

# Investment Roadmap

## September 2010

*Note: A plan to update the roadmap is being drafted (Nov 2018)*



## Executive Summary

- Within the financial services industry, there are multiple messaging standards being used, and the purpose of the Standards Coordination Group has been to come up with an approach that leverages and includes these standards into a broader framework without reinventing and creating redundant messages that increase implementation costs and cause confusion for the industry.
- This investment roadmap affirms the commitment of each organization (FIX, FpML, SWIFT, XBRL, ISITC and FISD) to the ISO 20022 business model by laying the groundwork for defining a common underlying financial model and ensuring some level of interoperability by producing a consistent direction for utilization of messaging standards and communicating that direction clearly to the industry.
- The respective business processes included in the roadmap are or will be incorporated within the ISO 20022 business model and the model allows for ISO 20022 XML based messages to be created to support the business processes, while at the same time provides in certain circumstances for existing domain specific syntaxes and protocols to be maintained in order to protect the investments of market participants.
- The organizations are committed to meeting on a consistent basis to ensure the roadmap continues to accurately depict the standards environment.

# Investment Roadmap – FIX, ISO, FpML, XBRL syntax (HIGH LEVEL)

	Function	Cash Equities & Fixed Income	Forex <sup>(2)</sup>	Listed Derivatives	OTC Derivatives <sup>(2)</sup>	Funds
Issuer	Pre-investment decision		N/A		N/A	
Front Office	Pre-Trade					
	Trade					
Middle Office	Post-Trade	▲ ●	▲ ●	▲ ●		
	Clearing / Pre-Settlement			▲ ●		
Back Office	Asset Servicing	● ◆	N/A			● ◆
	Collateral Management	▲ ●	N/A	▲ ●	■ ●	N/A
	Settlement					
	Pricing / Risk / Reporting	■ ●	■ ●	■ ●	■ ●	■ ●
Investor Supervision	Regulatory Reporting	▲ ●	▲ ●	▲ ●		
Issuer Supervision	Regulatory Reporting		N/A		N/A	

▲	FIX	●	ISO (1)
■	FpML	◆	XBRL

(1) Represents ISO 20022, ISO 15022 and MT messages

(2) See OTC Derivatives breakout for details:

- Syndicated Loans, Privately Negotiated FX, and OTC Equity, Interest Rate, Credit, and Commodity Derivatives
- FpML payload may be used in combination with FIX business processes in dealer to buy side communication

# Goal: ISO 20022 Common Business Model (HIGH LEVEL)

	Function	Cash Equities & Fixed Income	Forex <sup>(2)</sup>	Listed Derivatives	OTC Derivatives <sup>(2)</sup>	Funds
Issuer	Pre-investment decision		N/A		N/A	
Front Office	Pre-Trade					
	Trade					
Middle Office	Post-Trade					
	Clearing					
Back Office	Asset Servicing	● ◆	N/A			● ◆
	Collateral Management	▲ ●	N/A		■ ●	N/A
	Price Risk / Reporting	■ ●	■ ●	■ ●	■ ●	■ ●
Investor Supervision	Regulatory Reporting	▲ ●	▲ ●	▲ ●		
Issuer Supervision	Regulatory Reporting		N/A		N/A	

*ISO 20022 Compliant*

*using Domain Specific Syntaxes*

▲	FIX	●	ISO (1)
■	FpML	◆	XBRL

(1) Represents ISO 20022, ISO 15022 and MT messages

(2) See OTC Derivatives breakout for details:

- Syndicated Loans, Privately Negotiated FX, and OTC Equity, Interest Rate, Credit, and Commodity Derivatives
- FpML payload may be used in combination with FIX business processes in dealer to buy side communication

# Investment Roadmap – FIX, ISO, FpML, XBRL syntax (MEDIUM LEVEL)

	Function	Cash Equities & Fixed Income	Forex	Listed Derivatives	OTC Derivatives	Funds
<b>Issuer</b>	<b>Pre-investment decision:</b> Filing Fundamental Data with the Regulator, Analytical Models		N/A		N/A	
<b>Front Office</b>	<b>Pre-Trade:</b> IOIs, Trade adverts, Quotes, Market data, Short Sale Locate, Reference Data					
	<b>Trade:</b> Order Routing, Trade Execution, Trade Date Position Reporting, Reference Data					
<b>Middle Office</b>	<b>Post-Trade:</b> Trade Capture & Validations, Allocation, Matching, Confirmation/Affirmation, Position Management, OTC Derivatives Post Trade Processing	▲ ●	▲ ●	▲ ●		
	<b>Clearing / Pre-Settlement:</b> Matching, Netting, Funding, Reference Data			▲ ●		
<b>Back Office</b>	<b>Asset Servicing:</b> Issuance, Corporate Actions, Proxy Voting, Securities Lending	● ◆	N/A			● ◆
	<b>Collateral Management:</b> Initial Margining, Margin Call, Substitution, Recall, Transfer, Interest Payment	▲ ●	N/A	▲ ●	■ ●	N/A
	<b>Settlement:</b> Pre-advisement, Settlement Notification, Settlement, Transaction Management, Fail and Claim Management					
	<b>Pricing / Risk / Reporting:</b> Tax Management, Income Collection, Risk Management, Pricing & Valuation, Reporting, Position Management	■ ●	■ ●	■ ●	■ ●	■ ●
<b>Investor Supervision</b>	<b>Regulatory Reporting:</b> Short Sale Reporting, Trade Surveillance Reporting, Position Management Reporting, Tax Lot Reporting	▲ ●	▲ ●	▲ ●		
<b>Issuer Supervision</b>	<b>Regulatory Reporting:</b> Short Interest Reporting, Financial Statement Reporting, Investment Reporting		N/A		N/A	

FIX
FpML
ISO
XBRL

# Investment roadmap – FIX, ISO, FpML, XBRL syntax (DETAIL LEVEL)





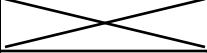
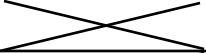
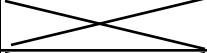
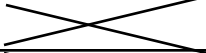
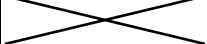
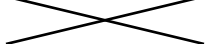
	Cash Equities	Fixed Income	Forex	Listed Derivatives	OTC Derivatives <sup>(1)</sup>	Funds
<b>Pre-investment Decision</b>						
•Filing Fundamental Data with the Regulator	XBRL	XBRL	<del></del>	XBRL	<del></del>	XBRL
•Analytical Models	XBRL	XBRL	<del></del>	XBRL	<del></del>	XBRL
<b>Pre-Trade:</b>						
•IOIs	FIX	FIX	<del></del>	FIX	FpML	<del></del>
•Trade advertisements	FIX	FIX	<del></del>	FIX	FpML	<del></del>
•Quotes	FIX	FIX	FIX	FIX	FpML	<del></del>
•Market Data	FIX	FIX	FIX	FIX	FpML	ISO
•Short Sale Locate	FIX	<del></del>	<del></del>	FIX	<del></del>	<del></del>
•Reference Data	FIX	FIX	FIX	FIX	FpML	ISO
<b>Trade:</b>						
•Order Routing	FIX	FIX	FIX	FIX	<del></del>	ISO
•Trade Execution	FIX	FIX	FIX	FIX	FpML	ISO
•Trade Date Position Reporting	FIX	FIX	FIX	FIX	FpML	ISO
•Reference Data	FIX	FIX	FIX	FIX	FpML	ISO
<b>Post-Trade:</b>						
•Trade Capture & Validations	FIX, ISO	FIX, ISO	FIX, ISO	FIX, ISO	FpML	ISO
•Allocation	FIX, ISO	FIX, ISO	FIX, ISO	FIX, ISO	FpML	ISO
•Matching	FIX, ISO	FIX, ISO	FIX, ISO	FIX, ISO	FpML	ISO
•Confirmation/Affirmation	FIX, ISO	FIX, ISO	FIX, ISO	FIX, ISO	FpML	ISO
•Position Management	FIX, ISO	FIX, ISO	FIX, ISO	FIX, ISO	FpML	ISO
•Novation/Assignment (OTC Derivatives)	<del></del>	<del></del>	<del></del>	<del></del>	FpML	<del></del>
•Amendments / Modifications (OTC Derivatives)	<del></del>	<del></del>	<del></del>	<del></del>	FpML	<del></del>
•Termination (OTC Derivatives)	<del></del>	<del></del>	<del></del>	<del></del>	FpML	<del></del>
•Increases (OTC Derivatives)	<del></del>	<del></del>	<del></del>	<del></del>	FpML	<del></del>
•Affirmations (OTC Derivatives)	<del></del>	<del></del>	<del></del>	<del></del>	FpML	<del></del>
•Exercise (OTC Derivatives)	<del></del>	<del></del>	<del></del>	<del></del>	FpML	<del></del>

<sup>(1)</sup> FpML payload may be used in combination with FIX business processes in dealer to buy side communication.

# Investment roadmap – FIX, ISO, FpML, XBRL syntax (DETAIL LEVEL)

	Cash Equities	Fixed Income	Forex	Listed Derivatives	OTC Derivatives	Funds
<b>Clearing / Pre-Settlement:</b>						
•Matching	ISO	ISO	ISO	FIX, ISO	FpML	ISO
•Netting	ISO	ISO	ISO	FIX, ISO	FpML	ISO
•Funding	ISO	ISO	ISO	FIX, ISO	FpML	ISO
•Reference Data	ISO	ISO	ISO	FIX, ISO	<del> </del>	ISO
<b>Asset Servicing:</b>						
•Issuance	ISO, XBRL	ISO, XBRL	<del> </del>	ISO	<del> </del>	ISO, XBRL
•Corporate Actions	ISO, XBRL	ISO, XBRL	<del> </del>	ISO	FpML	ISO, XBRL
•Proxy Voting	ISO, XBRL	ISO, XBRL	<del> </del>	ISO	<del> </del>	ISO, XBRL
•Securities Lending	ISO	ISO	<del> </del>	ISO	FpML	ISO
<b>Reconciliation:</b>						
•Portfolio Reconciliation	ISO	ISO	<del> </del>	ISO	FpML,ISO	ISO
•Cash Flow Matching	ISO	ISO	<del> </del>	ISO	FpML	ISO
<b>Collateral Management:</b>						
• Initial Margining	ISO	FIX, ISO	<del> </del>	FIX, ISO	FpML,ISO	<del> </del>
• Margin Call	ISO	FIX, ISO	<del> </del>	FIX, ISO	FpML,ISO	<del> </del>
• Substitution	ISO	FIX, ISO	<del> </del>	FIX, ISO	FpML,ISO	<del> </del>
• Recall	ISO	ISO	<del> </del>	ISO	FpML,ISO	<del> </del>
• Transfer	ISO	ISO	<del> </del>	ISO	FpML,ISO	<del> </del>
• Interest Payment	ISO	ISO	<del> </del>	ISO	ISO	<del> </del>

# Investment roadmap – FIX, ISO, FpML, XBRL syntax (DETAIL LEVEL)

	Cash Equities	Fixed Income	Forex	Listed Derivatives	OTC Derivatives	Funds
<b>Settlement:</b>						
•Pre-advisement	ISO	ISO	ISO	ISO	FpML	ISO
•Settlement Notification	ISO	ISO	ISO	ISO	FpML	ISO
•Settlement	ISO	ISO	ISO	ISO	ISO	ISO
•Transaction Management	ISO	ISO	ISO	ISO	ISO	ISO
•Fail and Claim Management	ISO	ISO	ISO	ISO	ISO	ISO
<b>Pricing / Risk / Reporting</b>						
•Tax Management	ISO	ISO		ISO	ISO	ISO
•Income Collection	ISO	ISO	ISO	ISO	ISO	ISO
•Risk Management	FpML,ISO	FpML,ISO	FpML,ISO	FpML,ISO	FpML,ISO	FpML,ISO
•Pricing & Valuation	FpML,ISO	FpML,ISO	FpML,ISO	FpML,ISO	FpML,ISO	FpML,ISO
•Reporting	FpML,ISO	FpML,ISO	FpML,ISO	FpML,ISO	FpML,ISO	FpML,ISO
•Position Management	FpML,ISO	FpML,ISO	FpML,ISO	FpML,ISO	FpML,ISO	FpML,ISO
<b>Regulatory Reporting - Investor</b>						
•Short Sale Reporting	FIX, ISO	FIX, ISO		FIX, ISO		
•Trade Surveillance Reporting	FIX, ISO	FIX, ISO	FIX	FIX, ISO	FpML	ISO
•Position Management Reporting	FIX, ISO	FIX, ISO	FIX, ISO	FIX, ISO	FpML,ISO	ISO
•Tax Lot Reporting	FIX, ISO	FIX, ISO	FIX, ISO	FIX, ISO	FpML,ISO	ISO
<b>Regulatory Reporting - Issuer</b>						
•Short Interest Reporting	XBRL	XBRL		XBRL		XBRL
•Financial Statement Reporting	XBRL	XBRL		XBRL		XBRL
•Investment Reporting	XBRL	XBRL		XBRL		XBRL



# OTC Derivatives Detail – Client Side Applications

	Function	Syndicated Loans	FX Derivatives	Equity Derivatives	Interest Rate Derivatives	Credit Derivatives	Commodity Derivatives
<b>Issuer</b>	<b>Pre-investment Decision:</b>	N/A	N/A	N/A	N/A	N/A	N/A
<b>Front Office</b>	<b>Pre-Trade:</b> IOIs, Trade adverts, Quotes, Market data, Short Sale Locate, Reference Data	<b>Communication between clients and brokers of OTC Derivative Process and Product representations for Pre-Trade and Trade Processes will continue to be discussed. A Gap Analysis to be performed by ISDA and FPL has been proposed to determine requirements for and feasibility of FIX Protocol Support in these areas.</b>					
	<b>Trade:</b> Order Routing, Trade Execution, Trade Date Positions, Reference Data						
<b>Middle Office</b>	<b>Post-Trade:</b> Trade Capture & Validations, Allocation, Matching, Confirmation/Affirmation, Position Management, Trade Surveillance, OTC Derivatives Post Trade Processing						
	<b>Clearing / Pre-Settlement:</b> Matching, Netting, Funding, Reference Data						
	<b>Asset Servicing:</b> Issuance, Corporate Actions, Proxy Voting, Securities Lending						
	<b>Collateral Management:</b> Initial Margining, Margin Call, Substitution, Recall, Transfer, Interest Payment	□ ●	□ ●	□ ●	□ ●	□ ●	□ ●
	<b>Reconciliation:</b> Cash Flow Matching, Portfolio Reconciliation	□ ●	□ ●	□ ●	□ ●	□ ●	□ ●
<b>Back Office</b>	<b>Settlement:</b> Pre-advisement, Settlement Notification, Settlement, Transaction Management, Fail and Claim Management						
	<b>Pricing / Risk / Reporting:</b> Tax Management, Income Collection, Risk Management, Pricing & Valuation, Accounting, Position Management	□ ●	□ ●	□ ●	□ ●	□ ●	□ ●
<b>Investor Supervision</b>	<b>Regulatory Reporting:</b> Short Sale Reporting, Trade Surveillance Reporting, Position Management Reporting, Tax Lot Reporting						
<b>Issuer Supervision</b>	<b>Regulatory Reporting:</b> Short Interest Reporting, Financial Statement Reporting, Investment Reporting	N/A	N/A	N/A	N/A	N/A	N/A

FIX
FpML
ISO
XBRL

<sup>(1)</sup> FpML payload over FIX business processes across all OTC Derivatives products may be used for allocation and confirmation/affirmation