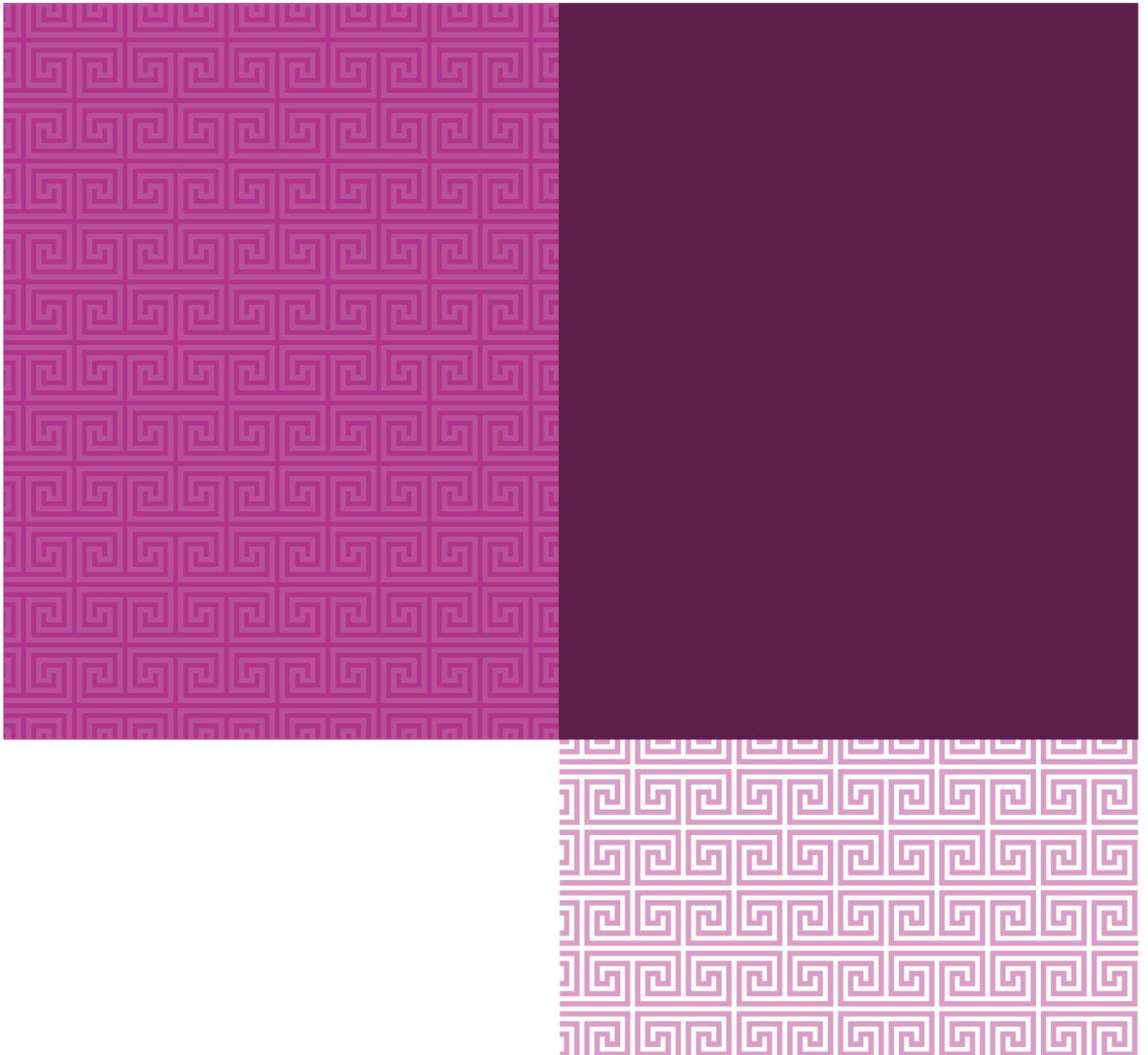




# Bank of England CHAPS Enhanced ISO 20022 Messages

## Industry Review

July 2020



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## Executive summary

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This document introduces the near-final draft of the enhanced messages (or ‘schemas’) for the migration of CHAPS to the ISO 20022 messaging standard. These schemas are being made available to allow the industry to provide review and feedback prior to publication of the final enhanced schemas in September 2020. We are strongly encouraging industry stakeholders to provide input and feedback on these detailed messages to support a successful migration of CHAPS to ISO 20022.

The Bank is basing the renewed Real-Time Gross Settlement (RTGS) service, including CHAPS payments, on ISO 20022 messaging. Ultimately this will enable us to enhance the information carried with a payments message. The enhanced messages published here build on the [like-for-like messages published](#) by the Bank at end-2019. They include the new fields which will support the transmission of more information as set out in the 2018 [joint consultation](#) published by the Bank, Pay.UK and Payment Systems Regulator (PSR). This includes greater information about the identities of those involved in payments and the purpose of the payment.

The introduction of ISO 20022 and in particular enhanced data has the potential to deliver widespread benefits, including: (i) increased resilience and reduced risk; (ii) improved efficiency and outcomes for users of payments; and (iii) more informed and effective decision-making for organisations, households and policy makers. It will also align RTGS payments messaging with those to be used internationally, as well as with UK retail payments systems in Pay.UK’s New Payments Architecture. The Bank continues to work closely with Pay.UK on both standards and our aligned policy objectives, to that ensure we have considered any wider implications for the adoption on ISO 20022 in the UK.

This document also outlines our updated thinking on how we will deliver our desired policy objectives as part of the adoption of ISO 20022 and use of enhanced data. This includes initial thoughts on how we will mandate provision of some of this enhanced information in CHAPS. Ahead of publication of the final schema, we encourage payment service providers to starting consider how they will collect this additional information, as well transmit it; including necessary changes to their customer channels.

Since the Bank’s publication of the final like-for-like messages at the end of 2019, SWIFT has announced that it will delay migration of its correspondent banking network to ISO 20022 by one year to end-2022. The ECB recently announced that its Governing Council will shortly consider an industry recommendation to extend the timeline for ISO 20022 migration as part of the TARGET2/T2S consolidation project by one year to end-2022, in light of both SWIFT’s rescheduling and the challenges posed by the coronavirus (COVID-19) pandemic.

The Bank has recently engaged with all CHAPS Direct Participants following these announcements. The feedback suggests that it is still reasonable to continue with migration from the SWIFT FIN (MT messaging) to the SWIFT InterAct / FINplus (ISO messaging) network in Spring 2022, as planned. However, given the delay to the SWIFT migration, the industry has highlighted that there may be a case for using the “like-for-like” schemas only during this phase of the project. If that were the case, CHAPS would then switch over to the enhanced schemas for both receiving and sending messages in early 2023, rather than permitting sending or receiving of enhanced data from Spring 2022.

The Bank is considering both industry views and implications for the broader Renewal Programme. The Bank will provide a statement in the coming weeks to confirm its CHAPS ISO 20022 migration timelines and approach. Even if adoption of the enhanced schemas is postponed until early 2023, the Bank still intends to publish the final enhanced schemas in September 2020. Furthermore, all other timelines, such as testing, will remain the same unless confirmed otherwise.

The two main areas of this document on which the Bank is seeking feedback, are as set out below:

### **Section I: Industry Review of the enhanced ISO 20022 message schema**

The Bank is seeking detailed feedback on the near-final enhanced ISO 20022 message schema, ahead of the publication of the final version in September 2020. **These near-final messages are draft only and should not be used for development at this stage.**

The purpose of this Review is to provide validation that the schemas meet the expectations required to deliver the Bank's ISO 20022 objectives, such as alignment with international market practice. It also provides an opportunity for relevant stakeholders to provide comments and suggest changes. The schemas have been through extensive review from a number of CHAPS Direct Participants and software providers who provided input at recent workshops. They also reflect comments made following the 2018 consultation. The Bank is very grateful for all of these contributions.

### **Section II: Industry Review on progress towards policy objectives delivered via ISO 20022**

This section outlines our updated thinking on how we will deliver our desired policy objectives as part of the adoption of ISO 20022 and use of enhanced data, such as: Purpose Codes, Legal Entity Identifiers, structured addresses, and remittance data. A more comprehensive update will be provided before the end of 2020. However, we encourage stakeholders to respond to the accompanying questions to help shape the Bank's thinking as it develops.

In addition to the CHAPS service, the Bank is considering how other functionality within the renewed RTGS service will be delivered using ISO 20022. This includes functionality such as the messages used for settlement of the Deferred Net Settlement (DNS) payment systems, and new services to be introduced after the core ledger of the RTGS service has been replaced in 2023. These are out of scope of this review document; there will be a separate review process for the ISO 20022 schemas that will need to be introduced as part of these workstreams.

Further information about the Bank's broader work to implement ISO 20022 is available on the [Bank's website](#).

## Providing feedback

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1. The Bank is seeking responses from all stakeholders with an interest in the CHAPS implementation of ISO 20022. While this document is primarily focused towards CHAPS Direct Participants, CHAPS indirect participants and the technology vendors that provide services for CHAPS payments processing, we would encourage other payment service providers who provide CHAPS services to also respond given the expected impact on them. **All comments and responses should be provided by 31 July 2020.**
2. Where providing comments on the specific message elements, respondents are requested to provide comments either: (I) in MyStandards<sup>1</sup>, using the comment functionality, or (II) by filling in the attached [Excel Spreadsheet](#). For both, **comments will only be considered where a justification for change has been provided.** Furthermore, **respondents are asked to provide comments back as soon as possible.** We would rather manage comments on the schemas in a piecemeal fashion; respondents do not need to wait until they are also ready to provide more strategic or holistic responses. This will assist the Bank in meeting its timeline commitments.
3. All other comments and feedback, including to the list of questions in Section II on the delivery of our policy objectives, should be provided via email to [rtsreadiness@bankofengland.co.uk](mailto:rtsreadiness@bankofengland.co.uk).

## Next Steps

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4. The Bank will review all responses provided. While we will not respond directly to each comment or response, we may seek to clarify any comments bilaterally and will provide a response document to the feedback received. This will include a Change Log, showing the changes the Bank has made to the enhanced ISO 20022 schemas (Section I of this document) and an overview of the feedback and next steps on the policy objectives (Section II). The Bank intends to publish the final enhanced CHAPS ISO 20022 schemas, alongside associated documentation (such as the Technical Guidance), in September 2020.
5. In addition to MyStandards, the final versions of the schemas will also be published on Standards Source. This will allow users to directly compare the schemas with Pay.UK's New Payments Architecture's schemas for the Common Credit Message, as published on Standards Source.
6. All responses will be anonymised and the Bank will not publish any responses verbatim. The Bank however may choose to share anonymous feedback (either aggregated or specific) with other operators, such as Pay.UK. This will be done with a view to support industry coordination and alignment of the Common Credit Message and other standards, wherever possible. Details of how the Bank will treat respondents' information is set out under Annex C.

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<sup>1</sup> 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 ISO 20022 community](#). MyStandards can be found on the [SWIFT website](#).

## Background

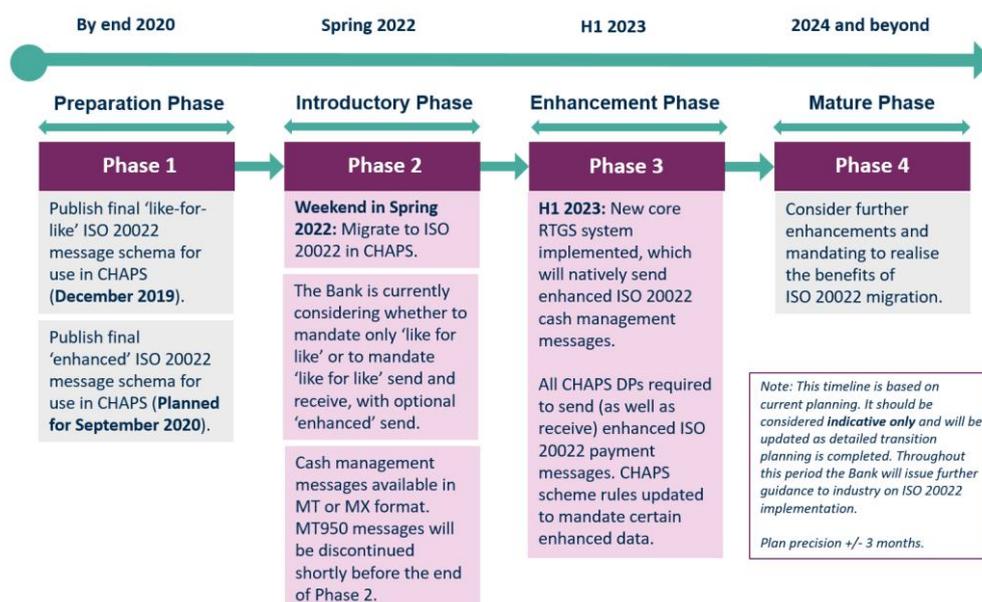
7. As set out in the [RTGS Renewal Blueprint](#) published in May 2017, the Bank will be building the renewed RTGS service, including CHAPS payments, to operate using ISO 20022 messaging. The Bank is seeking to deliver widespread benefits through the introduction of ISO 20022 including: (i) increasing resilience and reducing risk; (ii) improving UK productivity and outcomes for users of payments; and (iii) enabling organisations, households and policy makers to take more informed and effective decisions.
8. In June 2018, the Bank, Pay.UK and the PSR consulted on how the UK's major payment systems, including CHAPS, should implement ISO 20022. The Bank, Pay.UK and the PSR then formally responded to this consultation in [November 2018](#). The Bank's proposed approach to ISO 20022 and direction of travel for the received broad support. Following further consultation, the Bank subsequently published the final [like-for-like messages](#) for CHAPS in December 2019.
9. We have continued to work with Pay.UK and align our approach and strategy on the implementation of ISO 20022 for CHAPS and the New Payments Architecture, in particular to deliver a very closely-aligned Common Credit Message. We share common objectives of supporting easier access to and wider interoperability between our respective payments systems, which will ultimately foster greater resilience, efficiency, innovation and competition in UK payments. In December 2019, the Bank and Pay.UK jointly published [an overview of this continued commitment](#). In February 2020, Pay.UK published a [consultation on the Pay.UK Next Generation Standards for UK Retail Payments](#). Pay.UK intends to publish its Consultation Responses Report by end-2020.
10. To support the delivery of ISO 20022 in CHAPS, the Bank has or will publish the below artefacts ahead of the start of migration:

Publication	Description	Timeline
CHAPS like-for-like ISO 20022 Schemas	The ISO 20022 XML schemas defines the organisation of the ISO 20022 data, including data definition, structure, and format. The schemas is used to validate the ISO 20022 XML messages.	Published December 2019 (updated February 2020)
CHAPS enhanced ISO 20022 Schema		Final draft: September 2020
CHAPS enhanced ISO 20022 Technical Guidance and CHAPS rules	Supporting documentation to the schema, including detail of each field and associated CHAPS rulebook changes.	Final draft: September 2020
Market Guidance	Best practice guidance on information required for specific use cases, and how this should be completed / formatted.	TBC from 2021

11. The Bank recognises that the future vision for ISO 20022 is long term and the processes and benefits will take time to evolve and bed-in. Although we will introduce enhanced messaging with certain fields mandated in 2023, it is critical that payment service providers keep in mind that we intend to go further over time and will in due course introduce a regular version change.

## Migration timelines and approach

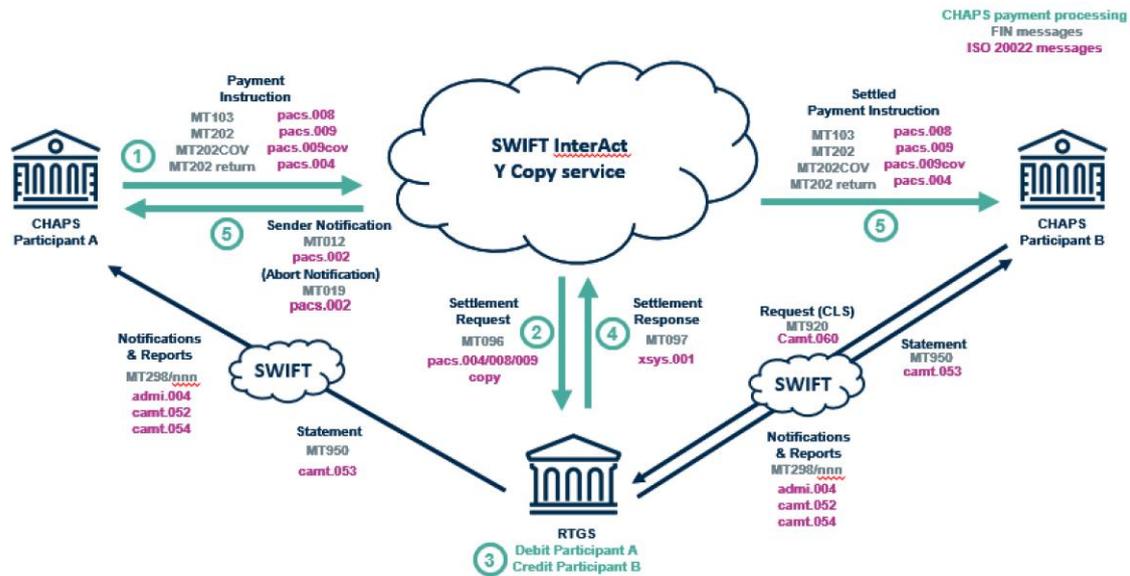
12. The Bank is committed to ensuring that the CHAPS ISO 2022 implementation balances the objective to realise benefits as soon as possible, with the need to provide users of the messages reasonable time to be ready. The Bank is also committed to ensuring that the timeline for CHAPS migration remains co-ordinated with other financial market infrastructures' ISO 2022 migrations. This helps reduce both project resourcing challenges at payment service providers, and the technical and legal challenges surrounding truncation of payment data. Furthermore, we are conscious that the coronavirus (COVID-19) pandemic may continue to impact participants' plans and resourcing over the coming months.
13. Since the Bank's publication of the final like-for-like messages at the end of 2019, SWIFT has announced that it will delay migration of its correspondent banking network to ISO 2022 by one year to end-2022. The ECB has also recently announced that its Governing Council will shortly be considering an industry recommendation to extend the timeline for ISO 2022 migration as part of the TARGET2/T2S consolidation project by one year to end-2022. This is in light of both SWIFT's rescheduling and the challenges posed by the COVID-19 pandemic.
14. The Bank has recently engaged with all CHAPS Direct Participants following these announcements. The feedback suggests that it is still reasonable to continue with migration of CHAPS from the SWIFT FIN (MT messaging) to the SWIFT InterAct / FINplus (ISO messaging) network in Spring 2022, as planned. However, given the delay to the SWIFT migration, the industry has highlighted that there may be a case for using the "like-for-like" schemas only during this phase of the project. If that were the case, CHAPS would then switch over to the enhanced schemas for both receiving and sending messages in early 2023, rather than permitting sending or receiving of enhanced data from Spring 2022.
15. The Bank is considering both industry views and implications for the broader Renewal Programme. It will provide a statement in the coming weeks to confirm its CHAPS ISO 2022 migration timelines and approach. Nevertheless the Bank still intends to publish the final enhanced schemas in September 2020, even if adoption of the enhanced schemas was delayed. Furthermore, all other timelines, such as testing, remain the same unless confirmed otherwise.



16. The Bank also continues to be committed to work with industry on delivering additional Market Guidance; best practice guidance on how information can be conveyed consistently using ISO 20022 messages for specific types of transactions. Due to the challenges of Covid-19, the Bank has delayed the start of the engagement phase for additional Market Guidance until autumn 2020.

## Section I – Industry Review of the enhanced ISO 2022 message schemas feedback

17. The below diagram shows the messages that will be used in the CHAPS service. The Bank is seeking detailed feedback and comments on the near-final enhanced ISO 2022 schemas for the messages: pacs.008, pacs.009 (COV and CORE), pacs.004, camt.052, camt.053, camt.054, camt.060 (confirmation of liquidity increase, confirmation of liquidity decrease, liquidity pre-advice, cancellation advice, and account reporting request), admi.004 (funds queue status, and RTGS status report).



18. The intention is to consider the feedback from this Industry Review, before publishing a revised and final version of the ISO 2022 enhanced schemas in September 2020. Details of how to respond are under the ‘Providing feedback’ section.

Date	Publication	Status
December 2019	CHAPS Like-for-like ISO 2022 schemas published on MyStandards	Published
March 2020	CHAPS Like-for-like ISO 2022 schemas published on Standards Source	Published
April – May 2020	Early draft of CHAPS enhanced ISO 2022 schemas on MyStandards	Published
<b>June 2020</b>	<b>Near final draft of CHAPS enhanced ISO 2022 schemas on MyStandards</b>	<b>Published for Review</b>
September 2020	Final draft of CHAPS enhanced ISO 2022 schemas on MyStandards	Pending
Autumn 2020	Final draft of CHAPS enhanced ISO 2022 schemas on Standards Source	Pending

## Development of the CHAPS ISO 2022 schemas

19. These enhanced schemas build on the like-for-like schemas published by the Bank at end-2019. They include new fields enabling carrying of more information as set out in the joint consultation published by the Bank, Pay.UK and PSR; including greater information about the identities of those involved in payments and the purpose. The near-final schemas have already gone through considerable review and, while participants should not start development work using these, they should be considered near-final drafts.
20. The Bank and Pay.UK have worked together to ensure alignment exists between the CHAPS schemas and the New Payments Architecture schemas where possible. Although there are now minor, deliberate discrepancies – reflecting where there are different characteristics between the CHAPS and NPA schemes, we have developed the CHAPS pacs.008 message from the pacs.008 Common Credit Message. In due course the Bank will consider providing an overview of the difference between the CHAPS and New Payments Architecture implementations of the Common Credit Message.
21. All the enhanced schemas are based on the international market practice guidelines, HVPS+ and CBPR+. As far as possible, we have aligned with both, though in a small number of occurrences, there are differences between these and we have made a decision as to which to align to. This means that the CHAPS messages should be almost identical to those published for use in TARGET 2, and those being developed for use in the Fedwire Funds Service and in other high value payment systems.

## Additional considerations

22. The Bank has continued to work on a number of aspects of further detail for its ISO 2022 migration plan for CHAPS and RTGS, including in response to feedback received during previous consultations. We have now come to conclusions and near-final views on a number of aspects of the detailed plan.
23. The Bank confirms that the renewed RTGS service will:
  - a. During the Phase 2 of the migration, only provide like-for-like data in the statement messages (camt.053). In other words, the Bank does not intend to provide any further data than it currently provides in the statements at this time, even if enhanced data was supported in CHAPS from the start of Phase 2. However, in Phase 3 the Bank will be able to provide richer data to participants. The Bank will therefore be seeking feedback in the future on what additional data would be useful (especially for particular aspects of participants' operations, such as reconciliation departments). It is also possible that alternative solutions, such as APIs, may also provide an additional alternative means to send and receive specific sets of data<sup>2</sup>
  - b. Only accept instructions to the Bank RT CHAPS participant (such as for reserves funding) with a pacs.009 CORE message from the start of Phase 2. This is because the pacs.009 CORE is designed for the use of wholesale, FI to FI payments. At present, both MT103

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<sup>2</sup> Delivery of APIs will be after the implementation of ISO 2022 messaging. We expect that the first APIs offered will focus on read access to transactional and liquidity data, with a later focus on other read APIs and then write APIs.

and MT202 messages are used for these types of transactions. However, this reflects a now-superseded contingency measure in the current RTGS service.

- c. No longer require or enable the use of the repair BIC / Sort Code in the CHAPS context (for routing of return CHAPS payments), given the onus will now be on the receiving participant to develop processing for the incoming pacs.004 to re-route internally as necessary.
24. **Statement message format during Phase 2.** The Bank has previously confirmed that CHAPS Direct Participants and Reserves Account Holders could choose whether they wanted to receive statement and scheduler messages (such as the camt.053) in ISO 20022 or MT formats from March 2022 to spring 2023. For statements, this choice can be made at the individual account level. Therefore a participant holding multiple accounts (e.g. collateralisation accounts held in respect of retail schemes prefunding) can make separate choices for each account. However, in order to avoid any reconciliation challenges, the Bank will not provide both formats for the same account. In other words, we will not make it possible for an institution to receive both ISO 20022 format and MT format message duplicates for the same account.
25. **SWIFT Y-copy service xsys messages.** The Bank has not included in this Industry Review the CHAPS messages that are not carried over the CHAPS system. Specifically, the xsys messages that are sent by SWIFT to sending CHAPS Direct Participants to communicate confirmation / abortion of settlement. Following industry feedback, the Bank intends to work with SWIFT migrate the xsys messages to the ISO 20022 pacs.002 message. More information on the pacs.002 schema will be provided once the service change and schema have been agreed with SWIFT.
26. **Business Application Header (BAH) implementation.** The Bank has included in the enhanced schemas the Business Application Header version two (head.001.001.02). This transition was made to align with the latest developments of the ISO 20022 community and the CBPR+ guidance. The Bank has currently integrated the BAH into the schemas in two ways: it has been embedded into all the schemas as part of the enhanced message set (following the CBPR+ guidelines); and it has also been provided as a standalone schema (following the Bank's 'like for like' guidelines). **We would be interested to hear from respondents whether they have a preferred approach to applying to BAH in CHAPS messages.**
27. **BAH elements.** The current set of required elements in the Bank's BAH is limited to "From", "To", "Business Message Identifier", "Message Definition Identifier" and "Creation Date" blocks. Compared to the CBPR+ guidelines, a number of additional blocks was omitted due to them being irrelevant to CHAPS. **We would like to understand if respondents have a view on whether there are additional fields in the BAH that would be useful or required.**

## Technical Guidance

28. We will publish technical guidance alongside the final CHAPS enhanced ISO 20022 schemas. This accompanying documentation will support end users, especially for detail on how CHAPS Direct Participants and indirect participants will interpret the schemas. The final publication will include:
- Principles for using the enhanced fields, such as when to use a field and how.

- Detail on how participants should format the ISO 20022 messages.
- Detail on how to interpret the schemas and an explanation of each field.
- Detail on the differences between like-for-like and enhanced, as well as mapping back to the MT message equivalents where applicable.
- Detail on which fields will be mandatory and optional at the schemas level.
- Detail on which fields will be mandatory and optional in the CHAPS rulebook.

29. A draft publication has been provided alongside the schemas on MyStandards (see 'Providing feedback'). This is provided to support the review of the enhanced ISO 20022 schemas.

### **Additional Market Guidance**

30. Alongside our enhanced schemas and the associated technical guidance, the Bank will engage with industry over the coming months to produce the first set of additional market guidance documents. Due to the resource challenges that the coronavirus (COVID-19) pandemic presented during the start of the outbreak, the Bank delayed the start of the engagement phase for additional market guidance until autumn 2020.
31. The market guidance documents will seek to translate industry best practice guidance into user-friendly instructions for how to complete specific fields within the enhanced ISO 20022 messages. Separate guides will be published for different transaction types (e.g. house purchases). They will be used alongside the Bank's published technical guidance to capture industry conventions and encourage a consistent use and therefore easier straight-through-processing of messages.
32. The production of market guidance will be a collaborative process, involving international and domestic stakeholders from across the payments chain. Whilst the Bank will convene the initial group of representative stakeholders and ensure alignment with its published technical guidance, the responsibility for ensuring the guidance meets the continued needs of end-users on an ongoing basis will be for industry to own. It is not intended that the guides produced will be an exhaustive list of use cases. The Bank, working with Pay.UK and industry stakeholders, will identify where industry will gain the most value from producing a handful of guides.
33. The Bank is working closely with Pay.UK on an overall approach for producing market guidance. The different roles and responsibilities of both organisations, as well as the different features of the CHAPS and NPA schemes mean the outputs may not be identical. Nevertheless, we will coordinate to ensure our overall approach to producing additional market guidance is aligned.
34. The Bank will communicate more details of its engagement plans for the production of additional market guidance over the next few months, via the usual Bank RTGS Renewal Programme communications channels.

## Section II - Industry Review on progress towards policy objectives delivered via ISO 2022

35. As the Bank set out in the June 2018 consultation, ISO 2022 has the potential to deliver widespread benefits across the payments ecosystem, and the Bank intends to take a leading role in ensuring that these benefits are realised. This includes introducing, and in some cases mandating, a number of additional and structured fields in the enhanced ISO 2022 messages.

Drivers		Outcomes – UK	Outcomes – Bank of England
 1	Operational Resilience	Reduce the impact of an operational outage	Reduce single points of failure in the payments ecosystem
 2	Risk management	Help firms control liquidity and credit risks	Improve management of end-to-end systemic risk
 3	Fraud and economic crime	Help firms to identify fraud and economic crime	Facilitate UK objectives to target fraud and economic crime
 4	Competition and innovation	Support development of products and services providing enhanced customer functionality	Support greater innovation in risk-reducing technologies
 5	International harmonisation	Create efficiencies in cross-border banking	Support continued provision of correspondent banking relationships
 6	Efficiencies in processing	Improve the reconciliation of payments, and increase straight-through processing rates	Streamline operations as a user of payment systems
 7	Richer Data	Provide end-users with data-driven services	Enable better informed policy decisions

36. These will support the delivery of benefits to industry and end users. Specifically, they will support the Bank's ambitions to create RTGS and CHAPS services that offer better access to settlement, wider interoperability, improved user functionality and strengthened end-to-end risk management in UK payments.

37. The Bank is continuing work to determine its approach and has provided updates in the below sections. Whilst the enhanced messages offer a large number of additional fields, this Industry Review focuses on those key fields that we believe will help deliver specific policy ambitions for the Bank. This paper covers four specific enhanced fields:

- Purpose and Category Codes
- LEIs
- Remittance data
- Structured addresses

### Data Correctness

38. As well as mandating additional data, it is important that data included in payments is correct and can be relied upon. The benefits of UK-wide adoption of the ISO 2022 standard and in particular the Common Credit Message will only be realised if stakeholders and end-users in the payments chain have confidence in the quality of the enhanced data.

39. The Bank is intending for specific additional data fields to be mandatory for certain transaction types from Phase 3, in H1 2023. The Bank is currently considering the most effective methods

and tools of implementing and mandating their use in messages, as well as how we can facilitate the input of correct data<sup>3</sup>.

40. For the specific enhanced fields covered here, the Bank will not mandate these in the schemas in 2023 (i.e. the fields will be technically optional). Instead our initial view is that we will mandate their use through the CHAPS rulebook from 2023 and, in some cases, introduce appropriate incentives for their use. This is because mandating them in the schemas would mean:
- a. Payments would be rejected without completed enhanced data, which given the potential for exceptions and issues collecting / inputting this data poses unacceptable financial stability risk. The Bank recognises that these issues are particularly likely to occur the further removed the payment instigator is from the payment system, for instance where the end-user is a retail customer and/or based overseas.
  - b. The Bank could be seen to be taking a disproportionate approach to enforcing standards. Mandating data at the CHAPS rulebook level will mean the Bank could, for instance, focus on the completion of quality enhanced data for those use cases where there is the greatest benefit to stakeholders.

### Overview and update on the Bank's approach to policy objectives

41. Before the end of 2020, the Bank will provide a full update on the use of these enhanced fields and its approach to ensuring they are used effectively in the market. The follow table sets out an overview of the Bank's approach to date. For further details see the Bank's 2018 consultation response document. A more comprehensive update and detail will be provided before end-2020.
42. The Bank would welcome any comments on the below approaches and is willing to engage on either of the topics, should respondents have feedback. We would particularly welcome a steer on the below questions:
- Question 1 - Does the respondent have any views on how the Bank could most effectively incentivise completion of either some or all enhanced fields listed below? In particular, we would welcome views on whether there are particular incentives the Bank could provide to ensure their use, without the use of the CHAPS rulebook.
  - Question 2 - Is the respondent aware of other initiatives in the private sector that could support completion of any of the enhanced fields listed? For example, we are particularly interested to hear about where firms have implemented the use of purpose codes in their processes.

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<sup>3</sup> By correct data, the Bank means data that we determine, in the rules or otherwise, to be true and intended for that field. For example, an LEI is valid, registered with GLEIF and relates to the entity in the name and address fields.

## Overview of the Banks Approach to Policy Objectives delivered through ISO 20022

	Overview	Update
<p><b>Purpose and Category Codes</b></p>	<ul style="list-style-type: none"> <li>- The purpose and category purpose code fields are designed to indicate the reason a payment is being made, and how it should be processed, limited to a pre-agreed list of codes. The pacs.008 and pacs.009 messages contain the fields:               <ul style="list-style-type: none"> <li>o 'Category Purpose Code' which is primarily for use by participants to signal to receiving PSPs some specific properties of a payment instruction to help with processing;</li> <li>o 'Purpose Code' which is a granular code for use by the originator of a payment to denote the reason for why the payment is being made.</li> </ul> </li> <li>- They will improve identification of payments and will support work to mitigate fraud risks.</li> <li>- The Bank will mandate the use of purpose codes for FI-to-FI and housing payments as part of the Enhancement Phase.</li> </ul>	<ul style="list-style-type: none"> <li>- The Bank and Pay.UK will produce and seek industry feedback on a shortlist of the main codes that they would expect to be used in the vast majority of transactions using the Common Credit Message. These codes will be fully aligned to the international ISO 20022 External Code Set. Where the existing set of codes does not fully meet the requirements of the UK market, the Bank will request some limited additions to the External Code Set. This will ensure that codes are consistent across UK retail and wholesale payments and aligned with the international standard.</li> <li>- The fields are currently (and for the foreseeable) optional in the schemas, however the Bank is considering how to mandate and incentivise the use of purpose codes beyond what it has already committed to. This will include considering if and when to widen mandating the use of purpose codes for all transaction types. The Bank is also working with Pay.UK to align with the NPA's approach.</li> </ul>
<p><b>LEIs</b></p>	<ul style="list-style-type: none"> <li>- LEIs (Legal Entity Identifiers) enable the consistent and accurate identification of individual legal entities on a global basis, based on the ISO 17442 standard.</li> <li>- Adoption of LEIs would be of great benefit, both to individual organisations, and to the UK economy as a whole.</li> </ul>	<ul style="list-style-type: none"> <li>- The Bank is currently considering how it could provide a framework to ensure LEIs are mandated effectively to ensure the benefits to end users and the wider economy are realised. We will promote the correct and accurate use of the LEI, providing incentives to promote consistent use across the CHAPS system for applicable payment messages.</li> <li>- The LEI fields are currently (and for the foreseeable) optional in the schemas. As part of the Data Correctness work described above, the Bank is considering how it could provide a framework that ensures mandated.</li> </ul>

	<ul style="list-style-type: none"> <li>- The Bank will mandate the use of LEIs in the enhanced ISO 2022 CHAPS messages for wholesale transactions (pacs.009 messages) as part of the Enhancement Phase.</li> </ul>	<p>LEIs are effectively and accurately used to the benefit of the CHAPS system and the UK economy.</p> <ul style="list-style-type: none"> <li>- The Bank is also considering options for promoting wider adoption of the LEI in the UK as part of the Bank's wider strategy for promoting LEI adoption, including engagement with Government departments. The Bank will review how, when and where mandatory inclusion of LEIs could be extended, and outline its approach in September.</li> </ul>
<b>Remittance data</b>	<ul style="list-style-type: none"> <li>- Remittance data is contextual information associated with a payment. It often supports reconciliation of transactions, such as by providing related invoice information.</li> <li>- The Bank intends to introduce structured remittance fields in the enhanced ISO 2022 CHAPS payments messages. While it will allow some dual running of structured and unstructured in the Enhancement phase, the Bank will remove unstructured remittance data in the Mature phase.</li> </ul>	<ul style="list-style-type: none"> <li>- The Bank is likely to enforce structured remittance data via a hard, technical rule in the schemas. This is potentially from November 2025 when the MT messaging is no longer supported for payments.</li> <li>- However, the Bank believes that waiting this long to enforce structured remittance data in CHAPS risks a delay to and potential dilution to the benefits of migrating to ISO 2022 structured data. The Bank is therefore looking at creating an appropriate framework to incentivise or mandate the use of structured data before this.</li> <li>- The Bank is currently reviewing whether it should still support remt messages.</li> </ul>
<b>Structured Addresses</b>	<ul style="list-style-type: none"> <li>- Structured addresses means there is a set format for inputting addresses, as opposed to a free-format text field. This better enables automatic processing and screening by payment service providers, reducing the processing time and cost of transactions.</li> <li>- The Bank previously stated that from Enhancement phase, the name and address fields must be structured where used. The Bank now recognises that a dual phase should be used.</li> </ul>	<ul style="list-style-type: none"> <li>- The Bank now recognises that for inbound payments it may be difficult to map unstructured address data to structured data. We therefore will need to dual run structured and unstructured data from the Enhancement phase and to remove unstructured addresses in the Mature Phase.</li> <li>- The Bank is likely to enforce structured addresses via a hard, technical rule in the schemas when the SWIFT correspondent banking network moves to requiring use of structured address (potentially from November 2025, once MT messaging is no longer supported for payments). This will ensure that there are no challenges with truncation between the correspondent banking chains and CHAPS payments.</li> </ul>

## Annex A – Testing and Readiness

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1. The Bank's website provides the most detailed and up to date information on Testing and Readiness. This chapter provides early information on the testing tools the Bank will provide to support the transition of CHAPS to ISO 20022 messaging, and how the Bank expects DPs to use these tools to support their preparations. It also provides indicative timelines for the availability for these tools to help DPs outline and plan their own preparation.

### MyStandards Readiness Portal

2. The Bank has now launched the SWIFT MyStandards Readiness Portal to enable users to begin validating their CHAPS payment messages against the published like-for-like schemas. We are strongly encouraging all CHAPS Direct Participants to make use of the Readiness Portal to support their internal readiness for the CHAPS ISO 20022 migration. Other users, including indirect participants in CHAPS, software vendors supplying payment systems, and others in the payments industry are also welcome to use it. The Bank will monitor Direct Participants' use of the Readiness Portal as part of our approach to assuring industry readiness for the migration (more information on how and when will be shared via the RTGS Renewal Testing Working Group in September 2020).
3. The Readiness Portal will validate CHAPS ISO 20022 messages to ensure they comply with the schemas and that the format meets the mandatory requirements for a payment message to settle in RTGS. It will also enable users to validate examples of the cash management and administration messages that CHAPS Direct Participants will receive from RTGS, to enable them to prepare their systems to process them. It links with the SWIFT MyStandards documentation, not the Standards Source documentation.
4. A set of use cases have been developed to support validation and shared with Direct Participants via the RTGS Renewal Testing Working Group. The Bank is asking for evidence of completing these by January 2021. However, users are also encouraged to use the Readiness Portal in any way which supports the development of their CHAPS ISO 20022 messages.
5. The Readiness Portal will be available throughout the RTGS Renewal Programme, and will be updated to include the schemas for the enhanced CHAPS ISO 20022 messages later this year.

### Participant Testing Simulator

6. The Bank of England will be purchasing a 'Commercial off the Shelf' (COTS) simulator solution. The Test Simulator solution will cover two main areas:
  - Providing a more efficient testing regime for external members via a solution to exchange test messages with dummy banks, removing the reliance on other participants.
  - To enable the emulation of all types of messages, sent and received from an external member to test end to end Bank processing through to back office systems, including the ability to undertake performance and stress testing.

7. The Test Simulator solution should be able to ingest and generate messages from a bespoke schemas implementation built on both industry standard ISO2022 and pre-ISO2022 standard messages known as SWIFT MT messages (including ISO15022 messages).
8. The 'BoE Internal and Participant Testing' Simulator will have two purposes
  - 'BoE Internal Simulator': used by the Bank and the Technology Delivery Partner (TDP) during development and user acceptance testing. It will enable message exchange via SWIFT or other external networks. The TDP will utilise this environment for performance testing and ultimately supporting the automated testing suite. This will be ready for February 2021.
  - 'Participant Test Simulator': The second instance will be used for Direct Participants for 'self-service' message generation via SWIFT. There will be Direct Participant training of this tool conducted in summer 2021 ahead of Participant Testing in November 2021.
9. Based on responses from the Direct Participants, the programme team have concluded that a Sandbox solution will not be implemented at this point due to difficulty in Cloud connectivity and overall Direct Participant readiness and need. We will continue to monitor the demand and if a need arises in the future we will reopen discussions.

## Participant Testing

10. DPs must complete Participant Testing in an RTGS testing environment ahead of cutover to ISO 20022 messaging; using the full simulation tool will be one of the first stages of this testing. The Bank will issue a minimum set of test cases for each DP to complete ('Participant Acceptance Testing'), alongside their own testing plans which can use either a test simulator or a 'buddy' bank. Once DPs have successfully completed this testing, there will be a wider, more structured test phase ('Group Testing') where DPs test multi-laterally with each other, alongside DNS and CREST settlement testing.

## Industry Readiness

11. The Bank continues to work closely with the industry so that all ISO 20022 users can ensure they are ready to transition to the renewed RTGS service, including the introduction of ISO 20022 messaging.
12. To support this, the Bank will be introducing a monitoring and assurance approach. This will primarily focus on the readiness of DPs but will also include engaging with a limited number of indirect participants and other key players.
13. The Bank will share further details of this monitoring and assurance approach to those directly impacted later this year.

## Annex B – Glossary

Term	Acronym	Definition
Agent		The formal term in ISO 2022 for a party involved in a transaction chain.
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.
Business Identifier Code	BIC	An international standard for routing business transactions and identifying business parties, as defined in ISO 9362.
CBPR+		Cross-Border Payments and Reporting Plus (CBPR+) working group set up to design the usage guidelines for consistent use of ISO 2022 in cross-border payments.
CHAPS		CHAPS is the same-day system that is used to settle high-value wholesale payments as well as time-critical, lower-value payments like buying a property.
Direct Participants		Direct participants are those banks, building societies and other payment service providers that access one of the UK payment systems (i.e. CHAPS, Faster Payments or Bacs) directly.
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.
Global LEI Foundation	GLEIF	Established by the Financial Stability Board in June 2014, the GLEIF is tasked to support the implementation and use of the Legal Entity Identifier.
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 2022 implementation guidelines for high value payment systems (HVPS).
InterAct / FINplus network		InterAct (AKA FINplus) 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.
Legal Entity Identifier	LEI	A unique reference number for an organisation as defined in ISO 17442.
MT message		A SWIFT proprietary message format currently used in CHAPS.
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.

Pay.UK		Pay.UK is responsible for the operation of three of the UK's retail payment systems – Bacs, Faster Payments and cheque clearing. In the Consultation it was referred to by its previous title, the New Payment System Operator (NPSO)
Payment Service Provider	PSP	'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.
Payment 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 sterling settlement.
Registration Management Group	RMG	The role of the RMG is to promote and support the involvement of financial service actors to facilitate the registration and maintenance of high quality globally relevant ISO 20022 compliant business models for exchange of information for financial services.
Reserves account		Reserves accounts at the Bank of England are effectively instant-access accounts for firms that participate in the Sterling Monetary Framework.
Settlement account		RTGS accounts that can be used for the purposes of settlement.
Standards Advisory Panel	SAP	A senior, strategic level panel focussing on the implementation of ISO 20022, but also covering other payments standards for the UK.
SWIFT		SWIFT is a global member-owned cooperative that provides secure financial messaging services.
XML syntax		XML is a mark-up language used to define the ISO 20022 structure.

## Annex C – How the Bank will use Respondents' Information

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1. By responding to this Industry Review the Bank of England (“the Bank” or “we”) collect information about the Respondent (“you”). This includes your name and professional contact details.
2. We may use your personal data to contact you if we need to clarify your responses or to invite you to further discussion and consultation on related topics. Engagement relating to our work is necessary in the public interest and in the exercise of the official authority of the Bank.
3. The Industry Review feedback will be used to inform the next steps and approach to the Bank’s work to migrate CHAPS messaging to ISO 20022.
4. The responses will not be shared verbatim with any other party or published. In its follow up to the Industry Review, the Bank may choose to anonymously share themes or significant points of view in order to qualify or explain its next steps. If you do not wish any elements of your response to be anonymously shared or referred to, please indicate so in your response.
5. We will keep your personal data for as long as we require it to finalise this work on the CHAPS migration to ISO 20022.
6. You have a number of rights under data protection laws. For example, you have the right to ask us for a copy of the personal data the Bank holds about you (this is known as a ‘Subject Access Request’); you can ask us to change how we process or deal with your personal data; or you may also have the right in some circumstances to have your personal data amended or deleted.
7. To find out more about those rights, to make a complaint, or to contact our Data Protection Officer, please see our website at [www.bankofengland.co.uk/privacy](http://www.bankofengland.co.uk/privacy)
8. Information provided in response to this Industry Review, including personal information, may be subject to publication or disclosure to other parties in accordance with access to information regimes including under the Freedom of Information Act 2000, data protection legislation, or as otherwise required by law or in discharge of the Bank’s functions.
9. Please indicate if you regard all, or some of, the information you provide as confidential. If the Bank receives a request for disclosure of this information, we will take your indications into account, but cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system on emails will not, of itself, be regarded as binding on the Bank.