The Importance of Data Structure: ISO 20022 and the Future of Payments

Treasury and Trade Solutions

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Introduction

The cross-border payments ecosystem is in the midst of a major transformation. Legacy standards, infrastructure and operating models are being challenged as client's expectations rise and vastly improved technologies undermine the status quo. At a global industry level, the Financial Stability Board (FSB) is working with a broad range of ecosystem players to fulfil its vision of faster, cheaper, more transparent and inclusive payments through the Enhancing Cross-Border Payments Roadmap *FSB Roadmap Playbook*. Many of the key friction points identified as part of this work relate to inconsistent standards, structural limitations and fragmentation of the current data model for cross-border payments.

There is a major opportunity for the industry to address these friction points through the global adoption and implementation of ISO 20022 as the data standard for the cross-border payment ecosystem. Migration to ISO 20022 is crucial to overcoming the challenges faced by the industry in a more demanding, globalized, and heavily regulated world. It also facilitates a critical shift in information flow by allowing institutions across the SWIFT network to take better advantage of new technologies and payments processes at lower costs.

By the end of 2025, 87% of high value payments (HVP) systems will have migrated to the ISO 20022 format for financial messaging.[1] This is complemented by SWIFT's own migration to ISO 20022 for payment messages starting in November 2022 and ending in November 2025. This migration has the potential to create major efficiencies in payments, leading to greater speed, automation, and digitization of both payments and post-payments processes. If this migration is successful, it could result in a vastly improved end user experience with faster processing and increased straight through processing (STP) rates, making payment delivery more efficient and lowering costs.[2]

However, the success of this migration will require participants across the ecosystem to make significant investments: a like-for-like migration from the existing antiquated MT standards will be insufficient. In this paper, we explore some of the potential benefits of moving to this new data model as well as potential use cases. This information will hopefully prove valuable to ecosystem players as they consider their business case for investment.

Our focus is on potential improvements in three specific areas:

1. Compliance monitoring and sanctions screening
2. Operations and investigations
3. Reconciliation and data exchange

[1] Swift.com_ISO 20022 migration study consultation paper 2018
[2] Straight through processing is an automated process for electronic funds transfer where there is no manual intervention from payment inception to payment delivery.

Background

SWIFT created the current MT messaging standard in 1977 as a message exchange and common communication platform for cross-border payments; it replaced telex messages between banks. MT provided the industry with a globally consistent way of communicating across the network and made cross-border payments more efficient. MT was created at a time when computing power and data exchange were in their infancy. Movement of digitized information was expensive and therefore MT messages were as data-light as possible and designed for human consumption rather than machine readability. Over the years there has been some automation in message exchanges and adjustments to MT message types (MT100 was replaced by MT103 in the early 2000s, for instance) to allow for stricter data validation. However, there is now a need for a much broader payments message data structure in order to establish cross-border data harmonization.

What is ISO 20022?

ISO 20022 is a global and open messaging standard for financial institutions set by the International Organization for Standardization, an independent, non-governmental standard-setting body. ISO is a language based on a business dictionary that unifies many existing fragmented standards and accommodates local practices and their variants. It is a digitally native message type. Designed for technology ingestion and readability across systems, ISO is widely used today by corporations.

The adoption of ISO 20022 by the cross-border payments ecosystem presents an opportunity to leverage this standard as the data model for payments globally. However, implementing and maintaining the standard across both SWIFT and market infrastructures in a coordinated and harmonized way will be key to ensuring global interoperability. Industry working groups such as the Cross-Border Payments and Reporting group (CBPR)+, the Payments Market Practice Group (PMPG) and High Value Payments Systems (HVPS)+ are defining guidelines for consistent use of ISO 20022 in cross-border payments and will be critical in driving interoperability and a unified approach. While these initiatives are mainly focused on high value payments infrastructure, there is also opportunity to drive harmonization with domestic ACH and instant payments schemes for greater ecosystem-wide interoperability.

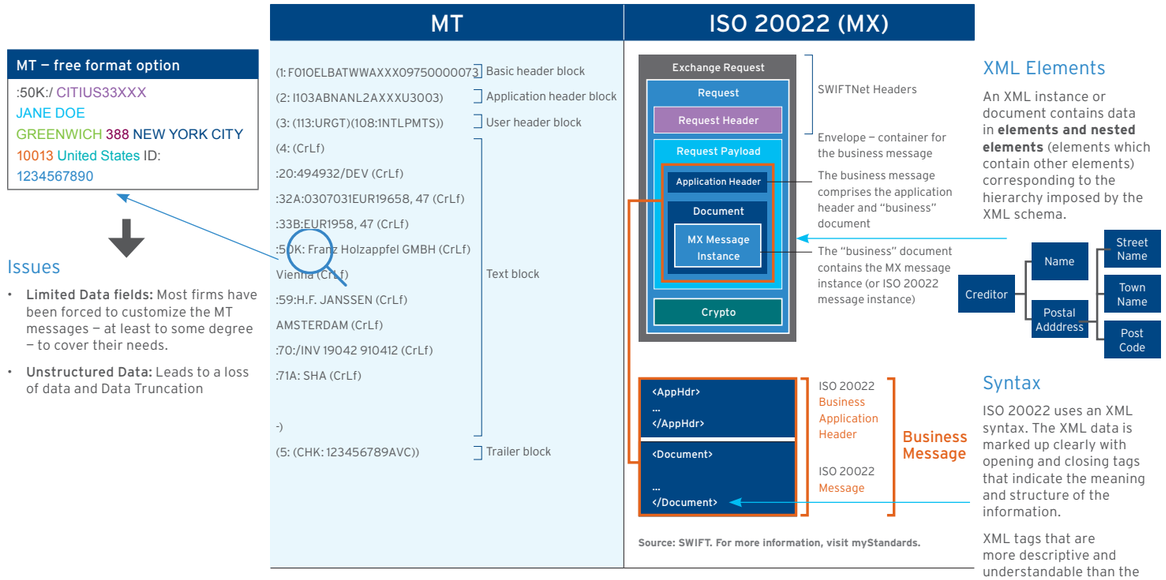
The current bank operational and service model for cross-border payments remains dependent on human interaction to interpret, repair and service payments. It can be inefficient and expensive; message limitations relating to data fields and lack of structure make it harder to meet regulatory requirements. Migration to ISO 20022 has the potential to address these challenges. A new, enriched structured data model for messages will not only promote end-to-end automation but will help unify many existing standards. Ultimately, it will enhance customer service by enabling faster processing, improved reconciliation and greater openness and interoperability.

ISO 20022: A Better Data Model

The ISO 20022 open and global standard is based on the concept of hierarchy where the top layer provides the key business processes and concepts; the middle layer provides logical messages or message models; and the bottom layer deals with syntax.

The ISO 20022 data standard is based on an extensible markup language (XML) format that is descriptive and understandable. The MX message type is an XML-based replacement for the MT message type. It is significantly longer than existing MT messages and captures more data, while the hierarchical structure (with nested elements) allows for logical grouping of data. For example, in the MX message type, the creditor field includes name and address, while there are additional structured elements for street name and zip code in the address field.

These additional elements directly support straight through processing of data, increasing the potential for automation and resulting in faster speeds and a more efficient operating model.



Source: Citi material

The dedicated element structure of the ISO 20022 message format allows instructions for specific business data elements, creating a dynamic and enhanced data model.[3] These structured elements facilitate interoperability and make it easier to exchange messages between regions.

In addition to dedicated elements, the ISO 20022 message format also has new elements with fields such as extended remittance information. Such information is mostly free format in the current MT format; it has to be forced into applications or blocks, which makes it a challenge to determine the exact tag. ISO 20022 has the potential to create a consistent data model across the entire payments chain, which will help reduce obscure data and support more efficient and effective compliance monitoring.

[3] Dedicated elements provide specific fields such as reference fields, service levels, currency, charge information, etc.

Complying with the Travel Rule

Inter-governmental bodies such as the Financial Action Taskforce (FATF) and Financial Crimes Enforcement Network (FinCEN) set international standards to promote financial transparency and combat financial crimes. Their Travel Rule provides standards within the current MT data structure to combat money laundering, terrorist financing and other threats to the integrity of the financial system.

According to the Travel Rule, certain information should be included and carried forward in transmittals of funds involving wires. Specifically, an originating bank must include certain customer and transaction information such as the beneficiary in the originating wire. Although intermediary banks should pass on information received from the originating financial institutions as good practice, there are no standard requirements regarding which data fields must be retained. This is because there are no truly dedicated fields within the current MT structure. The limitation on field length also increases the risk of truncation of information and reduces institutions' ability to monitor data within the payments message.

The ISO 20022 standard would automatically include elements consistent with the ISO 20022 messaging format. In addition, consistent and standardized implementation would reduce friction points and compliance issues relating to local market practices on data fields (many jurisdictions have differing practices relating to address fields, for example).

Focus Area 1: Compliance Monitoring and Sanctions Screening

ISO 20022 messages offer discrete and specific data on the relationships between parties, including actual and on-behalf-of information, intermediate and receiving roles, as well as the geographies of the participants. The ISO 20022 message format allows banks and payment participants to include more contextually relevant data related to the individual payment. It offers rich structured party data, extended remittance information, and allows for special characters and expanded character sets. The structure and granularity of ISO 20022 enables a more targeted approach to screening financial transactions, potentially reducing false positives and addressing the friction associated with sanctions.

Sanctions screening using current MT standards is problematic because of inconsistent formats, omissions, and poor data quality. The MT format contains limited counterparty information, making it difficult to validate that a client name matches a sanctioned entity.

For example, if Laura is a sanctioned client name, all payments with those details in unstructured fields could be placed in a sanction queue, as it would be unclear whether such details related to the debtor or creditor. With structured data, such hits can be ignored, ensuring that payments are not unnecessarily placed in a sanctions queue (eliminating the need to manually check such payments subsequently).

A targeted screening approach avoids false positives linked to mismatches between information type (such as a debtor name being confused with a vessel name or a street name matching embargo data). Structured data applies logic to the screening process, facilitating automation and eliminating post-facto manual monitoring. By providing more detailed information about all parties involved in a payment, the new message format speeds up payments, increases transparency, and improves the effectiveness and accuracy of sanctions screening.

The example below shows how this works in practice. John Smith, who lives at 126 Cuba Ave in NYC, wants to send a payment.

- Using the MT free format option in field 50K there is no way to determine without human intervention if Cuba relates to the country or the street name.
- However, when formatted with ISO 20022 we see that Cuba Ave is tagged to street name and not the country field; therefore it will pass screening without registering a false positive.

MT – free format option

:50K:/ CITIUS33XXX
JOHN SMITH
CUBA AVE 126 NEW YORK CITY
10306 United States ID: 1234567890

ISO 20022 Debtor data element example

Credit Transfer Transaction Information	Debtor	Name		JOHN SMITH
		Postal Address	Department	
			Sub Department	
			Street Name	CUBA AVE
			Building Number	126
			Post Code	10306
			Town Name	NEW YORK CITY
			Country	US
		Identification	Legal entity identification (LEI)	1234001234567891 2312
	Debtor Account	Identification	IBAN	US253902000000 012345
	Debtor Agent	FI Identification	Finical Institution BIC	CITIUS33XXX

MX message XML Example for Debtor:

```
<Dbtr>
        <Nm> MR JOHN SMITH</Nm>
        <PstlAdr>
                <StrtNm> CUBA AVE </StrtNm>
                <BldgNb>126</BldgNb>
                <PstCd> 10306 </PstCd>
                <TwnNm> NEW YORK CITY
</TwnNm>
                <Ctry> US </Ctry>
        </PstlAdr>
        <Id>
                <OrgId>
                        <LEI>12340012345678912312</LEI>
                </OrgId>
        </Id>
</Dbtr>
<DbtrAcct>
        <Id>
                <IBAN>
US253902000000012345</IBAN>
        </Id>
</DbtrAcct>
<DbtrAgt>
        <FinInstnId>
                <BICFI> CITIUS33XXX </BICFI>
        </FinInstnId>
</DbtrAgt>
```

Source: Citi material

The more structured and higher data quality offered by ISO 20022 could facilitate the use of new technologies like artificial intelligence (AI) and machine learning (ML), which would automatically eliminate false hits, reducing manual intervention and accelerating payments processing.

Moreover, ISO 20022 could streamline compliance by making processes faster, more efficient, and more accurate. This would lessen one of the greatest friction points in cross-border payments and make compliance with regulatory mandates on processing completeness and quality data more straightforward.

Benefits

- Financial data management
- Enhanced client experience
- Harmonization across global jurisdictions
- Greater transparency

However, in the short term, banks need to be mindful of the unintended consequences of adopting full ISO 20022 messages. Given their extensive unstructured data fields, if data is of poor quality it could result in an increase in false positives unless banks build ignore patterns or find other ways to manage exceptions. Institutions considering the potential upside of ISO 20022 implementation should review their internal hit rates, including the number of false positives, with a view to moving towards a fully structured data model in the future.

Focus Area 2: Operations and Investigations

The failure of payments due to repair or investigations across the banking chain is another key pain point in the current cross-border payments system. It results in potentially lengthy payments delays for end users and contributes to the cost of payments processing for banks, impacting overall client experience. In many cases, payment repairs and investigations result from poorly formatted or incomplete payments messages.

Repair

The current MT standard makes it difficult to validate whether payment details are complete in advance and their open and unstructured nature also leads to incorrect use of fields by senders and sending institutions. One common reason why non-STP payments require manual intervention is because of incorrect intermediary/ beneficiary bank information and a lack of upfront validation. For example, the beneficiary bank in field 57 of an MT103 is often incorrectly formatted. Below is an example of this occurring and how these messages are repaired at present.

Incorrect Beneficiary bank formatting

MT103 (Customer Payment)

{1:F01CITIUS33AXXX0000000000}
{2:O103TESTUS33XXX}}
:20: ABC123REFERENCE
:32A:150505USD12666,00
:50K:/123456789
JANE DOE
~~:57D:BANK OF WIRE TRANSFERS~~
~~MIAMI, FLORIDA USA~~
:59:/12345678
JOHN DOE
:70:CONGRATULATIONS
:72:/ACC/IMPORTANT PAYMENT

Manual Repair

MT103 (Customer Payment)

{1:F01CITIUS33AXXX0000000000}
{2:O103TESTUS33XXX}}
:20: ABC123REFERENCE
:32A:150505USD12666,00
:50K:/123456789
JANE DOE
:57A:BOWTUS33
:59:/12345678
JOHN DOE
:70:CONGRATULATIONS
:72:/ACC/IMPORTANT PAYMENT

ISO 20022 pacs.008 Beneficiary Bank Example

```
<CdtrAgt>
        <FinInstnId>
                <BICFI>BOWTUS33 </BICFI>
        </FinInstnId>
</CdtrAgt>
```

Source: Citi material

Because field 57D does not have a specific tag, many players enter the name of the institution when only a business identifier code (BIC) is required (detailing financial or non-financial institutions).[4] With ISO 20022, it is clear from the tag that only the BIC – BICFI in this example – should be included in this field; there is no need to incorporate the institution's name or another identifier.

Investigations

Investigations could greatly benefit from the adoption of ISO 20022. On average, 2%-5% of all payments prompt an enquiry. Management of exceptions, alerts and investigations is extremely labor intensive for a financial institution because it hinders increased automation. The requirement for investigations is largely due to the widespread use of free-format messages combined with a lack of industry rules.

Furthermore, many banks use the unstructured MTn99 message type for investigations. These messages require human intervention to read, identify the issue and then determine the proper course of action. In many cases inquires can take days to resolve due to inefficient processes. Banks need to address their dependence on MTn99 messages in the immediate term.

[4] A Business Identifier Code (BIC) is a universal standard used for routing transactions to identify financial and non-financial institutions in a payments chain.

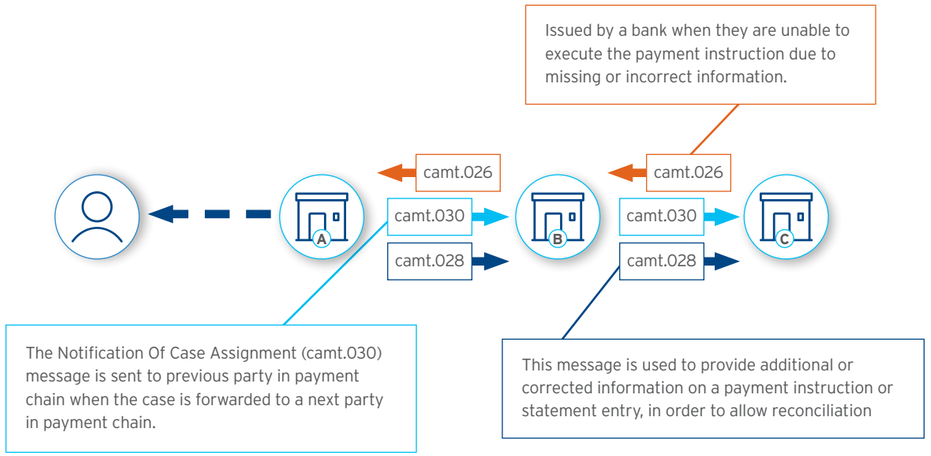
In an ISO 20022 world, the unstructured free format MTn99 messages would be replaced by 17 different types of camt (cash management) ISO messages for investigations related to cash transactions; ISO 20022 has no support for generic MTn99 messages.[5] Camt messages are designed to assist the investment fund community with account management, bank transfers and account statements. Their structure is specific to the inquiry or action being requested. The following is a list of key camt ISO messages:

camt.055	Issued by the initiating party (Debtor) to initiating bank (Debtor Agent) to request the cancellation of an initiation payment message previously sent
camt.056	Issued by a FI to another FI or Clearing House to request the cancellation of an existing payment message
camt.037	Initiated by a bank to the creditor agent requesting authorization to debit its account
camt.036	Response from the creditor agent to the camt.037 sent providing authorization to debit its account
camt.027	This message is used to transport the Claim Non-Receipt from the Originator Bank to the Beneficiary Bank, directly or through intermediaries
camt.029	Initiated by a bank to provide the status of an ongoing investigation

Source: Citi material

Below is an example of how these messages could be used to resolve a payment inquiry:

Unable to apply – *A financial institution is unable to execute the payment due to missing information. An investigation is opened to check the missing details with the debtor. Once additional information is issued, reconciliation can take place.*



Source: Citi material

[5] camt messages are message types sent by banks to their customers, in order to inform them on the status of an initiated transaction, the arrival of incoming transactions or to communicate their account .statements.

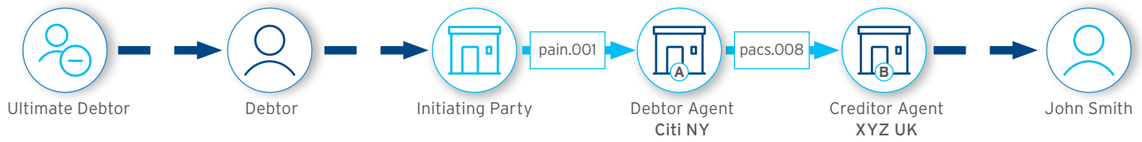
Focus Area 3: Reconciliation and Data Exchange

Reconciling cash positions via intra-day or end-of-day bank statements can be onerous for both banks and corporates due to missing remittance information, remitter identification, lack of data standardization across different message formats, in-country data variants or data truncation. For example, if a corporate wishes to reconcile payments based on intra-day statements (e.g., MT942 message type), its statement may not contain the ultimate debtor information (which is included in the pacs.008 (payments clearing and settlement) message); this can make it impossible to reconcile the originator of funds.[6]

The ISO 20022 format enables transmission of detailed invoice information which is critical for end-to-end reconciliation. This is especially crucial for corporates' enterprise resource planning (ERP) systems that generate invoice information against each payment record. The use of structured and enhanced payments data will increase automated reconciliation of payments and invoices and overall efficiency across the industry.

Support for OBO Payments

One major pain point for corporates reconciling their payments and receivables, especially for those with centralized treasury structures, is the inability to fit all required sending and receiving party information for on-behalf-of (OBO) payments within the current cross-border payments message format. OBO payments are increasingly used by corporates as a result of Open Banking regulations/PSD2[7] and the growing number of payment intermediaries. However, the current MT structure is not designed to support these payments efficiently. In contrast, ISO messages have dedicated and structured fields to support this type of payments message.



MT – free format option

```
:50K:/24681012
E GHAZARYAN ARMAN ALBERTI
KOSTANYAN 1/5 KOSTANYAN 1/5
ULTIMATE DEBTOR ADD 3


:72:/ACC/CHASUS33XXX
//BY ORDER OF ABCDUS33XXX FOR GH
//AZARYAN ARMAN ALBERTI ACCOUNT
//24681012

:72:/INS/VISAUS33XXX
```

The existing MT messages have limited number of fields and most of the data related to debtor or initiating party etc. in case of an OBO payments or Nested payments are put into the free format fields like Tag 72, which needs bi-lateral agreements to be in place and also introduces the risk of mismapping and data truncation.

In MX messages there are dedicated fields available for various parties in the payments. There are dedicated fields available for Ultimate Debtor, Debtor, Initiating Parties.

Debtor	Party that owes an amount of money to the (ultimate) creditor. In the context of the payment model, the debtor is also the debit account owner.
Creditor	Party to which an amount of money is due. In the context of the payment model, the creditor is also the credit account owner.
Ultimate Debtor	Ultimate party that owes an amount of money to the (ultimate) creditor.
Debtor Agent	Financial institution servicing an account for the debtor.
Creditor Agent	Financial institution servicing an account for the creditor.
Forwarding Agent	Financial institution that receives the instruction from the initiating party and forwards it to the next agent in the payment chain for execution.
Initiating Party	Party initiating the payment to an agent. In the payment context, this can either be the debtor (in a credit transfer), the creditor (in a direct debit), or a party that initiates the payment on behalf of the debtor or creditor.

Source: https://www2.swift.com/mystandards/res/cbpr/ISO_20022_Programme_UHB_Q2_2021_Edition_v1.0.pdf

[6] Pacs.008 is the MT103 equivalent for a FI-to-FI customer credit transfer.
[7] The UK's Open Banking Implementation Entity (OBIE), the body tasked with designing open banking technology in the UK. See: https://www.openbanking.org.uk/news/three-years-since-psd2-marked-the-start-of-open-banking-the-uk-has-built-a-world-leading-ecosystem/

Remittance Information

The ISO 20022 format has an element with a detailed structure for remittance information. The extended remittance information within the MX message contains several possible source elements to enter MT remittance information, including ultimate debtor, ultimate creditor, purpose code, end-to-end-identification, related remittance information and remittance information.

MT 103 Message – Remittance Information

:70:/PURP/**GDDS**///ROC/**END2ENDID-CIT001**
23456789-448123455329///URI/**CINV**/ Z
0045400103 **09-292021** **03/21-21V.331**
67824686784 -5486 793 / 1234001234567891+

Field limitation:
4 x 35 characters

ISO 20022 pacs.008 XML message Example

```
<CdtTrfTxInf>
  <PmtId>
    <InstrId> JD/150928/CCT001/1 </InstrId>
    <EndToEndId> END2ENDID-CIT00123456789-
448123455 </EndToEndId>
    <TxId> CITINY/12345/XYZGB/USD </TxId>
    <UETR> eb6305c9-1f7f-49de-aed0-16487c27b42d </UETR>
  </PmtId>
  <IntrBkSttlmAmt Ccy=USD> 10000 </IntrBkSttlmAmt>
  <ChrgBr> CRED </ChrgBr>
  <ChrgsInf><Amt Ccy='USD'>1.00 </Amt></ChrgsInf>
{…}  <Purp>
       <Cd> GDDS </Cd>
     <Purp>
{…}
     <RmtInf>
       <Strd>
            <RfrdDocInf>
                 <Tp>
                      <CdOrPrtry>
                           <Cd> CINV </Cd>
                      </CdOrPrtry>
                 </Tp>
                 <Nb> Z0000103 </Nb>
                 <Dt> 2021-09-29 </Dt>
            </RfrdDocInf>
       <CdtrRefInf>
            <Ref> 03/21-21V.331667824686784 -5486793 </Ref>
       </CdtrRefInf>
            <Invcr>
              <Id>
{…}           <OrgId><LEI> 12340012345678912312 </LEI>
```

Data Truncation

Remittance information is among the most frequently truncated data points.

- In this example, the End-To-End-identification and Purpose Code can be mapped in full to an MT message, while the Remittance Information is truncated because of character limitation.

In the example above, an end-to-end identification and purpose code is successfully mapped to a MT message. However, due to character limits (four lines, each offering 35 characters) a lot of free formatted information is forced into blocks, resulting in remittance information being truncated.

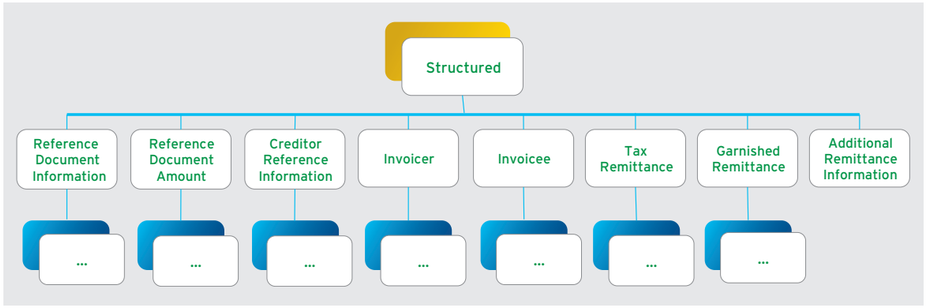
The introduction of a new element for remittance information allows for granular data inclusion within a payment, with structured remittance data such as invoice contract details, reference number and invoice itemized details, which can facilitate streamlined invoice reconciliation.

This capability would benefit all corporates. Adoption of expansive and rich structured data results in a wider data set compared to today's MX message format, improving reconciliation and invoice management. Moreover, it will reduce the number of service and investigation queries, driving an enhanced client experience and improved overall treasury management.

It is important to note that in a pacs.008 message there are two new dedicated elements (outlined below) that allow the use of extended remittance information. These elements have a distinct use and cannot both be present in the same payment.

1. **Related remittance information.** This relates to the handling of the remittance information by any of the agents in the transaction processing chain. This information is typically provided by the debtor in the payment initiation request. Related remittance information contains:
   - **Remittance identification:** A unique identification, as assigned by the initiating party, to unambiguously identify the remittance information. It is sent separately from the payment instruction, such as a remittance advice.
   - **Remittance location details:** A set of elements used to provide information on the location and/or delivery of the remittance information.
   - **Method:** How the remittance advice information is delivered.
   - **Postal address:** Where the agent sends the remittance information. The postal address identifies a specific location, as defined by postal services. This data element contains multiple tags which can be used for:
     - Structured address details, where components of the address are included in their respective tags.
     - Unstructured address details, where all information is included in a single tag, which can be repeated as required.
2. **Remittance information.** This is supplied to enable the matching of an entry with the item that the transfer is intended to settle, such as commercial invoices in an accounts receivable system.

The structured element is nested, capturing rich structured remittance information. It is unlimited in its multiplicity, but must not exceed 9,000 characters of business information (this does not include the XML element identification). The use of this nested element should be bilaterally/multilaterally agreed, to ensure end-to-end transportation of this data.[8]



Source: https://www2.swift.com/mystandards/res/cbpr/ISO_20022_Programme_UHB_Q2_2021_Edition_v1.0.pdf

Remittance advices are typically considered a traditional value-added service provided by the debtor agent to the debtor, in order to provide remittance information to the creditor. This element can travel end-to-end within the pain, pacs and camt reporting messages.

Remittance information is a dedicated element used both within pacs and camt reporting messages; this information can travel end-to-end using ISO 20022.

[8] https://www2.swift.com/mystandards/res/cbpr/ISO_20022_Programme_UHB_Q2_2021_Edition_v1.0.pdf

The Role of ISO 20022 in Citi's Payment Strategy

ISO 20022 is at the core of Citi's payments strategy. As an industry leader, we are committed to driving awareness of the benefits that ISO 20022 brings to all participants in the payments ecosystem. To that end, we are fully incorporating this data standard across our operations, service and technology ecosystem. Citi is working collaboratively across our organization on a strategy and execution roadmap to ensure that all areas of the bank are fully prepared for this change. We are also leveraging our close relationships with SWIFT as well as clearing systems in the US, Europe and across the globe, to stay informed on global implementation timelines and market updates.

Citi has begun laying the groundwork for this migration internally. We have established global management and communication processes to ensure that teams have the training and support needed. Teams across Product, Operations, Technology, Service, Sales, Compliance, Risk and other areas have taken part in training, workshops, and seminars in order to understand the external and internal impact of ISO 20022 implementation. It is crucial for Citi to establish clear implementation guidelines for all employees, as all areas of the bank will be impacted by this migration, from front office to core infrastructure (such as interbank channels). Citi is developing and enabling shared utilities for accessing, validating, translating, and enriching structured ISO data.

As part of its approach, Citi is rethinking its entire data framework in order to transition from legacy data formats towards a ISO 20022 data model. In doing this, Citi will capture and store new, rich data elements and present this data in real-time to customers, across multiple channels. In the long-term, the migration will streamline system and capability implementations as we will have a single core data model rather than multiple formats that require translation and convergence. In addition, we are ensuring we have data storage and processes in place to build analytics to derive insights and new services.

To facilitate a safe and timely migration that meets external timelines, Citi has formed a cross-functional group to take a holistic and cohesive approach to supporting clients across all segments. Given the complexity of the migration over the next five years, it is critical to map out the impact across clients as well as payment data exchange standards.

The Case for Community Adoption of Enhanced and Fully Structured Data

As adoption of the ISO 20022 messaging standard proceeds, two approaches are being taken by major industry players. The first is a big bang implementation with a full move to ISO 20022; the second is a like-for like gradual transition.

In a like-for-like migration there is a measured move of a specific sets of ISO 20022 data points, replacing existing formats. This type of migration allows an easy transition between legacy and the ISO 20022 format with no loss of data. It also gives institutions additional time to facilitate a complex technology migration.

One risk of adopting a gradual like-for-like approach is that the large amounts of unstructured data facilitated by ISO 20022 can lead to increased rates of payment repairs and more frequent higher sanctions hit rates, thereby impacting STP rates. Moreover, a reliance on a like-for-like strategy will slow the industry transition to an ISO-native world. In addition, implementation of new ISO 20022 standards releases or upgrades will pose a challenge if adoption is fragmented.

In order to reap the benefits of greater openness and interoperability, a move towards widespread community adoption of structured ISO 20022 data – where both senders and receivers are not only ISO-enabled but also adopt a fully structured ISO message – is necessary. Such an approach will not only promote end-to-end automation but will also help unify many existing standards. Ultimately, it will enhance customer service as a result of faster processing, improved reconciliation and greater openness and interoperability.

To facilitate a safe and timely migration that meets external timelines, Citi has formed a cross-functional group to take a holistic and cohesive approach to supporting clients across all segments.

Conclusion

The migration to ISO 20022 is challenging for the industry and will require significant effort from all institutions. It is not simply a shift from one messaging standard to another, but a change in data models and a move to a new language, which needs to be learned by both humans and machines. This new standard and language will need to be incorporated into all processes and procedures throughout the payments chain: a truly collaborative effort across the industry is essential.

Despite the scale of the challenges, within the next few years, ISO 20022 is expected to dominate high-value payments, supporting over 87% of transaction values worldwide. It is therefore important for FIs worldwide to begin planning for full integration of the standard into their platforms as soon as possible. The rewards on offer justify the work required. If implemented fully, with a globally consistent approach, ISO 20022 has the potential to enable transformational technologies such as AI and ML, driving greater efficiency, digitization, and interoperability across the globe. As the world becomes increasingly complex and digital, with a slew of new market entrants, FIs that are prepared will realize the greatest benefits from ISO 20022 and will be best positioned to lead the industry in the future.

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