

# ISO<sup>®</sup> 20022 for U.S. Payments

SWIFT Executive Payments Roundtable  
September 16, 2015

## ISO 20022 U.S. Stakeholder Group

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# Agenda

- Introductions
- ISO 20022 Background – SWIFT
- ISO 20022 U.S. Business Case Assessment
- ISO 20022 for ACH in the U.S.
- Break
- ISO 20022 for U.S. Wire Systems
- Roundtable Discussion

# ISO 20022 Business Case Assessment

- Several major world-wide markets announced plans to adopt ISO 20022 in response to:
  - ✓ Regulatory mandates
  - ✓ Development of new systems
  - ✓ Technology upgrades
- ISO 20022 Stakeholder Group formed to determine if the U.S. payments markets should adopt ISO 20022 to remain competitive.
- ISO 20022 Stakeholder Group engaged an independent consultant to objectively evaluate the business case for (or against) adopting ISO 20022 payment messages in the U.S.
  - ✓ Assessment considered both domestic & cross-border Fedwire<sup>®</sup> Funds Service, CHIPS<sup>®</sup>, FedACH<sup>®</sup>, and EPN<sup>®</sup> payments.

## ISO 20022 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

- The consultant released its report in April 2014 to the Stakeholder Group and concluded that 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.
- The consultant recommended that ISO 20022 strategies be considered in the following phases:

Phase	Recommendation
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	Consider ISO 20022 as the standard messaging format for new products and services

# ISO Stakeholder Group Workstreams

Workstream	ISO Stakeholder Group Members
<b>High-Value Wire</b>	<ul style="list-style-type: none"><li>■ Federal Reserve Banks, Wholesale Product Office (Fedwire Funds Service)</li><li>■ The Clearing House (CHIPS)</li><li>■ X9</li></ul>
<b>Low-Value ACH</b>	<ul style="list-style-type: none"><li>■ Federal Reserve Banks, Retail Payments Office (FedACH Service)</li><li>■ The Clearing House (EPN)</li><li>■ NACHA</li><li>■ X9</li></ul>

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

## Federal Reserve Banks

- 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 encourage 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.
- On October 22, 2014, The Clearing House announced efforts to undertake a multi-year effort to design and develop a secure, Real-Time Payment System and has since confirmed that it will incorporate the ISO 20022 message format for this system.

# ISO 20022 and Real-Time Payments

- TCH and EBA Clearing formed Global Real Time Instant Payments Group for Clearing and Settlement Providers in early 2015 to foster practitioners' dialogue, exchange experience and envisaged solutions, and understand national/domestic scheme discussions.
- Payments UK facilitated a Global Real Time Payments Group (RTPG) roundtable meeting in April 2015 of over 50 participants; recent outcome is the agreement and publishing of a first draft of ISO 20022 messaging standards for real-time payments systems.

**The above efforts illustrate the need to continue coordinate global developments; also supports the strategy for new products to be developed in ISO 20022.**

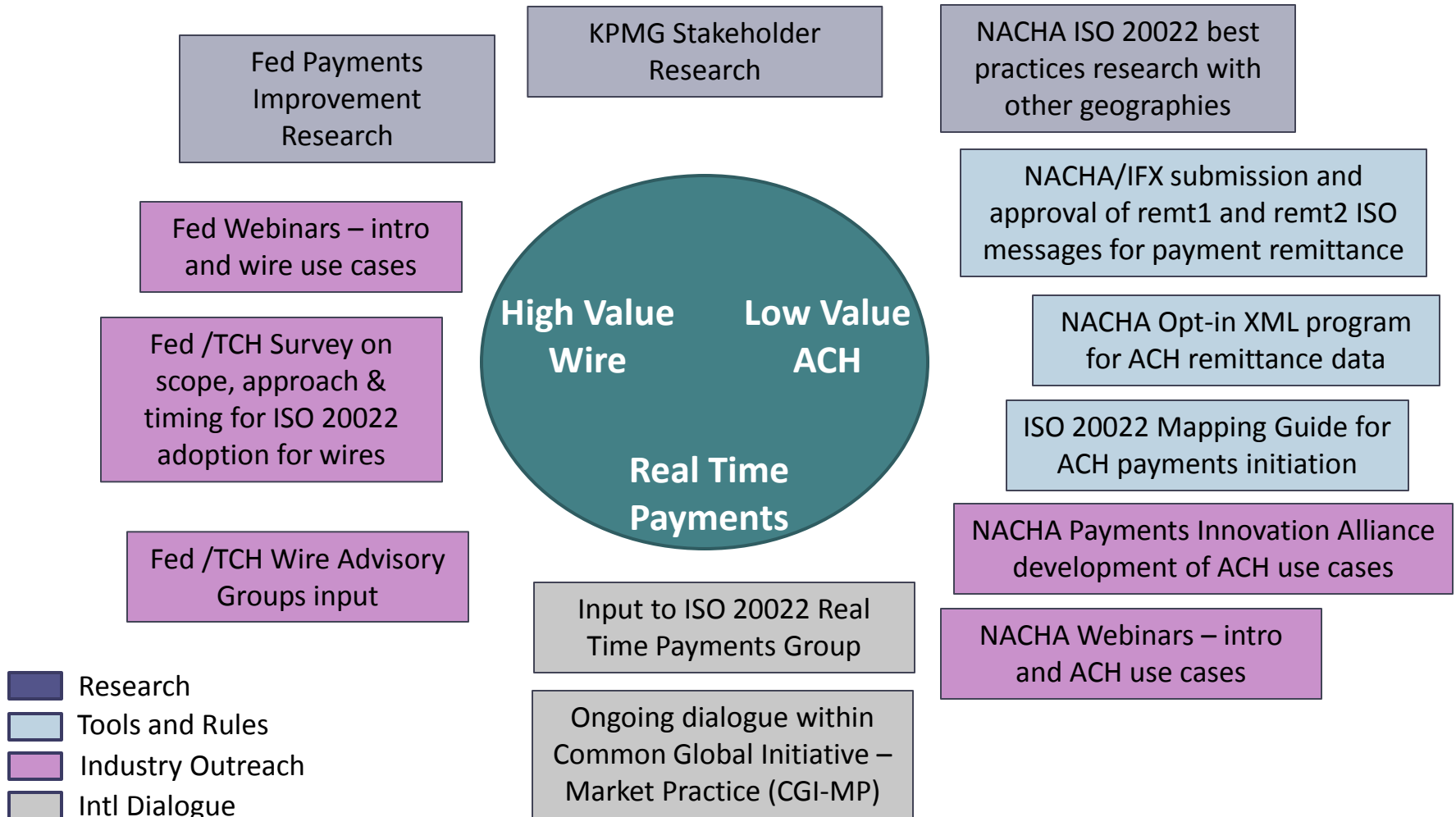
The ISO 20022 Stakeholder Group organizations have a set of common goals as we explore the future utilization of ISO 20022 in the U.S.

- To ensure our work is consistent, as much as possible, across payment types (ACH, wire, real time payments) in the U.S.
- To ensure our work is consistent, as much as possible, across geographies
- To continue to gather input and feedback from various participants in our vast payments ecosystem in the United States
- To use a fact-based approach to recommendations that are brought forward
- To define incremental steps that can be agreed to over time that provide benefit to and/or consistency for our payments ecosystem

If the above common goals are met, investments in our payment systems will yield a better return and processes can be better aligned in support of all payment system participants



Over the past 2 years, the study of benefits of ISO 2022 for the U.S. has included research on both high and low value systems, payment initiation as well as payment remittance data, and comparisons to other geographies



# ISO 20022 Work Efforts Span both Integration and Conversion

- Work conducted to explore ISO 20022 for ACH – both for integration and for conversion - can serve to help bridge payments from today to tomorrow



# ISO 20022 Strategy for the ACH Network – Definitions

- ISO 20022 ACH Integration

- Industry tools and solutions that allow ACH users to translate and integrate the ISO 20022 Payment Message standard for both electronic payments initiation and payments remittance without making changes to the current ACH formats and with the support of the *NACHA Operating Rules*

- ISO 20022 ACH Conversion

- The current ACH file formats are converted to ISO 20022 Payment Messages for all ACH payment types to all endpoints with the support of the *NACHA Operating Rules*, as revised to accommodate the different ISO formats or messages

# NACHA ISO 20022 ACH Integration Solutions



- XML-ACH Remittance Opt-In Program
  - Defines rules for the exchange of ISO 20022 formatted remittance messages (remt.00x) for B2B transactions in a standardized XML format
  - Expands ACH Remittance offerings from existing ability to support extensive remittance information to an option to support XML
- ISO 20022 Mapping Guide & Tool
  - Provides standardized guidance to facilitate translation of ISO 20022 pain.001 credit transfer payment messages into ACH transactions

# NACHA ISO 20022 ACH Integration Solutions: What's Next?

- XML-ACH Remittance Rule
  - Initiate NACHA rulemaking process to transition XML-ACH Remittance Opt-In Program to requirement as part of *NACHA Operating Rules*
  - Continue outreach to the industry to gain feedback
- Enhance ISO 20022 Mapping Guide & Tool
  - Expand to support additional ISO messages and mapping to other ACH payments types



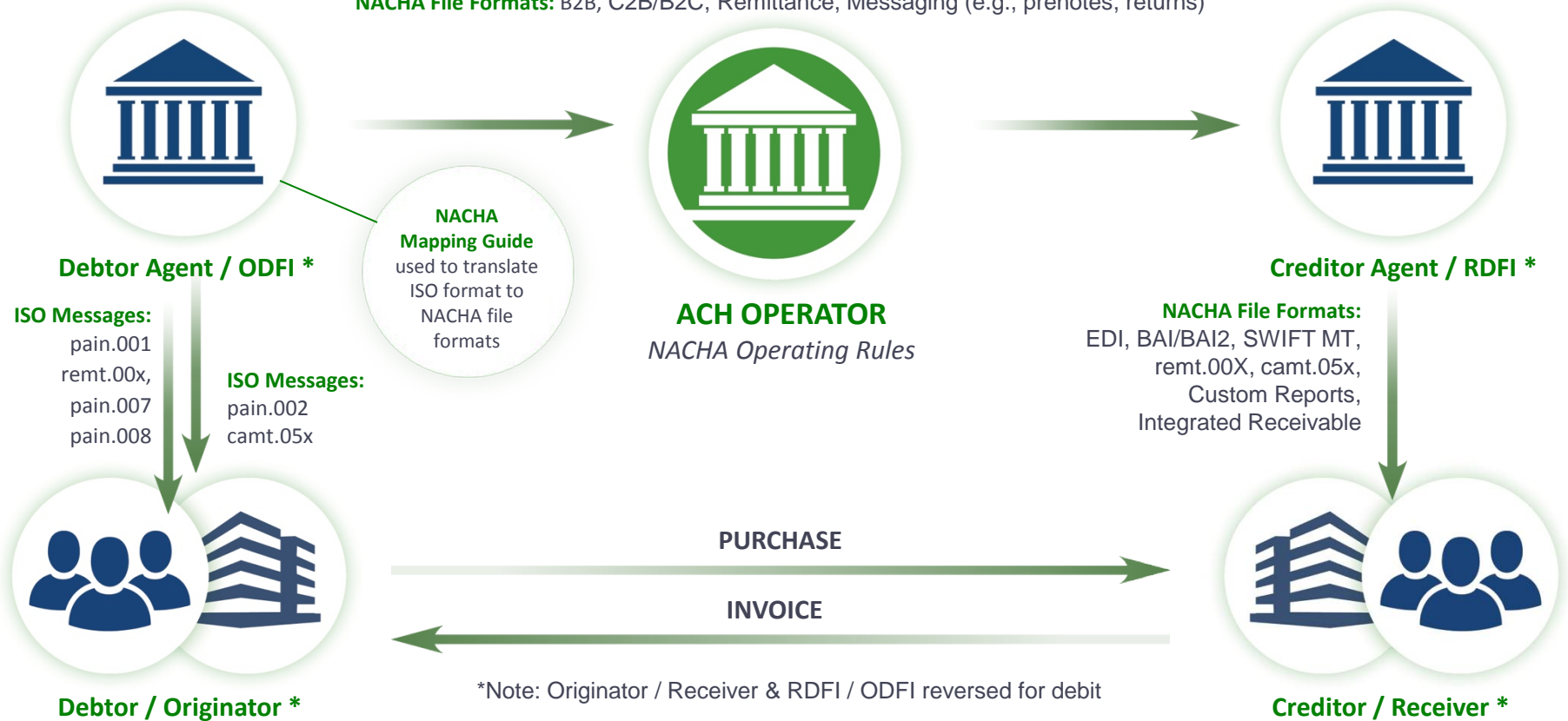
# Available Now: ISO 20022 Integration with B2B Credit ACH Formats



# Next: Expand ISO 20022 Integration Mapping to All ACH B2B, C2B/B2C and Related Messaging SECs (Credit and Debit)

## INTERBANK CLEARING AND SETTLEMENT

**NACHA File Formats:** B2B, C2B/B2C, Remittance, Messaging (e.g., prenotes, returns)



# ISO 20022 ACH Conversion Exploration

- NACHA's member organizations have started to explore ways to better understand the specific U.S. implications of replacing proprietary formats for low-value payments and messaging
- The Payments Innovation Alliance formed a ISO 20022 Task Force to identify potential use cases for converting the current ACH formats to ISO 20022 Payment Messages. They were asked:

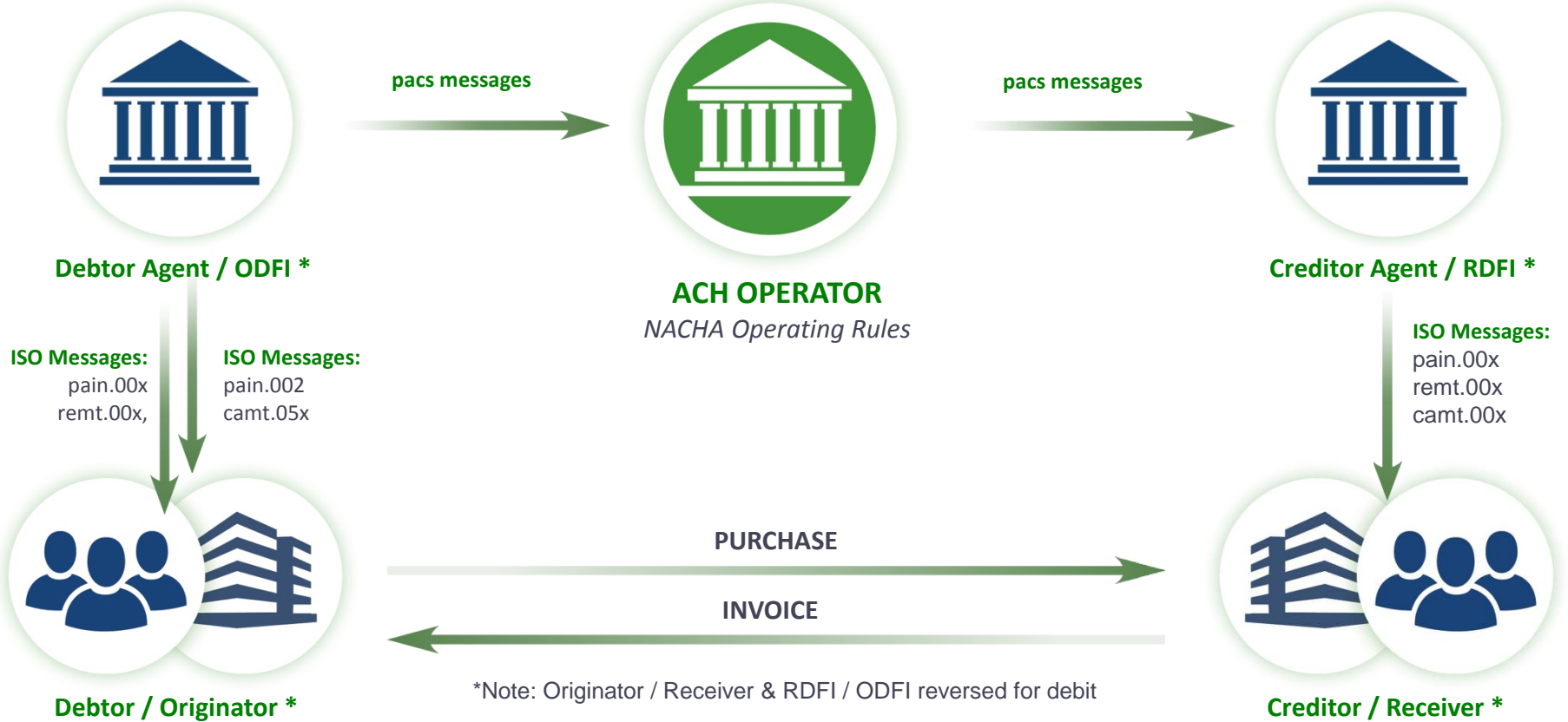
*What could ACH Network users do better, faster or more efficiently with ISO 20022 vs. the current ACH formats?*

- Currently eight use cases have been identified
- NACHA will continue to conduct industry outreach to obtain feedback on ISO 20022 ACH conversion use cases



# ISO 2002 ACH Format Conversion

## INTERBANK CLEARING AND SETTLEMENT



## Eight use cases outline areas where there may be benefit for ACH Network participants to convert to ISO 20022

- A modern programming language
- XML is more human readable
- ISO 20022 structured data facilitates STP
- Single payment instruction for all payment types
- Flexibility in data formats and field definition
- Overcome field length restrictions and data truncation
- Regulatory compliance improvement
- Facilitate international cross-border payments

## Will we convert the U.S. ACH to an ISO format?

- There are potential “triggers” or events that will influence decisions around when, if or how to convert the current ACH format to an ISO 20022 format
  - Significant gaps or opportunities are not met by ISO 20022 ACH Integration impacting users
  - The ACH operators complete significant system and operation modernization efforts that would create a catalyst for ACH format conversion
  - Adjacent systems that facilitate “STP” are updated to ease acceptance and utilization of ISO formats for all parties including accounting, banking and reporting systems for payments, and remittance included in the ACH flow
  - The benefits of ISO 20022 ACH format conversion justify the potential industry cost
  - Regulatory/mandatory requirements

# Both integration and conversion activities may allow for incremental investments over time

## Integration

ODFI translates ISO 20022 (pain.remtd) Payment Instructions to NACHA format using NACHA Mapping Tool and Guide

ODFI transmits NACHA formatted files to ACH Operators

Operators switch ACH formatted interbank messages  
example: CCD, CTX, IAT, etc.

## Both

Originator sends ISO 20022 payment instructions (pain.remtd) to ODFI

ODFI receives ISO 20022 payments instructions for processing

RDFI delivers reporting to receivers in format options including EDI, BAI, SWIFT, ISO 20022

Payment receiver processes integrating reporting from RDFI

*NACHA Operating Rules* apply to financial institutions

## Conversion

ODFI sends ISO 20022 (pacs) formatted to ACH Operator (switch)

Operators switch ISO 20022 (pacs) interbank payment messages

# ISO 2022 Stakeholder Engagement

## U.S. Wire Transfer Systems

Completed	Upcoming
<ul style="list-style-type: none"> <li>✓ Held joint Fed &amp; TCH meeting with advisory group banks (Sept 2014)</li> <li>✓ Finalized use cases to articulate the key benefits of ISO 2022 for wire transfer systems in May</li> <li>✓ Held two ISO 2022 education webinars on May 19 and June 3</li> <li>✓ Held vendor meeting on May 27 to discuss implementation approaches</li> <li>✓ Held AFP webinar on July 1</li> <li>✓ Held two webinars (July 15 &amp; July 23) to explain survey being conducted to gather input on ISO 2022 implementation scope, approach, &amp; timing for U.S. wire transfer systems – Survey closed September 4</li> <li>✓ Call with Fed &amp; TCH advisory group banks on August 25</li> </ul>	<ul style="list-style-type: none"> <li>✓ SWIFT executive roundtable meeting on Sept 16</li> <li>✓ Announce high-level plan and timeline to implement ISO 2022 for U.S. wire transfer systems at Sibos® 2015 in October</li> </ul> <p>Note: The ISO 2022 business case assessment summary, webinar recordings &amp; online survey have been posted to a dedicated page on the <a href="http://fedpaymentsimprovement.org">fedpaymentsimprovement.org</a> website.</p>

# ISO 20022 Survey Distribution

## Federal Reserve Marketing Distribution

- Approximately 2,350 institutions:
  - All Fedwire Funds customers using the FedLine Direct<sup>®</sup> access solution
  - All Fedwire Funds customers using the import/export feature of the FedPayments<sup>®</sup> Manager Funds application via the FedLine Advantage<sup>®</sup> access solution

## Other Distributions

- Wholesale Payments Advisory Group
- CHIPS Business Committee
- FedLine Direct Service Providers/Software Vendors
- Industry groups
  - ABA
  - ICBA
  - BAFT
  - AFP
  - SWIFT Cash & Trade

# ISO 20022 Survey Respondents To Date

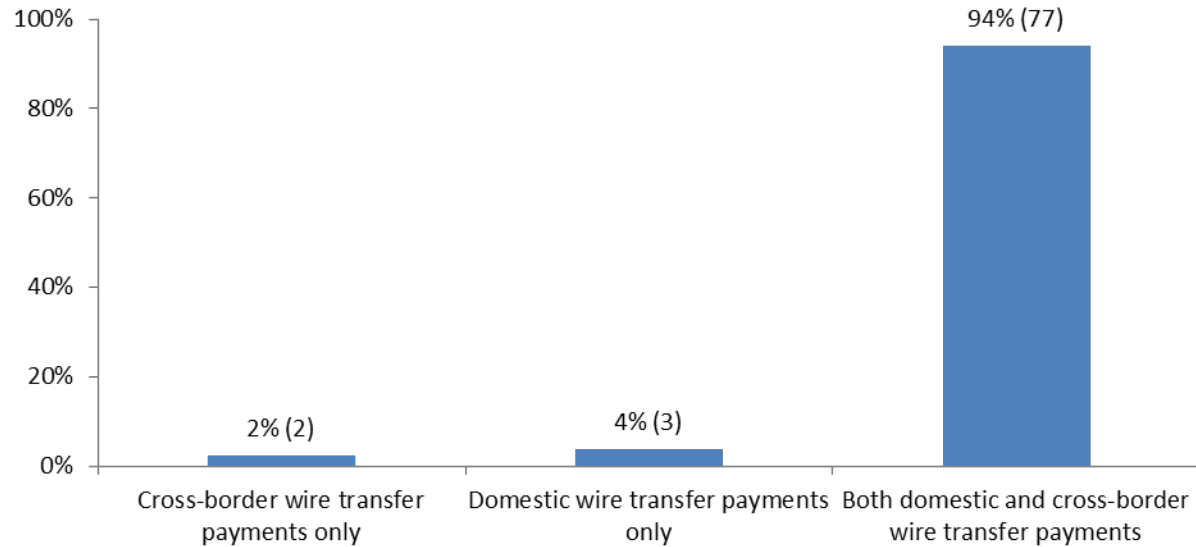
(Survey deadline of August 7 was extended to September 4)

Institution Type	# of Respondents (as of September 4, 2015)
Global Bank	11
Regional Bank	8
Bankers Bank	3
Community Bank	21
Credit Union	6
Foreign Bank with U.S. Branch	2
Service Provider/Software Developer	14
End-User Payments Provider	2
Card Network/Provider	1
Corporate	8
Consultant	2
University	1
Individual Person	1
Unknown (did not provide contact information)	5
<b>Total</b>	<b>85</b>

*Note: Some did not respond to every applicable question.*

- 64% of respondents were either in product management or wire/treasury operations.

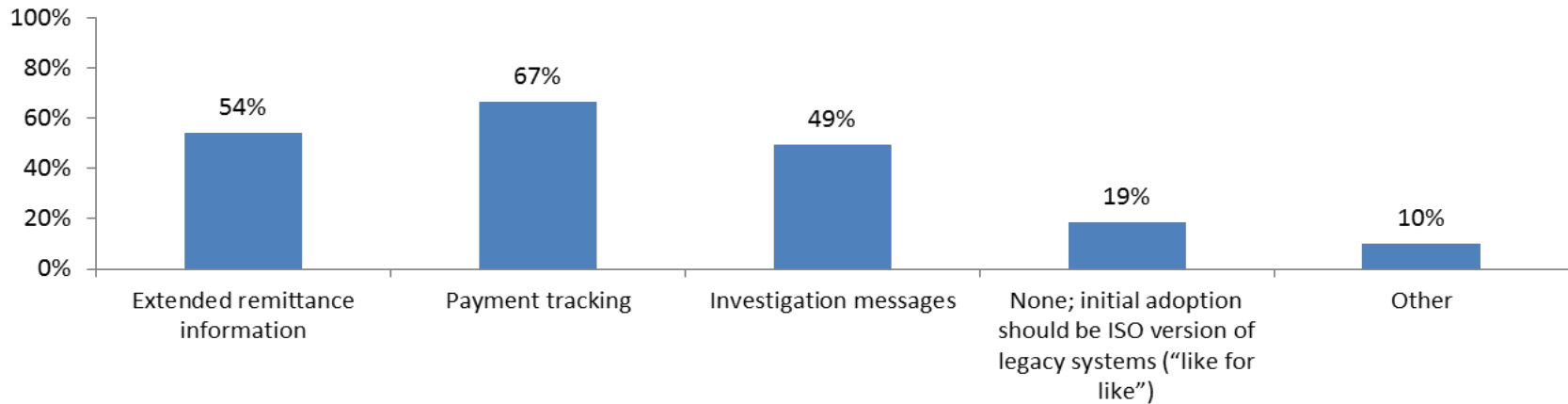
Q8. Which type of wire transfer payments should be included in an ISO 20022 implementation strategy for U.S. wire transfer systems? (Select one)



Total Responses = 82



## Q9. Which value-added enhancements would you like to see included in an ISO 20022 implementation strategy for U.S. wire transfer systems? (Select all that apply)



### Other Responses

Account attribute validation: It would be good if the bene's account can be validated prior to making the payment

Structured remitter and beneficiary information, including ISO country code

If we do this, we recommend starting with cross-border first, then consider domestic if the former proves to be worth the time and cost in terms of incremental value it brings.

**BANK TO BANK WIRE TRANSFER**

schemas need to be improved .. version of the message is part of the root field

Unstructured Remittance needs to have some standardized "structured schemas" for various business purpose..just like SEPA has various user groups

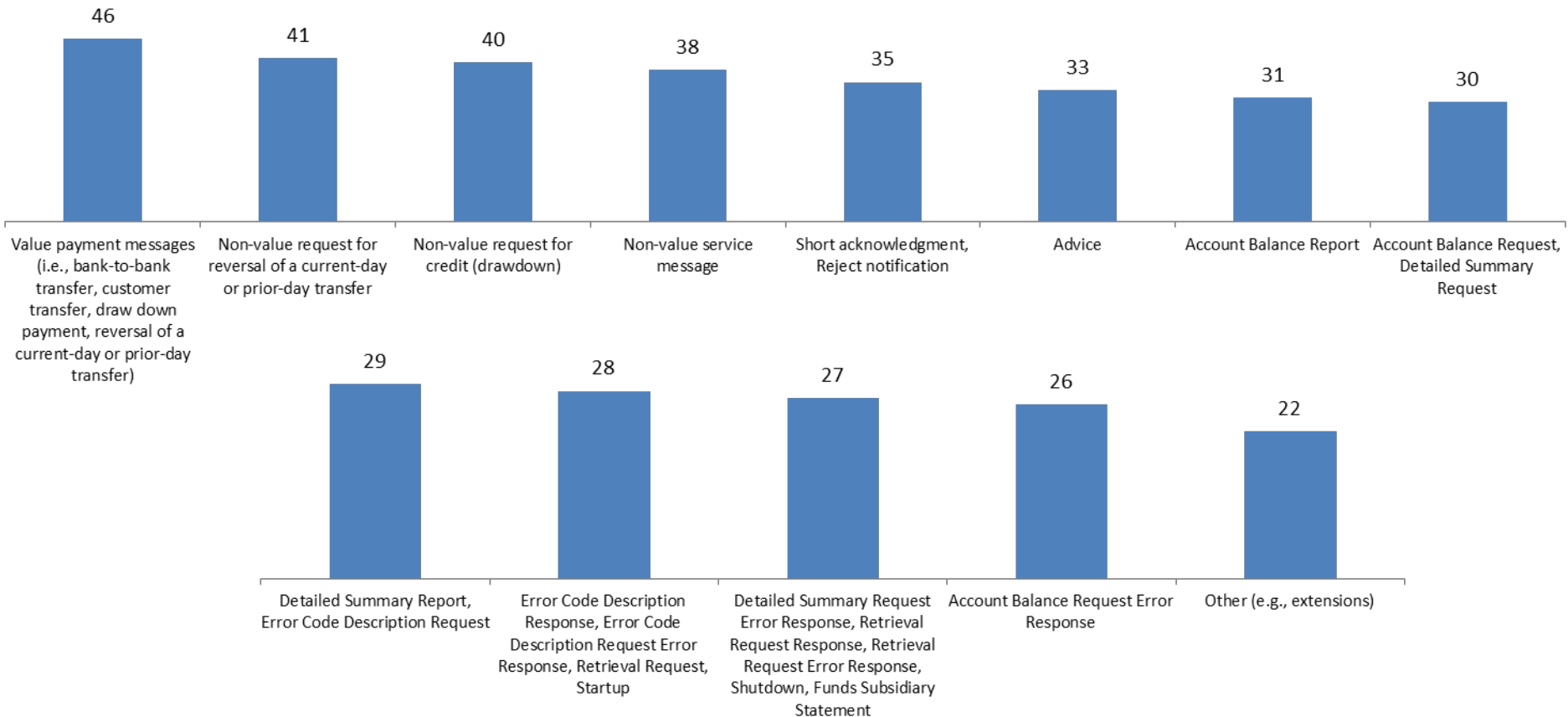
1. I believe that the scope should include like for like migration of the legacy formats to ISO 20022 as well as prepare for implementation of value added services such as ERI, Payment tracking and tracing. 2. The plan should include the approach for instant payments and the related changes to ISO 20022 to accommodate the real time payments transfer with all the rich data that it is supports. 3. It should also explore various non financial messages in the customer to bank space such as account switching / redirection, stopping / cancelling future dated payments sitting within the bank in its warehouse, setting up of fixed / variable amount of standing orders for high value payments 4. The plan should include the TWIST standard to embrace standardized service codes / transaction codes for reporting of fees applied on transaction services provided by a bank to its customers. In other words it should try and embrace the full grandeur of this standard atleast from a scope determination standpoint so that the industry at large knows which way the country is moving in terms of the feature set

All of the above, but minimum of "initial adoption should be ISO version of legacy systems ("like for like")

Total Responses = 81

Q10. Which aspects of the Fedwire Funds Service message format should be considered as part of the scope for adoption of the ISO 20022 format for U.S. wire transfer systems? (FedLine Direct customers & vendors) (Select all that apply)

### Fedwire Funds Service



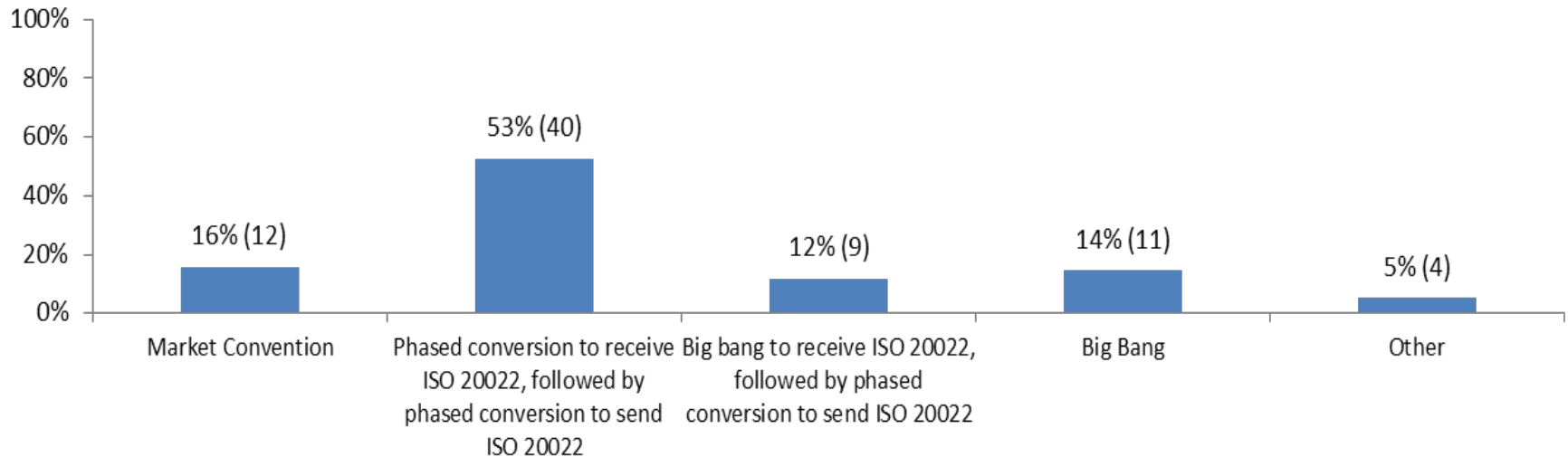
Total Responses = 50

**Q11. Which aspects of the CHIPS message format should be considered as part of the scope for adoption of the ISO 20022 format for U.S. wire transfer systems? (CHIPS customers & vendors) (Select all that apply)**

CHIPS Message Type	Frequency of Responses
Payment Message	23
Payment Message Stored Response, Payment Message System Cancelled Response ,Payment Preference Message ,Payment Preference Response ,Invalid Payment Preference Response ,Delete Payment Message ,Payment Message Retrieval ,Receive Retrieval	20
Payment Resolver Notification ,Invalid Delete Response ,Resolver Retrieval ,Payment Message Retrieval Response ,Receive Retrieval Response ,Payment Resolver Retrieval Response ,Invalid Payment Message Retrieval Response ,Invalid Receiver Retrieval Response ,Invalid Resolver Retrieval Response, Participant Inquiry, Participant Inquiry Response	19
Service Message ,Invalid Inquiry Response, Bilateral Inquiry	18
Valid Service Message Response, Service Message notification, Invalid Bilateral Inquiry Response, Participant Withdrawal Request, Reserve for Preference Request	17
Invalid Service Message Response, Service Message Input Retrieval, Service Message Notification Retrieval, Valid Service Message Input Retrieval Response, Invalid Service Message Input Retrieval Response, Valid Service Message Notification Retrieval Response, Invalid Service Message Notification Retrieval Response , Bilateral Inquiry Response, Invalid Withdrawal Response, Invalid Reserve Request Response, Cutoff / Expired Report , Initial End-of Day Balance Report , Final End-of Day Balance Report , Initial Bilateral Position Report , Final Bilateral Position Report , Cutoff Time Response, Queue Status Response	16
Warning Report Request , Warning Report , Receiver's Unresolved Payment Message Report Request , Receiver's Unresolved Payment Message Report Response , Invalid Receiver's Unresolved Payment Message Report Response , Status /Recovery/ Closing Report, Supervisory Message, Status Funded Participants Response, Status Active Participants Response, Rule 13 Status Response	15

**Total Responses = 25**

## Q12. Which of the following ISO 2022 implementation approaches for the U.S. wire transfer systems do you support? (Select one)

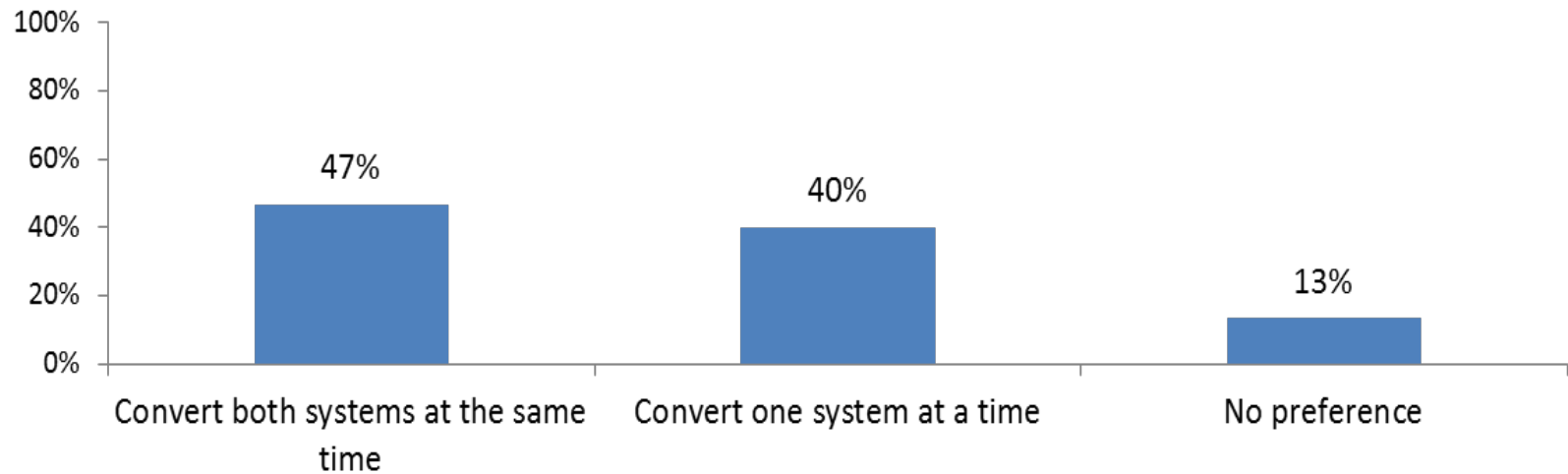


### Other Responses

Phased approach with both receive and send at same time - market infrastructure would convert to and from for those without ISO capability, but for those that do they could send and receive ISO and not use legacy

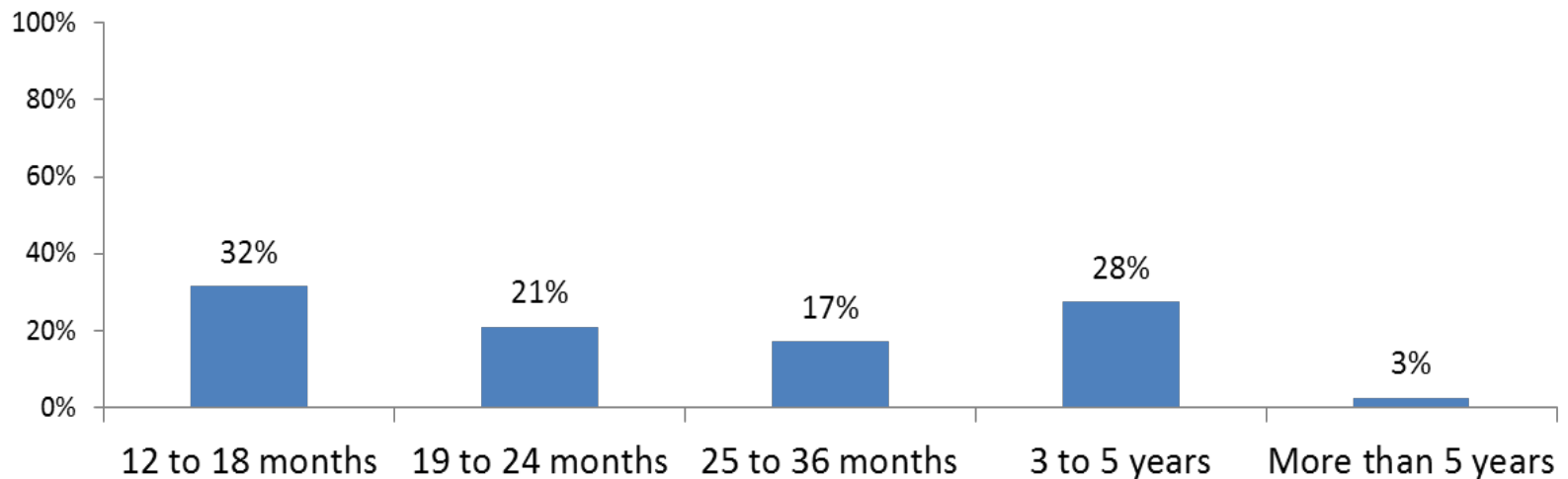
Total Responses = 76

Q13. Your organization participates in both the Fedwire Funds Service and CHIPS. What is your preference for converting to the ISO 20022 message format for those systems? (Select one)



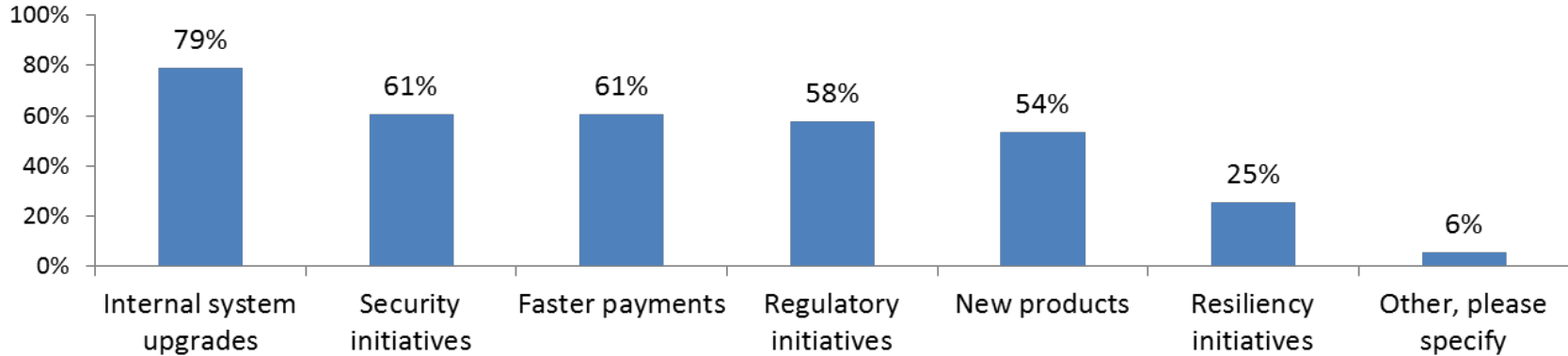
Total Responses = 15

Q14. How much lead time (from the time the Federal Reserve Banks and The Clearing House announce the new ISO 20022 format specifications) would your organization need to budget resources and make changes to prepare for an ISO 20022 implementation for wire transfer systems? (Select one)



Total Responses = 76

**Q15. Please identify other initiatives that will compete with ISO 2022 adoption efforts for resources within your organization. (Select all that apply)**



Specific Regulatory Initiatives
▪ SWIFT Reg Updates
▪ Ongoing KYC/AML screening requirements; Basel III requirements
▪ Intraday liquidity reporting, FAFT 16
▪ Intraday liquidity reporting, Basel III, EU FATF requirements, Format & convention changes e.g., Field 59
▪ FICC initiatives, MSRB/FINRA, SWIFT annual
▪ If ISO20022 is Mandated
▪ Mortgage, Reg Z, Reg CC (proposed), card association changes to support tokenization, EMV, etc.
▪ SWIFT updates
▪ Continued tightening of AML regulation and enforcement, etc.
▪ Banking regulations, CFPB, NACHA,

Specific Other Initiatives
▪ Same Day ACH
▪ Securities processing initiatives
▪ Post-merger organizational structure refinement
▪ From a vendor product standpoint, Intellect Payments is well geared to handle both sending and receiving of ISO 20022 based wire payments. The product framework allows compressed time framework based adaption to evolving needs of banks in these above mentioned areas

**Total Responses = 71**

# ISO 20022 for U.S. Wire Transfer Systems

## Proposed High-Level Implementation Strategy

### Scope

- Include both domestic & cross-border wire payments
- Include all components of the U.S. wire systems (all message types, inquiries, reports, etc.)

### Approach

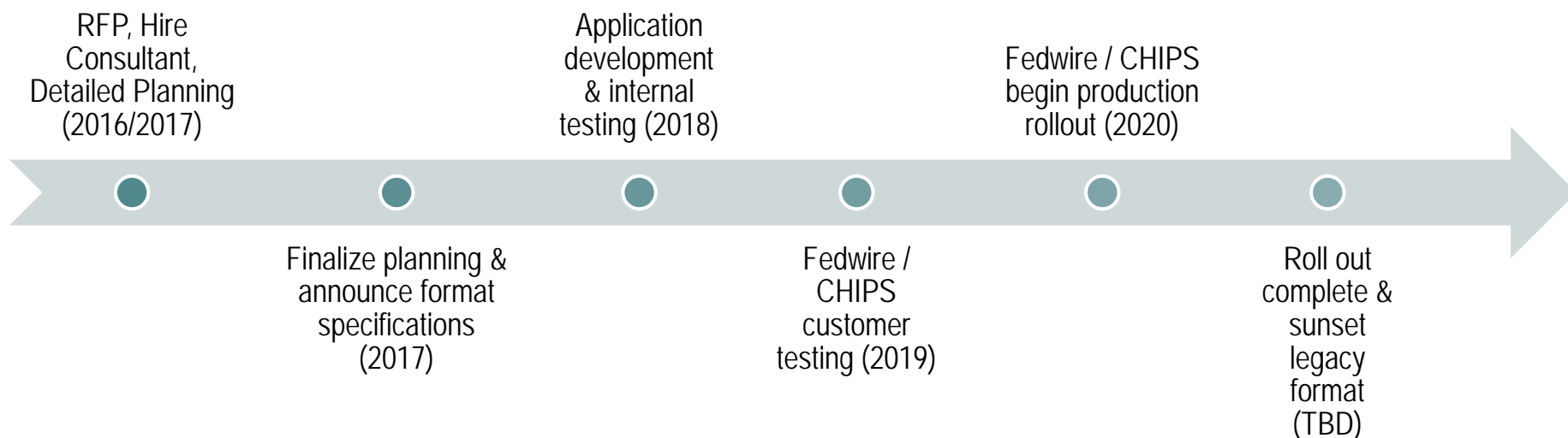
Two-phased approach that includes mandated sunset date for legacy formats:

1. Require all banks to **receive** ISO 20022
  - Fedwire Funds Service & CHIPS will translate legacy formats to ISO 20022 during conversion period
2. Require all banks to **send** ISO 20022
  - Legacy format will sunset at end of this phase



# ISO 20022 for U.S. Wire Transfer Systems

## Preliminary High-Level Timeline



### Detailed Planning Activities

- Define detailed project plan & timeline
- Ensure ISO 20022 can accommodate everything needed for Fedwire Funds Service & CHIPS
  - Could provide opportunity to streamline processes or eliminate messages with little or no usage
  - May identify change requests that need to be approved/implemented by ISO
- Define the specific ISO 20022 messages and fields that will be needed for Fedwire Funds Service & CHIPS
- Determine if implementation will be “like for like” or include enhancements
- If enhancements are to be included, identify and prioritize the enhancements based on industry feedback
- Define format specifications/message implementation guide & validate with industry

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

## Next Steps

- RFP to hire consultant to help develop detailed project plan & timeline
- Conduct detailed work
- Seek additional industry validation
- Provide update on status of detailed project plan at Sibos 2016

# Notices

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