outcomes that widespread uptake of LEIs can affect, as such this is seen as a significant feature of the implementation of ISO 20022 and the CCM in the United Kingdom.

<sup>(a)</sup> McKinsey & Company and GLEIF White Paper: Creating Business Value with the LEI

## Personal identifiers

26. As with organisational identifiers, current messaging formats across UK payment systems have no designated, structured field to carry personal identifiers.
27. ISO 20022 permits designated spaces for (i) date and place of birth and (ii) other personal identifiers in the ‘personal identification’ section of a message. The use of identifiers such as date of birth can reduce the number of ‘false positives’ when undertaking sanctions screening (i.e. where a client is incorrectly identified as being on a sanctions list).
28. It is proposed that the CCM should contain space for the optional input of:
- the *date and place of birth* of an individual involved in a transaction; and
  - a limited number of fields that can hold *other personal identifiers*.<sup>24</sup>
29. Full details of the personal identifiers that would be facilitated in the CCM can be found in Appendix 1. The legal implications of gathering these data will require further study in the next phase of this work. The implications for the Bank as CHAPS operator are summarised in **Box 5** in Section 3.6.

**Table 1: Summary of changes to information on identity**

|  | Current message format |  |  | Proposed format  |
|--|------------------------|--|--|--|
|  | Bacs                   | FPS  | CHAPS (MT 103 and 202)   | Common UK Credit message (CCM)   |
| Identification of ultimate beneficiary/ originator and intermediary agents | ×                      | Space for 4 agents; none are clearly marked for ultimate beneficiary or originator | Space for 5 agents; none are clearly marked for ultimate beneficiary or originator | Specific fields to identify ultimate originator and beneficiary<br><br>CCM will be capable of carrying information for 10 agents |
| Name and structured address  | ×                      | ×  | 4 unstructured lines or a structured format for address                            | Considerably more structured format than MT messaging, including adding ‘building name’  |
| Legal Entity Identifiers (LEIs) and other organisational identifiers       | ×                      | ×  | ×  | Introducing a field for LEIs alongside fields for organisational identifiers such as tax number and company number               |
| Personal identifiers   | ×                      | ×  | ×  | Specific fields for date and place of birth, and fields that could hold other personal identifiers, e.g. passport or NI number   |

× = indicates where a feature has no designated space in legacy formats

<sup>24</sup> Providing date and place of birth is one of the options as set out as per article 4 requirements of the Wire Transfer Regulations. The structuring of personal data of this sort may help PSPs manage personal data in line with their GDPR requirements.

## 2.3 Purpose codes

30. Being able to identify clearly the purpose of a payment (for example, a salary or pension payment, payment of tax, etc.) is key to understanding the underlying economic activity a payment represents. There are a number of uses for this information including:
- Allowing PSPs and end-users to identify time-sensitive, critical or systemic payments;
  - Allowing PSPs to mitigate the risk of fraud;
  - Supporting analytical tools (e.g. allowing PSPs to provide consumers with a summary of spending by category);
  - Providing data for the Bank and other public bodies for macroeconomic and financial risk analysis.
31. While the purpose of a payment can be included in the current messaging formats across UK payment systems, it is not used in a standard way, leaving an information gap. ISO 20022 messaging includes specific fields and lists for a purpose code to capture this information. It is therefore proposed that two fields are introduced – a ‘category code’ which is primarily for use by PSPs signalling to receiving PSPs some specific properties of a payment instruction to help with processing, and a ‘payment code’ which is a granular code for use by the originator of a payment to denote the purpose.
32. It is recognised that there are challenges associated with the introduction of purpose codes, which will require further discussion with PSPs and users beyond this consultation document. For example, decisions will be needed on who is expected to input the purpose code (the PSP or the end-user), and how to ensure the code accurately represents the payment it is attached to.
33. In order to try to address these issues the Bank, together with the NPSO, has committed to a number of actions:
- Improving HVPS+ guidelines, which include internationally agreed lists of purpose codes. The Bank, with the NPSO, is engaging with HVPS+ to draw up a streamlined list for effective use in the United Kingdom.
  - The Bank and NPSO plan to work with stakeholder groups, such as UK Finance, to develop guidance on which codes to use in various scenarios. In particular there will be clear guidance on whether the expectation will be on the PSP or the user of the payment systems to input the purpose code in a given use case.
34. In doing so the Bank and NPSO intend to improve the ease of use of purpose codes in order to increase consistency of use and reduce the challenges arising when using them. This in turn increases their overall effectiveness and the benefits derived from mandating them. See Section 3.3 for how this is being proposed in CHAPS.

**Table 2: Summary of changes to information on purpose codes**

|                      | Current message format |   |   | Proposed format   |
|----------------------|------------------------|---|---|---|
|                      | Bacs                   | FPS   | CHAPS<br>(MT 103 and 202)   | Common UK Credit message (CCM)  |
| <b>Purpose codes</b> | ×                      | Purpose field included for compatibility with other systems | Field for purpose codes but not typically used; no standardised list of codes | Fields to identify both category purpose and payment purpose; there is a standardised list for each, from which a subset would be agreed for use for payments within the United Kingdom |

× = indicates where a feature has no designated space in legacy formats

## 2.4 Remittance Information

35. The ability to transmit rich contextual information associated with a payment is often crucial for individuals and organisations making payments. This is called remittance information. It allows users to convey contextual information, such as an invoice reference, or other details on why this particular payment is being made, with the payment instruction. This facilitates reconciliation and other back-office processes, and allows for potentially much more effective integration of payments information into purchasing and analytical systems and applications, enabling the provision of innovative financial products better suited to user needs.
36. In the current CHAPS and Faster Payment messages, users can enter up to 140 characters of free text remittance information. This is in contrast to 18 available characters in Bacs.
37. This lack of structure and limited capacity hampers automatic processing of payments, thereby increasing delays and costs across the end-to-end payment process. Some users of payment systems do however value the flexibility of an unstructured format.
38. Following discussions with PSPs and users it is clear that there are a number of key decisions, and trade-offs, to be made in relation to remittance information:
- *Flexibility vs efficiency*: the desire to transmit free text in the message *versus* the wish for structured data to ensure PSPs can automate the pass-through and screening of payments as far as possible.
  - *Domestic vs international context*: the desire to tailor the domestic implementation of ISO 20022 to UK scenarios *versus* the need to remain in line with international practices (such as other HVPS+ implementations) so as not to create data loss or truncation.
  - *Innovation vs compliance*: the desire to transmit electronic addresses in the message, to allow for remittance information and perhaps invoices to be stored by third parties or other data storage solutions (including in the cloud) *versus* the need for PSPs to screen that information and the security implications of passing on such third party locations.
39. The proposed design of the CCM has been informed by these trade-offs, whilst aiming to improve the quality of remittance information available in a payment instruction to benefit payments providers and users:
- The *unstructured text* field will remain at 140 characters. It will primarily be retained for the purposes of interoperating between the current messaging and the CCM during the migration to ISO 20022 to ensure continuing alignment with user needs in the near term. As ISO 20022 adoption takes hold, the Bank and NPSO will be actively seeking to reduce the use of unstructured remittance information, helping to drive efficiency benefits.
  - Additional fields will be available to enter *structured remittance information* such as an invoicer's address, specific tax information or other reference information types.
  - There will be designated fields to allow *related remittance* information references to be inserted into a message, such as an electronic address for an external cloud-based repository, or references to documents sent by other methods such as email or post. If used, these fields can reduce the need to input all contextual information in a payment.
  - In line with HVPS+ guidelines, the CCM will allow *users to input only one type of remittance information per message*, e.g. only structured, or only unstructured. The Bank and NPSO will encourage the use of ISO 20022 across the end-to-end payment chain in order to maximise the availability of structured and related remittance information fields.

40. In accordance with principles of diversity, inclusion and representation the Bank and NPSO have proposed that the gender-neutral title ‘Mx’ be included as an option in the CCM wherever the structure requires a title.<sup>25</sup> At present, the ISO 20022 structure only contains options for Mr, Miss, Ms and Dr. A Bank authored and NPSO sponsored change request has been submitted to ISO to this effect.

41. Full details of the remittance information that will be facilitated in the CCM can be found in Appendix 1.

**Table 3: Summary of changes to information on remittance information**

|  | Current message format |                |   | Proposed format   |
|--|------------------------|----------------|---|---|
|  | Bacs                   | FPS            | CHAPS (MT 103 and 202)                                      | Common UK Credit message (CCM)  |
| <b>Unstructured remittance information</b> | 18 characters          | 140 characters | 140 characters  | 140 characters  |
| <b>Structured remittance information</b>   | ×                      | ×              | ×   | Many structured fields available  |
| <b>Related remittance information</b>      | ×                      | ×              | ×   | Specific fields for related remittance information i.e. electronic address  |
| <b>Additional remittance message</b>       | ×                      | ×              | The MT103.REMIT message has extended remittance information | The <i>Remt</i> message is transmitted alongside the CCM, with a repeat of the full set of remittance information fields. |

× = indicates where a feature has no designated space in legacy formats

## 2.5 Facilitating innovation and change

### Ability to interface with APIs and overlay services

42. The CCM and thus the implementation of ISO 20022 in CHAPS, Bacs and Faster Payments will be in XML format, the standard format defined by ISO 20022. XML is not the only syntax available, however the maturity of the XML syntax, its suitability for the transmission of clearing and settlement instructions, and the desire to align with key international implementations of ISO 20022 helped to inform this decision. Because other formats can be used to represent ISO 20022 and the CCM (such as ASN.1 and JSON) the standard is able to adapt to new technology as it emerges. One key area is expected to be the interaction between APIs and the data structures of the ISO 20022 standard. Work to define this is being led by the NPSO on behalf of the United Kingdom, and standards bodies from China and Singapore under ISO.<sup>26</sup> This will help to ensure that the UK’s interests are at the forefront of this work.

43. The CCM’s greater capacity to carry information can enhance its ability to interact more broadly with overlay services. For example, the ISO messages are capable of carrying the information needed to facilitate the SWIFT

<sup>25</sup> At present this is only in the remittance information section.

<sup>26</sup> [www.iso.org/standard/74353](http://www.iso.org/standard/74353)

gpi 'track-and-trace' service and will provide the foundation for the design of NPA solutions, including request to pay and confirmation of payee.

## Character sets

44. Bacs and Faster Payments currently use a limited character set comprising digits, some Latin characters, and some special characters. Thus any words from Arabic, Chinese or Greek alphabets must be translated into Latin characters where there can often be more than one possible representation, creating inconsistencies. Further, certain symbols commonly used in modern communication are not permissible which can restrict uses of the messaging standard, such as the '@' symbol. Conversely, the status quo provides benefits for screening software, as a limited character set can make this process a much simpler task and a large number of systems are designed to support this restricted set.
45. Building the capability, within the renewed RTGS and the emerging design of the NPA, to facilitate the use of an extended character set for both alphabets and special characters will provide strategic flexibility for future changes. It will also accommodate possible future changes for international payments. As referenced in the recent SWIFT consultation on cross-border payments, growth in Asian payments in particular emphasises the need to encourage flexibility.
46. ISO 20022 has the ability to support the full range of Unicode characters (i.e. extended character sets) in XML. The CCM, in addition to the Latin characters and symbols currently supported, will also support the ability to transmit the following:
  - Non-Latin alphabets (e.g. Arabic, Chinese). However, it is not proposed that non-Latin alphabets be mandated in the CCM at this stage.
  - A wider range of special Latin characters (e.g. '@', 'ú'). In line with HVPS+ guidelines, it is proposed that any use of extended character sets in the CCM is limited to the (i) remittance information fields and (ii) structured name and address fields. This wider range of characters must be supported by PSPs using the CCM.
47. Should a critical mass of PSPs or users wish to take advantage of the non-Latin alphabets functionality, arrangements will need to be in place to ensure that there is no loss of data when those using extended characters send messages to those who are not. Additional costs may therefore need to be incurred to facilitate the use of these characters, e.g. the cost of updating legacy systems. PSPs should consider the opportunities that this functionality can bring as and when they upgrade their infrastructures, even if they do not plan to use this facility in the near term, as it may help prevent future development costs.

Table 4: Summary of changes facilitating innovation and change

|                                       | Current message format  |   |   | Proposed format  |
|---------------------------------------|---|---|---|--|
|                                       | Bacs  | FPS   | CHAPS (MT 103 and 202)  | Common UK Credit message (CCM)   |
| <b>Ability to interface with APIs</b> | ×   | ×   | ×   | ISO 20022 definitions can be shared with overlay services ensuring consistent data capture and adaptability to new technology.   |
| <b>Character sets</b>                 | Upper case Latin characters, digits and a very limited number of special characters | Latin characters, digits and a limited number of special characters | Latin characters, digits and a limited number of special characters | <p>Extended special characters, set out in Annex 1, must be supported by PSPs using the CCM. They are restricted to remittance information and name and address fields.</p> <p>In the long term, the ability to transmit non-Latin alphabets may be enabled, subject to further industry engagement.</p> |

× = indicates where a feature has no designated space in legacy formats

## 2.6 Governance to ensure effective adoption of ISO 20022

48. The Bank and NPSO recognise that a wider programme of change is needed to deliver an effective and aligned adoption of the ISO 20022 CCM across the entire UK payments chain. Effective governance and oversight of this cross-industry programme will be a key element of ensuring its success.
49. Work to design the future governance structure is now underway. The Bank and NPSO recognise that as well as collaboration between themselves, effective oversight and coordination of such a programme can only be achieved by involving a wide range of stakeholders in the governance process. These stakeholders include PSPs, trade bodies, end-users and vendors. At this early stage of our thinking, the Bank envisages a senior strategic change advisory panel tasked with advising, supporting and challenging the Bank and NPSO in promoting, encouraging and ensuring consistent adoption of ISO 20022 across the United Kingdom. It is expected that this group would run from 2019 to 2024.
50. The Bank also envisages that there would be a number of working groups established jointly by the Bank and NPSO tasked with delivering practical elements required to ensure an effective adoption of ISO 20022, including:
- developing implementation guidance for PSPs and users, including writing wider messages (including payments initiation and confirmation messages) for use in the end-to-end payments chain;
  - review of change requests and versioning issues; and
  - looking to align wider interoperability issues across the CHAPS and the NPA, including looking at routing rules and other issues where there is separation between the systems.

## 2.7 Ongoing governance of the CCM

51. Beyond the completion of the RTGS Renewal and NPA projects, the Bank and NPSO recognise that there will be a need for some of the governance functions around the CCM to continue. This would include managing change requests to the CCM and the ongoing maintenance of usage guidance, to ensure that the CCM continues to meet industry needs, and remains harmonised both internationally and domestically. It is expected that the stakeholder working groups envisaged above during the migration will evolve and continue to deliver advice on these to the Bank and NPSO. The Bank and NPSO will share further information on both migration and longer term ‘business as usual’ governance as their thinking develops, including seeking nominations to participate in and support this work.

52. Moving to the ISO 20022 messaging standards provides an opportunity for the United Kingdom to set its own rules on which version of ISO 20022 to adopt and when. New versions of ISO 20022 may be created annually by ISO, following a comprehensive change management process (in which the Bank and NPSO will continue to participate). ISO does not impose changes so it is for communities to decide whether to implement these new messages. This differs to the current arrangements in CHAPS, Bacs and Faster Payments. In CHAPS, the SWIFT MT messages are updated through a compulsory annual release cycle; this process, managed by SWIFT, ensures standardisation across the entire international SWIFT community. In contrast, messages within Faster Payments and Bacs have been updated using different processes and driven by their own governance processes. It is important that the Bank and NPSO work together on change management processes, and early work to design the future governance structure is now underway.
53. The Bank and NPSO plan to take a leading role in setting out an approach to message versioning within their infrastructures, and therefore what versions firms should be using. It is important that all users of ISO 20022 within the United Kingdom are able to support the same functionality. Divergence in versions of ISO 20022 used in firms' systems should be avoided as it may risk translation or data truncation issues, negating many of the expected benefits of the migration to ISO 20022. It is also important that international harmonisation should continue, and for the United Kingdom to keep up to date with the versions being used internationally. The Bank and NPSO are therefore considering a regular cycle to update the version of ISO 20022 being supported. For CHAPS, this is expected to be an annual cycle, with implementation delivered over a fixed weekend, similar to the current SWIFT MT annual release cycle. For the NPA, the task is more complex given the much larger number of users submitting instructions directly to it. The NPSO is therefore also considering whether, in addition to an annual process, it would be possible for the NPSO to provide a migration window during which both the current version and the previous version would be supported. This would mean that users would be able to upgrade systems to support the new version of ISO 20022 at some point during the window rather than a fixed weekend.
54. SWIFT is considering which versions of ISO 20022 they will support on their network and how this will change over time. They are also considering an annual process, though this may be dependent on whether new versions of ISO 20022 contain developments that would be useful for their communities. Aligning with this will be a key input into deciding what version CHAPS will support.

## 2.8 How the proposed CCM delivers the desired outcomes

55. **Table 5** below takes the policy drivers set out in Section 1 and shows how the various proposals that comprise the CCM help deliver those goals. Through the delivery of CCM, and migration to ISO 20022, PSPs can achieve improvements in operational resilience, international harmonisation and can facilitate competition and innovation. A number of these benefits will require uniform and universal adoption of ISO 20022 to deliver the desired outcomes for end-users, PSPs and policy makers. In particular, improving detection of fraud and financial crime requires consistent formatting and provision of information which can be screened in an efficient and cost effective manner. Consistently structured data will be essential for firms to realise efficiencies in processing and for firms and policy makers to harness the opportunities for data to be used productively. This is why the Bank and NPSO will use their influence over payment system operators to ensure that the adoption of ISO 20022 in the United Kingdom covers the entire payment chain, and is uniform in its application. In part this will be driven by mandating certain data elements and providing effective usage guidance.

Table 5: Summary of outcomes delivered by the CCM

| Drivers                            | How the proposals could lead to desired outcomes   | Identity                          |                    |      |                      | Purpose       |                     | Character sets |
|------------------------------------|--|-----------------------------------|--------------------|------|----------------------|---------------|---------------------|----------------|
|                                    |  | Ultimate beneficiary / originator | Structured address | LEIs | Personal identifiers | Purpose codes | Improved Remittance |                |
| <b>Operational resilience</b>      | <ul style="list-style-type: none"> <li>Additional data can be used to prioritise payments in the event of an operational incident (see Use case 4);</li> <li>The CCM will reduce barriers to redirecting payments between payment systems (see Box 2)</li> </ul>                               |                                   |                    | ✓    |                      | ✓             |                     |                |
| <b>Risk management</b>             | <ul style="list-style-type: none"> <li>LEIs will assist firms managing liquidity and credit risks by precisely identifying their counterparties (see Box 3);</li> <li>Purpose codes will improve identification of the types of transactions driving liquidity use (see Use case 1)</li> </ul> |                                   |                    | ✓    |                      | ✓             |                     |                |
| <b>Fraud and financial crime</b>   | <ul style="list-style-type: none"> <li>Additional structured fields to capture information required by Wire Transfer Regulations;</li> <li>Additional data points to reduce false positives and mitigate authorised push payment (APP) fraud (see Use case 1)</li> </ul>                       | ✓                                 | ✓                  | ✓    | ✓                    | ✓             |                     |                |
| <b>Competition and innovation</b>  | <ul style="list-style-type: none"> <li>The use of the CCM across payment systems reduces barriers to entry by aligning technical requirements;</li> <li>New products and services are enabled by the additional data contained within messages</li> </ul>                                      |                                   |                    | ✓    |                      |               | ✓                   | ✓              |
| <b>International harmonisation</b> | <ul style="list-style-type: none"> <li>Streamline processing of cross-border payments via alignment with HVPS+ guidelines</li> </ul>   | ✓                                 | ✓                  |      |                      |               |                     | ✓              |
| <b>Efficiencies in processing</b>  | <ul style="list-style-type: none"> <li>Data with a clear structure improves machine readability and straight-through processing</li> </ul>   |                                   | ✓                  | ✓    |                      |               | ✓                   |                |
| <b>Richer data</b>                 | <ul style="list-style-type: none"> <li>More precise information on the identity and purpose of a transaction, when aggregated, will enable enhanced analysis and decision-making for policymakers</li> </ul>   | ✓                                 | ✓                  | ✓    |                      | ✓             |                     |                |

## Use case 1: Authorised Push Payment scams

The ISO 20022 messaging standard will have significant reach and will define the data carrying ability of payments messages. If used effectively, several of the new data aspects contained in the CCM can be used by PSPs to mitigate financial crime.

For example, Authorised Push Payment (APP) scams – where people are tricked into sending money to a bank account controlled by a fraudster – affected almost 43,000 individuals during 2017, amounting to an estimated total loss of £236 million.<sup>(a)</sup>

Following a super-complaint from the consumer organisation Which?, the PSR is currently working with PSPs to develop initiatives to help prevent APP scams. Ultimately only a multifaceted approach will succeed in mitigating payments fraud, but the CCM can support efforts to prevent APP scams.

### **Example**

Conveyancing fraud is a specific type of APP fraud whereby a fraudster pretends to be a conveyancer as part of a housing transaction. Given the stresses and time pressures of completion day, individuals might transfer funds to the fake conveyancer instead of their appointed conveyancer.

The purpose codes feature contained within ISO 20022 messaging may help detect and prevent this type of fraud. For example, PSPs could set up accounts such that payments received with a purpose code which is not consistent with the customer's stated use of the account is flagged as a fraud concern. In this example, if the individual (or PSP acting on behalf of the individual) attached a 'housing completion' purpose to their payment, the payment into the fraudster's account would be stopped because accounts for individuals would not generally be set up to receive 'housing completion' payments.<sup>(b)</sup>

Several other data elements in the CCM will also provide context and additional information to PSPs in the transaction chain, and so enable them to better undertake screening and due diligence.

(a) UK Finance and FFAUK: 2017 Annual Fraud Update

(b) Were the fraudster to set up a business current account, a PSP could undertake due diligence before enabling that account to receive 'housing completion' denoted payments

## Use case 2: Cross border correspondent banking and overseas remittances

The global Financial Stability Board has identified that the introduction of ISO 20022 could help stem the decline in provision of correspondent banking relationships. This decline in correspondent banking remains a concern for the international community, because in affected jurisdictions, it may impact the ability to send and receive international payments. This could have potentially adverse consequences on international trade, growth and financial inclusion, as well as the stability and integrity of the financial system.

The Board, chaired by the Bank's Governor Mark Carney, has identified that one of the main reasons that correspondent banks terminate customer relationships is the cost and risk involved in performing due diligence on underlying customers and payments.<sup>(a)</sup> In the correspondent banking network, correspondent banks do not have a direct relationship with the underlying organisations or persons making or receiving payments. They therefore rely on the checks undertaken by the underlying customer's PSP and the information provided with the payment message, in order to effectively manage any money-laundering risk.

It is expected that the universal and uniform adoption of ISO 20022 will reduce these costs and risks by:

- Carrying more information about the underlying transactions and previous agents involved in these transactions, making it easier for correspondent banks to perform due diligence, and improving trust between correspondent and respondent.
- Including LEIs in transactions will provide information about the exact entity involved in transactions. This will improve the risk assessment process by facilitating information sharing and standardising the format in which this is done.
- Introducing an optional regulatory reporting section, where users can enter information relating to sanctions licences for example.

It is expected that this will help support both continued provision of sterling services in overseas jurisdictions, and the banking services that UK-based money remittance services need to send money overseas.

Furthermore this is expected to help in making legitimate payments from the United Kingdom to high risk jurisdictions overseas – including humanitarian payments and payments covered by trade export licences. Anecdotally, these payments can sometimes take several months to reach their destination, as they are stopped for detailed screening by each PSP in the correspondent banking chain, and each PSP requests additional information about the identities and purpose of the transaction, and the details of any sanctions licences or exemptions. While these transactions will likely still have to be subject to careful screening, the additional information carried in ISO 20022 messages should help provide additional context and support quicker onward release of these payments. With the correct market guidance, the new messaging is expected to reduce delays to payments thereby improving international trade and the ability of the UK government and charities to respond to time-sensitive crises.

(a) FSB Action Plan to assess and address the decline in correspondent banking – available at: <http://www.fsb.org/2018/03/fsb-action-plan-to-assess-and-address-the-decline-in-correspondent-banking-progress-report-to-g20-finance-ministers-and-central-bank-governors-meeting-of-march-2018/>

### Use case 3: Benefits for organisations making payments

ISO 20022 is expected to deliver a wide range of benefits to organisations making payments, subject to uniform and universal adoption of ISO 20002 into the corporate space. These include:

1. Reconciling incoming payments could become easier as the messages will carry richer and more structured remittance information. This could include:
  - Richer information sent by the originator of the payment, including dedicated space for fields such as shipping details and invoice attachments;
  - Reference to remittance information held in external sources;
  - Globally unique reference numbers, known as Legal Entity Identifiers; and
  - A wider set of available characters, if supported by your bank.
2. Aligning messaging across CHAPS, Bacs and Faster Payments, and internationally, will enable organisations to streamline payments operations and realise efficiency benefits and cost reductions.
3. More structured information will both improve machine readability and help PSPs screen transactions for fraud and other financial crime more efficiently, leading to fewer delays in payments processing. And the harmonised standard should lead to better outcomes in the event of an operational outage.
4. The new messaging standard supports competition and innovation through its capacity to carry a wider range of information and through technical features which allow greater flexibility. The messaging standard will also support new overlay services, for instance, the SWIFT gpi 'track and trace' service, which will allow tracking of international payments in the same way parcel tracking happens now, will be supported.
5. The additional information in payments could also help organisations take better decisions, particularly around managing credit and liquidity risk.

## 2.9 Key costs and risks associated with the adoption of ISO 20022

56. The adoption of ISO 20022 is widely supported across the public and private sectors.<sup>27</sup> However, delivering the benefits will involve potentially material costs and risks, particularly in the short term. The implementation of ISO 20022 and the CCM is taking place alongside a significant amount of change in the domestic payments landscape as the retail infrastructures move to the NPA and initiatives such as Open Banking take shape. It is therefore important to understand the costs and risks of implementing these changes, and to understand how to deliver ISO 20022 in a way that minimises the burden and maximises the benefits.

57. This section sets out an initial assessment of some of the most significant potential costs and risks from implementing ISO 20022 across CHAPS and the emerging design of the NPA. Costs are considered both as they relate to the initial implementation of ISO 20022, and as they relate to the longer term running costs associated with adoption of the messaging standard. This is *an indicative list*, and the Bank and NPSO wish to refine their understanding of the challenges and mitigating factors in this area.

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<sup>27</sup> For example 98% of respondents to the Bank's 2016 consultation on RTGS Renewal supported adopting ISO 20022.

58. The responses to this section will not only help define which proposals should be adopted, but they will also be considered by the future group that will govern the future change of the messaging standard and its implementation, as detailed in Section 2.6.

## Costs

59. The costs associated with the adoption of ISO 20022 are far-reaching, in that they will be incurred not only by direct participants of the UK payment systems and other PSPs, but also by the end-users of those payment systems. Costs will also be incurred by suppliers of technology facilitating payments between PSPs, and payment initiation or reconciliation between PSPs and their customers.

60. Initial migration costs are an unavoidable part of this change. Such costs will occur mainly throughout the *Introductory* and *Enhancements Phases* and will affect many different stakeholder groups. An effective migration strategy balancing the speed of migration with the delivery of benefits is key to minimising costs incurred via:

- **Core systems change:** PSPs will be required to make payments in ISO 20022 format. This may require changes to payments engines and core banking platforms. This could constitute one of the most significant costs to intermediaries relating to adopting ISO 20022 in the United Kingdom. It is also likely that PSPs will be in varying states of readiness for ISO 20022.
- It is recognised that some **corporates or PSPs** have already switched their internal systems to ISO 20022, or have plans to do so. And others may be able to incorporate the changes into system upgrades planned for other purposes during the migration period.
- **Translation:** PSPs and corporates will be required to manage the migration to ISO 20022 messaging, for instance through the use of so-called 'translation services',<sup>28</sup> between the current messaging standards and ISO 20022 during the migration process. This will need to be undertaken within the timeframes for the decommissioning of legacy messaging standards, once those are agreed. For PSPs with large agency banking networks using legacy messaging there will be challenges if CHAPS migrates to ISO 20022 before all agency relationships have migrated. For CHAPS users in particular, this may be mitigated somewhat by SWIFT's intentions to cease support eventually for MT payment messages across its cross-border networks.<sup>29</sup>
- **Process changes:** PSPs will need to develop new processes and business practices to facilitate the pass-through and screening of data, and enable the collection of mandatory data elements. **End-users** may be required to provide new types of data, if required by their PSP.
- **Data storage:** The increased quantity of structured data in the CCM may impact on the way data is stored in systems throughout the end-to-end payment chain. **PSPs** in particular, but also **corporates and other users**, will have to develop and update storage solutions and data warehouses to account for the change in messaging standard and requirements imposed by the CCM and ISO 20022.
- **Changes to user facing channels:** PSPs will need to update online banking platforms to ensure that data from the new fields in the payment instruction are incorporated. This will include data elements mandated by scheme specific implementations of the CCM, and changes introduced by ISO 20022 such as structured addresses. This will need to be supported by **corporates**. For example, enterprise resource planning systems used for treasury management or reconciliation will also need to adapt to the change in messaging standard, associated data requirements and ongoing changes and versioning.

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<sup>28</sup> Translation services are used to transform data represented in an MT format into data represented in an ISO 20022 format.

<sup>29</sup> <https://www.swift.com/standards/iso-20022-migration-study>

61. Uniform and universal use of ISO 20022 throughout the payments chain is critical to the reduction of any long term running costs that are incurred during the *Mature Phase* and onwards as a result of the migration to ISO 20022; it is also essential in the delivery of a number of key benefits.
- In particular the reduction or removal of **ongoing translation costs** is essential to the success of the implementation. Widespread use of translation services in the long term would result in industry-wide inefficiencies and introduce additional operational risks.
  - The ongoing **maintenance and versioning** of the messaging standard will require input and change from PSPs and users. In particular additional mandated data requirements will drive costs across process, data storage and changes to user facing channels. This process already is undertaken today, and it is important that ISO 20022 maintenance does not unjustifiably increase this cost.
62. **Technology vendors** will be key stakeholders for managing the changes and costs incurred as a consequence of implementing ISO 20022 in UK payment systems. Achieving interoperability across CHAPS and the design of the NPA is in part dependent on the technical solutions employed by PSPs. The vendor community will be involved in core systems change, adapting data storage, changing customer channels and helping to manage migration. It will be essential that change happens in both PSP-to-PSP and PSP-to-customer legs of the payments chain.

## Risks

63. As with costs, the risks faced by any given organisation will vary, but may include:
- **Industry capacity:** A key risk is the payment sector's capacity to deliver effective change given a series of other developments, including but not limited to, the broader renewal of the UK's wholesale and retail payments infrastructure (through the RTGS renewal and NPA programmes respectively), the implications of the United Kingdom's exit from the European Union, adoption of ISO 20022 globally including in the United States, Europe and Asia, and ongoing changes involving use of the SWIFT network and the introduction of SWIFT gpi.
  - **Delivering business as usual services:** Along with the considerable change programme, PSPs must continue to provide payment services to end-users and remain aligned with ongoing industry change, such as the regular programme of MT standards releases.
  - **Ongoing operational risks:** Similar to the current environment, the handling of ISO 20022 messages and its associated structure will create new risks in terms of the processing and handling of payments. For example, there will be an increased likelihood of entering addresses into messages incorrectly, because of the more rigid structure. These risks will be present during the *Introductory Phase* but can be expected to subside as ISO 20022 becomes embedded within and across organisations.
  - **Translation risks:** The use of translation and mapping services to convert between legacy standards and ISO 20022 carries a risk in cases of data truncation or loss. As detailed in Section 4, it is not expected that translation tools will be used in steady state. Without consistent adoption of ISO 20022, and the additional data requirements proposed in this document throughout the payments chain, this risk is accentuated.
  - **Legal risks:** The potentially higher levels of structured personal data contained within payments messages comes with risks around the processing and handling of that data, in line with GDPR requirements (see **Box 5** for more information on how GDPR relates to ISO 20022 messages). In addition, during the migration period, there is a heightened risk of data loss, relating to data required by Wire Transfer Regulations.

### Potential risk mitigating factors

64. Over the course of the outreach prior to this consultation, the Bank and retail scheme operators have heard a range of suggestions that may help mitigate risks:

- *Uniform and universal adoption of ISO 20022*: A considerable reduction in the costs and risks of implementing ISO 20022 can be mitigated with consistent and widespread uptake of the standard and the changes required as a result of additional data requirements, in particular removing optionality.
- *Revising guidance on compliance*: UK Finance currently works with PSPs to ensure effective implementation of regulatory requirements. This guidance will need to be updated following the introduction of the messaging standard in order to minimise legal risks across CHAPS and the design of the NPA.
- *Publication of freely available translation guidance*: The publication of translation guidance by SWIFT, the Bank and other system operators can help to reduce data truncation risk by ensuring consistent data mapping.
- *Advance publication of ISO messages*: Making message standards available as early as possible, as is being done in this document for the CCM, should help to provide PSPs and organisations with a significant lead-in time before ISO 20022 implementation. It is anticipated that the Bank and the NPSO will both continue to publish material relevant to adoption of the CCM at the earliest opportunity. This should provide clarity for PSPs to begin the process of informing their customers and planning for the forthcoming changes, in particular any new data requirements.
- *Governance around message standards and maintenance*: As described in Section 2.6, an advisory group will be convened in order to advise and to guide the Bank and NPSO in their implementation of the CCM and other UK standards. This will also allow for the early identification of as yet unknown risks which may crystallise in the future.

## 2.10 Questions

### The proposed CCM

*Developed through collaboration between the Bank, the NPSO and market participants, Section 2 of the consultation document sets out how the Common UK Credit Message (CCM) builds on the foundation ISO 20022 provides to ensure a standard language for payments in the United Kingdom. In addition to seeking harmonisation across the domestic UK systems, the CCM has also been developed taking into consideration the HVPS+ guidance for international implementation of ISO 20022, with the aim of achieving international harmonisation. Change will be introduced by the CCM, of which a considerable amount is inherent to the adoption of ISO 20022. The following questions seek views on the CCM approach. Questions on the specific proposals and how they will be implemented are contained in Section 3.*

Q.1 Do you agree with the proposed approach to the CCM to align the content of payment message across key UK payment systems? i.e. the proposals to introduce shared data definitions, structure and format; and a consolidated approach to governance and maintenance.

Yes

No

Please explain, with reference to specific aspects of the CCM.

Q.2 In what ways will the CCM approach benefit you, your end users and/or those you represent?

- Improved operational resilience
- Improved risk management
- Fraud and economic crime prevention
- Increased competition and innovation
- Greater international harmonisation
- Efficiencies in processing
- Richer data
- Other (please specify)

If possible, please try to quantify the efficiency gains from adopting the CCM.

Q.3 Section 2.5 sets out the CCM's capacity to facilitate innovation and change by interacting with APIs and other emerging technology. Do you envisage utilising these services?

- Yes
- No

Please explain the rationale for your choice.

Q.4 Should the Bank, in collaboration with the NPSO, seek to explore the alignment of the CCM with one of the following?

- |                        |                          |     |                          |    |
|------------------------|--------------------------|-----|--------------------------|----|
| Open Banking           | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Cards schemes          | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Securities Settlement  | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Other (please specify) |                          |     |                          |    |

Q.5 Are there any additional CCM fields or data elements that you consider should be included?

Q.6 The implementation of ISO 20022 is a rare opportunity to achieve the desired outcomes outlined in Diagram 2, but the extent to which many of these are achieved is dependent on the uniform and universal adoption of ISO 20022 in the United Kingdom. Do you agree that the Bank and NPSO, as payment system operators, should promote and influence the wider use of ISO 20022 and the CCM across the payment chain to achieve the desired network effects?

- Yes, the Bank should promote the wider use of ISO 20022 and the CCM
- No, wider promotion of ISO 20022 and the CCM is not necessary

## Governance

*In Section 2.6 a framework is proposed for the governance of the CCM to ensure the benefits of harmonisation continue to be realised. This includes the set-up of an advisory panel and continued engagement with payments providers leading up to the implementation of ISO 20022.*

Q.7 Do you agree that there should be a senior strategic change advisory panel, supplemented by subgroups, to advise the Bank and NPSO on the effective adoption of ISO 20022 across the United Kingdom?

- Yes
- No

Please comment on the role and composition you would expect the advisory panel to have.

Q.8 Do you agree with the proposed ongoing governance of the CCM beyond the completion of the RTGS Renewal and NPA projects?

- Yes
- No

Please explain in particular any issues with the proposed governance.

## CCM costs and risks

*ISO 20022 is being implemented in CHAPS and the NPA. Such a significant change will introduce costs and risks:*

Q.9 Please order the following changes by their contribution to your overall costs from implementing the CCM across key UK payment systems (1 = highest contribution, 2 = second highest contribution, etc).

- Core systems
- Data storage
- Payment channels
- Process change
- Translation services
- Other (please specify)

Q.10 If possible, please indicate the investment cost to you for implementing the CCM across key UK payment systems:

- £0-50k
- £50k-250k
- £250k-1mn
- £1mn-5mn
- £5mn- 10mn
- £10mn+

Q.11 Will the costs of implementing the CCM be shared across wider work required to implement ISO 20022 functionality?

Q.12 Please order the following functions by their contribution to your expected ongoing costs from operating the CCM across key UK payment systems (1 = highest contribution, 2 = second highest contribution, etc).

- Core systems
- Data storage
- Payment channels
- Process change
- Translation services
- Maintenance and versioning
- Other (please specify)

Q.13 If possible, please indicate your net change in ongoing annual operational costs once the CCM has been implemented across key UK payment systems:

- |  |                                     |
|--|-------------------------------------|
| <input type="checkbox"/> Net saving          | <input type="checkbox"/> £0-50k     |
| <input type="checkbox"/> Net additional cost | <input type="checkbox"/> £50k-250k  |
|  | <input type="checkbox"/> £250k-1mn  |
|  | <input type="checkbox"/> £1mn-5mn   |
|  | <input type="checkbox"/> £5mn- 10mn |
|  | <input type="checkbox"/> £10mn+     |

Q.14 Please order the following risks you face from implementing the CCM across key UK payment systems by the scale of the anticipated risk (1 = greatest risk. 2 = second greatest risk, etc):

- Industry capacity
- Operational risk
- Translation risk
- Legal risk
- Other (please specify)

# 3 Implementing the Common Credit Message in CHAPS

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## 3.1 Introduction

1. **This section sets out the Bank's proposals for implementing the CCM in CHAPS**, and covers the following specific areas:
  - Identity (Section 3.2);
  - Purpose codes (Section 3.3);
  - Remittance information (Section 3.4);
  - Character sets (Section 3.5); and
  - Other technical changes (Section 3.6).
2. The Bank's current intention is that these proposals will be implemented in four phases, as described in **Box 4** below. Further detail on this proposed migration to ISO 20022 is provided in Section 4.
3. CHAPS scheme rules contractually only apply to CHAPS direct participants. However, they directly impact the requirements placed on, and services provided to, indirect members and end-users. Indeed, the benefits accruing from standardisation of CHAPS payment messages only fully accrue through the uniform and universal adoption of these rules and requirements throughout the end-to-end CHAPS payment chain.
4. The NPSO will be publishing further information on its CCM implementation plans in due course. The governance arrangements described in Section 2.6 will guide continuing interoperability between the payment systems.

### Creating new mandatory fields in CHAPS

5. The Bank is charged with maintaining UK financial stability. Furthermore, as payment system operator for CHAPS, it has a responsibility for end-to-end risk management across the CHAPS payment chain. As such, the Bank is keen to increase oversight and understanding of the transactions flowing through the UK financial system on both a granular and system-wide level. As described in Section 2, the introduction of purpose codes and LEIs will provide a clear picture of the activities and entities engaged in these transactions. It should also help PSPs and corporates to monitor their own risk and liquidity use more accurately.
6. In the proposals included in this section, **the Bank is inclined to mandate the inclusion of LEIs and purpose codes for all payments between PSPs.**<sup>30</sup> Additionally, purpose codes would be mandated on all payments above a certain value threshold. These payments are typically highly important, time-critical transactions, such as overnight money market deals, that pose a risk to financial stability if not completed. They currently account for three-quarters of CHAPS traffic by value, or some £60 trillion per year.
7. Many financial regulations reference or require ISO 20022 standards, including MiFiD II, CSDR and PSD2. The use of LEIs and purpose codes in payments will help facilitate compliance with these regulations.

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<sup>30</sup> This refers to pacs.009 payment messages, which are financial institution to financial institution payments.

8. As acknowledged in the Wolfsberg Group Payment Transparency Principles (2017), although there are significant benefits to using LEIs in payments, there needs to be a significant increase in adoption of LEIs to fully realise this opportunity.<sup>31</sup> The Bank will engage in efforts to increase the uptake of LEIs, and intends to make them mandatory for all payments that involve parties that are eligible for an LEI. More information is available in **Box 3**.
9. Furthermore, the **Bank proposes to mandate the use of purpose codes for any housing completion payments**. As set out in **Use case 4**, operational outages within payments systems can cause significant disruption where payments are time-critical, such as those supporting house moves; the clear identification of these types of payments would allow prioritisation of these payments in such eventualities thereby mitigating real economy impact.
10. The Bank is ambitious about how it can use the CHAPS scheme rules to ensure an effective adoption of ISO 20022. Other methods, such as working with industry to develop payments initiation messages and ensuring effective usage guidance will also facilitate realisation of a uniform and universal adoption. Together these measures would better enable the introduction of further mandatory data elements to result in better outcomes for users and PSPs whilst helping to further the Bank's objectives.

#### Box 4: Migration summary

The implementation of ISO 20022 in CHAPS will involve four phases:

- *Phase 1* – the *Preparatory Phase* involves publishing the complete messaging standard;
- *Phase 2* – the *Introductory Phase* involving a go-live with like-for-like messaging. In this phase there are no extra data fields or requirements over and above those required under the current messaging standard;
- *Phase 3* – the *Enhancement Phase*, which involves the introduction of new data fields, some of which will be mandatory to complete. Any data contained in the optional fields will be mandatory to pass through the entire payment chain.
- *Phase 4* – the *Mature Phase*, where longer term developments to the message are considered as part of a regular maintenance and upgrade cycle to the CCM.

Further details of the Bank's migration proposals for CHAPS are given in Section 4. Section 4.2 sets out a proposal to enable earlier benefit realisation via the creation of a 'Closed User Group' in phase 2.

## 3.2 Identity

### Better information on ultimate originators and beneficiaries and on intermediary agents

11. The implementation of the CCM in CHAPS increases the capacity to transmit information on the parties (individuals or organisations initiating and receiving a payment) and agents (PSPs undertaking the movement of funds on behalf of the parties) in a payment.
12. Specific fields for inputting information on ultimate originators and beneficiaries would be introduced in the *Enhancement Phase* of the CHAPS migration to ISO 20022 messaging and the CCM. The CHAPS messaging

<sup>31</sup> <https://www.wolfsberg-principles.com/sites/default/files/wb/pdfs/wolfsberg-standards/1.%20Wolfsberg-Payment-Transparency-Standards-October-2017.pdf>

standard will mandate that in set cases for which these fields are required, as set out by regulations such as the Wire Transfer Regulations, all participants have the ability to receive and pass on this information to end-users.

13. The Bank plans to work with industry groups, such as UK Finance, to develop guidance on how to enter this information in accordance with the various regulatory requirements.
14. Implementing the CCM in CHAPS will also enable an increased number of intermediary agents to be identified in a given transaction.<sup>32</sup> This helps payment providers undertaking due diligence checks to understand the full payments chain. In order to ensure universal and uniform adoption, it will be mandatory for PSPs to receive this information and be able to pass it on to counterparties.

## Structured name and address fields

15. Structured name and address fields would be introduced in the *Introductory Phase* of the migration to ISO 20022 and the CCM. The implementation of the CCM in CHAPS will not allow an agent or party identified in the payment instruction to use unstructured data. Although the name and address fields will be optional to complete, from the *Introductory Phase* it would **be mandatory to enter addresses in a structured format** where used. When using structured address fields, the 'town name' and 'country' field will be mandatory.
16. It will be the responsibility of the sending party to validate the information contained within address fields.

## Legal Entity Identifiers and other organisational identifiers

17. LEIs would be introduced in the *Enhancement Phase* of the CHAPS migration to ISO 20022 messaging, alongside other organisational identifiers such as company numbers.
18. The Bank proposes to make the **use of LEIs mandatory for transactions between financial institutions** under the CHAPS scheme rules in the *Enhancement Phase* of the migration to ISO 20022 messaging. For other transactions, LEI use will be optional (reflecting that LEIs do not have universal coverage for other institution types).<sup>33</sup> It will however become mandatory in the *Enhancement Phase* for CHAPS direct participants to have the ability to receive and pass on this information where it has been provided by users.
19. In order to improve the quality of data transmitted across RTGS, the Bank may consider undertaking checks to establish whether data are formatted like an LEI; however it will remain the responsibility of the sending party to ensure that the data they supply is accurate.
20. Consistent with the proposal for the CCM, there will be a range of other organisational identifiers available for PSPs and end-users to input into a payment instruction. These will be mandatory to receive and pass on for all participants from the *Enhancement Phase*. Regardless, the Bank has a strong preference to use the LEI in lieu of other organisational identifiers wherever possible and seeks feedback on how to realise this objective.

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<sup>32</sup> The FSB has identified this feature as being a vital tool to assist in the decline of correspondent banking relationships. <http://www.fsb.org/2018/03/fsb-action-plan-to-assess-and-address-the-decline-in-correspondent-banking-progress-report-to-g20-finance-ministers-and-central-bank-governors-meeting-of-march-2018/>

<sup>33</sup> However, in the future this may change as LEI use is proliferated across the economy. 'Between financial institutions' means use in pacs.009 messages.

## Personal identifiers

21. Personal identifiers would be introduced in the *Enhancement Phase* of the CHAPS migration to ISO 20022 messaging.
22. It is likely that in certain key use cases additional personal identifiers will be mandatory. This could include tax codes or National Insurance number for a tax or salary payment. As these use cases only make up a small proportion of total volume processed in CHAPS, the use of these fields will be **optional**; it will be for PSPs to determine the processes by which they will facilitate (or require) their customers inputting personal identifiers when required to do so. It will become mandatory in the *Enhancement Phase* for CHAPS direct participants to have the ability to receive and pass on this information.
23. The Bank will not verify any information held in these fields, e.g. checking to determine whether the National Insurance number quoted is valid. Furthermore, the Bank will not store any personal data. For more information on how the Bank plans to use the data in payments, see **Box 5**.

**Table 6: Summary of proposed implementation in CHAPS - Identity**

|  | Proposed CCM content   | CHAPS implementation  |   |  |
|--|--|---|---|--|
|  |  | Introductory Phase (phase 2)  | Enhancement Phase (phase 3)   | Mature Phase (phase 4)   |
| <b>Ultimate beneficiary/originator and intermediary agents</b> | Specific fields to identify ultimate originator and beneficiary<br><br>CCM will be capable of carrying information for 10 agents | Not available   | Ultimate beneficiary/originator mandatory where required by Wire Transfer Regulations<br><br>Mandatory to receive and pass on all information on intermediary agents, and beneficiaries/originators | No further developments currently planned  |
| <b>Name and structured address</b>                             | More structured format than MT messaging, including adding 'building name'   | Only structured fields will be available and Town and Country are mandatory | Only structured fields are available and Town and Country are mandatory   | No further developments currently planned  |
| <b>LEIs and other organisational identifiers</b>               | Introducing a field for LEIs alongside fields for organisational identifiers such as tax number and company number               | Not available   | <b>LEIs mandated for transactions between financial institutions (predominantly pacs.009, the MT202 equivalent)</b><br><br>Other identifiers optional to use  | LEIs will become mandatory for a wider range of payments that involve agents other than financial institutions |
| <b>Personal identifiers</b>                                    | Specific fields for date and place of birth, and fields that could hold other personal identifiers, e.g. passport or NI number   | Not available   | Optional fields, likely that there will be specific use cases in which they are mandated, such as tax payments – we will be working with key stakeholders to define these cases                     | Further use cases developed, pending industry engagement   |

### 3.3 Purpose codes

24. It is proposed that purpose codes will be introduced in the *Enhancement Phase* of the CHAPS migration to the CCM. To facilitate its mandate to ensure financial stability, the Bank proposes to make the use of purpose codes **mandatory for payments between financial institutions, all payments above a certain value threshold, and for housing completion payments** under the CHAPS scheme rules.
25. For the former, this will help PSPs and firms identify payments that are likely to be subject to regulatory reporting such as derivatives transactions. It also provides key insight for policymakers concerned with end-to-end risk and financial stability in real time.
26. Mandating the use of purpose codes for all payments above a certain value threshold, yet to be determined, will enable enhanced end-to-end risk management as set out in Section 3.1.
27. For the latter, by making the identification of housing completion payments mandatory, PSPs would be able to prioritise these time-sensitive payments in the event of an operational incident, helping reduce the impact on end-users (see **Use case 4**).
28. All other uses will be optional. It will however be mandatory in the *Enhancement Phase* for CHAPS direct participants to have the ability to receive and pass on this information where it has been completed by others in the payments chain.
29. To ensure the full benefits from purpose codes, only a subset of codes from the international HVPS+ lists that are appropriate to the UK context and to CHAPS payments in particular would be included in the CHAPS scheme rules. These UK specific sub lists will be expected to be used in domestic payments; however support will be required for the full code list to enable cross-border payments without truncation.
30. The Bank may consider making the use of purpose codes mandatory in other circumstances at a later date in order to further support its financial stability objective. Consistent use and clear guidance can facilitate the wider adoption of purpose codes. In turn, this will enhance the realisation of the Bank's financial stability objective, owing to the improved system-wide visibility this would provide.

**Table 7: Summary of proposed implementation in CHAPS - Purpose codes**

|                      | Proposed CCM content   | CHAPS implementation         |   |   |
|----------------------|--|------------------------------|---|---|
|                      |  | Introductory Phase (phase 2) | Enhancement Phase (phase 3)   | Mature Phase (phase 4)  |
| <b>Purpose codes</b> | Fields to identify both category purpose and payment purpose; there is a standardised list for each defined by HVPS+ | Not available                | A subset of codes from the HVPS+ lists will be used in the UK context<br><br><b>Mandatory for payments between financial institutions, for payments above a certain value threshold, and for housing completion related payments.</b> | Expect to mandate in certain additional use cases to be defined |

## Use case 4: Prioritising critical payments

Evaluations of the resilience of the UK payments infrastructure, including periodic industry-wide simulation exercises, have repeatedly highlighted the benefits that would accrue from a more straightforward way to re-route the highest-priority payments from one system to another in the event of a major operational outage. Such mechanisms would also be useful in more normal market conditions where PSPs want to prioritise certain payments when there is an exceptionally high volume of transactions, to ensure those payments are not delayed. Given that the urgency of a payment is frequently linked to the underlying reason for sending the payment, purpose codes will offer PSPs an efficient and effective way to help identify those payments.<sup>(a)</sup>

Introduction of a standard ISO 20022 message format will help considerably with rerouting across payment systems, but effective identification of priority payments will also require consistent use of purpose codes.

### **Example:**

Successful completion of a house purchase is dependent on a number of time critical payments, such as a deposit from the buyer, a mortgage advance from a lender, and a completion payment between the buyer's and the seller's solicitor or conveyancer. Due to their size and criticality, many of these payments – especially the completion payment – are made using CHAPS.

At certain times of day, even a relatively modest delay can have significant implications in the case of housing payments. For example, other purchases further down the chain will be held up; keys may not be handed over; and removal vans cannot be unpacked. Identifying the purpose of CHAPS payments is not easy using the current, often unstructured, data. And manual identification is not a feasible solution given the volume of CHAPS payments.<sup>(b)</sup> This makes it difficult to prioritise the more critical payments when recovering from an operational outage.

One solution would be to use purpose codes, contained in the ISO 20022 message, to indicate the purpose of a payment. This way the Bank and CHAPS direct participants could identify the critical payments and prioritise them appropriately. That is the approach proposed in this document for housing payments. But there are also wider applications, for example to other payments such as commercial property purchases, salaries and margin calls for central counterparties (CCPs) that could also be beneficial.

<sup>(a)</sup> Purpose codes are separate to urgency codes used for promoting payments in the Liquidity Savings Mechanism (LSM). Urgency codes will be continue to be available in the new message format.

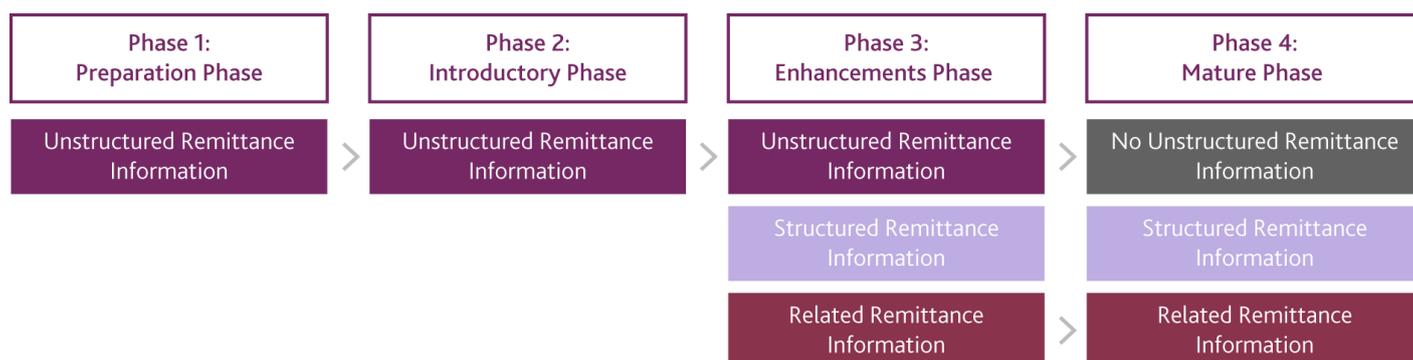
<sup>(b)</sup> An average of 165,285 payments a day settled through CHAPS in 2017.

## 3.4 Remittance Information

31. It is proposed that during the *Enhancement Phase* users making CHAPS payments will be able to use unstructured, structured or related remittance information as part of the CHAPS implementation of the CCM. This will mitigate disruption whilst migrating to ISO 20022 in CHAPS. Users can only input one type of remittance information per message, as per HVPS+ guidelines.
32. In the *Enhancement Phase* users would be able transmit up to 420 characters of free text in the structured remittance section, in a specially designated free text field. The 420 character limit is a guideline from the HVPS+ standard to encourage interoperability.

33. The Bank intends that unstructured, free format information is minimised in payments messages in order to promote efficiency and straight-through processing. Hence, during the *Mature Phase* the unstructured remittance field section will be phased out as illustrated in **Diagram 8** below. This will be done to help drive efficiency and structure. This is facilitated by widespread use of ISO 20022 throughout the payments chain, as users and intermediaries have greater access to structured and related remittance information fields.
34. CHAPS guidance will specify that should users wish to enter free text format text during the *Enhancement Phase*, they should enter this in the structured remittance information section so as to reduce use and dependence of the unstructured field.

**Diagram 8: Proposed migration of remittance information**



### **Remt messages**

35. The Bank also proposes to allow the use of so-called '*remt* messages'. These are separate messages to the CCM which contain a whole block of remittance information – unstructured, structured and related remittance information. This additional message will give users the option to pass through remittance information outside of the main credit message itself when, say, the amount of free text exceeds 420 characters. This ensures continuing harmonisation with international implementations of ISO 20022 which have implemented larger remittance information character limits. For instance, the Federal Reserve has initially proposed a 9,000 character limit.
36. CHAPS scheme rules will state that *remt* messages should only be used to resolve data truncation issues where cross-border payments have a higher character limit; general practice should be not to use these messages for UK domestic payments.

Table 8: Summary of proposed implementation in CHAPS - Remittance information

|  | Proposed CCM content   | CHAPS implementation         |  |  |
|--|--|------------------------------|--|--|
|  |  | Introductory Phase (phase 2) | Enhancement Phase (phase 3)  | Mature Phase (phase 4)                           |
| <b>Unstructured remittance information</b> | Unstructured field, 140 characters   | Optional to use              | Mandatory to receive and pass through all remittance information                                   | Remove unstructured remittance information field |
| <b>Structured remittance information</b>   | Many structured fields available   | Not available                | Only one category of remittance information per message (e.g. structured or unstructured)          |  |
| <b>Related remittance information</b>      | Specific fields for related remittance information i.e. electronic address |                              | Free text within structured remittance limited to 420 characters                                   |  |
| <b>Remittance information message</b>      | The <i>Remt</i> message is transmitted alongside the CCM                   |                              | <i>Remt</i> messages should only be used to mitigate data truncation for cross-border transactions |  |

### 3.5 Character sets

37. The Bank intends that *extended special characters* (beyond those contained in existing MT messages) will be facilitated in the *Enhancement Phase* of the migration to ISO 20022. As per the HVPS+ guidelines, to enable their uniform and universal use, it will become mandatory in the *Enhancement Phase* to have the ability to receive and pass on this information where users wish to use it. Characters such as '@' would be facilitated throughout CHAPS, enabling transmission vital details such as email addresses.

38. The Bank recognises that non-Latin alphabets could pose significant challenges to payments providers if implemented; and hence the CHAPS scheme rules will only permit the Latin alphabet where there is bilateral agreement between counterparties.

39. In the *Mature Phase*, the Bank would re-engage with industry on introducing the expectation that CHAPS participants facilitate non-Latin alphabets. This ability is technically supported as a result of using ISO 20022 and there may be strategic benefits from doing so. The Bank recognises that significant industry engagement would be needed before such a change took place.

Table 9: Summary of implementation in CHAPS - Character sets

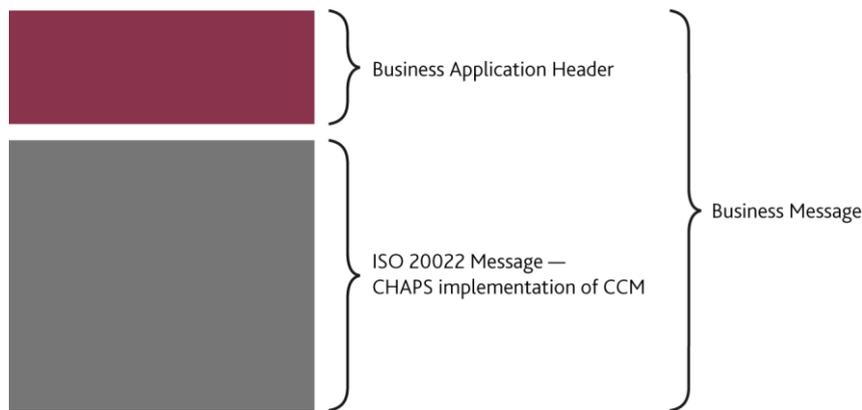
|                       | Proposed CCM content   | CHAPS implementation         |   |  |
|-----------------------|--|------------------------------|---|--|
|                       |  | Introductory Phase (phase 2) | Enhancement Phase (phase 3)   | Mature Phase (phase 4)   |
| <b>Character sets</b> | <p>Extended special characters, set out in Annex 1, must be supported by PSPs using the CCM. They are restricted to remittance information and name and address fields</p> <p>In the long term, the ability to transmit non-Latin alphabets may be enabled</p> |                              | <p>Extended special characters must be supported</p> <p>Optional to use non-Latin alphabets subject to bilateral agreement between counterparties</p> | <p>Possible introduction of non-Latin characters and a wider range of special characters, subject to further industry engagement at a later date</p> |

## 3.6 Other technical changes

### Business Application Header

40. As part of the implementation of ISO 20022 the Bank is proposing to introduce the ISO 20022 standard Business Application Header (BAH), following the recommendation of HVPS+ guidelines. The BAH precedes the main ISO 20022 message and contains relevant information regarding the content of that payment instruction. Collectively the BAH and the ISO 20022 message comprise the Business Message, as illustrated in **Diagram 9** below.

**Diagram 9: Elements of a Business Message**



#### **What does it do?**

41. The BAH contains key information for processing a payment in one location. Examples of fields within the BAH are: Party From, Party To, Message Definition Identification, Business Message Identifier, and digital signature for authentication/non-repudiation.
42. The BAH can be used in a variety of situations to assist the processing and routing of payment instructions. For example it can be used to inform the recipient that the text based elements of the business message may contain non-Latin characters, or inform the recipient of the business service within which this message is being exchanged (e.g. SWIFT InterAct) when the business message is used in multiple services.
43. The BAH can be used when the sender believes the recipient did not receive the original message, when the sender sends a copy of the original message, a duplicate of the original, or a duplicate of a copy of the original message. Furthermore it can contain digital signatures and cryptographic keys securing the content of the underlying message. Precisely which uses will be accommodated will be dictated by the fields chosen to populate the message.

#### **Why implement it?**

44. There are a number of strategic drivers for using the BAH:
- Harmonisation with HVPS+ messaging standards being adopted in other jurisdictions that have or will implement it.
  - The Bank and NPSO have committed to ensuring that the messaging standard adopted across CHAPS and the NPA is not a barrier to interoperability. The ISO 20022 BAH can facilitate this by enabling fields required specifically for processing purposes in an individual system to be placed in the BAH rather than in the CCM.

- The Bank wishes to ensure that the renewed RTGS service is network agnostic (see Section 4 for more information). This means that message design, network orchestration and the implementation of network security must be facilitators of this. The ISO 20022 BAH is key to this.

### Box 5: What will the Bank do with the additional data?

The Bank will receive more information about transactions within the CHAPS system as a result of the move to ISO 20022. The Bank already receives some information in the current messages, but the way it is structured makes it difficult to analyse and interpret effectively. Some of this information may be personal data and therefore may be subject to data protection legislation and, in particular the recently-introduced General Data Protection Regulation (GDPR). GDPR sets out a number of requirements including: (i) responsibilities for organisations holding personal data, and (ii) the rights of individuals whom the data relates to.

For the purposes of data protection legislation, apart from processing banking transactions directly, any analysis that the Bank undertakes will be fully anonymised and will be the product of pseudonymised data. This approach is in accordance with the GDPR principle of data minimisation.

The Bank plans to use transaction information in a number of ways, for example:

1. To process individual banking transactions.
2. In an aggregated, anonymised form:
  - To develop its understanding of the economy. For example, developing near real-time data on housing activity, including geographical breakdowns. Some of this aggregate information could be published or shared with other organisations.
  - To understand risk within the CHAPS payment system, in order to protect and enhance financial stability (i.e. to understand the key activities undertaken, the concentration of risk, and impact of default).
3. The Bank also plans to share anonymised transaction level information with the Office for National Statistics (ONS) for evaluation for use in their statistics measuring the size and health of the UK economy, subject to the relevant data sharing legislative requirements.

The Bank will continue to be a 'data controller' for the purposes of GDPR in relation to the personal data it uses in this regard. It should be noted that the Bank is exempted from certain GDPR requirements where it is processing personal data for the purpose of discharging certain functions, where these requirements would hamper its ability to meet its objectives.

## 3.7 Costs of implementing ISO 20022 in CHAPS

45. The Bank recognises that the adoption of CCM in CHAPS may not be a separate internal project from wider changes happening as a result of renewal of UK payments infrastructure, or the introduction of the CCM as more broadly set out in Section 2.
46. The Bank, however, is keen to understand from respondents estimates of the ancillary or incremental costs that will be incurred from introducing the CCM into CHAPS as proposed in this section. Of particular importance, and where the Bank seeks detailed feedback, are where it has been proposed that elements of the CCM will be mandated in CHAPS.
47. For instance in the case of introducing LEIs as a mandatory for payments between financial institutions, there will be an additional cost associated with collecting, storing, and passing through this data to/from other internal

systems. This will require upfront investment and systems changes, and will have longer term costs in the BAU environment, corresponding to requisite changes in business processes.

48. Ultimately this information will be used by the Bank to further refine its proposals and shape how the CCM should be implemented via the CHAPS scheme rules.

## 3.8 Questions

*In Section 3 of the consultation document, the Bank sets out its proposals for how the CCM will be implemented in CHAPS in order to ensure that the desired outcomes are achieved as far as possible.*

- Q.15 Do you agree with the proposed approach to the CCM implementation in CHAPS?

- Yes  
 No

Please explain, in particular if you think the proposals go far enough to achieve the desired outcomes.

- Q.16 In order to achieve the desired outcomes set out in Diagram 2, should there be further mandatory data requirements in the CHAPS implementation of the CCM?

- Yes (please specify)  
 No (please explain)

## Identity

*Section 3.2 sets out the Bank's proposals for how the identity elements of the CCM will be implemented in CHAPS to improve identification of parties and agents in a payment instruction.*

- Q.17 Do you agree with the proposals for improved identification of parties and agents in a CHAPS payment?

- Yes  
 No

Please explain, in particular any issues with the proposals.

- Q.18 Do you agree that LEIs should be made mandatory for payments between financial institutions in order to achieve the expected benefits?

- Fully agree  
 Mostly agree  
 Partially agree  
 Do not agree

Please explain the rationale for your choice.

- Q.19 Do you agree that LEIs should be made mandatory for a wider set of CHAPS payments?

- Yes  
 No

Please explain the rationale for your choice.

- Q.20 If possible, please indicate the investment costs of implementing the mandatory use of LEIs:
- £0-50k
  - £50k-250k
  - £250k-1mn
  - £1mn-5mn
  - £5mn- 10mn
  - £10mn+
- Q.21 If possible, please indicate your net change in ongoing annual operational costs from mandatory use of LEIs once implemented:
- |  |    |                                     |
|--|----|-------------------------------------|
| <input type="checkbox"/> Net saving          | of | <input type="checkbox"/> £0-50k     |
| <input type="checkbox"/> Net additional cost |    | <input type="checkbox"/> £50k-250k  |
|  |    | <input type="checkbox"/> £250k-1mn  |
|  |    | <input type="checkbox"/> £1mn-5mn   |
|  |    | <input type="checkbox"/> £5mn- 10mn |
|  |    | <input type="checkbox"/> £10mn+     |

## Purpose codes

*In Section 3.3, the Bank proposes that in the Enhancement Phase purpose codes are mandatory for payments between financial institutions, housing payments and for payments above a value threshold (value subject to further industry engagement), with all other uses being optional. The Bank would expect to mandate use in additional use cases in the Mature Phase, these cases are yet to be defined.*

- Q.22 Do you agree that purpose codes should be made mandatory for the specified CHAPS payments in order to achieve the expected benefits?
- Fully agree
  - Mostly agree
  - Partially agree
  - Do not agree
- Please explain, with particular reference to any difficulties in making them mandatory.
- Q.23 Do you agree that purpose codes should be made mandatory for a wider set of CHAPS payments?
- Yes
  - No
- Please explain the rationale for your choice.
- Q.24 Please order the following where you would expect the greatest benefit from purpose codes. (1= greatest benefit; 2=next greatest benefit etc.)
- Improved operational resilience
  - Improved risk management
  - Fraud and economic crime prevention
  - Increased competition and innovation
  - Greater international harmonisation
  - Efficiencies in processing
  - Richer data
  - Other (please specify)

Q.25 If possible, please indicate the investment costs of implementing the mandatory use of purpose codes:

- £0-50k
- £50k-250k
- £250k-1mn
- £1mn-5mn
- £5mn- 10mn
- £10mn+

Q.26 If possible, please indicate your net change in ongoing annual operational costs from mandatory use of purpose codes once implemented:

- |  |    |                                     |
|--|----|-------------------------------------|
| <input type="checkbox"/> Net saving          | of | <input type="checkbox"/> £0-50k     |
| <input type="checkbox"/> Net additional cost |    | <input type="checkbox"/> £50k-250k  |
|  |    | <input type="checkbox"/> £250k-1mn  |
|  |    | <input type="checkbox"/> £1mn-5mn   |
|  |    | <input type="checkbox"/> £5mn- 10mn |
|  |    | <input type="checkbox"/> £10mn      |

## Remittance information

*Section 3.4 covers the proposed use of remittance information in CHAPS, this includes the phased removal of unstructured remittance information and the best practice for using a standalone remt messages. For a full list of structured remittance information see Appendix1.*

Q.27 Would you expect to use structured remittance information?

- Yes
- No

If so, which specific fields, such as electronic address or postal address, would be of particular use? Are there additional fields which should be included?

Q.28 Do you agree with the phased removal of unstructured remittance information?

- Yes
- No

Please explain, in particular any difficulties of only using structured or related remittance information fields.

Q.29 Do you support the inclusion of *remt* messages to enable interoperability?

- Yes
- No

Please explain, in particular any costs or risks you have identified.

## Character sets

*In Section 3.5 the Bank proposes to make it mandatory in the Enhancement Phase to have the ability to receive and pass on extended special Latin characters, such as '@'. It does not propose that non-Latin alphabets should be supported from the outset.*

Q.30 Do you agree that an extended special Latin character set should be supported in CHAPS?

- Yes
- No

Please explain the rationale for your choice.

Q.31 Would you benefit from using non-Latin character sets if they were supported in CHAPS in the *Mature Phase*?

- Yes
- No

Please explain, in particular if you anticipate a wider demand for non-Latin character sets.

## Business Application Header

*Section 3.6 sets out the proposed approach to the Business Application Header (BAH). It will contain key information for processing a payment and will help prevent barriers to interoperability.*

Q.32 Do you agree with the proposals for the BAH?

- Yes
- No

Please explain the rationale for your choice.

## CHAPS specific costs and risks

*The following questions relate to the costs and benefits associated with the CHAPS implementation of the CCM.*

Q.33 Please order the following proposals by the scale of anticipated investment costs for implementation of the CCM in CHAPS (1 = highest cost; 2 = second highest cost etc):

- Identity
- Purpose
- Remittance information
- Character sets
- Other (please specify)

Q.34 Please order the following proposals by the scale of anticipated ongoing operational costs following the implementation of the CCM in CHAPS (1 = highest cost; 2 = second highest cost etc):

- Identity
- Purpose
- Remittance information
- Character sets
- Other (please specify)

Q.35 Please order the following proposed enhancements to the of the CHAPS implementation of the CCM by the scale of anticipated benefits (1 = greatest benefit, 2 = second greatest benefit, etc):

- Identity
- Purpose
- Remittance information
- Character sets
- Other (please specify)

Q.36 Please order the following where you would expect the greatest benefit from the CHAPS implementation of the CCM. (1= greatest benefit; 2=next greatest benefit, etc)

- Improved operational resilience
- Improved risk management
- Fraud and economic crime prevention
- Increased competition and innovation
- Greater international harmonisation
- Efficiencies in processing
- Richer data
- Other (please specify)

If possible, please try to quantify the efficiency gains from the CHAPS implementation of the CCM.

## 4 Migrating CHAPS to ISO 20022

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### 4.1 Introduction

1. This section sets out the Bank's proposals for the migration of CHAPS payments from the current MT messaging to ISO 20022 messaging, including phasing and timing. It is of most relevance to CHAPS direct participants. It will also be of interest to others who may wish to understand the wider timelines associated with the CHAPS ISO 20022 migration. In due course, customers may wish to contact their CHAPS clearing bank for further information on how the CHAPS ISO 20022 migration programme will impact the services provided. In particular, customers will need to understand how to provide the additional information required in CHAPS payment messages in the future.
2. It is important to note that as set out in Appendix 2, the Bank will migrate all messaging within RTGS, including other CHAPS messages, and messages for management of reserves accounts and settlement instructions for deferred net settlement schemes, to ISO 20022. However, the changes required for these, in terms of message content, are expected to be less extensive than for the adoption of the CCM. Further information on these message types, and the proposed migration path, will be published in due course.
3. Section 4.2 summarises the migration strategy for ISO 20022 in CHAPS. It sets out key principles and considerations, and the proposal for a closed user group (CUG). Section 4.3 goes into greater detail on each of the migration phases and timings. Section 4.4 asks a number of questions for feedback on strategy and timings.

### 4.2 Migration overview

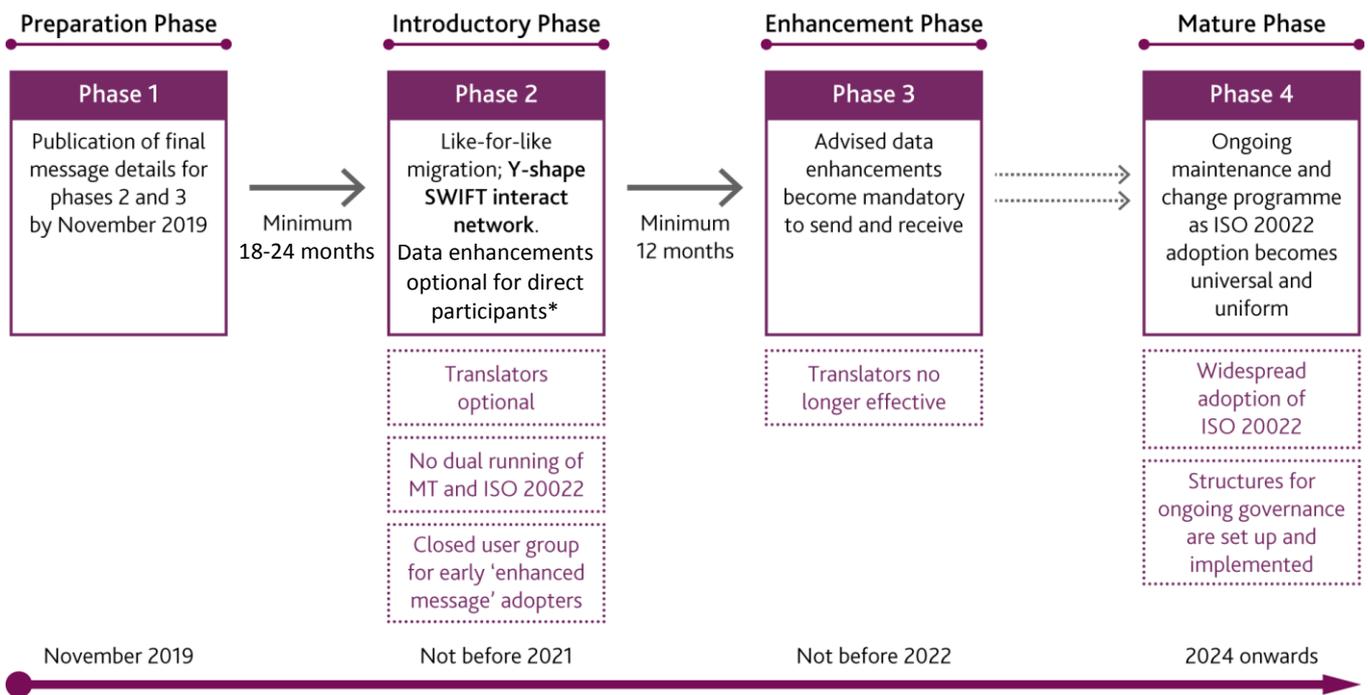
4. The Bank's intention is for the renewed RTGS system to use SWIFT as the sole messaging network initially. However, the Bank has previously stated its intention to design the service to be 'message network agnostic' i.e. capable of sending and receiving payment messages over multiple networks. It is anticipated that CHAPS will use a V-shape network configuration, where the Bank receives messages directly from the participants (sent via a variety of different networks), rather than via the current SWIFT Y-copy service. In the migration strategy outlined below, CHAPS will remain on a SWIFT Y-copy for the go-live of ISO 20022. This is to ensure that the benefits of moving to ISO 20022 are realised early in the RT Renewal programme. Further information on message network agnostic design (MNAD) will be made available in due course.

#### Summary

5. The Bank is proposing a phased migration from current MT messaging to ISO 20022 messaging. The final **strategy and actual timings will be determined by feedback to this consultation paper, the wider industry change schedule (including where possible alignment with the NPSO change timeline) and the Bank's detailed transition analysis informing RTGS Renewal timelines.**
6. The implementation of ISO 20022 in CHAPS will involve four main stages, full details of which are provided in Section 4.3:
  - **Phase 1: Preparation Phase** – publishing the final messages for use within CHAPS;
  - **Phase 2: Introductory Phase** – go-live with like-for-like ISO 20022 messaging; i.e. there are no extra data fields or requirements over and above those required with the current messaging standard; it is proposed that there is no period of dual running MT messaging and ISO 20022 messaging;

- **Phase 3: Enhancement Phase** – introduction of new data fields, some of which will be mandatory to complete. All PSPs will need to be able to receive, process and pass on any optional fields to customers in order to be compliant with Wire Transfer Regulations.
- **Phase 4: Mature Phase** – the introduction of further additional data requirements, as well as a regular maintenance programme (see Section 2.7). Many of these changes are dependent on wider (non-technical) conditions being met, such as a wider rollout/use of LEIs across companies, and decisions will need to be taken about when these have been met and it is appropriate for these changes to be introduced. This will take place alongside the more widespread adoption of ISO 20022 throughout the end-to-end payment chain.

Diagram 10: Proposed high level CHAPS timeline – further detail on each phase is included in Section 4.3



\*Customers should speak to their bank about when the data enhancements will be available.

## Principles

7. **The proposed CHAPS migration strategy has been designed to meet the following principles:**
  - To realise the benefits of moving to ISO 20022 at the earliest opportunity, particularly for those direct participants who will be ready sooner;
  - To provide flexibility to participants requiring longer lead times to full adopt the new messaging standard;
  - To achieve a balance between cost, risk and complexity for both the Bank and direct participants. In particular to seek to balance the trade-offs between implementing a large number of small scale changes (de-risking each individual change but increasing the risk of a more extended change period) and implementing a small number of large changes (with the opposite risk characteristics); and
  - To support participants' use of translation tools as an interim step during migration, to help mitigate risk.

## Considerations

8. When considering these proposals, stakeholders should be aware of the following:
- **There will not be a period of dual running for MT messaging and ISO 20022 for direct participants under the current proposal.** At the commencement of phase 2, when ISO 20022 messaging goes live, it will be necessary for CHAPS direct participants to send and receive ISO 20022 messaging to remain capable of participating in the CHAPS payment scheme.<sup>34</sup> Dual running both MT and ISO 20022 messages would require all participants to be connected to both the MT and ISO 20022 Y-copy services offered by SWIFT at the same time, increasing the cost and complexity of the migration for all participants.
  - **The Bank will not provide a central translation service during the migration.** The CHAPS payment scheme will only support ISO 20022 messaging.
  - The Bank understands **that some participants may need to make some temporary use of translators** during phase 2. Given the mandatory inclusion of data enhancements proposed during phase 3, and consistent with the wider move to ISO 20022 across other UK and international payment systems, CHAPS direct participants' internal systems will need to become fully ISO 20022 compatible (i.e. not to be dependent on translators) before phase 3 is implemented.
  - **The migration of CHAPS to ISO 20022 messaging forms only part of the overall migration from the legacy RTGS service to the renewed service.** More detailed transition plans for the RTGS Renewal programme as a whole will be available in due course. These will incorporate the plans for migration of all messaging to ISO 20022, including other CHAPS messages, and messages for management of reserves accounts and settlement instructions for deferred net settlement schemes. They will also include adjustments made following both feedback to this consultation paper, and further consideration of interdependencies with the wider RTGS Renewal programme. As such the proposals for timing set out in **Diagram 10** are provisional. However, it is expected that the migration to ISO 20022 will be technically separated from other key renewal transition states, such as implementing message network agnostic design or the ledger cut-over.
9. The Bank wishes to understand both the technical and practical feasibility of its proposals. In particular, it is keen to understand whether the proposed timelines provide sufficient time for CHAPS direct participants to make the necessary changes required in phases 2 and 3. This should include any knock-on effects that ISO 20022 will have on operations, such as the need to update channels to collect and provide additional data to end-users. The questions at the end of the section seek feedback on the strategy presented here and on indicative timelines to implement the required changes.
10. It should be noted that in the outline migration plan described below, 'data enhancements' refers to the additional data fields and changes to the structure of data fields as proposed in Sections 2 and 3.

## Proposal for a Closed User Group (CUG)

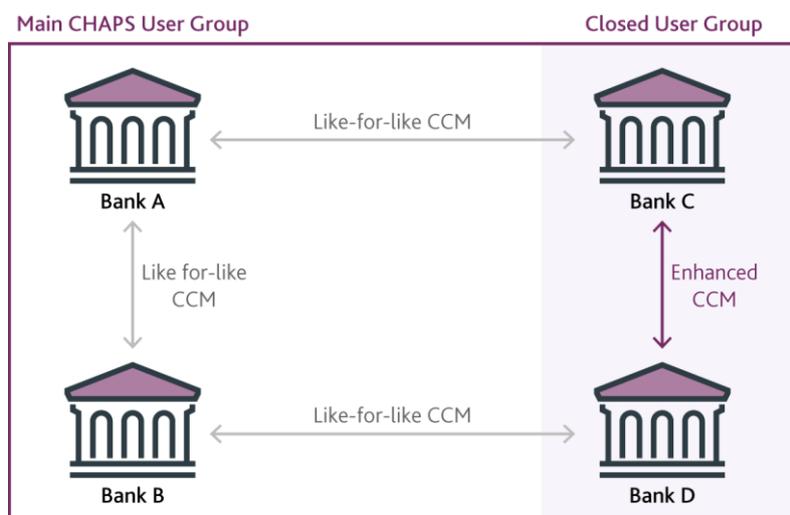
11. The Bank has heard from a number of stakeholders that there is a desire to realise the benefits of ISO 20022, and the data enhancements, as soon as possible. This must be balanced against the needs of those institutions that require longer lead times to implement ISO 20022 messaging or to make the necessary changes associated with processing and passing through additional data enhancements in internal and customer-facing systems.

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<sup>34</sup> Wherever there is a cut-over weekend it should be assumed that the Bank will implement a process that ensures there are reversion points, periods of simultaneous operation and other risk reduction techniques to manage the change process.

12. **During phase 2** of the migration strategy, the Bank proposes introducing a **CUG** for those participants who wish to use the data enhancements early. The CUG will be available from go-live, and additional participants may choose to join at different points between phase 2 and phase 3.<sup>35</sup>
13. The CUG will allow for the co-existence of the full, enhanced CHAPS implementation of the CCM for those who wish to use it from the start, alongside the restricted 'like-for-like' message for other members. By allowing CHAPS direct participants early access to the CHAPS implementation of the CCM, the benefits could in principle cascade down to participants' customers on a shorter timescale.
14. For those participants in the CUG, all additional data fields will be available to use. This will mean they are optional to send, but participants must ensure that they are able to receive, process and pass this information on to end-users in order to meet regulatory requirements. This will ensure there is no truncation of data in the payments chain.
15. Any payment between a member of the main user group and the closed user group will take place using the like-for-like message, as depicted in **Diagram 11**.
16. The Bank recognises that it would need to provide some enhanced technical support if a CUG is agreed and implemented. At a minimum, that would need to include a directory service setting out which participants are in which user group.

**Diagram 11: Indicative orchestration of the Closed User Group**



<sup>35</sup> Membership of the CUG would be open to all CHAPS direct participants with the requisite technical capabilities.

## 4.3 Detailed description of proposed migration strategy

### Phase 1 – Preparation Phase

17. **The Bank publishes the full ISO 20022 schema** for:

- CHAPS messaging at go-live, a like-for-like message mapping the MT messaging into ISO 20022 (needed for phase 2);
- CHAPS messaging with proposed data enhancements (needed for phase 3).

#### *Timing*

18. **Final messages will be published by end 2019.**

19. The current draft structure of the CCM is already available online at MyStandards and Standards Source.<sup>36</sup> Drafts of all other ISO 20022 messages supporting CHAPS and RTGS settlement will be made available in due course.<sup>37</sup>

### Phase 2 – Introductory Phase

20. **All CHAPS direct participants move to ISO 20022 messaging simultaneously, using the SWIFT Y-copy service on the InterAct network. There is no dual running of MT and ISO 20022 messaging.**

21. The Bank proposes using **like-for-like ISO 20022 messaging** at this stage. This means the message is easy to translate back to existing MT messaging and there will be no additional data requirements. This will particularly help those PSPs which are migrating to full ISO 20022 compliance over a longer time horizon or which have large agency banking networks using the MT messaging standard. As the data requirements have not changed during this phase, it is possible to use translation tools whilst PSPs build full ISO 20022 capability, and adapt channels to collect additional data requirements from end-users for phase 3.

22. **During this period, it is proposed that there should be a CUG for those CHAPS direct participants that wish to use data enhancements.** It will be mandatory for direct participants that wish to be in the CUG to have the ability to receive and process all enhanced data contained within the CCM. CUG participants should also make sure that they are able to meet their regulatory requirements to pass on all additional data they receive to the next PSP or end-user in a payment chain. (See Section 4.2 above for a full description of the CUG).

#### *Timing*

23. **The Bank proposes to allow at least 18 months between phase 1 and go-live phase 2. The migration to ISO 20022 messaging is therefore not expected to happen before 2021.**

24. CHAPS direct participants would be free to enter into the CUG from go-live, dependent on reaching the threshold conditions. It is possible that there could be set points at which new groups of direct participants can enter into the CUG during phase 2.

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<sup>36</sup> MyStandards [https://login.swift.com/swift/login/login\\_mystandards.html](https://login.swift.com/swift/login/login_mystandards.html); Standards Source <https://npsso.standardslibrary.org>

<sup>37</sup> The exact design of the final messages – both the CCM and other messages – is dependent on the outcome of a number of change requests which the Bank has submitted to ISO.

## Phase 3 – Enhancement Phase

25. **All CHAPS direct participants must be able to send and receive/pass on all proposed mandatory data enhancements within the ISO 20022 message.** Examples include mandatory use of purpose codes and LEIs for payments between financial institutions; and the removal of unstructured remittance information. For full information, please see Section 3.
26. As the messaging being used during phase 3 is no longer like-for-like, it will not be possible for CHAPS participants to use translation tools. Mandatory data enhancements and the wider move to ISO 20022 across other UK and international / cross-border payments systems create clear needs for CHAPS direct participants' internal systems to become fully ISO 20022 compatible before phase 3 is implemented.

### Timing

27. Pending further migration planning and technical analysis, **the Bank proposes a period of 12 months between phase 2 and phase 3.** The Bank would welcome feedback on whether this gives sufficient lead time when considering the proposals in this consultation.
28. The introduction of data enhancements in phase 3 should be considered in the context of ongoing maintenance releases and version control of the messaging standard (see maintenance and versioning in Section 2).

## Phase 4 – Mature Phase

29. In the long term, given certain conditions are met and following further engagement, additional changes to the rules governing the data requirements in CHAPS messages are likely. Examples are to mandate LEIs for all organisations making CHAPS payments, or to mandate purpose codes for a wider range of transactions. These changes require wider environment conditions to be in place to be fully effective, and so it is difficult to be fully prescriptive about timing now. The Bank is committed to ensuring a uniform and universal implementation of ISO 20022 standards throughout the payments chain to facilitate these improvements. The introduction of new rules governing data will be managed via the annual maintenance and release process.

### Timing

30. Phase 4 of the CHAPS migration plan corresponds with the *Mature Phase* of the introduction of ISO 20022 to the wider UK environment. It is provisionally expected to be undertaken around 2024, however will be subject to wider RTGS Renewal programme timelines and constraints.

## 4.4 Questions

*In Section 4, the Bank sets out the proposal for the migration from the current MT messaging to ISO 20022 messaging, this includes the phasing strategy and high level timelines.*

- Q.37 Do you agree with requiring migration of CHAPS to ISO 20022 on a single cut-over weekend and on a phased introduction of mandatory new data requirements?
- Fully agree
  - Mostly agree
  - Partially agree
  - Do not agree
- Please explain, in particular any concerns with the approach.

Q.38 Will you be able to meet the broad timelines set out in Section 4 to implement ISO 20022 in CHAPS?

- Yes; these timelines are suitable
- Yes; even shorter timelines would be preferable
- No; longer timelines would be preferable

Please explain the rationale for your choice.

Q.39 The Bank has proposed a closed user group (CUG) to give participants the option to use data enhancements at go-live. Do you agree with this proposal?

- Yes
- No

Please explain, stating your preference for being in the CUG.

# Glossary

| Term   | Acronym | Definition  |
|--|---------|---|
| Agent  |         | The formal term in ISO 20022 for a party involved in a transaction chain.   |
| Anti-money laundering requirements             | AML     | Anti-money laundering requirements on PSPs, including the Money Laundering, Terrorist Financing and Transfer of Funds (Information on the Payer) Regulations 2017 and related FCA regulation.   |
| Application programming interface              | API     | An API acts as a channel through which software on one system can make a request to retrieve, create or edit data on another system. APIs are a common method of exchanging data between two computer systems.  |
| Bacs   |         | Bacs runs Direct Debit and the Bacs Direct Credit Scheme, which is used to pay salaries and settle invoices from suppliers.   |
| Blueprint                                      |         | 'A blueprint for a new RTGS service for the United Kingdom', published on 9 May 2017, set out the Bank's blueprint for a renewed RTGS service.  |
| CHAPS  |         | CHAPS is the sterling same-day system that is used to settle high-value wholesale payments as well as time-critical, lower-value payments like buying or paying a deposit on a property.  |
| Direct participants                            |         | Direct participants are those banks, building societies and other PSPs that access one of the UK payment systems (i.e. CHAPS, Faster Payment or Bacs) directly rather than through an agent.  |
| Enterprise Resource Planning                   | ERP     | An ERP system integrates all the core processes needed to run a company (e.g. finance, HR, manufacturing, supply chain, services, procurement) into a single system.  |
| Faster Payments                                | FPS     | Faster Payments is the system that enables mobile, internet, telephone and standing order payments to move quickly and securely in near real-time.  |
| Financial Action Task Force                    | FATF    | The Financial Action Task Force is an intergovernmental organisation founded on the initiative of the G7 to produce guidelines to combat a range of financial crime threats.  |
| General Data Protection Regulation             | GDPR    | Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation). |
| HVPS+  |         | HVPS+ is a group of major market infrastructures and PSPs that aims to build on existing market practice to deliver a set of ISO 20022 implementation guidelines for high value payments systems (HVPS).  |
| InterAct network                               |         | InterAct is the SWIFT messaging service for exchanging XML-based financial messages and data between users.   |
| International Organisation for Standardisation | ISO     | ISO develops and publishes International Standards. It is an independent, non-governmental international organisation with a membership of 161 national standards bodies.   |
| Interoperability                               |         | Interoperability is the ability of different information technology systems and software applications to communicate, exchange data, and use the information that has been exchanged.   |
| Know Your Customer requirements                | KYC     | KYC is the collection and use of information about a customer required for anti-money laundering purposes.  |
| Message Network Agnostic Design                | MNAD    | The ability of a network such as RTGS to be supported by any network provider, and therefore not only SWIFT.  |

| Term                              | Acronym | Definition  |
|-----------------------------------|---------|---|
| MT message                        |         | A SWIFT proprietary message format currently used in CHAPS.   |
| New Payment System Operator       | NPSO    | The NPSO is responsible for the operation of two of the UK's retail payment systems – Bacs and Faster Payments. It expects to take over responsibility for the Cheque and Credit Clearing Company over the next few months.   |
| New Payments Architecture         | NPA     | The New Payments Architecture is a blueprint for building the technical infrastructure which enables retail payments and associated payment services to be completed across the UK economy. It includes: (i) A clearing and settlement rail upon which all retail payments can be made, and; (ii) Plans and technical standards which enable payment service providers to deliver payment services. |
| Payment Service Providers         | PSPs    | 'Payment service provider', in relation to a payment system, means any person who provides services to persons who are not participants in the system for the purposes of enabling the transfer of funds using the payment system. See Payment Services Regulations 2017, SI 2017/752.  |
| Payments Systems Regulator        | PSR     | The PSR is the economic regulator for the payment systems industry in the UK.   |
| Real Time Gross Settlement System | RTGS    | RTGS is operated by the Bank of England, and is the infrastructure that holds accounts for banks, building societies and other institutions. The balances in these accounts can be used to move money in real time between these account holders. This delivers final and risk-free settlement.   |
| Reserves account                  |         | Reserves accounts at the Bank of England are effectively instant-access accounts for firms that participate in the Sterling Monetary Framework.   |
| Routing rules                     |         | The processes and codes that payment systems and PSPs use in order to ensure that a payment reaches its intended destination.   |
| SWIFT                             |         | SWIFT is a global member-owned cooperative that provides secure financial messaging services.   |
| Translator                        |         | A software solution that is able to convert legacy MT messages into ISO 20022 messages, and vice versa.   |
| UK Finance                        |         | UK Finance represents nearly 300 of the leading firms providing finance, banking, markets and payments-related services in or from the United Kingdom.  |
| Unicode characters                |         | Unicode is a computer standard for encoding text. There are over 100,000 Unicode characters globally.   |
| V-shape network                   |         | A type of network shape where payment instructions themselves, rather than a copy, directly flow through an RTGS system.  |
| Wire Transfer Regulations         | WTR     | Regulation (EU) 2015/847 of the European Parliament and of the Council of 20 May 2015 on information accompanying transfers of funds and repealing Regulation (EC) No 1781/2006. Sometimes referred to as the revised Wire Transfer Regulations or the Funds Transfer Regulations.  |
| Wolfsberg Group                   |         | The Wolfsberg Group is a collection of Global Systemically Important Banks (G-SIBs) that publish standards and industry best practice relating to a wide range of financial crime issues.   |
| XML syntax                        |         | XML is a mark-up language used to define the ISO 20022 structure.   |
| Y-copy service                    |         | The current shape of the RTGS network – Y-copy services are where a network provider, such as SWIFT, stores a copy of the payment instruction.  |

# Appendix 1: Technical summary of proposals

|          |                                  | Structure and length limits   | Code list  | Usage guidance  | Notes  |
|----------|----------------------------------|---|--|---|--|
| Identity | Ultimate beneficiary/ originator | Name Postal Address ID:<br>Organisational ID, BIC, LEI,<br>Other or Personal ID<br>Country of residence [ISO<br>country code format: 2a!]   | N/A  | These fields are optional to complete, but users are reminded of their obligations under the Wire Transfer Regulations.<br>One of name or ID must be present. |  |
|          | Name and structured address      | Address type [only for NPA use]<br>Name [140 free text]<br>Department [70 free text]<br>Sub Department [70 free text]<br>Street Name [70 free text]<br>Building Number [16 free text]<br>Post Code [16 free text]<br>Town Name [35 free text]<br>Country Sub Division [35 free text]<br>Country [A-Z]{2,2}<br>Address Line [70 free text] – <i>for existing agents only</i><br>Building Name [70 free text] | In terms of the message component to be used, the Bank proposes to use the Postal Address 11 definition, and is issuing a change request to effect this.                                   | Only the structured format is to be used to enter addresses.  | A SWIFT Standards Release in 2020 will add additional structure to existing MT messages. This will help PSPs to prepare for the ISO 20022 structure.                         |
|          | LEIs                             | [A-Z0-9]{18,18}[0-9]{2,2}   | N/A; LEIs can be looked up via GLEIF’s website   | Mandatory to use in pacs.009 (MT202 equivalent messages)  | The Bank believes that LEIs are too nascent to be used for routing in the near term.   |
|          | Other organisational Identifiers | Code: 4a!<br>Free text entry: 35an<br>Issuer name free text entry: 35an   | External Organisation Identification<br>E.g. Tax ID number, Country ID code (which can be used for company number)   | The Bank proposes that the SREN and SRET codes should not be used in CHAPS as they are French government codes.   | Organisational identifiers are in addition to <i>financial institution identifiers</i> whereby clearing scheme identification, such as a member’s sort code, can be entered. |
|          | Personal identifiers             | Code: 4a!<br>Free text entry: 35an<br>Issuer name free text entry: 35an<br><br>Date of birth [ISO date format]<br>Place of birth [Region, City, Country Code]   | External Person Identification 1 Code<br><br>Passport Number, Customer ID number, Drivers Licence number, Employment ID number, National ID number, Social Security Number, Tax ID number. | The Bank proposes that the ARNU ‘Alien Registration’ should not be used in CHAPS.   | In line with its requirements under GDPR, the Bank would not store this data.  |

|                         |                                     | Structure and length limits  | Code list  | Usage guidance  | Notes   |
|-------------------------|-------------------------------------|--|--|---|---|
| Purpose                 | Purpose codes                       | Code: 4a!  | External Purpose Code 1 list e.g. 'Refund', 'Salary Payment', 'Interest'.<br><br>The External Category Purpose Code 1 list will be optional to use in the category purpose field. This is used predominantly for interbank processing. | Payment purpose code will be mandatory to compete in pacs.009 messages.<br><br>Purpose codes will be mandatory to complete where a pacs.008 payment involves housing completion, or where a payment is above a certain value threshold.   | The Bank has introduced a change request to introduce payment purpose codes in pacs.009 messages.                                       |
|                         | Unstructured remittance information | 140 characters free text; see below on character sets.   | N/A  | Unstructured remittance information will eventually be phased out in lieu of the structured remittance information section. Free text remittance will still be available as part of structured remittance information.  | The Bank's and NPSO will look to phase out the unstructured field in the long term.   |
| Remittance              | Structured remittance information   | Document Information, Document Amount, Creditor Reference, Invoicer, Invoicee, Garnishment Information, Additional Remittance [3 x 140 characters free text] | Invoicer/ Invoicee use the Name Prefix 1 code; the Bank proposes to add 'Mx' to this list.   | Users can only use one of the remittance sections.  | In line with HVPS+ guidelines, users can only use structured remittance <i>or</i> related remittance.                                   |
|                         | Related remittance information      | Remittance ID [35 characters free text]<br>Remittance Location (Method, Electronic Address, Postal Address)  | N/A  | The Bank will publish guidance where URIs are used.   | See above.  |
|                         | <i>Remt</i> messages                | They are stand-alone repetitions of the structured and related remittance information sections.  | N/A  | <i>Remt</i> messages should only be used where data truncation is a concern; i.e. where another market infrastructure uses a higher free text format field length limit.  | Remittance messages are independent of the credit message itself. They are exchanged in the same way as the credit messages themselves. |
| Facilitating innovation | Character sets                      | These will apply to the following fields, for example:<br><br>Initiating Party, Debtor, Ultimate Debtor, Related Remittance                                  | To keep in line with HVPS+ guidelines, the following extended characters are permissible:<br>FIN X plus the following<br>!#\$%&'*+/-=?^_`{ }~<br>"(),;:<>@[\\]   | Mapping tables will be published indicating how to convert a character where a receiving party is not able to process it<br>Extended Latin characters could be used in the following fields, for example:<br>Creditor, Debtor, Ultimate Debtor and Ultimate Creditor name and address fields. | In the long term, the ability to transmit non-Latin alphabets may be enabled, subject to further industry engagement.                   |

For further technical information on the proposals, please consult the draft message schema. For details on how to do so, please see Section 1.5.

## Appendix 2: MT to ISO 20022 equivalents in CHAPS/RTGS

The focus of this consultation has been on the replacement for the MT103 and MT202 messages used to instruct credit transfers. However RTGS / CHAPS uses a variety of other message types in order to carry out a range of its core functions. The messages allow users to make changes to their accounts held in RTGS and to manage payment flows. All of these different messages are presently in the legacy MT format and will migrate to ISO 20022 as part of the RTGS Renewal programme. The below reflects the Bank's current thinking on which ISO 20022 equivalent messages will replace these.

| Category                  | MT Message  | ISO 20022 equivalent  |
|---------------------------|---|-----------------------|
| <b>BAH</b>                | Business application header                           | head.001              |
| <b>Payments</b>           | MT103 Customer Transfer                               | pacs.008              |
|                           | MT202 General Financial Institution Transfer          | pacs.009              |
|                           | MT202COV General financial Institution Transfer Cover | pacs.009 (COV)        |
|                           | MT202 Return Transfer                                 | pacs.004              |
|                           | MT096 Settlement request                              | pacs.008   009 (copy) |
| <b>Statements</b>         | MT920 Request Message                                 | camt.060              |
|                           | MT950 Statement Message                               | camt.053              |
| <b>Other</b>              | MT097 Settlement Confirmation                         | pacs.002              |
|                           | MT298/003 Funds Queue Status Message                  | admi.004              |
|                           | MT298/004 RTGS Status Report                          | admi.004              |
|                           | MT298/010 Liquidity Report                            | camt.052              |
|                           | MT298/011 Confirmation of liquidity decrease          | camt.054              |
|                           | MT298/012 Confirmation of liquidity increase          | camt.054              |
|                           | MT298/013 Liquidity pre-advice                        | camt.054              |
|                           | MT298/014 Cancellation advice                         | camt.054              |
| <b>V/Y copy dependent</b> | MT011 Delivery notification                           | pacs.002              |
|                           | MT012 Sender notification                             | pacs.002              |
|                           | MT019 Abort notification                              | pacs.002              |

Additional messages for communications between RTGS and the deferred net settlement retail payment schemes have not been covered in the table. They will be expected to migrate to ISO 20022 as part of the renewal of the RTGS service.