

ISO 20022 – Payments Language of the Future

Why are we investing in ISO 20022 messaging?

Payments are the backbone of today's economy. Without payments, businesses would be unable to procure for their supply chain or pay their employees, consumers could not purchase necessities or luxuries, and governments would not be able to fully serve their citizens. Because payments are so intertwined with everyday life, demands for improved payment functionality have increased, with corporates and consumers both demanding faster, more secure, and more convenient payments than ever before.

We have seen a sub-set of non-bank payment providers, such as Fintechs and Trusted Third Parties as defined under EU PSD2 legislation, who have risen to meet clients' expectations, offering payment solutions based on new technology that were unthinkable less than a decade ago. Clients are, however, still impacted by challenges faced by Payment Service Providers ("PSP") in today's payments landscape, including barriers to interoperability between clearing systems in different countries, lack of integration between high and low value payment systems, limited capability to efficiently deliver extended remittance information and ever increasing compliance and security obligations. Against this backdrop,

a major change in the payments industry, which will be a potential answer to many of today's payment challenges, is coming – the expanded adoption of the ISO 20022 standard for payment and reporting messages on high and low value clearing systems using the SWIFT messaging service.

As major high-value payment clearing systems and SWIFT begin to migrate to the ISO 20022 standard for payment and reporting messages, there will be significant opportunities for both PSPs, financial institutions ("FIs") and Corporates to benefit from the structured data definitions and richer data. While ISO migration can be merely a technical project to come into compliance with ISO standards, it also offers a unique opportunity to take a leap forward and devise strategies to capture benefits from better interoperability and richer structured data. In the short term, Straight through Processing ("STP") benefits can be achieved thanks to ISO 20022's heightened detail and structured XML syntax, allowing FIs and Corporates to communicate more efficiently and effectively in certain areas. Long term, abundant opportunities lie ahead for FIs to exchange richer data and XML based interoperability, supporting innovation in the world of payments.

What is ISO 20022 messaging?

ISO 20022 is a financial messaging standard and specifically a payments and reporting messaging standard that utilizes a structured syntax known as Extensible Markup Language ("XML"), in addition to being a dictionary of common message components that is re-useable in other financial transactions.

ISO 20022 standards encompass securities and funds processing, trade finance, foreign exchange and even ATM messaging standards, creating a common global language that enables payments counterparties to communicate more effectively in an automated and increasingly more real-time fashion. On the SWIFT network, messages in the ISO 20022 standard are referred to as MX messages (cf. the legacy generation of SWIFT messages are referred to as MT).

Today, ISO 20022 standard messages are already used by many real-time and low-value clearing systems, including the U.S.'s real-time RTP system, the Eurozone's low-value STEP2 system and real time payment systems RT1 and TIPS, and Japan's real-time Zengin-Net system. Additionally, a number of high-value clearing systems, like the SWISS Interbank Clearing or Japan's BOJNet are ahead of the broader industry's migration to ISO 20022 and already use the standard today.

Beginning in Q2 2022 with the Bank of England's CHAPS migration to the new UK RTGS system, ISO 20022 will gradually become the global standard for payments messaging on high-value systems as major clearing systems migrate to this standard. In Europe, transition will continue with TARGET2 and EURO1 in November 2022 (both EUR systems), followed by CHIPS and Fedwire for USD, which are targeting 2023.

“The Financial Services Industry is embarking on a multi-year effort to evolve the way we exchange and process payments data. J.P. Morgan sees an opportunity to move well beyond the messages banks exchange, to empower our clients to manage their liquidity and reconcile their funds movements with structured data on a near real-time frequency.”

Ms. Gayathri Vasudev

J.P. Morgan Wholesale Payments, Head of Global Clearing

Immediate benefits of ISO 20022 for SWIFT messaging

Benefit #1: Increased transparency and efficiency

The lack of structured data in legacy payment and reporting messages is an obstacle to seamless compliance screening. Screening a long string of unstructured text creates the risk of misinterpreting data, resulting in a higher level of false positives, which cause payment delays. With ISO 20022's richer and more structured data, FIs can streamline compliance efforts while better ensuring adherence to governing regulatory obligations. From a more technical perspective, ISO 20022 messages have XML tags that give more structure, a readable name to each element in the message and clearly show where each element starts and ends.

These XML tags aid in the compliance process, as data can be more accurately screened when presented in this structure than in unstructured legacy formats where it can be difficult to match data in a text string to the correct element. Definition provided by XML tags can prevent payments from being incorrectly flagged due to sanctions concerns, as a word or phrase can be screened in context during the screening process. This can allow FIs to spend less time investigating incorrectly flagged payments, saving both time and resources.

Benefit #2: Enhanced bank-to-bank communication & automation

Exceptions and investigations ("E&I") activities, ranging from requests to modify payments to requests to return funds, are critical to the overall quality of a payment provider's offering. E&I inquiries are occurring more frequently as sanctions and regulatory requirements increase, and with legacy MT formats, the processes are time consuming, expensive, and largely manual for FIs. Free format messages are frequently used for E&I purposes, which can make automation a challenge. For example, if an institution receives a free format message requesting a return of funds, but the message doesn't use the exact funds return request code recognized by the FI's processing system, human intervention will be required and the handing of these exceptions can further worsen the client's payment experience.

However, with ISO 20022's more structured message types that can be used for specific E&I purposes, mainly within the Cash Management ("camt") message series, the industry can move away from free format messages to structured messages and streamline payment providers' efforts by automatically resolving E&I cases more consistently, as message formatting and language will be more read across the industry.

ISO 20022 messages can also bring more clarity to E&I inquiries. One example of this is the information provided in the Cancellation Reason Code field of ISO 20022 payment cancellation request messages (camt.055 and camt.056). The sender can input one of multiple code options in this field to provide greater detail on the reason for the cancellation request, including duplicate payment or incorrect currency. Although structured MT192/292 messages support use of these same cancellation request reason codes today, in practice their usage is relatively minimal compared to the more usual usage of free format messages. With ISO 20022, free format options do not exist. Consistent industry use of structured, standardized data will inevitably reduce the number of inquiries, but also help to automate payment E&I processes, potentially allowing for faster resolutions, when certain types of issues arise in the payment chain. Faster resolutions enable FIs to improve in client service areas where demands are ever-increasing, particularly in relation to payment speed and ease of completion.

For example, imagine there is an individual living in the United States named Cuba Smith who is the ultimate beneficiary of an incoming payment. With legacy format messages, this payment has a much greater chance of being stopped due to sanctions screening processes due to the word 'Cuba' appearing in the payment message in a non-structured way.

Although 'Cuba' is only in the beneficiary's name, and the recipient is located in the United States, it will be difficult for screening systems to match legacy format data to the correct elements, most likely resulting in the payment being stopped. With an ISO 20022 message, readable data tags will improve the screening process, and it will be much easier to determine that there is not a sanctions concern in this scenario due to the presence of the word 'Cuba' alone, as it is only part of the beneficiary's name.

The image shows a comparison between two message formats for beneficiary information. The top section, titled "MT format", shows a plain text string: "-59/1234567890 SAMPLE BENEFICIARY 123 CITY AVENUE NEW YORK NY US". Below this, a legend indicates "Unclear country information" and "Unstructured data". The bottom section, titled "ISO 20022 standard (MX)", shows the same information wrapped in XML tags: "<Cdr> <Nm>SAMPLE BENEFICIARY</Nm> <PstlAdr> <StrtNm>CITY AVENUE</StrtNm> <BldgNb>123</BldgNb> <PstCd>10004</PstCd> <TwnNm>NEW YORK</TwnNm> <CtrySubDvsn>NY</CtrySubDvsn> <Ctry>US</Ctry> </PstlAdr> : etc. : </Cdr>". Below this, a legend indicates "Clear country information" and "Structured data".

Long-term benefits – Creating interoperability and harnessing the power of data

Benefit #3: Enhanced Data and Payments Reconciliation for Corporates

The reconciliation process is a challenge for Corporates today, as legacy message formats often do not provide data that can automatically reconcile incoming payments with outstanding invoices for goods previously delivered or services already provided to their customers. With ISO 20022's rich data and structure that can carry invoice information, Corporates can benefit from easier reconciliation of outgoing and incoming payments, saving time and resources while also maintaining accuracy. Enterprise Resource Planning ('ERP') systems that are ISO 20022 compliant will make short work of reconciling bank statements to accounts receivable or payable. Because ISO 20022 provides consistent standards for messages across the payment chain, from payment initiation to cash reporting, reconciliation of incoming payments and outstanding invoices by ERP systems can be automated, combining what would otherwise be multiple steps into a single unified process.

Automated reconciliation of incoming payments with outstanding invoices can potentially enable Corporates to reduce their 'days sales outstanding' ratio by allowing for faster conversion of receivables to cash. Because Corporates cannot use incoming cash until it is reconciled, faster reconciliation also means cash can more quickly be used to further business objectives. Ultimately, a streamlined reconciliation process will allow Corporates to spend additional time on revenue-generating efforts while ensuring that cash and receivables records are also in order.

While most corporate professionals focus more on commercial activities than the underlying payments, a 'bad' payment can ruin a commercial experience. As technology develops, payments have become more closely aligned with the underlying commercial activities. This includes embedding payment methods with clients' ERP systems through APIs, and e-commerce platforms leveraging wallets to create seamless online purchasing experiences.

However, when looking at the payment market infrastructures to which banks are connected, there are stark differences between payment systems and market practices from country to country. Supporting a seamless cross-border payment experience is a highly challenging task. The information required for payments differs by country and by market infrastructure, which is part of the reason why payments rarely move freely from one country to another. Traditionally, banks have had to re-format the data exchanged with customers to fit the requirements of each local infrastructure, and then re-format the data back into SWIFT format, creating the possibility for data corruption or truncation. Often times, banks will need to 'repair' a payment by inserting data based on the bank's proprietary knowledge of local requirements or by asking clients to provide additional information, which causes delays, at others there is sometimes the loss of payment information.

A number of leading payments infrastructures around the world have already adopted ISO 20022, and retired their proprietary formats. As major market infrastructures such as TARGET 2, CHAPS, Fedwire, and CHIPS and SWIFT user-to-user participants adopt the ISO 20022 messages over the next few years, cross border payments should no longer require banks to reformat or supplement additional payment information before converting them to another currency or sending them to another country. With richer and more structured payment information and more unified requirements, payments will travel more seamlessly from sender to end receiver and reconciliation should be greatly facilitated, regardless of the currency or country.

As richer payment data that is ISO 20022 structured and standardized is adopted across the universe of payment infrastructures, and information can flow seamlessly from one nation to another without alteration, banks will have a greater opportunity to harness the power of data in the payments ecosystem. This payment information is not only valuable from management information and compliance perspectives, but can also provide insight to help banks understand their clients' behaviors and counterparty interactions. Banks can then develop refined products and services supporting their clients in the generation of further commercial opportunities.

Compare how fintechs, through the expansion of services, have become increasingly relevant and have even become integral in their customers' day-to-day lives like a ride-share company that subsequently introduced an e-wallet to complement their application. Another example is how emerging fintechs have created closed loop ecosystems and use the power of data to gain insights into their customers' behaviors using various data aggregations including Artificial Intelligence ("AI") to anticipate client needs, proactively recommend services to their clients, and customize offerings to provide white glove-like services to grow customer loyalty. The continuous iteration of data augmentation allows fintechs to expand into adjacent services and further develop their platforms. Similarly, the standardization of data flows in the banking ecosystem will provide opportunities to identify trends, remove new friction points and invigorate the development of new solutions.

Where might all this lead? QR payments on ISO 20022 standards and more

With the advancement of mobile technology and new tech savvy generations entering into the workforce and becoming mainstream consumers, our society has become more cashless with increased adoption of contactless and mobile payments and increased expectation of real time availability of both service capability and information.

Card networks and issuers have been able to leverage chips and other technology to offer fast and frictionless payment options. At the same time, non-bank payment service providers have also built proprietary QR payments for their close loop payment network. However, banks have not yet been able to offer these more frictionless payment experiences to checking account holders using traditional payment methods, in part because they have been mired in heritage data structures that limit the information that can be transmitted.

With the adoption of ISO across various national payment systems, banks will have an opportunity to introduce QR payments and other new capabilities leveraging richer standard structured information. The industry will be able to leverage ISO standards and develop guidelines to define the content of QR codes that can be used for cross border payments so that business and consumers can initiate payment without manually entering the payment details which might cause errors and increase friction.

Closing comments

While the immediate business case for ISO 20022 on automation and efficiency are more obvious, the future potential will be significant as FIs start to think strategically about how to harness the power of data, create value added services and build out an ever more frictionless payment experience.

In the near term benefits can include:

- Fewer sanction screening delays from more structured data,
- Faster payment application and reconciliation enabled by more information in the message, and
- A common message standard across all participants from ordering party to beneficiary, each of these benefits will reduce friction from manual processing and therefore save time and expense.

The opportunity to innovate and create new products and services ranging from the smallest retail payments to the highest value, highest priority transactions based on the increased data that can be carried in a common format should alleviate many current practices created to overcome the hurdles our current usage of multiple proprietary and common data standards encourage.

The payments landscape is undergoing unprecedented changes with new technologies, increased competition and heightened client demands. In order for Financial Institutions to stay relevant to their client base in the payments space, forward-looking change is needed, and ISO 20022 can provide the building blocks for payment innovations.

To ensure your firm is ready for the new opportunities structured data can provide, plan to embrace the ISO 20022 data structure in your processing applications and data warehousing. Doing so early may help avoid the pitfalls of trying to map your current data to and from the ISO data structures in the future.

J.P.Morgan

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