The Global Unification of Financial Messaging: Exploring best practices with ISO 20022

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ISO 20022 is recognized internationally as a global messaging standard. It includes a harmonized set of standards across financial service domains and is based on the unification around financial services messaging.

The focus of ISO 20022 has been on the establishment of a global standard that could be used in the sending of messages in both a corporate environment as well as in the interbank space.

Key Findings

- ISO 20022 is a set of standards around financial services messaging that serves as an international recipe to build a shared financial language
- CGI simplifies implementation for corporate users and provides a template for harmonization across banks.
- As a best practice, organizations use an enterprise service bus that uses a single message format

Organization of ISO 20022

ISO 20022 sits within the broader ISO organization. It is a purely voluntary organization and is freely available to all members of the financial services community. Standards organizations can have representation as long as they have a global focus, for ex., the Federal Reserve, OAGi, and IFX.

However, representation to ISO 20022 is by country, not by individual organization. Countries can send multiple representatives, but can only vote per country for any activity done within ISO 20022.

Because of its voluntary nature, not all countries are represented – all of the countries in the EU are represented. From Asia Pacific – China, Japan, Korea, Thailand, Singapore and Australia are among the representatives. Brazil is the only Latin American country involved.

ISO Technical Committee TC68 - Financial Services
USA is the Secretariat, Convenor and a Member

| SC2 Security | SC4 Securities | SC7 Banking | ISO 20022 RMG Registration Management Group USA is Secretariat and Co-Convenor | WG4 and WG5 ISO20022 Technical Standard |

- Examples of ISO Standards Used in the US Payments Industry
- SC2 Financial Services, Security
  - PIN, biometrics, PKI, encryption algorithms
- SC7 Financial Services, Core Banking
  - BIC, ISO currency codes, IBAN
- TC 68 ISO 20022 standard, *Universal financial industry message scheme*

RA Registration Authority
TSG Technical Support Group

Payment SEG Standard Evaluation Group
Securities SEG
Trade SEG
Cards SEG
FX SEG

The US is the convener and co-convener that makes up the technical committee at the top of the organization. Within that are committees that focus on the security around the message, and banking, whereas the primary focus on the message itself is overseen by the Registration Management Group (RMG).

The RMG is responsible for building data dictionaries, schemas etc. and controls what goes down to the Standard Evaluation groups (SEGs). Examples of these SEGs include committees that focus on Payments, Trade, Cards and Financial Exchange.

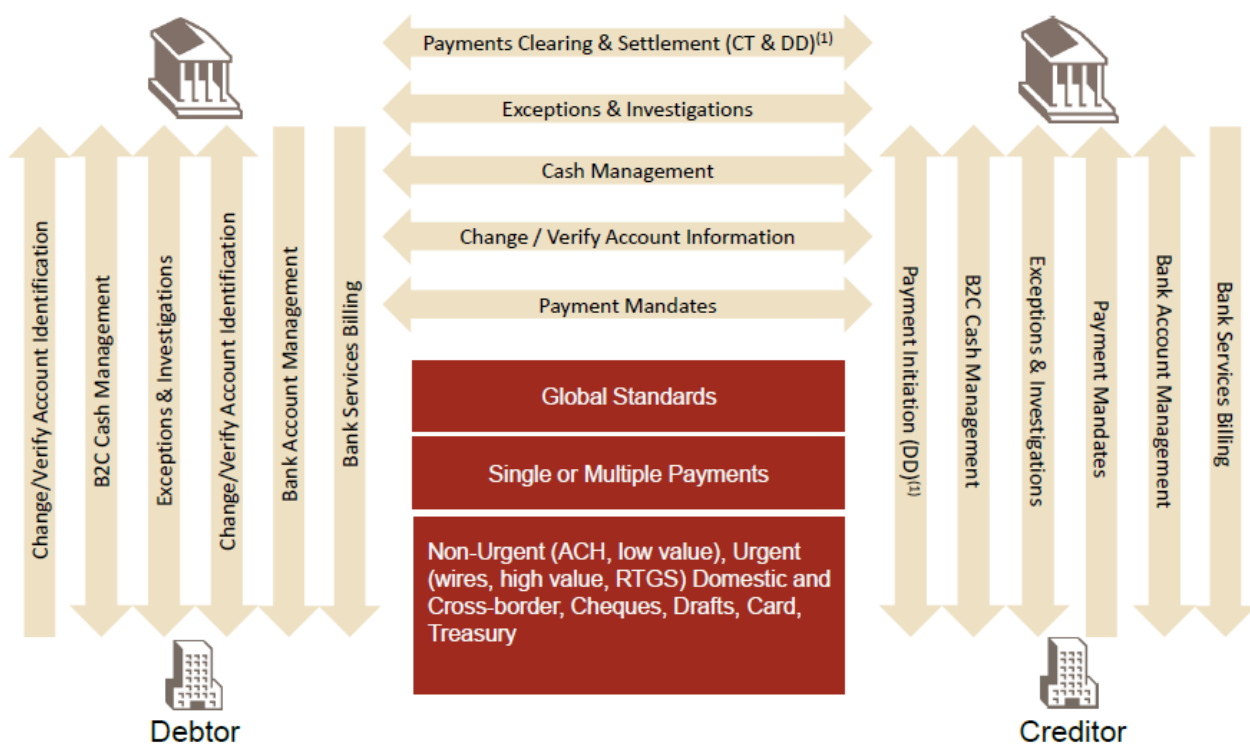## ISO 20022 Payments Schema Flows

ISO 20022 messages are defined as business processes. The advantage of this is that if the technology were to change to a new language, it would be fairly easy to support since the definition of the messages is based on the business model and not on a specific syntax.

Within the payments segment, there are messages associated around payment initiation, around clearings and settlements, cash management messages, bank account management etc.

The users of these messages are not only Financial Institutions (FIs), but also clearing houses, and end users, i.e. corporations that are customers of the bank. The corporations who can utilize this standard run the gamut from very large businesses to small companies.

Corporations have shown considerable interest in utilizing ISO 20022 for bank account management messages, as they have the ability to send messages to open or close accounts or decide on who is a signer on an account, all without having to call a customer sales representative.

From a payments perspective, messages can facilitate both single as well multiple messages, so banks have the flexibility to use the same message for either single payments or batch payments. In addition, multiple types of payments can be supported in a single message. So non-urgent (ACH), and urgent (wires, RTGS) payments can be included on the same message. They can be utilized for both domestic as well as cross-border transactions. The standard also has the ability to provide check and draft instructions for countries that do not support electronic transactions.

Payments Clearing & Settlement (CT & DD)[1]

Exceptions & Investigations

Cash Management

Change / Verify Account Information

Payment Mandates

Global Standards

Single or Multiple Payments

Non-Urgent (ACH, low value), Urgent (wires, high value, RTGS) Domestic and Cross-border, Cheques, Drafts, Card, Treasury

Debtor

- Change/Verify Account Identification
- B2C Cash Management
- Exceptions & Investigations
- Change/Verify Account Identification
- Bank Account Management
- Bank Services Billing

Creditor

- Payment Initiation (DD)[1]
- B2C Cash Management
- Exceptions & Investigations
- Payment Mandates
- Bank Account Management
- Bank Services Billing

Drivers of adoption

Adoption is being driven by specific initiatives happening within the industry itself, as well as global harmonization initiatives and regulation. For example, SEPA in Europe is required to use ISO 20022 messages.

As corporations look to update their business systems, and want to streamline how they interact with banks, they are increasingly moving towards ISO 20022. While some banks have been flexible about supporting ISO 20022, others have mandated that their customers use the ISO 20022 standard. As a result there has been a lot of activity in customers migrating over to using an ISO 20022 standard.

In countries where new clearing houses are being developed, they are using ISO 20022, which is a globally recognized standard, rather than developing a proprietary standard.

In the US, adoption has been slow because of its large infrastructure. The Federal Reserve has come out to include ISO 20022, and NACHA is moving towards ISO 20022 standards.

CGI

Common Global Implementation (CGI) came about as a forum from a need for banks and corporations to collectively discuss the actual implementation and usage of ISO 20022. Banks heard that their customers needed a single way in which they could communicate with them. Major competitor banks sat down together and agreed upon a common way through which data could be captured in the messages. This has proven to be very valuable from corporations' perspectives.

The CGI publishes the building blocks of messages based on ISO standards, but does not define anything outside the messages. National and regional guidelines, as well as bank-specific guidelines can be built on top of that. Currently, over 80 organizations participate, including both FIs and non-FIs.

Case Studies

General Electric utilizes these standards in the payments and cash management area. Initially it started with those countries and banks where they had to support multiple non-standard interfaces, through a gradual roll out process.

SAP worked with participants from CGI on how its applications could generate ISO messages. It rolled this out in Asia, where messages needed to support local language characters for local clearing.

Universal Music Group utilizes ISO 20022 across their entire organization for their payments transactions going to the banks. After launching in Europe as a pilot, the company rolled it out to other countries.

OAGi

The Open applications Group, Inc. (OAGi) is a non-profit group that is based on a principle of engagement with other standards bodies. The organization came out of the manufacturing industry in recognition of the need to increase the velocity of transactions by implementing real-time systems.

Interoperability requires interfaces to be standardized. Only 5% of the interface is a function of the middleware. The other 95% is a function of the application semantics. The entire implementation process can be thrown off by having a single piece out of order.

Applications have to talk to each other. When corporations grow, they tend to grow in fits and starts or through acquisitions. Often the organization is stuck with legacy systems that can't be changed due to cost and time commitments.

As a best practice, companies use an enterprise service bus that uses a single message format. The format remains the same as it is based on a canonical model of the business. The model moves back and forth over the bus, thereby taking the load off individual systems, and saves the company money when it needs to integrate systems.
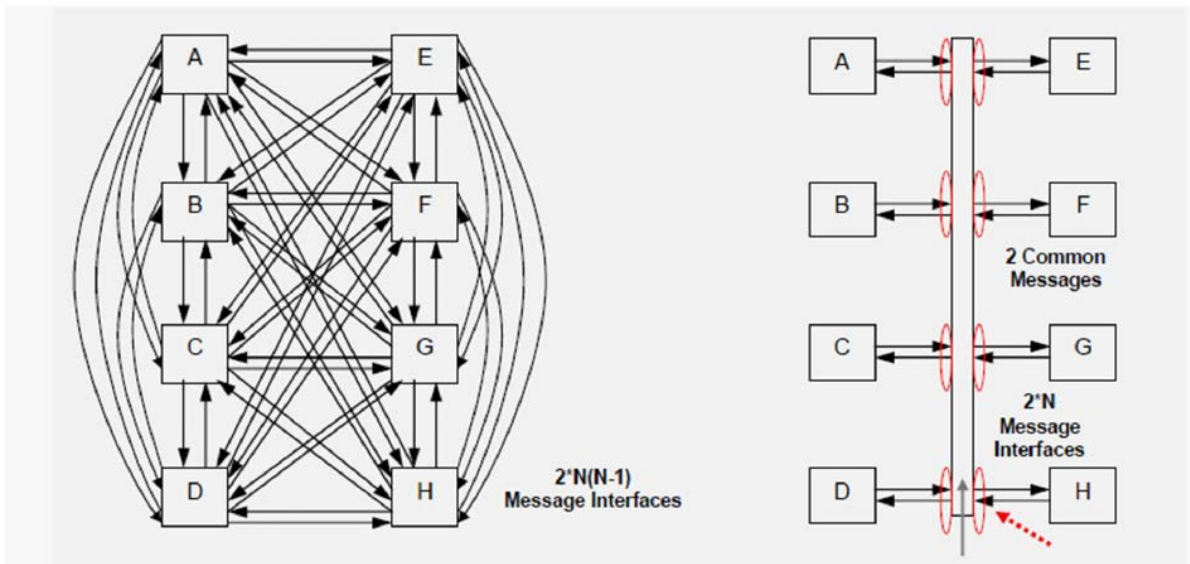
Susan Colles is a Director, Global Standards Head, within the eCommerce Channel team, a division of Bank of America Merrill Lynch Global Treasury Product Platform and eChannels. Ms. Colles focuses on Enterprise Resource Planning (ERP) integration and ISO 20022 standards, supporting both strategic and tactical electronic commerce efforts across many levels in the organization. Ms. Colles is the convenor of the ISO 20022 Payments Standards Evaluation Group (SEG), encompassing global XML messages for corporate to bank and bank to corporate business interaction. She is active in the leadership of the Common Global Implementation (CGI) industry initiative whose charter is to publish guides for utilization with multi-national implementations across multiple banks. She also participates in various other standards organizations, including IFX Forum and SWIFT Global Business Validation Groups.

As a strategic executive and EVP of Operations, Open Applications Group, Inc, *Ralph Hertlein* focuses on shaping and delivering business results through transformation and timely execution in areas such as distribution/supply chain, master data management, integrated product development, life cycle management, and business process management. His experience lies in strategy development and converting that into integrated product and service delivery (with special focus on improving value), risk management, value delivery, global teaming, and developing productive relationships & integration, including healthcare. Ralph has been improving business for a wide range of corporations across the globe from communications to retail to manufacturing to logistics.