

# ISO<sup>®</sup> 20022 Adoption Considerations & Survey for U.S. Wire Transfer Systems

Federal Reserve Bank Webinar

July 15, 2015

July 23, 2015

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# Agenda

ISO 2022 overview & example

U.S. business case assessment

ISO 2022 as a payments strategy

ISO 2022 scope considerations & customer impact

Online survey seeking input on ISO 2022 scope, approach & timing

Appendix – ISO 2022 use cases for wire transfer systems

# ISO<sup>®</sup> 20022 Overview

What is ISO 20022 for payments?

International Organization for Standardization (ISO) develops standards for many industries

The ISO 20022 standards relate to financial messaging across major financial services domains

Robust standard with room for additional payment-related information that supports the end-to-end flow of information about a payment from the originator to the beneficiary

- Payment initiation (corporate to bank)
- Interbank settlement (bank to bank)
- Cash management (bank to corporate)

## ISO 20022 Example

The Fedwire® Funds Service and CHIPS® proprietary message formats contains 3 free-text address lines for each of the various party fields in the message.

The ISO 20022 format uses XML syntax and contains discrete fields designed to contain specific address information.

Fedwire Funds Service & CHIPS proprietary formats	ISO 20022 format
Address Line 1 (up to 35 characters) Address Line 2 (up to 35 characters) Address Line 3 (up to 35 characters)	Postal Address <PstlAdr> <AdrTp> (4 characters) <Dept> (up to 70 characters) <SubDept> (up to 70 characters) <StrtNm> (up to 70 characters) <BldgNb> (up to 16 characters) <PstCd> (up to 16 characters) <TwnNm> (up to 35 characters) <CtrySubDvsn> (up to 35 characters) <Ctry> (2 characters)

# ISO 2002 Business Case Assessment

## *Background*

- Several major worldwide markets announced plans to adopt ISO 2002 in response to:
  - ✓ Regulatory mandates
  - ✓ Development of new systems
  - ✓ Technology upgrades
- Determine if the U.S. payments markets should also adopt ISO 2002 to remain competitive.
- ISO 2002 Stakeholder Group working to address U.S. adoption:
  - ✓ Engaged an independent consultant to objectively evaluate the business case for (or against) adopting ISO 2002 payment messages in the U.S.
  - ✓ Assessment considered both domestic & cross-border payments for Fedwire Funds Service, CHIPS, FedACH<sup>®</sup> and EPN<sup>®</sup> services.

### ISO 2002 Stakeholder Group

Federal Reserve Bank of New York  
The Clearing House Payments Company L.L.C.  
NACHA—The Electronic Payments Association  
Accredited Standards Committee X9—Financial Industry Standards, Inc.

# ISO 20022 Business Case Assessment

## *Conclusion*

- Benefits are largely qualitative at this point and haven't been fully realized.
- Difficult to define an overarching financial business case at the industry level
  - ✓ In all cases, upgrade to ISO 20022 in other markets was part of broader technology project or regulatory mandate.
  - ✓ Other markets were reluctant to share proprietary information regarding local business cases.
- Momentum exists for ISO 20022 adoption among large global banks and large global corporates.
- While there may not be a compelling *financial* business case at this time for U.S. PCS participants to adopt ISO 20022, there may be *strategic* reasons to do so.

# ISO 20022 Business Case Assessment

## *Strategic Reasons to Consider ISO 20022 Adoption in the U.S. Market*

Strategic Reason	Description
Global Momentum	Large U.S. corporates and banks are actively adopting ISO 20022 and that is expected to continue.
Global Competition	Compatibility with the ISO 20022 format enables the United States to maintain parity with other global markets and U.S. dollar clearing systems in other jurisdictions that are adopting ISO 20022 messaging, which may help preserve the attractiveness of the U.S. dollar as a global currency.
Cost Savings & Processing Efficiency	Standardizing message formats allows for consolidation of payments platforms at banks and corporations, which could promote straight-through processing and drive down costs.



# ISO 20022 Business Case Assessment

## *Strategic Reasons to Consider ISO 20022 Adoption in the U.S. Market*

Strategic Reason	Description
Consistent & Rich Data	While domestic formats support robust data content, ISO 20022 enables all parties to leverage a common set of data dictionary elements to build transactions and messages under an internationally agreed approach.
Interoperability	A common format promotes ease of transacting domestically and globally by using a single, open standard rather than multiple proprietary standards.
Agility to Meet Evolving Regulatory Needs	The ISO 20022 format provides for full originator and receiver information, allowing for improved regulatory reporting and monitoring.
New, Innovative Products	A common format across systems reduces the amount of change required to bring innovative new products and services to market.

# ISO 20022 Business Case Assessment Recommendations

- Employ a phased approach to ISO 20022 adoption to reduce risk and cost.
- To better educate and plan with the industry, the stakeholder group also agreed to conduct an assessment to identify specific use cases that could be addressed by ISO 20022 in the U.S.

Phase	Recommendations
1 – Planning & Education	Promote ISO 20022 educational efforts and develop a national strategy for ISO 20022 adoption
2 – Cross-Border Payments	Enable ISO 20022 for cross-border wire payments, followed by cross-border ACH payments
3 – Domestic Payments	Assess value proposition and timing for adoption of ISO 20022 for domestic wire and ACH payments
Additional Consideration	Use ISO 20022 as the standard messaging format for new products and services

- Consultant's [ISO 20022 Business Case Executive Summary](#) is available on NACHA's website.
  - ✓ Must establish user ID & password and agree to terms of use to download report.

# ISO 20022 as a Strategy for Improving the U.S. Payment System

The Federal Reserve Banks and The Clearing House have expressed intentions to adopt ISO 20022 for the Fedwire Funds Service and CHIPS, but the scope, means and timing of adoption have not yet been determined.

## Federal Reserve

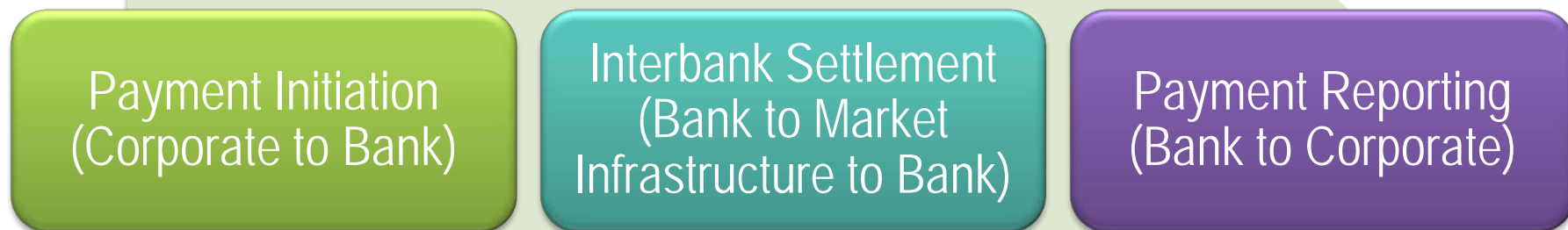
- On January 26, 2015, the Federal Reserve released the *Strategies for Improving the U.S. Payment System* paper <https://fedpaymentsimprovement.org/>.
- Strategy 4 of the paper (*Achieve greater end-to-end efficiency for domestic and cross-border payments*) noted that:
  - *The Federal Reserve will continue to work with the Stakeholder Group to express intent to support ISO 20022, with the timing, means, and scope of adoption to be determined once more-detailed work is complete.*

## The Clearing House

- Will continue to work with the ISO 20022 Stakeholder Group.
- Has a strategy to develop a real-time payments service, which will incorporate the ISO 20022 message format.

# ISO 20022 Implementation Scope Considerations

- Adoption should include the end-to-end payment flow as follows:



- Lesson from ERI is that you need adoption to be end to end to make it worthwhile.
- Should not separate domestic & cross-border, especially for corporations that send both types of payments (*differs from consultant's recommendation*).
- Market infrastructure coordination needed.

# ISO 20022 Implementation Scope Considerations

- Should adoption for the market infrastructures include just the payment message or all messages (i.e., advices, acknowledgments, inquiries, reports)?
  - If adoption is limited to payment messages, then legacy formats will still need to be supported, which could be costly over the longer term.
  - If adoption includes all messages, inquiries, reports, etc., the implementation will take longer and likely be costly in the short term.
- Should adoption be “like for like” (i.e., ISO version of legacy formats) or include enhancements?
- Sunset of legacy format needed to encourage adoption
- Need to minimize impact on smaller banks

# ISO 2022 Implementation Impact Fedwire Funds Service Customers

Fedwire Funds Service Access Channel	ISO 2022 Considerations				
	Learn new field names	Learn new screens	Staff training	Update internal forms	Make internal system changes vendor upgrades
FedLine Direct®	X	X	X	X	X
FedLine Advantage® FedPayments® Manager Import/Export	X	X	X	X	X
FedLine Advantage FedPayments Manager Manual Input	X	X	X	X	N/A
Offline	X	N/A	X	X	N/A

# ISO 20022 Wire Implementation Impact CHIPS Customers

CHIPS Access Channel	ISO 20022 Considerations				
	Learn new field names	Learn new screens	Staff training	Update internal forms	Make internal system changes vendor upgrades
CHIPS (proprietary interface)	X	X	X	X	X
CHIPS web	X	X	X	X	X

# ISO 20022 Implementation Survey

## U.S. Wire Transfer Systems

Who is hosting the survey?

- The Federal Reserve Banks & The Clearing House

What is the survey about?

- The survey will include questions about the scope, approach and timing for adoption of ISO 20022 for wire transfer systems in the U.S.

Where can I find the survey?

- The survey will be posted to [www.fedpaymentsimprovement.org](http://www.fedpaymentsimprovement.org).



# ISO 20022 Implementation Survey

## U.S. Wire Transfer Systems

### Who should participate?

- Banks, corporates and vendors that would be impacted by ISO 20022 format changes to the Fedwire Funds Service and/or CHIPS wire transfer systems.

### How long do I have to complete the survey?

- The survey will be available online through **August 7, 2015**.

# ISO 20022 Implementation Scope U.S. Wire Transfer Systems

## What is NOT included?

- Fedwire Funds Service & CHIPS will retain proprietary networks.
- Fedwire Funds Service & CHIPS will not be offering SWIFTNet<sup>®</sup> access option.

# ISO 20022 Implementation Survey

## U.S. Wire Transfer Systems

Do you use vendors or in-house development for the following?

Banks	Corporates
<ul style="list-style-type: none"> <li>▪ FedLine Direct interface to the Fedwire Funds Service</li> <li>▪ Internal system that can create files to import to and/or receive export files from the FedLine Advantage FedPayments Manager Funds application</li> <li>▪ Interface to CHIPS</li> <li>▪ Front-end interface to corporate customers</li> <li>▪ DDA system</li> <li>▪ Cash management system with your customers</li> <li>▪ Compliance screening</li> <li>▪ Other</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cash management system with your bank</li> <li>▪ Treasury operations</li> <li>▪ Accounts payable</li> <li>▪ Accounts receivable</li> <li>▪ Enterprise Resource Planning (ERP)</li> <li>▪ Other</li> </ul>

# ISO 20022 Implementation Scope U.S. Wire Transfer Systems

## What type of payments?

- Domestic
- Cross-border
- Both

## Which aspects of the wire systems?

- Transfer messages (value & non-value) & responses
- Inquiry requests & responses
- Broadcast messages
- Statements

# ISO 20022 Implementation Scope U.S. Wire Transfer Systems

Which value-added enhancements should be considered?

- Extended Remittance Information
- Payment Tracking
- Investigation Messages
- None; initial adoption should be ISO 20022 version of legacy systems (“like for like”)
- Other

# ISO 2022 Implementation Approach U.S. Wire Transfer Systems

Which ISO 2022 implementation approach do you prefer?

- Market convention using legacy formats
- Big bang
- Phased Option 1 (phased receive; phased send)
- Phased Option 2 (big bang receive; phased send)

# ISO 20022 Implementation Approach

## U.S. Wire Transfer Systems

ISO 20022 Implementation Approach	Description
<p><b>Market Convention Using Legacy Formats</b></p>	<ul style="list-style-type: none"> <li>▪ The market infrastructures (i.e., Federal Reserve Banks and The Clearing House) can work with the banks to develop a market convention for sending an ISO 20022 formatted message within an existing free-text field (up to about 9,000 characters) of the legacy Fedwire Funds Service and CHIPS formats.</li> <li>▪ Banks would still need to complete the basic payment information of the Fedwire Funds Service and CHIPS message formats.</li> <li>▪ While the market infrastructures would not need to make any changes to support the market convention and could support it today, banks (and their vendors) who wish to participate would need to make programming changes to support the market convention.</li> </ul>

# ISO 2022 Implementation Approach U.S. Wire Transfer Systems

ISO 2022 Implementation Approach	Description
Big Bang	Market infrastructures would establish a sunset date for the legacy formats and require all banks to <i>send and receive</i> the ISO 2022 format for the U.S. wire transfer systems on the <i>same cut over day</i> .



# ISO 20022 Implementation Approach U.S. Wire Transfer Systems

ISO 20022 Implementation Approach	Description
<p>Phased conversion to receive ISO 20022, followed by phased conversion to send ISO 20022</p> <p><i>("Phased Receive, Phased Send")</i></p>	<p><b><u>Phased conversion to receive ISO 20022</u></b></p> <ul style="list-style-type: none"> <li>▪ Market infrastructures would mandate that banks convert (<b>over a conversion period</b>) to "receive" only the ISO 20022 format for the U.S. wire transfer systems.</li> <li>▪ During this phase, banks would continue to send only the legacy format and the market infrastructures would convert the legacy format to the ISO 20022 format to send to the receivers who can receive the ISO 20022 format.</li> </ul> <p><b><u>Phased conversion to send ISO 20022</u></b></p> <ul style="list-style-type: none"> <li>▪ Once all banks have been converted to "receive" the ISO 20022 format, the market infrastructures would mandate that banks convert (<b>over a conversion period</b>) to "send" only the ISO 20022 format.</li> <li>▪ Once all banks have been converted to send only the ISO 20022 format, the market infrastructures would sunset the legacy formats.</li> </ul>

# ISO 20022 Implementation Approach U.S. Wire Transfer Systems

ISO 20022 Implementation Approach	Description
<p>Big bang to receive ISO 20022, followed by phased conversion to send ISO 20022</p> <p><i>("Big Bang Receive, Phased Send")</i></p>	<p><b><u>Big bang to receive ISO</u></b></p> <ul style="list-style-type: none"> <li>▪ Market infrastructures would mandate that banks convert (<b>on the same day</b>) to "receive" only the ISO 20022 format for the U.S. wire transfer systems.</li> </ul> <p><b><u>Phased conversion to send ISO</u></b></p> <ul style="list-style-type: none"> <li>▪ Banks (who are ready) could also convert to sending the ISO 20022 format for the U.S. wire transfer systems on the same day as above.</li> <li>▪ Banks who need more time to begin sending the ISO 20022 format would continue to send the legacy format and the market infrastructures would convert it to the ISO 20022 format to send to the receivers.</li> <li>▪ Market infrastructures would mandate a sunset date for sending the legacy format so banks would need to convert to sending the ISO 20022 format over a conversion period.</li> </ul>

# ISO 20022 Implementation Timing U.S. Wire Transfer Systems

How much lead time do you need?

- 12 to 18 months
- 19 to 24 months
- 25 to 36 months
- 3 to 5 years
- More than 5 years

# ISO 20022 Implementation Timing U.S. Wire Transfer Systems

What other initiatives compete for resources?

- Regulatory
- Security initiatives
- Resiliency initiatives
- Faster payments
- Internal system upgrades
- New products
- Other

# ISO 20022 Activities for U.S. Wire Systems

## Complete

- Finalized use cases to articulate the key benefits of ISO 20022 for wire transfer systems
- Held two ISO 20022 education webinars on May 19 and June 3
- Held vendor meeting on May 27 to discuss implementation approaches
- Held AFP webinar for corporates on July 1

## Upcoming

- Online survey & webinars regarding ISO 20022 implementation approaches for U.S. wire systems (July)
- Reengage the Fed & TCH advisory banks (Summer)
- AFP webinar for corporates (Summer)
- SWIFT executive roundtable meeting on September 16
- Announce high-level plan and timeline to implement ISO 20022 for U.S. wire transfer systems at Sibos 2015

# Appendix

## ISO 20022 Use Cases for Wire Transfer Systems

# ISO 20022 Use Cases for U.S. Wire Transfer Systems

Use Case	Limitations of Current Wire Formats	ISO 20022 Benefits
<p><b>Compliance with domestic &amp; global regulatory requirements</b></p>	<ul style="list-style-type: none"> <li>▪ Name limited to 35 characters, which can lead to either data truncation or carry-over data being mapped to other free-text fields.</li> <li>▪ Free-text address fields.</li> <li>▪ No discrete field for country code, which makes regulatory screening for sanctioned countries more difficult.</li> </ul>	<p>To comply with existing and evolving regulatory requirements, complete origination and beneficiary name and address information is critical. The ISO 20022 format has characteristics that make it easier to identify full name and address information in the payment message. Specifically, the ISO 20002 format:</p> <ul style="list-style-type: none"> <li>▪ Includes consistent, user-friendly field names and has discrete fields to support specific data elements, several of which can be critical for proper regulatory screening (e.g., structured address fields, including a country code).</li> <li>▪ Provides more capacity to allow for longer names (i.e., up to 140 characters) to reduce data loss, which is critical for proper regulatory screening and can improve straight-through processing.</li> <li>▪ Provides banks that act as intermediaries with an effective way to identify missing information in cross-border wire transfers to enable them to take actions accordingly in a timely manner.</li> </ul>

# ISO 20022 Use Cases for U.S. Wire Transfer Systems

Use Case	Limitations of Current Wire Formats	ISO 20022 Benefits
<p><b>Domestic interoperability between U.S. wire systems and SWIFT</b></p>	<ul style="list-style-type: none"> <li>▪ The Fedwire Funds Service and CHIPS wire payment systems and SWIFT messaging system have propriety message formats.</li> <li>▪ While the formats are mostly interoperable, each format has its own unique field tag names &amp; characteristics.</li> <li>▪ Banks that participate in more than one system must maintain mapping routines to ensure that data is mapped correctly between systems.</li> <li>▪ Whenever wire format changes are made, banks must update all systems or develop market conventions for mapping to or from systems that haven't changed.</li> </ul>	<p>Moving to a common ISO 20022 format for both wire systems in the U.S. that would be compatible with the ISO 20022 messages that could be carried on the SWIFT network could reduce or eliminate the:</p> <ul style="list-style-type: none"> <li>▪ Gaps between different systems.</li> <li>▪ Need for banks to maintain mapping routines to accommodate different formats.</li> </ul>



# ISO 2022 Use Cases for U.S. Wire Transfer Systems

Use Case	Limitations of Current Wire Formats	ISO 2022 Benefits
<p><b>Cross-border interoperability</b></p>	<p>As other markets outside the U.S. adopt ISO 2022 payment messages, banks and their corporate customers engaged in global trade will need to make system changes to accommodate the ISO 2022 upgrades in those markets.</p> <p>Lack of cross-border interoperability could lead to:</p> <ul style="list-style-type: none"> <li>▪ More cross-border payments migrating to offshore dollar clearing arrangements capable of conducting transactions in the ISO 2022 format.</li> <li>▪ Counterparties deciding to conduct transactions in other currencies in markets that have already migrated to ISO 2022.</li> </ul>	<p>Adoption of ISO 2022 in the U.S. could:</p> <ul style="list-style-type: none"> <li>▪ Make it easier for global banks and corporates to conduct transactions across different markets.</li> <li>▪ Reduce costs associated with having to maintain multiple formats to accommodate markets that have not yet adopted the ISO 2022 payment message format.</li> <li>▪ Prevent migration of U.S. dollar payments to offshore clearing arrangements or other currencies, which may help the U.S. dollar remain attractive as a global currency.</li> </ul>

# ISO 20022 Use Cases for U.S. Wire Transfer Systems

Use Case	Limitations of Current Wire Formats	ISO 20022 Benefits
<p><b>Single end-to-end payment file format</b></p>	<p>On the <i>payment origination</i> side:</p> <ul style="list-style-type: none"> <li>▪ Some corporations send commingled payment files (i.e., in EDI 820 or ISO 20022 format) to instruct their banks to make various payment types (e.g., wire, ACH, check).</li> <li>▪ The banks then need to convert these instructions to the appropriate format for the respective payment system, which today involves separate formats for wire, ACH, and checks.</li> </ul> <p>On the <i>payment receipt</i> side:</p> <ul style="list-style-type: none"> <li>▪ Banks need to be able to receive different formats from the market infrastructures.</li> <li>▪ Banks then need to convert those instructions to other formats (e.g., BAI format or proprietary format) to deliver payment information to beneficiaries.</li> </ul>	<p>The ISO 20022 format:</p> <ul style="list-style-type: none"> <li>▪ Has sufficient data fields to support a single, uniform format for both high-value, low-value, and emerging real-time retail systems.</li> <li>▪ Contains fields that are common across the suite of ISO 20022 payment messages so that the same information can be carried end to end through the payment chain as follows: <ul style="list-style-type: none"> <li>➤ Payment initiation (corporate to bank)</li> <li>➤ Interbank settlement (bank to bank)</li> <li>➤ Cash management (bank to corporate)</li> </ul> </li> <li>▪ Could allow corporations, banks, and market infrastructures to exchange payments in the same format regardless of the type of system they are using to process the payment.</li> </ul>

# ISO 20022 Use Cases for U.S. Wire Transfer Systems

Use Case	Limitations of Current Wire Formats	ISO 20022 Benefits
<p><b>Consistent format for extended remittance information (ERI)</b></p>	<p>The U.S. does not have a uniform format for ERI:</p> <ul style="list-style-type: none"> <li>▪ ACH systems use both legacy ERI formats (i.e., EDI, STP 820), as well as XML and ISO 20022 REMT 001 structured remittance.</li> <li>▪ ERI for wire payments was introduced in November 2011, but adoption has been limited.</li> <li>▪ Numerous ERI formats prevent uptake of ERI in a consistent way because banks, corporations, and their vendors need to make changes to support and maintain each format.</li> </ul>	<p>ISO 20022 provides a consistent format for ERI for all parties in the payment message, which could:</p> <ul style="list-style-type: none"> <li>▪ Make end-to-end adoption easier.</li> <li>▪ Increase the likelihood that when an originator sends ERI, the beneficiary can receive and process it.</li> </ul>

# ISO 20022 Use Cases for U.S. Wire Transfer Systems

Use Case	Limitations of Current Wire Formats	ISO 20022 Benefits
<p><b>End-to-end payment tracking</b></p>	<p>Each party to a payment transaction has limited visibility into the end-to-end transaction flow to ensure the payment was successfully processed from the originator to the beneficiary.</p>	<p>The ISO 20022 payment and cash management messages:</p> <ul style="list-style-type: none"> <li>▪ Contain structured messages (e.g., status messages, return messages) to support real-time payment tracking and reporting.</li> <li>▪ Can enable banks to more easily provide their customers with information about the status of their payments.</li> </ul>

# ISO 20022 Use Cases for U.S. Wire Transfer Systems

Use Case	Limitations of Current Wire Formats	ISO 20022 Benefits
<p><b>Diminishing legacy resources</b></p>	<p>As seasoned format experts change jobs or retire, maintaining staff with expertise on legacy proprietary formats becomes more challenging and costly.</p>	<p>Upgrading to a modern, XML-based, common format for payment messages could expand the knowledge base of formatting experts in the payments industry.</p>



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