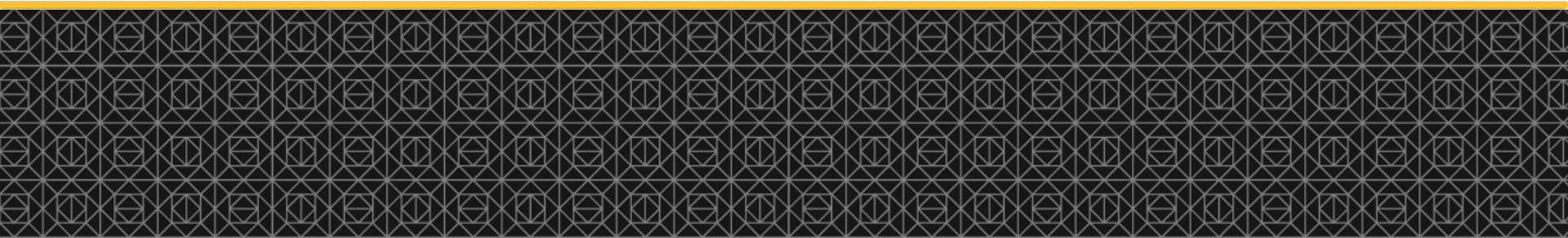


## MBS Novation Process Comparison

FICC Product Management

May 2016



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# Novation Highlights (1 of 2)

## Clearing

<b>Trade Novation</b>	Compared trades for generic TBAs, SPTs and STIPs will be novated facing three separate accounts FTBA, FSPT, FSTI, respectively. Pool Netting results for generic TBAs will still be facing FICC.
<b>IDB Changes</b>	IDB Flat commission eliminated
<b>IDB Changes</b>	IDB OPTN eligibility eliminated
<b>Option</b>	Option trades will not be novated
<b>Reporting</b>	New reject/ DK codes and MRO & report upgrades
<b>Reporting</b>	SWIFT Messaging updates
<b>Do-Not-Allocate (DNA)</b>	Available on 48hr day until cutoff on 24hr day at 4:30PM Excludes offsetting position from allocation resulting in a pair off and associated money difference
<b>SPT</b>	SPT submission based on Pool CUSIP or Issuer/Pool Number (clients may submit via different options & achieve matching)

## Clearing

<b>STIP</b>	Introduction of generic STIP trade matching with terminators logic
<b>STIP</b>	Introduction of required FICC STIP Trade ID on all EPN activities. Missing STIP Trade ID will result in a DK.
<b>STIP/SPT</b>	STIP and SPT activity not subject to split/splice process
<b>SPT_STIP</b>	STIP & SPT cancels accepted until evening CSD-1 (unless allocated)
<b>TBA Net</b>	Odd lot TBA Netting introduced
<b>TBA Net</b>	New TBA Netting algorithm
<b>TBA Net</b>	All TBA Netting output as SBON vs. Fixed Income Clearing Corp @ FICC system price
<b>NOS</b>	Client initiated NOS eliminated

# Novation Highlights (2 of 2)

EPN		Pool Netting		Settlement	
<b>Submissions</b>	Minimal changes to EPN processing	<b>PID Submission</b>	Optional as matching PIDs generated based on EPN allocations	<b>Ex-FICC settlements</b>	Eliminated as all settlements will be vs. Fixed Income Clearing Corp
<b>Submissions</b>	Fixed Income Clearing Corp is contra on all EPN activity	<b>SPT_STIP PID Submission</b>	PID submission not required as FICC will generate linked POIDs for all SPT & STIP trades	<b>Factor Updates</b>	Factor updates post settlement will result in a new cash settlement obligation type.
<b>Generic TBAs</b>	Allocations target by terms or FICC trade ID	<b>Pool Netting Schedule</b>	Existing 2 PM Pool netting process unchanged		
<b>STIP</b>	STIP allocations must target FICC trade ID	<b>Expanded Pool Netting Cycle</b>	Expanded Pool Netting executed in concert with SIFMA recommended CSD-1 at 4:30PM		
<b>EPNX</b>	Reconciliation reference number for EPN activities and pool instruct records. Also target number for non-STIP CC	<b>TBA Re-price</b>	Following expanded pool net on CSD-1 at 4:30PM, existing position re-priced to current FICC system price resulting in a new cash settlement obligation payable on CSD		
<b>Cutoff Time</b>	EPN will be shut down at 4:30PM daily				

# TBA Novation Comparison (1 of 4)

Action	Current SBOD TBA Process	Current TFTD TBA Process	Post Novation TBA Process	Additional Comments
<b>Trade Submission</b>	Clients submit vs. trading partner	Clients submit vs. trading partner	Clients submit vs. trading partner	
<b>Trade Bilateral Match</b>	Based on all terms matching	Based on all terms matching	Based on all terms matching	
<b>Compared Trade Contra Designation</b>	Trading partner	Trading partner	Fixed Income Clearing Corp. designated contra symbol (FTBA)	All post comparison actions on novated trades (i.e. cancels) must be submitted versus the Fixed Income Clearing Corp. designated contra symbol. In the event that a replacement trade is required the submission must be versus the trading partner's contra symbol.
<b>Risk Management</b>	Initiated upon matching	Initiated upon matching	Initiated upon matching	
<b>Broker GUP</b>	GUP executed based on IDB submission	GUP executed based on IDB submission	Not applicable as GUP process eliminated	IDB flat commission & option eligibility eliminated
<b>TBA Netting</b>	Eligible	Not eligible	All TBA activity eligible	New TBA Netting algorithm and introduction of odd lot netting. TFTD TBA's compared post the related TBA Netting Cycle will be submitted with a "TFTD" trade type

# TBA Novation Comparison (2 of 4)

Action	Current SBOD TBA Process	Current TFTD TBA Process	Post Novation TBA Process	Additional Comments
<b>Balance Order Designation(s)</b>	SBON or SBOO	Not applicable	SBON	Odd lot activity to be included in the TBA net will need to be entered as SBOD
<b>Balance Order Contra Designation</b>	Original or Non-original trading partner(s)	Not applicable	Fixed Income Clearing Corp. designated contra symbol (FTBA)	
<b>Do Not Allocate (“DNA”) Process</b>	Not applicable	Not applicable	Pair-off buys & sells eliminating allocation and settlement events	Available beginning 48hr day until 24hr day at 4:30PM cutoff, results in new COI type
<b>EPN Submission</b>	Seller allocates to buyer	Seller allocates to buyer	Allocation delivered by seller to FTBA is turned to buyer(s)	No outright cancel of EPN allowed
<b>PID Submission vs. Trading Partner</b>	Seller and buyer submit PIDs for bilateral match	Seller and buyer submit PIDs for bilateral match	Optional as PIDs will be systemically generated based on EPN activity	
<b>Automatic PID Generation</b>	Not applicable	Not applicable	EPN messages sent to FTBA are turned to buyer(s) and systemically generates compared PIDs	Clients may submit PIDs but EPN messages will be used to generate compared PIDs

# TBA Novation Comparison (3 of 4)

Action	Current SBOD TBA Process	Current TFTD TBA Process	Post Novation TBA Process	Additional Comments
Initial Pool Netting Cycle	Initiated per current schedule	Initiated per current schedule	Initiated per current schedule	
POID with DD = next business day generation vs. FICC	Available per current schedule	Available per current schedule	Available per current schedule	
Post 3 PM allocations on 48hr day through 4:30PM on 24hr day subject to second Pool Netting cycle	Not applicable	Not applicable	Allocations delivered by seller to FTBA is turned to buyer(s) subject to expanded Pool Netting cycle	Remaining positions subject to repricing
Expanded Pool Netting cycle	Not applicable	Not applicable	Expanded Pool Netting executed in concert with SIFMA recommended CSD-1 EOD at 4:30PM	
POID vs. FICC with DD in two business days generated vs. FICC	Not applicable	Not applicable	Available per CSD-1 EOD at 4:30PM	
DVP_RVP vs. FICC	Performed based on generated POIDs	Performed based on generated POIDs	Performed based on generated POIDs	

# TBA Novation Comparison (4 of 4)

Action	Current SBOD TBA Process	Current TFTD TBA Process	Post Novation TBA Process	Additional Comments
<b>DVP_RVP vs. Trading Partner</b>	Performed based on balance order trades not submitted to Pool Netting	Performed based on TFTD TBA not submitted to Pool Netting	Not Applicable as all settlements will be performed vs. FICC	
<b>Post settlement factor adjustments</b>	Not applicable	Not applicable	Factor change on settled pools vs. FICC will result in new cash settlement obligation event	
<b>Submit NOS vs. Trading Partner</b>	Required submission on clearance day	Required submission on clearance day	Not Applicable	External NOS is eliminated based on the roll out of novation eligible CUSIPS
<b>NOS bilateral match</b>	Based on matching terms	Based on matching terms	Not Applicable	



# SPT Novation Comparison (1 of 2)

Action	Current SPT Process	Post Novation SPT Process	Additional Comments
Trade Submission	Clients submit vs. trading partner	Clients submit vs. trading partner	Clients may submit Pool CUSIP number or issuer <b>and</b> pool number in place of TBA CUSIP to achieve matching
Trade Bilateral Match	Based on all terms matching	Based on all terms matching	Client cancels accepted up to evening prior to CSD-1
Contra Designation	Trading partner	Fixed Income Clearing Corp. designated contra symbol (FSPT)	All subsequent actions taken vs. Fixed Income Clearing Corp. designated contra symbol
Risk Management	Initiated upon matching	Initiated upon matching	
Broker GUP	GUP executed based on IDB submission	Not applicable as GUP process eliminated	IDB flat commission & option eligibility eliminated

# SPT Novation Comparison (2 of 2)

Action	Current SPT Process	Post Novation SPT Process	Additional Comments
DVP_RVP vs. FICC	Not Applicable	Settled vs. FSPT based on generated obligations	FICC will systemically generate obligations for settlement purposes linking original trading relationship
DVP_RVP vs. Trading Partner	Settled between trading partners	Not Applicable as all settlements will be performed vs. FSPT	
Submit NOS vs. Trading Partner	Required submission on clearance day	Not Applicable	All external NOS eliminated upon FICC achieving full novation status on all activity
NOS bilateral match	Based on matching terms	Not Applicable	

# STIP Novation Comparison (1 of 2)

Action	Current STIP Process	Post Novation STIP Process	Additional Comments
<b>Trade Submission</b>	Clients submit vs. trading partner. FICC cannot recognize STIP activity as it is submitted as a TFTD TBA trade and only the trading partners are aware of the actual STIP(s)	Clients submit vs. trading partners	Introduction of generic STIP trade matching with terminators logic
<b>Trade Bilateral Match</b>	Based on all terms matching	Based on all terms matching	Client cancels for unallocated trades accepted up to evening prior to CSD-1
<b>Contra Designation</b>	Trading partner	Fixed Income Clearing Corp. designated contra symbol (FSTI)	All subsequent actions taken vs. Fixed Income Clearing Corp. designated contra symbol
<b>Risk Management</b>	Initiated upon matching	Initiated upon matching	
<b>Broker GUP</b>	GUP executed based on IDB submission	Not applicable as GUP process eliminated	IDB flat commission & option eligibility eliminated

# STIP Novation Comparison (2 of 2)

Action	Current STIP Process	Post Novation STIP Process	Additional Comments
<b>EPN Submission</b>	Seller allocates to buyer	Allocation (including mandatory FICC Trade ID) delivered by seller to FSTI is turned to buyer(s)	Introduction of STIP trades. Supported by: 1) Good Delivery Million terminators 2) Bid list terminators
<b>DVP_RVP vs. FICC</b>	Not Applicable	Settled vs. FSTI based on generated obligations	FICC will systemically generate obligations for settlement purposes linking original trading relationship.
<b>DVP_RVP vs. Trading Partner</b>	Settled between trading partners	Not Applicable as all settlements will be performed vs. FSTI	
<b>Submit NOS vs. Trading Partner</b>	Required submission on clearance day	Not Applicable	All external NOS eliminated upon FICC achieving full novation status on all activity
<b>NOS bilateral match</b>	Based on matching terms	Not Applicable	
<b>Bank Settlement</b>	Not Applicable	One settlement bank	One settlement bank to avoid interbank movements and mismatches at the bank

# Appendix A: Glossary (1 of 2)

Acronym	Description	Definition
<b>COI</b>	Cash obligation Item	FICC generated cash payables & receivables
<b>CSD</b>	Contractual Settlement Date	Mutually agreed upon settlement date
<b>DNA</b>	Do Not Allocate	Trade pair-off process
<b>FSPT</b>	FICC TBA Trade Contra Symbol	Trade and settlement level contra side reflected on matched Specified Pool trades
<b>FSTI</b>	FICC TBA Trade Contra Symbol	Trade and settlement level contra side reflected on matched trades with stipulations
<b>FICC</b>	FICC Contra Symbol on all Pool Obligations	Settlement level contra side reflected on all TBA Pool Obligations generated via Pool Netting
<b>FTBA</b>	FICC TBA Trade Contra Symbol	Trade level contra side reflected on matched TBA and TBA Netting generated trades
<b>GUP</b>	Give-Up	Act of removing the IDB from a compared trade and replacing with dealer contra side
<b>IDB</b>	Interdealer Broker	Broker buying & selling on behalf of dealers
<b>MRO</b>	Machine Readable Output	MBSD data feed via file transmission
<b>NOS</b>	Notification of Settlement	Member submitted clearance information based on settlements away from FICC

# Glossary (2 of 2)

Acronym	Description	Definition
<b>OPTN</b>	Option Trade Type	Trade submission designation
<b>PID</b>	Pool Instruct	Submission pool details into Pool Netting
<b>POID</b>	Pool Obligation	Pool settlement generated via Pool Netting
<b>SBOD</b>	SBO Destined Trade	TBA trade subject to TBA Netting
<b>SBON</b>	Settlement Balance Order Non-Original	TBA trade generated via TBA Netting versus a non original contra side
<b>SBOO</b>	Settlement Balance Order Original	TBA trade generated via TBA Netting versus an original contra side
<b>SPT</b>	Specified Pool Trade	Trade terms include agreed upon pool number
<b>STIP</b>	Stipulated Trade	Trade with mutually agreed upon conditions
<b>TFTD</b>	Trade-for-Trade	Trade not intended for TBA Netting

# Appendix B: Novation Account IDs

Trade Type	RTTM	Pool Net	Settlement
TBA	FTBA	FICC	FICC
Specified Pool Trades (SPT)	FSPT	N/A	FSPT
Stipulated Trades (STIP)	FSTI	N/A	FSTI

# Appendix C: STIP Terminators (1 of 4)

- **FICC will support generic TBA stipulations in Novation. Members will indicate a Stipulation at time of trade submission. When the trade is fully matched and novated, FICC will assign a unique Trade ID that must be carried on the trades pool allocations and/or CC messages through EPN to ensure FICC targets the correct trade.**
- **Stipulated trades that are out of SIFMA guidelines will be supported through bid list terminator logic. Bad delivery terminator 8889 will define when FICC will close (fully decrement) trades.**
- **FICC will not validate any trade stipulations. It is the sole responsibility of the receiving member to DK the trade if it does not meet the agreed upon terms. FICC will DK the trades if incorrect terminator logic is used. Since FICC can't see or validate STIPs members must reconcile any differences with their original trading partner before resubmitting the allocation.**



# STIP Terminators (2 of 4)

- **Example 1: Combination of Good delivery terminators and Bad Delivery terminator - Good delivery terminators must come first with bad delivery terminators closing the trade. The message cannot start with a Bad Delivery terminator and switch to GD or switch from GD terminators to bad delivery and back to GD within the same trade.**
- **Trade: FNMA 30 year, 3%, Quantity: 125,500,000**

Lot/Message	Pool	Original Face	Terminator	
1	123456	50MM	0050	
2	123456	50MM	0050	
3	123456	25,800M	8889	This is over variance. 8889 will close out TBA

Lot /Message	Pool	Original Face	Terminator	
1	123456	50MM	0050	
2	123456	49MM	8888	GD Terminators are followed by bad delivery terminators 8888. Cannot go back to GD terminators
3	123456	24,500M	8889	This is under variance. 8889 will close out TBA regardless of variance

# STIP Terminators (3 of 4)

- **Example 2: Bad Delivery Terminator- all pools sent in the same EPN Message and lot**

Message	Pool	Original Face	Terminator	
1	123456	49,500M	8888	
1	123456	49,500M	8888	
1	123456	26,800M	8889	This is over variance. 8889 will close out TBA regardless of variance

- **Example 3: Partial Trade with Bad Delivery Terminators – Separate EPN Messages**

Message	Pool	Original Face	Terminator	
1	123456	49,500M	8888	This will decrement the trade to 76MM Open Par
2	123456	49,500M	8888	This will decrement the trade to 26,500M Open Par
3	123456	26,800M	8889	This is over variance. Terminator 8889 will close out TBA regardless of variance

# STIP Terminators (4 of 4)

- **Example 4: Trades with bad delivery terminators that reach good delivery variance- Partial trades sent with 8888 terminators will be Dk'd if the last pool with 8888 terminator falls within SIFMA good delivery.**
- **Trade of 100MM with 101MM allocation**

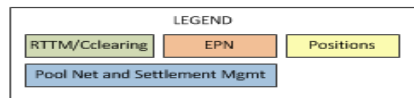
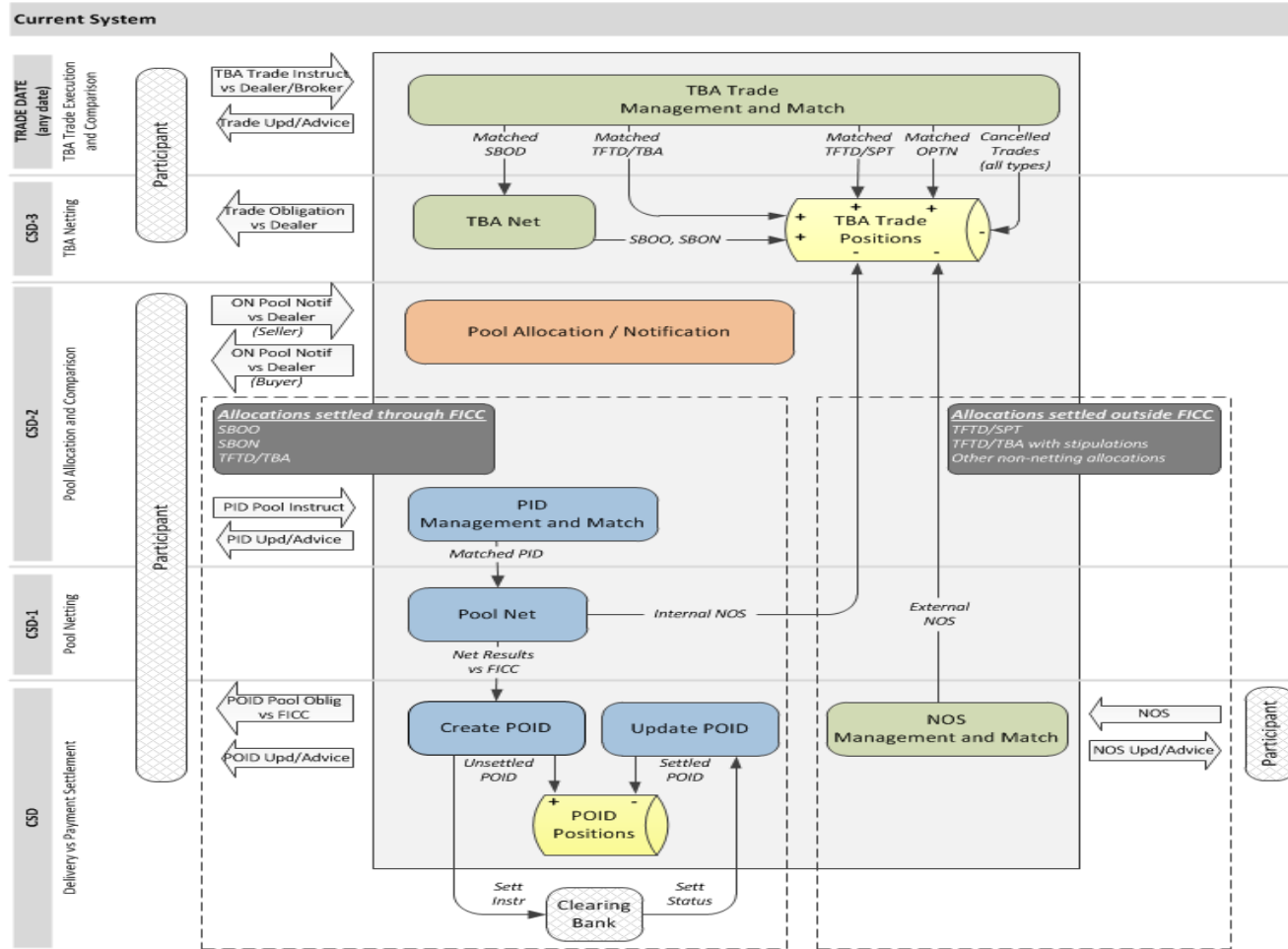
Message	Pool	Original Face	Terminator	
1	123456	50MM	8888	This will decrement the trade to 50MM Open Par This message will be DK'd since it's within SIFMA variance and the terminator suggests leaving an open position on a trade already decremented to 0
2	123456	50MM	8888	
3	123456	1MM	8889	This will incorrectly decrement this trade since previous lot was DK'd

Message	Pool	Original Face	Terminator	
1	123456	50MM	8888	This will decrement the trade to 50MM Open Par
2	123456	50MM	8888	This will correctly decrement the trade since the 50MM and the 1MM over delivery are sent in the same message
2	123456	1MM	8889	This will correctly decrement the trade since the 50MM and the 1MM over delivery are sent in the same message

# Appendix D: Timeline

- **Interactive Messaging and Detailed MRO Specifications – End of Q2 2015**
- **Member Testing – Q4 2016 – Q2 2017**
- **Novation Live Implementation – Q3 2017**

# Appendix E: Current Process Flow



# Future Process Flow

