

ISO 20022 Standard: Understanding the Impact on Payments

Abstract

The global payments industry's move to use ISO 20022 as the default messaging standard is picking up pace. By the year 2023, a major portion of the world's payment systems are expected to move to the ISO 20022 messaging standard. This paper examines the impact of the switch on the existing banking systems that have been using custom formats and SWIFT standards for decades. The paper also details the steps banks must take to prepare for implementing the standard in their central payment infrastructures.

ISO 2022: Impact on UK Financial Services

The Bank of England (BoE) plans to renew the existing real-time gross settlement (RTGS) system; in parallel, Pay.UK has begun the journey of creating the New Payments Architecture (NPA), a single core clearing and settlement platform. With the common vision of bringing harmonised and more aligned transactions in the UK payment system, BoE and Pay.UK have collaboratively decided to adopt a new message type, Common UK Credit Message (CCM), using the ISO 2022 standard for the transmission of the transaction message. CCM implementation will deliver myriad benefits to the UK payment systems: fully aligned message structure across payment schemes, a unified payments ecosystem, operational resilience, domestic interoperability, international harmonisation (for cross border transactions), and greater support for overlay services.

CCM Implementation

The BoE has mandated ISO 2022 implementation in four phases (see Table 1).

Phase	Name	Description	Deadline
1	Preparation phase	Baselining and publishing the final messages to be included in RTGS and NPA	End 2019 for introductory End 2020 for enhanced
2	Introductory phase	Adoption of ISO 2022 messages equivalent to current message types	Early 2022
3	Enhancement phase	Introduction of the new data fields	Early 2023
4	Mature phase	Further enhancements to data requirements for CCM and regular maintenance	2024 and beyond

Table 1: ISO 2022 Implementation Timeframe

For the enhancement phase, the BoE has mandated four key enhancements:

- Identity structured address fields and legal entity identifier
- Payment purpose code
- Structured remittance information
- Extended character set support

The BoE consultation leveraged the guidelines created by the SWIFT HVPS+ task force for the international harmonisation. The proposed CCM standard was customised to UK transactions while also meeting the needs of the individual schemes. This has resulted in a common block of the core message structure with scheme-specific attributes, while ensuring that the overall

CCM message structure is a subset of the HVPS+ guidelines to maintain global interoperability (see Figure 1).

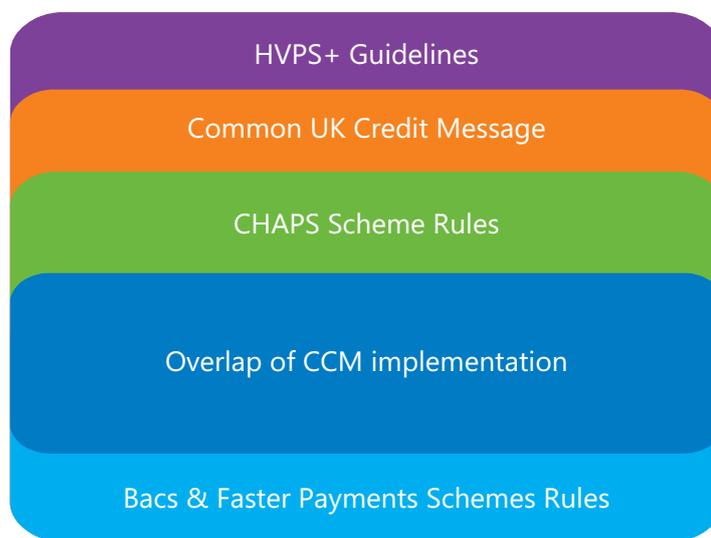


Figure 1: ISO 20022 Commonalities

The BoE is planning an incremental release of capability for the ISO 20022 standard with the first release expected by early 2022. Pay.UK is also planning the implementation of the CCM standard on the other UK domestic schemes in a slightly longer timeframe starting with the replacement of the Faster Payments scheme.

Additional ISO20022 Message Formats

The CCM is just the start of the ISO 20022 journey. The ISO 20022 standard has a large set of relevant formats that will bring further consistency to communication with banks and between banks. These will cover debit, credit, mandates, settlement, investigations and statements to name the key ones. Table 2 depicts the formats that are expected to be introduced, and will replace the current custom formats. For example, banks custom corporate host-to-host messages, unsolicited messages (USMs), SWIFT MT messages for settlement, custom investigation processes between banks, and paperless direct debit messages will be replaced.

End customer		Interbank payments	
Payments	Mandates	Payments	Settlement
Pain.001, Pain.002, Pain.007, Pain.008	Pain.009, Pain.010, Pain.011, Pain.012	Pacs.002, Pacs.007, Pacs.008, Pacs.004	Pacs.009, Pacs.010, Pacs.002
Overlay services	Payment Reporting	Reporting, administration	Investigations
Request to Pay: Pain.013, Pain.014 Enhanced Data: Remt.001, Remt.002	Camt.052, Camt.053, Camt.054	Camt.052, Camt.056, Admi.0nn	Camt.029, Camt.030

Table 2: ISO20022 Message Types

Impact on Banks

Adopting ISO 20022 will mandate changes to banks' systems and processes; proactive preparation will make for a hassle-free and smooth migration. Adopting a structured agile approach will enable incremental delivery of change to comply with the regulation as well as the ability to adapt to evolving regulations and new products. The impacts can be categorized into some key areas:

Payments engine: Core to ISO 20022 adoption is the backend payments engine that consumes and produces the message format and enables end-to-end processing and communication with other enterprise services. Enabling the payments engine to use the ISO 20022 format as the canonical model is not essential to success; however, many payment products and banks are adopting this approach given its rich structure and the thought that has gone into developing the standard. At a minimum, use of the ISO20022 data types will simplify format translations.

The other fundamental change will revolve around decommissioning or amalgamating multiple engines that are currently aligned to the existing payment schemes, into a single, high-performing engine that ensures high availability. In the absence of a clearly defined separation of the engine from the remaining estate, this is likely to have a ripple effect across the bank.

Migration to ISO 20022: Smooth migration ensures minimal impact to the banks' customers. Some key aspects that banks must consider while defining the migration strategy include:

- Cost of maintaining both the legacy and the new ISO 20022 compatible systems
- Operational impacts due to the data truncation and new data fields
- Data translation and data cleansing to transition to the ISO 20022 format, especially if moving from free text to strongly typed fields
- Seamless migration from existing schemes to the NPA and new RTGS
- Interim format translators to maintain backward compatibility

Careful planning will be required and we recommend that banks run pilots with a robust regression test suite covering all the customer types.

End-to-end ISO 20022 adoption: To fully utilise the benefits of the richer data structures of ISO 20022 and ensure consistency, the way banks interact with consumer and corporate entities will need to change. Additional mandatory

data will need to be captured from the users by enhancing the banking channels to adopt the pain.001 format and the customer experience will need to be reviewed across four areas – retail channels, corporate channels, bank staff channels, and bank internal originators that generate direct debit files.

Data storage and management: The ISO 20022 message format allows for richer data capabilities; however, managing and storing the additional transaction data poses challenges. Banks will need to update the existing database or upgrade to a completely new database. In addition, banks will face challenges in retaining and storing old data for regulatory compliance. The change to the format will also lead to downstream impacts; for example, complexities in reporting and analytics and additional storage costs.

Operational processes: Banks will need to update operational processes to handle transactions with insufficient data and data truncation issues post migration, in addition to educating customers on the new data points to be captured.

Next Steps

Banks have to complete development and testing and migrate to ISO 20022 by 2022. This can be achieved by managing the translation from legacy formats to ISO 20022 at the message gateway. However, reaping the complete benefits of the ISO 20022 format will require the enhanced data and new data points to percolate into the channels as well as the consumers and organizations that initiate the payment. This will require changes to how customers initiate payments, the introduction of innovative products and services to provide more information to consumers, and simplification of payment schemes to name a few.

To ensure a seamless migration to ISO 20022, banks must:

- Perform end-to-end impact assessment and gap analysis of payment data from capture to execution and archive. Identify all the impacted channels and touch points including all channels that can originate payments.
- Review the data format and in and out interfaces for each touchpoint in the payment value chain to identify readiness for migration to the ISO 20022 standard and the ability to handle new data points and extended fields.
- Map the gap analysis to the enterprise strategy to identify impacted systems and processes. Align change programs with the enterprise strategy for the payment engine.
- Draw up a roadmap to implement incremental changes to the estate; focus on decoupling systems into standard integrations and minimising customer impact.

- Ensure effective customer communication, especially for corporate customers using custom host-to-host formats, which will be crucial to a successful move to ISO 20022.

Look Beyond Compliance

Banks must not view ISO 20022 migration merely as a compliance exercise but think beyond the immediate regulatory mandate and look at unlocking value by leveraging the benefits of ISO 20022. This could include creating new products that utilise the extended remittance data, enhancing the API integration with corporate ERP solutions, and using the additional rich data to build new analytical models as well as craft offers personalised to individual customers. In addition to greater interoperability, richer data, more efficient processes, and better compliance, ISO 20022 offers an opportunity for banks to re-examine business models, improve customer service, and strengthen market positioning thereby generating exponential value.

About The Author

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