Bottomline

Digital Payments Transformation with ISO 20022 as the Springboard

ISO 20022 is impacting many other payment instructions globally

CONTEXT

The payment industry is facing an unprecedented change on a global scale. This development occurs throughout the payments ecosystem, from domestic and instant rails, to cross-borders payments.

Driven by new technologies and new customer expectations, the future payments landscape will be friction-less and real-time. However, although the various payments initiatives are moving in the same direction, their lack of synchronicity makes the process fragmented, hybrid, challenging to predict and compromises the speed of benefit realisation.

Moreover, payments transformation relies on complex new technologies and sophisticated customer expectations – all contributing to further hurdles in understanding what the impact will be on connectivity, messaging, existing infrastructure and core systems.

This paper aims to define and clarify the various aspects of this change via specific payment rails (domestic RTGS, Cross-border, and Instant). We will also assess how this will impact Financial Messaging activity. Our mission is to highlight key issues for Banks & Financial Institutions specifically, and so we will save coverage for the Corporate B2B payments landscape in a separate whitepaper.

ISO 20022: The common link in payments transformation

Boosted and driven by the SWIFT CBPR+ initiative that will affect the global cross-border payment exchanges, ISO 20022 is also impacting many other payment infrastructures globally, from domestic RTGS to Instant Payment schemes. The different ISO 20022 adoption pace across these infrastructures, which vary by nature, and the different ISO dialects that will be used, both create a fragmented landscape where successfully managing interoperability and country specific requirements will be key.

Challenges for ISO 20022

ISO 20022 Interoperability

With 200+ different payment types exchanged over the world all wrapped with country specific ISO dialects and rulebooks, it will be challenging for banks operating in several jurisdictions to ensure interoperability across multiple systems - especially if the systems aren't all ISO-enabled. The different ISO migration time-lines, combined with some hybrid initiatives, will bring additional complexity. Banks and Financial Institutions have to prepare their ISO readiness to meet multiple needs, along with anticipating different implementation strategies.

Operational Projects

With ISO 20022 impacting multiple lines of business for banks with domestic and cross-borders rails, the differing tight timelines are exacerbated further by the fact that 'one-size doesn't fit all'. Therefore, appropriate migration project planning that matches each institution's individual strategy will be essential.

New Rails to Consider

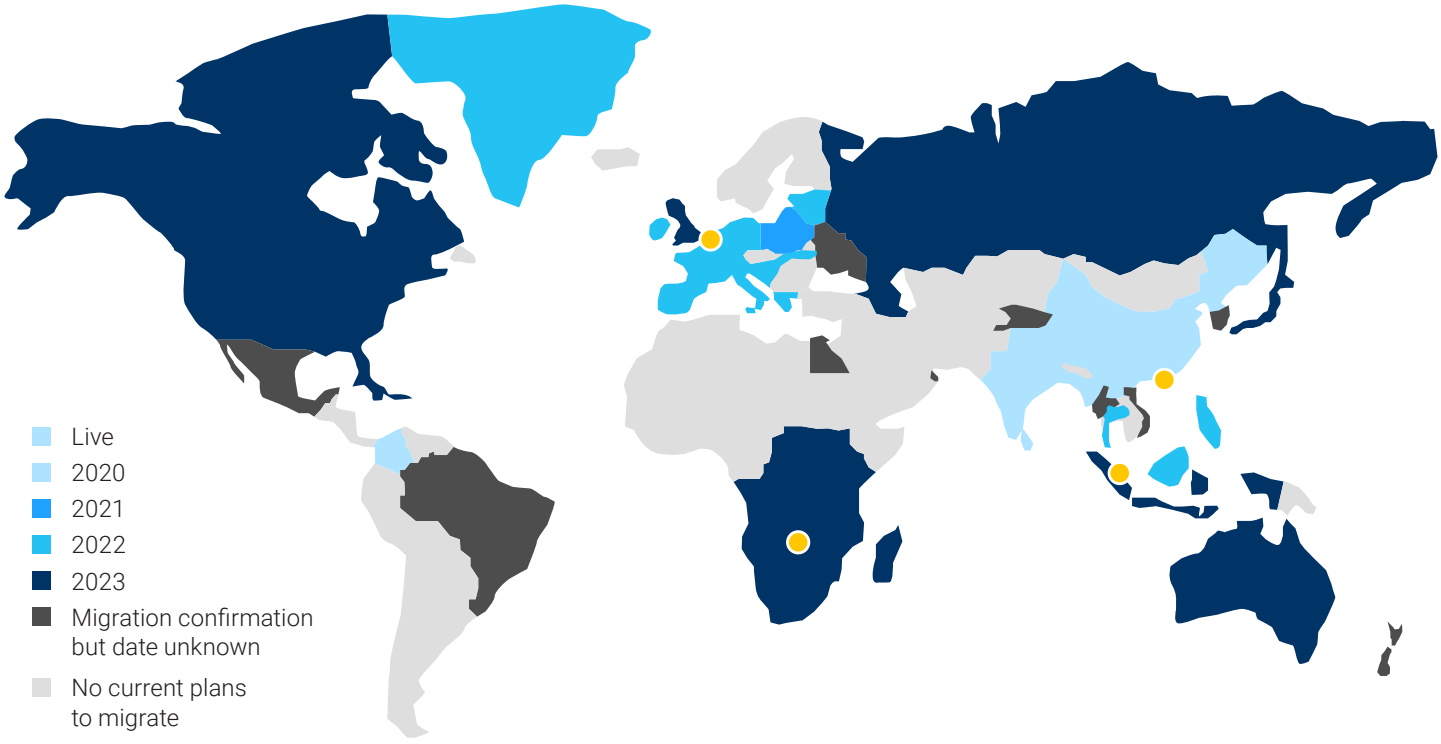
Most of the traditional rails that are currently transporting FIN-like messages will have to change to convey the ISO 20022 XML structure. This change will require the adaptation of gateways to ensure access to the new ISO channels.

Systems Adaptations

Similar to any ISO 20022 initiative, the move to XML requires not only adaptations of the core systems to enable them to generate and to consume ISO standards, but also of all the other ancillary systems such as reconciliation, sanction screening, fraud, liquidity, and connectivity. Therefore, it is vital for institutions to carry out a careful scoping analysis that assesses the real impact of ISO across the whole payments architecture.

RTGS: What other factors apart from ISO 20022 need to be considered?

The number of RTGS that have migrated / are currently migrating / plan to migrate to ISO 20022 over the world is huge. Although the ISO migration program is one of the key concerns for the banks in scope, other challenges must be considered depending on how several countries plan to leverage the ISO change as a core part of their payments architecture - introducing new network providers, connectivity options (e.g. API), rails (e.g. Instant Payments), digital overlay services, and overlay services (e.g. Request to Pay).



Challenges for RTGS

Systems Adaptations

The RTGSs move to ISO requires not only adaptations of the core systems to enable generation and consumption of the ISO standard, but also of all the other ancillary systems such as reconciliation, sanction screening, fraud, liquidity, and connectivity. Specific attention and care must be given to the various rulebooks (i.e. which dialect is used) that will support the varying regional migrations.

Rails Adaptation

In order to improve customer experience, boost innovation and reduce cost, some RTGS are improving their infrastructure by offering access to the scheme via multiple rails. This is the case for example in Europe with SWIFT and SIANet - both providing access to Target 2. The challenge of such dual options is the need for the banks to support additional components that ensure connectivity whatever the network provider (e.g. ESMIG component in the case of Target2).

Other rails changes should be anticipated at the protocol level (e.g. SIC5 in Switzerland, SWIFTNet InterAct for Target 2 via SWIFT in Europe), across various copy-services including SWIFT Y-T). As a result, it is important for each interface/gateways adaptation to be assessed in detail.

In other jurisdictions, this is extended at the network infrastructure level where the market envisages changes. For example, in Switzerland, the current FinanceIPNet network, largely based on MPLS-like principles, is challenged by new private-internet based rails which require upgrades at the router infrastructure level.

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RTGS: What other factors apart from ISO 20022 need to be considered?

At the top of the agenda for most banks worldwide is the SWIFT CBPR+ migration over ISO 20022 and how this will fundamentally affect cross-border payments. The program, spread over 3 years, will require all SWIFT participants to support ISO 20022 by 2025. This lead-up to the co-existence period where legacy standards and ISO 20022 can be used in tandem will add complexity i.e. managing multiple formats for the same functionality. New rails will also be needed to transport the ISO 20022 format, and new features such as extracting wrapped messages inside other messages will require further adaptation at the interface level.

- **New rails** – The SWIFTNet FIN layer used for transporting the traditional SWIFT MT messages will no longer be valid for transporting the CBPR+ MX messages. Banks have to be prepared to manage their SWIFT payments messages over SWIFTNet InterAct, which is the SWIFT channel to transport MX messages. Banks must go through an infrastructure upgrade (e.g. FINPlus service & InterAct) to ensure their availability on the network.

SWIFT also proposes an alternative option to support CBPR+ via APIs through its Transaction Management Platform with initial delivery set for 2022. Implementing these APIs has the potential to be a challenging technology and resourcing project for any banks choosing this path.

- **System adaptation** – As per the RTGS migrations, all the core and peripheral systems (e.g. sanction, liquidity, reconciliation, fraud) need to be able to cope with the new standards.

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Instant Payments: Table-Stakes

With more than 70.3 billion of real-time payments transactions processed globally in 2020, a surge of 41% compared to the previous year, Instant Payments will most probably become the new normal. Being domestic, Instant Payment are often part of a more general upgrade of a market-place, along with RTGS changes. However, with needs revolving around new connectivity methods, ISO 20022 management, instantaneity, availability (24x7x365), and irrevocability, Instant Payments will create their own unique challenge.

	FIN MT	ISO 2022 EQUIVILENT	USAGE GUIDELINE AVAILABLE
PHASE I	MT 103 CORE / REMIT / 103+ / 102	pacs.008	x
	MT 200 / 201 / 203 / 202 / 202COV / 205	pacs.009 CORE & COV & ADV	x
	MT 103 / MT 202 RTN	pacs.004	x
	n/a	pacs.002 (positive) pacs. 002 (negative)	x
	MT 941 / 942	camt.054	x
	MT 900 / 910	camt.053	x
	MT 940 / 950	camt.05	x
	MT 210 (Notice to Receive)	camt.060	x
	n/a	head.001 (BAH) v2	x
PHASE II	MT 103 STP	pacs.008 STP	x
	MT 103 STP	pacs.008 EEA	no business need for a dedicated message (will be covered with pacs.008STP)
	MT 204	pacs.010	x
	MT 104	pacs.003	no business need (removed)
PHASE III	MT 192 / 292	camt.056 - Cancellation Request camt.026 - Unable to Apply camt.027 - Claim Non Receipt camt.087 - Request to Modify	
	MT 196 / 296 / 199 / 299 / 112	camt.029 - Resolution of Investigation	
	MT 101	pain.001	
	MT 110 / MT 111 / MT 112	New Cheques messages	
	MT n90 / MT n91	New Charges / Fee messages	

Challenges for Instant Payments/Real-Time Payments/Faster Payments

New Connectivity Methods

The traditional store & forward connectivity method is not fit for purpose to deliver the speed required in Instant Payment (IP) and new protocols will be required to support IP. In this context, banks will have to consider other options than their traditional messaging gateways to handle Instant Payments. As an example, SWIFT is providing access to RT1 and TIPS real-time systems in Europe via a dedicated and new SWIFT rail (SWIFTNet Inst), which requires its own dedicated gateway. The access to other rails such as RT1 / TIPS via SIANet (or also EBICS for RT1) also requires a dedicated new box. New rails via APIs are also envisaged by several market places, driving a focus on infrastructure upgrades for many financial institutions.

Availability

One of the key aspect of IP is to support 24x7x365 availability with no downtime. This highlights the business case to drive the implementation of active-active solutions (allowing the upgrade of each node separately) to ensure continuity. However, many legacy core systems are still subject to periodic downtime which means they are not only not adhering to the requirements of continuous availability, but risk having to outsource key functionalities (e.g. liquidity checks & fraud monitoring).

Integration

Restful API are common interfaces used to access IP services either directly or via third party providers. Institutions will need to upgrade their infrastructure to connect via API to offer the service to their customers.

SANCTION & FRAUD

With an average time of 10 seconds for an end-to-end IP transaction, the time taken for making sanction or fraud control must reduce to a challenging minimum. Although it is possible to timestamp an outgoing message at its ultimate destination, the incoming screening will remain more challenging as it occurs in time stressed conditions. Such time constraints will prevent any manual action and will require a rethink in the way sanctions screening is achieved.

NEW SLA

The new constraints coming with IP are driving new and more stringent SLAs between service providers, infrastructure providers, and customers.

ALREADY BUSY ROAD-MAPS

The pace of change and demand for innovation in payments has led to Banks & FIs having to roll out lots of new solutions to meet and exceed demands from corporate customers and regulators alike. How do banks that have legacy infrastructure and limited technical resource juggle and prioritise their strategy? As stated above ISO 20022 and real-time go hand-in-hand and impact fraud, treasury, cross-border and so there is an argument that if you solve for these, then you lay the foundations for simplifying and accelerating your digital payments transformation. It is no secret that banks & FIs have realised that they need to accelerate their ISO migration to be compliant for Target2 and that the drive for automated, frictionless payments can only be facilitated by leveraging the rich data capacity and interoperability of ISO 20022. Yes, the end of the co-existence deadline isn't until 2025, but why miss out on all the benefits in the meantime and not consider going ISO native now?

How Can Bottomline Help & Support You?

Cloud Based Solution

Our rich cloud based solution will insulate institutions from many of the challenges above by providing access to multiple schemes and infrastructures via a whole range of rails. Standard solutions will help banks to meet regulatory and business requirements quickly and seamlessly with a minimum impact on core systems. In addition, with cloud infrastructures based on separate and private data-centres located in Switzerland or in the UK, data sovereignty and confidentiality is fully respected. To help future proof, a cloud based proposition will offer a single User Interface to access all the services via an aggregated ecosystem for an intuiative user experience.

Multiple Rails and Gateways Including Instant Payments

Our cloud proposition offers a wide range of connectivity to the most prevalent market infrastructures in Switzerland, UK, Asia, and North America. Access is provided for cross-borders payments, RTGSs, low value payment schemes, and Instant Payments rails - either via traditional methods or via API driven connectivity. The proposition also supports bespoke host-to-host solutions and securities networks (e.g. SWIFT, SECOM, CREST, FIX post-trade).

Integration Facilities

Providing easy access to payments schemes, we offer a wide range of integration options from MQ and sFTP to APIs for messaging, connectivity, payments, and accounting. Translations tools, bulking-unbulking, archiving, storage, enrichment are also available.

ISO 20022 Enabler

With many ISO driven initiatives being prioritised across the payments space, our comprehensive solution for ISO 20022 will help banks & FIs to adapt quickly to the new rails and to manage interoperability across formats.

Supporting SWIFTNet FIN and InterAct along with FINplus services, InterAct based copy services, ESMIG, MX extraction, SIANet network, SIC4 and 5, and monitoring API driven initiative in that space (e.g. SWIFT Transaction Management Platform, SIX Payment Hub), our multiple gateway proposition is supporting all the required changes in rails and protocols migrating over ISO 20022.

Our Transformation and Enrichment service (TES) adds further capabilities by providing you with an extensive list of predefined mapping and rules books coping with the most important ISO initiatives (e.g. Target 2, CHAPS, CBPR+, Lynx, SIC, MEPS+). Other bespoke mappings, rulebooks and translations can be considered as well.

Overlay Services

In order to complement the core services above, our proposition includes additional digital overlay services such as:

- Message Vault: a google-like Elastic Search database able to archive and store massive amounts of data with ultra-fast and easy search capabilities.
- Payment Services: Multiple modules - Verification and validation (incl duplicate check) based on schemes and gateways, Real-time monitoring with reconciled status (UI and Webhook API), Advanced Payment Processing (Workflows, limits and controls), Intelligent routing, traffic control & prioritisation.
- Accounting: Real-time Clearing/Payments Liquidity (can be combined with Payment Services), Internal Clearing, Statement Integration and generation, Ledger nooking & Posting.
- Sanction Screening: a flexible tool with ultra-low false positive rates that is able to screen any type of message leveraging a comprehensive 'case manager' to monitor hits.
- Secure Payment: a sophisticated intelligent tool that highlights anomalies representing a suspicious transaction that is based off both the behavior of a user and the behavior of a transaction.
- Reconciliation: a multi lines of business reconciliation tool that includes payments statements and intra-day in real-time, and exception management.
- Data & Analytics: the huge amount of data transported by our systems enables the provision of insights, intelligence, and predictions on transactions ranging from operational aspects, to business trends.
- Securities: our proposition also delivers added-value capabilities in the area of securities with the support of SRD II, CSDR, Corporate Actions, reconciliation, and market data golden copy.
- Distributed Ledger Technology (DLT or Blockchain): With the support of the Visa B2B Connect initiative (based on DLT technology) we have proven DLT technology targeted at offering an alternative to SWIFT for Business-to-Business payments. We are already active in monitoring all DLT-related payments and securities initiatives and incorporating them into any standard propositions requested by customers.

All the above capabilities are natively supporting ISO 20022.

What are my options?

OPTION 1 – ISO 20022 NATIVE

- Ensure your back-office systems are ready to send and receive ISO 20022 messages.
- Confirm counterparty readiness.
- Set up and test new folder structures and routing rules.
- Subscribe to FINPlus and enable the service.
- Start sending and receiving ISO 20022 messages only (from November 2021).
- Optionally enable Transformation and Enrichment Service via Bottomline for counterparties unable to send MX.

BOTTOMLINE RECOMMENDED

OPTION 2 – MARKET READY

- Confirm counterparty readiness.
- Implement the Transformation and Enrichment Service via Bottomline (see Appendix 1 for more information)
- Set up and test new folder structures, transformation, routing rules.
- Subscribe to FINPlus and enable the service.
- Start sending and receiving ISO 20022 messages only (from February 2022) from the bureau.
- Migrate back office systems to ISO 20022 in your own timeframe.

BOTTOMLINE RECOMMENDED

OPTION 3 – CONNECTIVITY ONLY

- Set up and test new folder structures and routing rules for the new ISO 20022 messages.
- Subscribe to FINPlus and enable the service.
- Manage interoperability with In-flow translation from SWIFT (available from August 2022)
- Move over to ISO 20022 at counterparty request, phased over the migration period.
- Message Storage - it is important that you consider a long-term storage solution for your sent and received messages to ensure that you can reference back if needed. (see Appendix 2 for more information)

Bottomline®

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Bottomline delivers a single SaaS platform for payments, securities and messaging that helps financial institutions and corporates to achieve lower costs, wider reach, speed-to-market, industry compliance, greater security and improved risk management.

Payment & Cash Aggregator • Messaging & Connectivity Aggregator • Securities Aggregator • Fraud & Financial Crime Management • Data & Analytics

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