A Guide to ISO 20022 and its Impact on Financial Crime Screening

White Paper

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Introduction

Ever since the early days of banking when medieval money changers provided payment services to customers, the challenge has been to find ways to clear and settle local and cross-border trade payments quickly, efficiently, inexpensively and with minimal risk. While these challenges predate the modern banking system, they are as true today as they were hundreds of years ago.

ISO 20022 is an impressive development in an industry that crawls cautiously rather than leaps forward. Already considered a worldwide standard, the tentacles of ISO 20022 reach banks, businesses and financial institutions as well as securities, trade services, cards and foreign exchange. There is no doubt, ISO 20022 represents the future of payments transactions.

As a common standard for payments messaging for financial communications, ISO 20022 gets all participants on the same page, speaking the same language. By facilitating cross-border interoperability, ISO 20022 will:

- Speed payments transactions thereby reducing risk;
- Lower costs, making it easier for new players to enter the market and drive innovation as well as enabling large existing institutions to remain competitive;
- Improve transparency for better compliance; and
- Provide more options and better service to end clients.

While none of this will happen overnight, the 2025 target date for coordinated harmonization across many market infrastructures represents a significant step. Once the new standard takes hold and critical mass is achieved, a snowball effect is likely to encourage even more widespread adoption over time.

This white paper from Accuity explores the changing market dynamics that have given rise to the need for a common payment messaging standard. It takes a closer look at the benefits of ISO 20022, its timeline for adoption, and implementation challenges. Finally, the white paper outlines best practices for migration and provides insight to help organizations better understand the impact on financial crime screening.
Evolving Payment Infrastructures

The world is undergoing a digital transformation in how payments are transacted and processed. The reach of this change is so deep and so vast that it will have an impact on large and small players alike – from traditional global banks to the taxi driver in South Africa who can now accept cashless payments.

Two interrelated factors are driving this transformation: advancements in technology and the increase in cross-border fund transfers as a result of increased international trade and growth in global remittances.

Global payments revenues, which were $1.27 trillion in 2017 are expected to reach $2.42 trillion by 2027.1 Yet, the market infrastructure that supports domestic and transnational payments – enabling a business to send money from their bank account in the U.S. to purchase merchandise in Italy, for example – has scarcely changed since 1977. That’s when the Society for Worldwide Interbank Financial Telecommunication (SWIFT) launched a messaging service with standardized codes and instructions to facilitate payment communications between its member institutions. Although revolutionary at the time (especially compared to its predecessor, Telex), SWIFT is challenged by inefficiencies that result in high fees and extended processing times.

Banks fare no better. Many are still using legacy systems with proprietary messaging formats, protocols, and standards that were developed decades ago based on local laws and the available technology at the time. These systems were not designed for global interoperability.

By 2027, global payments revenues are expected to reach $2.42 trillion.

Seeing huge opportunity to capture a growing market in need of change, challenger banks, payment service providers (PSPs), peer-to-peer lenders and other disrupters have pulled the rug out from under traditional banks who are losing ground – and sacrificing revenue streams – to this new breed of competitor. Not saddled by legacy technology, these disrupters have developed mobile and digital payment solutions that are faster and more efficient than the payment services available through traditional channels.

In China, the leading mobile payment apps, AliPay and WeChatPay, are so frictionless and so integrated in the economy that they are used for everything from paying a gas bill to buying coffee. Mobile payments in China have surpassed credit card usage and pushed cash to near obsolescence. So much in fact, that international visitors to China often find they are unable to pay for a purchase because the merchant does not accept cash or credit.

Although Europe and the U.S. have been slower than China, India, Africa and other growing markets in adopting new payment solutions, interest in these alternative payment methods continues to gather steam.

Perhaps the greatest impact of alternative payment methods is that they have laid bare the inefficiencies of legacy systems and have completely altered expectations regarding ease of use, cost, and processing time. Financial institutions and other traditional providers of market infrastructure in the payments ecosystem are finally heeding the wake-up call.

While some countries, such as Japan, have had domestic instant payment systems since the early 1970s, most developed countries have only introduced domestic real-time and instant payment systems in the last ten years. These new systems, such as the EU’s Target Instant Payment Settlement system and the U.S. Federal Reserve’s FedNow Service, are making 24/7/365 availability and processing of funds transfers a reality.

Another addition to instant payment systems is SWIFT’s global payment innovation (gpi), which can execute cross-border payments almost instantly.

As barriers continue to fall and international trade increases, the need for fast, accurate and efficient cross-border payments will continue to escalate. Meeting this need can only be accomplished with initiatives like ISO 20022, which offers a common, global messaging standard that enables payments and transactions to flow seamlessly between parties – whether a correspondent bank in Abu Dhabi or a domestic transfer within the U.S.
What is ISO 20022?

ISO 20022 (pronounced ‘ay-sew twenty-oh-twenty-two’) is an open and freely available common standard language for payments messaging. It was developed to replace a proliferation of disparate message formats that arose over the years in line with the growth of the internet, other technological advancements, and specific jurisdictional requirements.

ISO 20022 offers a flexible infrastructure that facilitates information exchange and helps to harmonize the payments language between old and new technologies. By getting the financial community on the same page and speaking the same language, ISO 20022 eliminates the barriers that slow global payments, add cost, and complicate compliance.

It will provide a common language for reconciliation, cash management and other treasury functions, making payments faster and more efficient. But ISO 20022 is not just for banks. Corporations, small businesses, and even end-users (i.e., consumers) will benefit as well because ISO 20022 will greatly enhance customer service.

Interest in a global standard like ISO 20022 has been percolating for some time. However, digitalization and the emergence of new payment methods from challenger banks, PSPs and other disruptors have increased the urgency and put more pressure on the payments industry for change. Customers expect a fast and frictionless experience, which cannot be accomplished effectively without standardization.

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A Step Back in Time

In the early 2000s, XML had become the de facto standard for electronic communications among financial institutions. However, various XML standards arose based on geography, local regulations and other factors. Each XML standard had its own message format and syntax, making it difficult to process and exchange payments information across borders.

The International Organization for Standardization (ISO), an independent, non-governmental organization, introduced ISO 20022 in response to the need for a common and consistent language to ensure payments information was interpreted exactly the same by all parties.

ISO 20022 used XML as its technical backbone since it was the most accepted language for messages at the time. ISO 20022 also offered many advantages, including flexibility to accommodate international characters and longer message fields for greater granularity, which other legacy formats could not support.

An initial driving force behind ISO 20022 adoption was the introduction of the European Union’s Single Euro Payments Area (SEPA) in 2008, which requires use of ISO 20022 message standards for electronic payments. SEPA improves interoperability, making it easier, faster and less expensive to transfer money, pay bills and settle payments across borders of participating jurisdictions. As of 2019, SEPA covers 36 countries and territories, including the 28 European Union (EU) member states.

SWIFT was appointed by ISO to act as the Registration Authority (RA) for ISO 20022. As such, its role is “to ensure the integrity of the reference data defined by ISO standards, and to publish the data in an accessible form for the benefit of the user community.” SWIFT collaborated with the industry to ensure that ISO 20022 addressed the shortcomings of the current SWIFT MT (message type), which has been the de facto standard for cross-border payments for over 40 years.

As of April 2018, SWIFT reports that ISO 20022 is being used for payments and securities businesses in more than 70 countries. The US, Europe, Canada, Australia, Singapore and other countries have already adopted ISO 20022 as the standard for instant payments and more countries are expected to follow suit. SWIFT estimates that ISO 20022 has the potential to support more than three-quarters of the total volume of transactions worldwide in the next five years.
ISO 20022 Impact on Financial Institutions

The initial focus of ISO 20022 “is on international (cross-border) financial communication between financial institutions, their clients and the domestic or international ‘market infrastructures’ involved in the processing of financial transactions.” However, ISO 20022 is expected to reach even further and completely transform the entire payments ecosystem.

ISO 20022 was conceived and built to adapt to differences in message structure. By establishing a common vocabulary that is syntax-independent, ISO 20022 provides the sender and receiver of a message with a universal understanding that is clear, consistent, and free from ambiguity.

Although the transition to this new messaging standard will not be easy, financial institutions stand much to gain as ISO 20022 provides significant benefits:

- **Increases transparency and compliance**
  Because ISO 20022 messages can carry more detailed information than SWIFT MT or other formats, they improve transparency for better anti-money laundering and sanctions screening compliance.

- **Provides fast, frictionless payments**
  More information embedded in the message reduces misunderstandings and obviates the need for back and forth email communications, leading to faster, frictionless transactions.

- **Improves accuracy and efficiency**
  Information from different payment methods can be grouped and reused, so less manual input is needed along the payments chain resulting in fewer errors and inconsistencies, which enables the payment to reach its intended destination the first time.

- **Delivers seamless processing**
  The inherent flexibility in ISO 20022 eliminates mapping of different payment standards and boosts interoperability across payment types and payment infrastructures for greater global straight-through processing.

- **Reduces cost**
  Eliminating global barriers and improving accuracy and efficiency reduce the overall cost of each payment transaction.

- **Enhances client service**
  The combined benefits of speed, accuracy and efficiency of ISO 20022 messages result in a better overall customer experience.

- **Expands business opportunities**
  Interoperability makes it easier for smaller players to transact business globally and for larger institutions to continue to grow and explore new payment rails to remain competitive.

Understanding Semantics and Syntax

ISO 20022 ensures that the sender and receiver of a message interpret the information exactly the same way by addressing two key elements of messaging communication: semantics and syntax.

**Semantics**

Semantics refers to what words mean. Just as language can be regional with various dialects, the same applies to messaging communications. It is not uncommon for a term to have a different meaning or refer to a different concept depending on the message types. Likewise, two completely different terms may refer to the same concept.

For example, the party requesting the payment in a credit instruction can be referred to as the originator in a U.S. Fedwire message or alternatively, as the ordering customer in a SWIFT message.

**Syntax**

Syntax addresses the structure of a message. This includes the order of the elements (words, numbers), allowable length, types of characters accepted, and other specifics.

As an example of different syntax, consider U.S. versus U.K. conventions for writing dates. In the U.S., dates are written with the month first so that 12/3/19 would be interpreted as December 3, 2019. In the UK, the day comes first, so 12/3/19 would be interpreted as March 12, 2019.

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Migration Timelines

Adoption of ISO 20022 messaging is either planned or underway across all major HVPS and payment market infrastructures worldwide. Whether implemented in a phased approach or a Big Bang changeover, SWIFT expects that “80% of global high value payments volumes will adopt ISO 20022 by 2025.”

Among the early adopters currently operational with ISO 20022 are China, Japan, India, Switzerland and Brunei. A summary of timelines for ISO 20022 adoption for other geographies and payment systems follows.

**Global**

SWIFT is a Belgian based shareholder-owned cooperative and provider of financial messaging services. The organization had originally established a four-year period beginning November 2021 to transition from SWIFT MT formats to ISO 20022 compliant messages (MX formats). The start data has now been deferred to November 2022, allowing for a three-year transition period. During that time, both MT and MX message formats will be supported and coexist. After November 2025, SWIFT MT messages will be decommissioned and ISO 20022 will be the only format used in SWIFT messaging. SWIFT’s adoption of ISO 20022 does not have an impact on corporate or other payments.

**Eurozone**

EBA Clearing is a Paris-based, bank-owned provider of payment infrastructure solutions throughout Europe. It manages several payment systems, including Euro1 (for large-value euro transactions); STEP1 (for single euro payments); STEP2 (a pan-European automated clearing house); and RT1 (a real-time payments platform for euro transactions). Development work for the Euro1 migration to ISO 20022 is already underway, with completion targeted for November 2023.

The Eurosystem is a monetary authority whose jurisdiction comprises the European Central Bank and national central banks of countries that use the euro as currency. It operates the Trans-European Automated Real-time Gross Settlement Express Transfer system (TARGET2), which processes and settles payment orders from central and commercial banks across the euro area. TARGET2 will replace existing payment and cash flow message formats and has committed to adopting ISO 20022 by November 2021.

EBA Clearing and the Eurosystem are harmonizing their efforts to align with SWIFT, setting November 2021 as the completion date for migrating the Euro1 and TARGET2 payment services to the ISO 20022 standard.

**U.K.**

The U.K. has three different infrastructures, each using its own format to send payments domestically:

- Clearing House Automated Payments System (CHAPS)
- Bacs
- Faster Payments Service (FPS)

All have committed to standardizing using ISO 20022.

The Bank of England, which operates the CHAPS HVPS, has updated its migration plans for the various message types used in CHAPS. The first phase, “preparatory phase,” is already underway. The next phase, with the migration to ISO 20022 in CHAPS, is anticipated to be completed by mid-2022. Phase 3, the “enhanced phase” has a mid-2023 targeted completion date. Additional enhancements will follow. In addition, The Bank of England will be replacing its RTGS system with a new ISO 20022 compliant RTGS for CHAPS payments.

ISO 20022 standards will also be adopted by Bacs Payment Schemes Limited and Faster Payments Scheme Limited, which will be consolidated under a New Payments Architecture (NPA). Pay.UK, which is responsible for operating these retail payment services, anticipates the core clearing and settlement layer of NPA to be available after 2021.

**U.S.**

Fedwire Fund Service, an RTGS provided by the Federal Reserve Banks, is typically used to make large-value, time-sensitive payments. In September 2019, the Federal Reserve announced that it would postpone Phase 1 of the three-phase migration strategy of Fedwire payments to the ISO 20022 message format, originally scheduled for November 23, 2020. The Federal Reserve is reassessing its phased approach and instead considering a same-day implementation, which would better coincide with other major payments platforms and preempt interoperability issues that might be introduced with a phased migration. A revised schedule is expected to be announced after further discussions and review.

The Clearing House Interbank Payments System (CHIPS) is a funds transfer system for U.S. dollar-based payments owned and operated by the U.S.-based Clearing House Payments Company. In line with the Federal Reserve, The Clearing House will also postpone its original Phase 1 live date for ISO 20022 migration to allow for further evaluation.

The Automated Clearing House (ACH) Network facilitates domestic interbank money transfers. While the network has no immediate plans to fully migrate to ISO 20022 messaging standards, ACH participants can use a mapping guide developed by Nacha to help translate ACH payment instructions and file formats to the ISO standard and vice versa. This will enable financial institutions to support their corporate customers that use ISO 20022 message formats for ACH payments.
ISO 20022 has deep tentacles that will impact a wide number of bank functions from payments processing systems to foreign exchange, treasury, billing, screening, trade finance, and other operational areas. This means that before ‘payments nirvana’ can be achieved, organizations should be prepared for what is likely to be a bumpy transitional period.

However, ISO 20022 also presents an ideal opportunity for financial institutions to clean house – rethink internal operations, change workflow, update existing systems, replace legacy systems, and build application programming interfaces (APIs).

**Best Practices for Migration**

While ISO 20022 will speed and simplify transaction processing, moving to the new messaging standard will not be as simple – particularly for large financial institutions and other organizations with cross-border payments.

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Careful planning can ease the transition to ISO 20022. Considerations for a smooth migration include:

- Identify all functions and internal departments likely to be impacted.
- Assess data storage capacity and data management since current systems may not be equipped to handle or process the additional data load that ISO 20022 generates.
- Identify vendor systems and other IT infrastructure that will be impacted. Work with vendors to retool software as needed.
- Allocate adequate budget to ensure resources are available for the duration of the project.
- Test interfaces and messages with all entities, including counterparties, customers, vendors and other stakeholders.
- Engage third-party support as needed to manage and deploy the conversion.
- Invest in staff training and ongoing communications to ease the transition.

Even institutions that are well prepared for ISO 20022 will be challenged by the differing approaches and migration timelines of different countries and the world’s payment systems. A bank with many cross-border activities will need a mix of systems during the transition period to support both the MT and ISO 20022 message formats.

Beginning 2022, institutions must be able to receive transactions in the ISO 20022 compliant SWIFT MX format. Institutions that have not fully upgraded their systems will need to translate any MX-formatted message into MT before processing the message through the bank’s fraud, transaction screening and other payments processing systems. Using the same translator, the message must then be converted back to MX before being sent to another bank. SWIFT and other organizations provide translators to map old and new message formats.
Enhancing Financial Crime Screening

Institutions must remain vigilant to prevent the global financial network from being used as a conduit for money laundering, terrorist financial and other illicit activities. Screening payments transactions for sanctions and politically exposed persons (PEPs) is not only good practice, but is fundamental for an effective risk-based approach to compliance.

However, transaction monitoring solutions are only as strong as the underlying data that feeds them. Inconsistent formats, omissions, and poor data quality hamper the effectiveness of even the best filtering solutions. The classic MT format of payments transactions contains limited information from counterparties, making it more difficult to validate if a client name matches a sanctioned entity, for example.

One significant advantage of the ISO 20022 message format is that its inherent extensibility can accommodate more detailed information about all parties involved in a payment.

The ability to add details and data points to the message not only provides greater transparency, but also enables financial crime screening solutions to raise more accurate, relevant alerts. In combination with extensibility and richer data, the consistent structure of ISO 20022 messages makes it easier to share information, further supporting an institution’s AML and sanctions screening operations.

Optimizing Payments

The full benefit of ISO 20022 cannot be fully realized without proper validation of values in the XML format and enriched instructions. While ISO 20022 provides more flexibility as a format, it is equally important to validate critical values identifying beneficiary account numbers and beneficiary banking details. In addition, the need to enrich instructions with intermediary banking details still persists with this new format. Without these steps, the range of benefits to be delivered with ISO 20022 will be compromised.

Looking Forward

There is no doubt – ISO 20022 is a reality. It is here to stay. Institutions that have not already started to plan for this new worldwide standard cannot afford to sit on the fence any longer.

The scope of ISO 20022 is so wide-reaching that it will take time to assess the anticipated impact on each banking system and even more time to upgrade infrastructure accordingly and test processes.

Regulators will need to come on board as well and clarify expectations. Institutions are already concerned as they try to understand what minimum information must be entered in the ISO 20022 transaction to meet regulatory compliance requirements. Regulators must be prepared with definitive answers to the many questions that are likely to arise as the industry moves through the transition period over the coming years.

By all accounts, the net end result of global adoption of ISO 20022 standards will be positive — with improved speed, accuracy and user experience at a lower cost. However, getting to that point will take time, and hiccups along the way are only to be expected.

How Accuity Can Help

Accuity is well-positioned for the new ISO 20022 message formats. Contact your Accuity sales representative for more information or visit accuity.com

Endnotes
2. www.swift.com/resource/ger-accepcce-website-views
4. www.swift.com/your-needs/industry-themes/iso-20022/supporting-standards
5. www.swift.com/resource/iso02022.txt
7. bankingblog.accenture.com/iso20022-embraces-relevant-payments-industry-hasnt_en_66
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