TMPG | Treasury Market Practices Group

Clearing and Settlement in the Secondary Market for U.S. Treasury Securities

Trade Flow Mapping

July 2018

Map Legend

Flows	Description	Counter-party/Description					
<>	Two-way information flow (Trade Messaging, Confirmation, Matching, etc.)	 1. Buyers/Sellers: a. Buy-side Firms: Not CCP members. Clear and settle bilaterally. 					
	One-way information fl ow (Delivery/Receive instructions, Settlement confirms, etc.)	 i. Multiple Disclosed Principals (MDP): Buy-side firm clients who are the underlying ultimate purchaser of U.S. Treasury securities. Trades are transacted as an omnibus principal by the buy-side firm and then allocated to the underlying principals by the end of T+1. b. Dealers (CCP members): Clear and settle on a bilateral basis with CCP nonmembers and clear and settle via the CCP when trading with other CCP members. c. Dealers (CCP non-members): Clear and settle on a bilateral basis as they are not CCP members. d. PTFs: Clear and settle bilaterally (not CCP members), or utilize a Prime/Executing Broker to face the market as principal on their behalf. 					
	Security movement (Delivery of Treasuries either across the Fedwire or as a book transfer within a Clearing Bank)						
0	Cash movement (Delivery of cash as payment for Treasury purchase. Cash is auto-debited when deliver of Treasury is across the Fedwire)						
Risk Event	Description	 e. Prime Brokers (PB): Can be CCP members that act as agent or principal when they clear and settle on behalf of their underlying clients. f. Executing Brokers: May or may not be CCP members and clear and settle as principal on behalf of their underlying clients. 					
\bigcirc	Counterparty credit risk (Risk of counterparty non-performance and the associated market risk from liquidating or covering positions)	 principal on behalf of their underlying clients. 2. Clearing/Custody Banks: Clear and settle on behalf of their clients with respect to both CCP and non-CCP trades. Typically involves the advancement of cash on behalf of 					
\bigcirc	Centrally cleared credit risk (Risk that the CCP assumes in becoming principal to the trade)	the underlying Buyer as cash is auto debited on the Fedwire upon receipt of Treasury securities in the Clearing/Custody Bank's omnibus account prior to final settlement upon payment into the Buyer's account.					
$\langle \rangle$	CCP counterparty risk (Buyer/Seller's risk of CCP non-performance and the associated market risk from liquidating or covering positions)	3. Central Counterparty (CCP): Clearing house that centrally clears for its members. Counterparty credit risk is transferred to CCP upon successful trade matching.					
\bigcirc	Credit extension risk (Risk assumed by parties advancing cash upon receipt of securities on behalf of underlying Buyer secured by such securities. In the event of Buyer's default, the party providing cash may liquidate Treasuries and absorb credit and market risk)	4. Interdealer Brokers (IDBs): Dealers that operate electronic and voice platforms that allow participants to trade anonymously. Typically are CCP members playing a principal role in the trade facing Buyer and Seller. Trades may clear through a CCP if both Buyer and Seller are CCP members; trades clear bilaterally if both parties are not CCP members; and trades clear bilaterally and centrally if either Buyer or Seller is a CCP member and the other is not.					
	Numbered quadrants denote stages of the transaction lifecycle:1. Execution3. Clearing/Settlement2. Affirmation/Matching4. Final Settlement	 5. Limited Principal Clearing Agents: Parties who act as agent for the final Buyer or Seller in the clearing and settlement process. To facilitate settlement, these agents assume some pre-agreed amount of credit risk on behalf of the underlying Buyer. 					
Party A Party B	Colored regions denote parties exposed to risk during corresponding lifecycle stage	6. Clearing Agents: Parties who act as agent for the final Buyer or Seller in the settlement process and do not extend any credit on behalf of the Buyer.					

Figure 1A: Bilateral Clearing (no IDB)

CCP member selling to CCP non-member; bilateral clearing



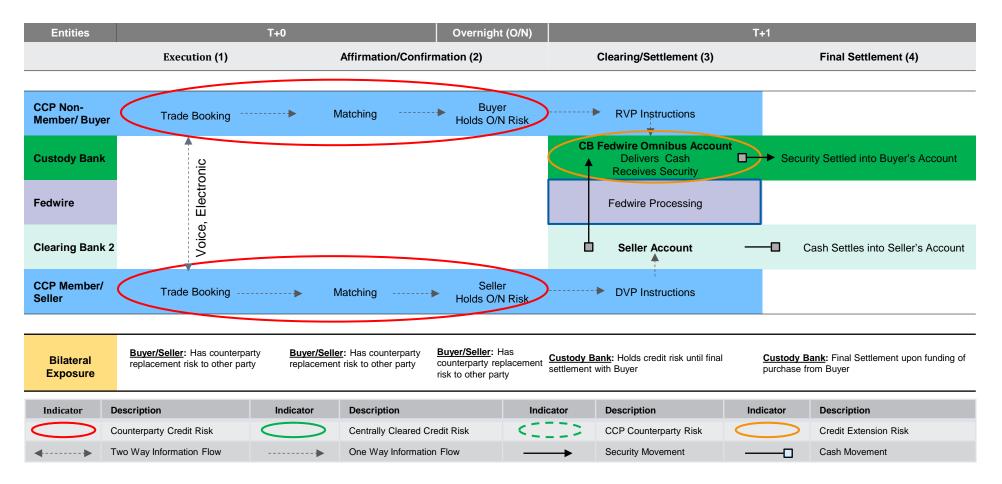
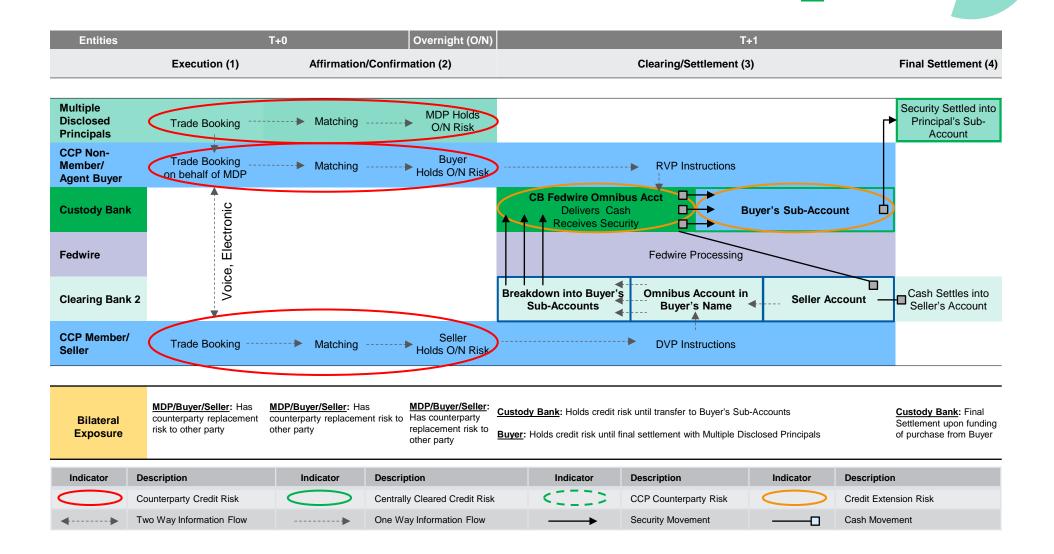


Figure 1B: Bilateral Clearing (Multiple Disclosed Principals)

CCP member selling to CCP non-member; bilateral clearing on behalf of multiple disclosed principals



Buyer/Seller

Multiple

Disclosed Principals Custody Bank

Figure 2: Central Clearing (no IDB)

Two CCP members trade; central clearing



Entities		T+0		Overnight (O/N)		T+1	
	Execution (1)	Affirmation/Confirma	tion (2)	Clearing/Settlement (3	3)	Final Settlement (4)
CCP Member/ Buyer	Trade Bookin	g	Trade Details Submission		RVP Instructions		
Clearing Bank	Platforms , OMGEO,				Clearing Bank's Fed Omnibus Accour		curity Settles into Buyer's Account
ССР	tronic Plat V-con, ON Email)	<	Matching, Novation, and Netting	CCP Holds O/N Credit Risk			
Fedwire	Elec berg,				Fedwire Processir	ŋg	
Clearing Bank	Voice, (Blooml		•			ller's —□ Ca count	ash Settles into Seller's Account
CCP Member/ Seller	Trade Bookin	g	Trade Details Submission		DVP Instructions		
Bilateral Exposur	Buyer/Seller: Has count replacement risk to other successful matching at C	party until			a ring Bank 1 : Holds credit risk tlement with Buyer		r <u>ing Bank 1</u> : Final Settlement upon ng of purchases from Buyer
Clearing Exposur	8	CCP	Members until delivery to	<u>CCP</u>: Holds Credit Risk overnight until delivery to clearing bank			
Indicator	Description	Indicator	Description	Indicator	Description	Indicator	Description
\bigcirc	Counterparty Credit Risk	\bigcirc	Centrally Cleared Credit Risk	<222>	CCP Counterparty Risk	\bigcirc	Credit Extension Risk
∢▶	Two Way Information Flow	·····•	One Way Information Flow	>	Security Movement	0	Cash Movement

Figure 3: Central Clearing (IDB)

Two CCP members trade via IDB; central clearing



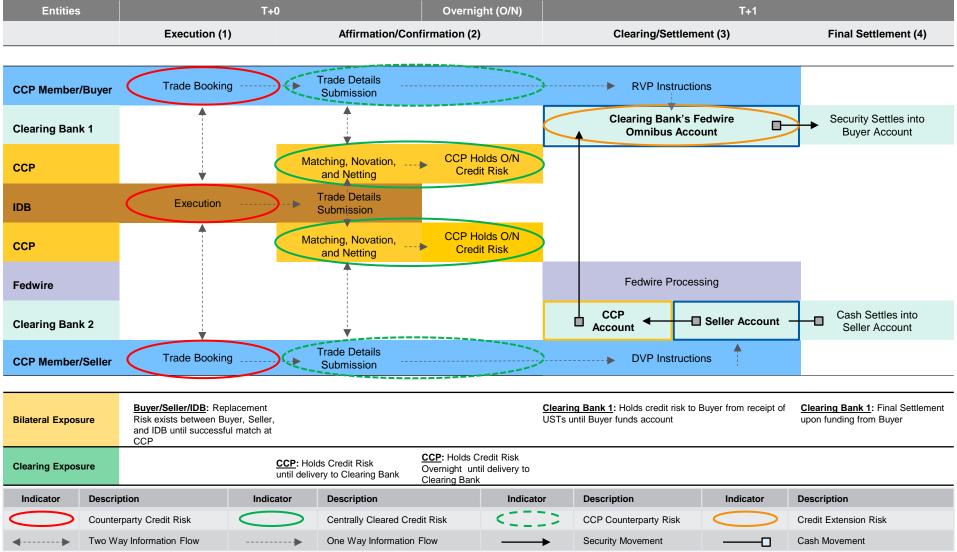
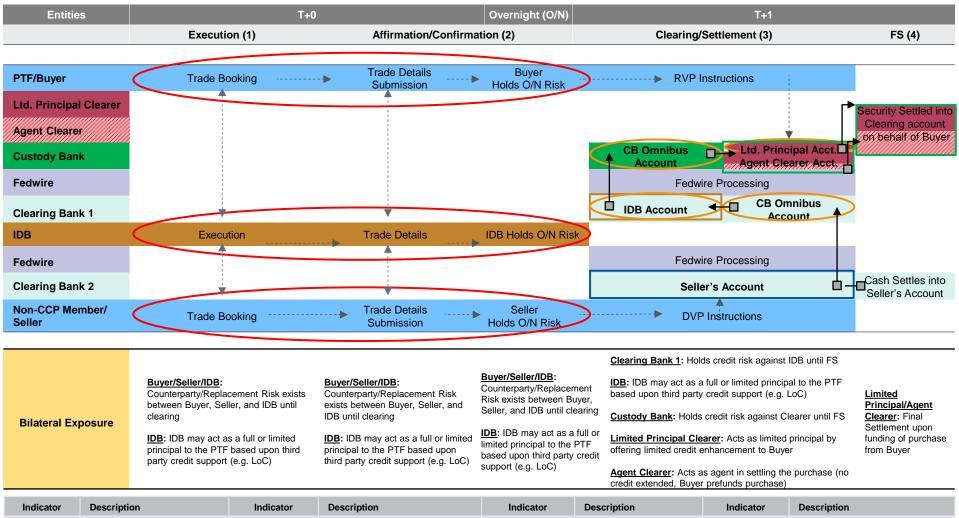


Figure 4: Bilateral Transaction (IDB)

Counterpart

Two CCP non-members trade via IDB; bilateral clearing





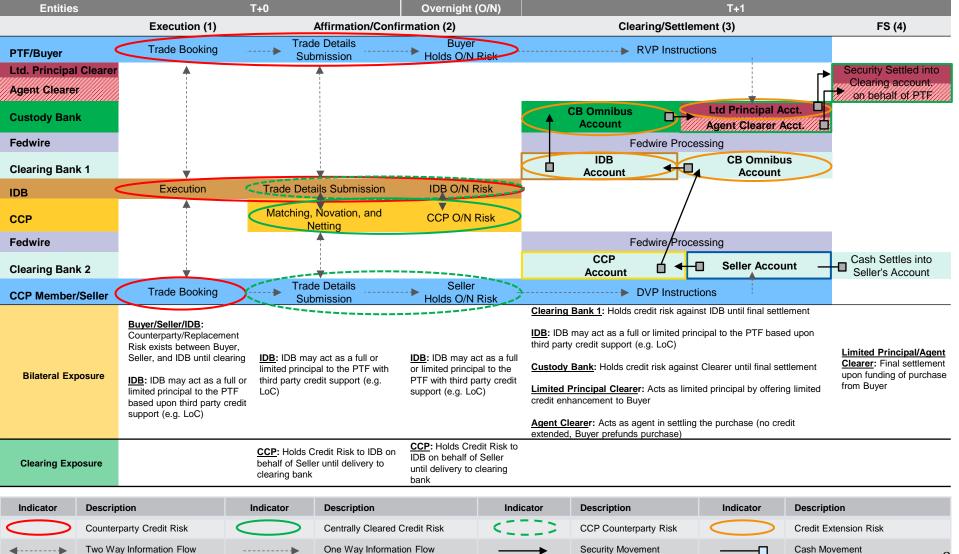
11	indicator	Description	mulcator	Description	maicator	Description
rty Credit Risk	\bigcirc	Centrally Cleared Credit Risk	<222>	CCP Counterparty Risk	\bigcirc	Credit Extension Risk
Information Flow		One Way Information Flow	>	Security Movement		Cash Movement

TMPG CONSULTATIVE REPORT

Figure 5A: Hybrid Clearing (IDB)

CCP member and CCP non-member trade via IDB; bilateral and central clearing





TMPG CONSULTATIVE REPORT

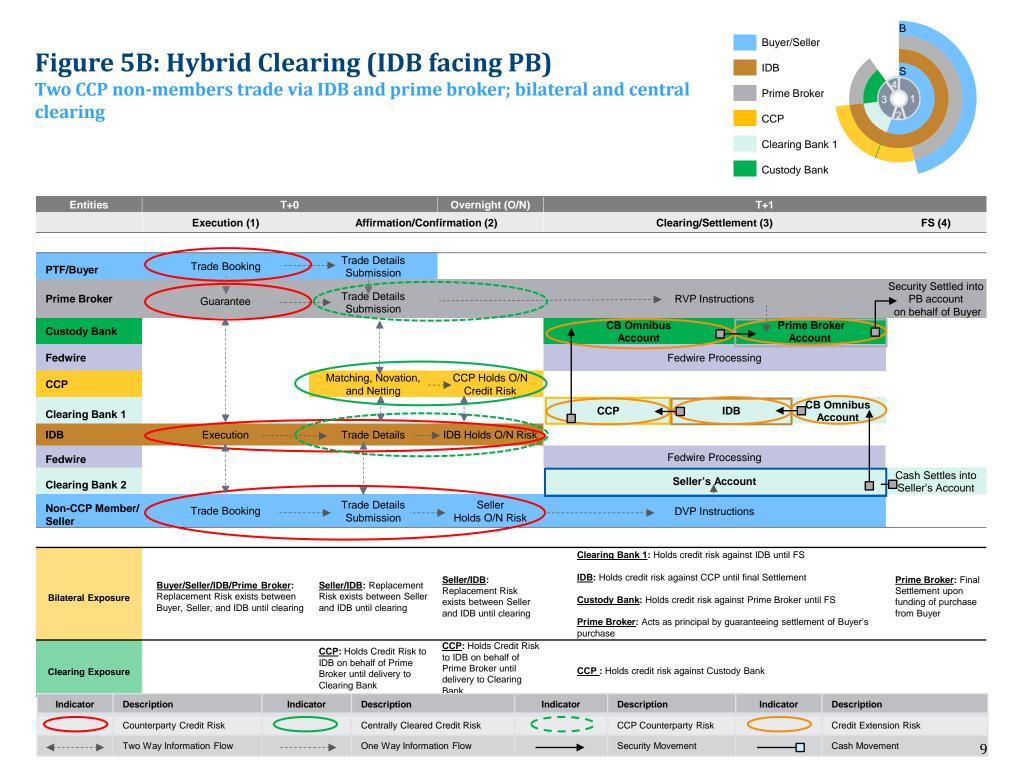


Figure 6: Comparison of risks held through the trade life cycle

The grey inner circle denote stages of the transaction life cycle, namely:

- 1. Execution
- 3. Clearing/Settlement

2. Affirmation/Matching

4. Final Settlement

Counterparties may run adjacent on the dials as they move through time. This reflects simultaneous risk exposure to multiple parties during the settlement life cycle.

