



Update from CARR: Inter-affiliate repos and Enhanced CORRA

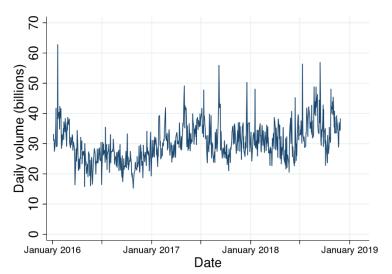
January 28, 2019

Summary – Inter-affiliate Repos

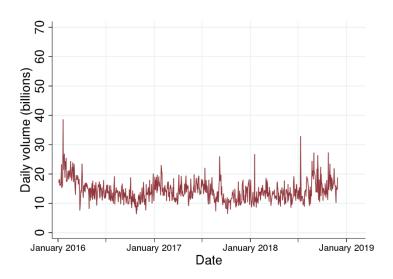
- At our last CARR meeting, the question was raised as to whether inter-affiliate repos should be included in an enhanced CORRA.
 - Enhanced CORRA results, presented up to this point, have included inter-affiliate trades.
- Following analysis and discussion, CARR recommends to exclude inter-affiliate trades from an enhanced CORRA.
 - Although most inter-affiliated trades are conducted at arms length and with consideration of market funding rates, they may include other adjustments (e.g. related to transfer pricing), with approaches differing across institutions.
 - The effort required to identify and flag the inter-affiliate trades that are appropriate for inclusion in an enhanced CORRA may not be justified by the corresponding additional volume gained.
 - Further, some jurisdictions consider that inter-affiliate trades may be more easily manipulated to sway a benchmark rate.
- No further changes are proposed to the enhanced CORRA methodology (e.g. the 25% filter remains the same).
- The following slides show the magnitude of inter-affiliate repo volumes in Canada as well as the impact to an enhanced CORRA from their exclusion.

Inter-affiliate repos are approximately half of overnight volume in GoC bills and bonds

Total overnight repo volume (tom-next excluded)



Overnight repo volume, unaffiliated entities (tom-next excluded)



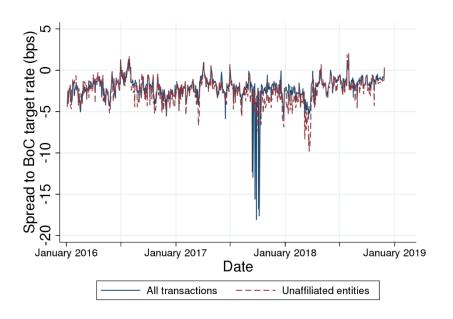
Daily overnight volume in GoC bills and bonds (\$ billions)

	All transactions		Unaffiliated entities			
	Avg	Min	Max	Avg	Min	Max
Full sample	30	15	63	14	6	39
2016	27	15	63	15	6	39
2017	32	21	56	14	7	26
2018	33	21	57	14	9	39

Source: MTRS2 Collateral: GoC bonds and bills Dates: January 2016 to November 2018 Filters: Tom-next excluded

Enhanced CORRA, excluding inter-affiliate trades, has a slightly lower rate

Average repo rates: all repos vs. unaffiliated repos

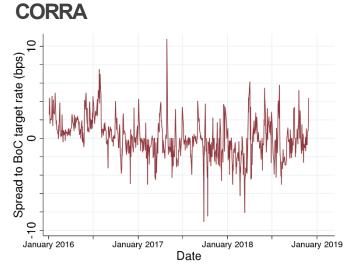


Volume-weighted average rate as a spread to BoC target rate (bps)

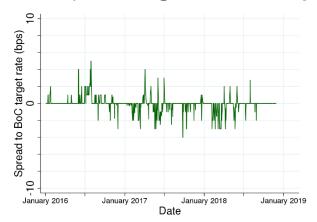
	Average	Standard Deviation
All transactions	-2.2	1.6
Unaffiliated entities only	-2.5	1.5
CORRA	0.0	2.1

Note – No filter is applied to the results above to correct for the impact of special repos.

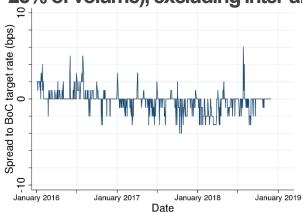
Comparing rates: Enhanced CORRA including vs. excluding inter-affiliate repos



Rate median (trimmed lower 25% of volume), including inter-affiliate repos



Recommendation: Rate median (trimmed lower 25% of volume), excluding inter-affiliate repos



Source: MTRS2 Collateral: GoC bonds and bills Dates: January 2016 to November 2018 Filters: Tom-next excluded



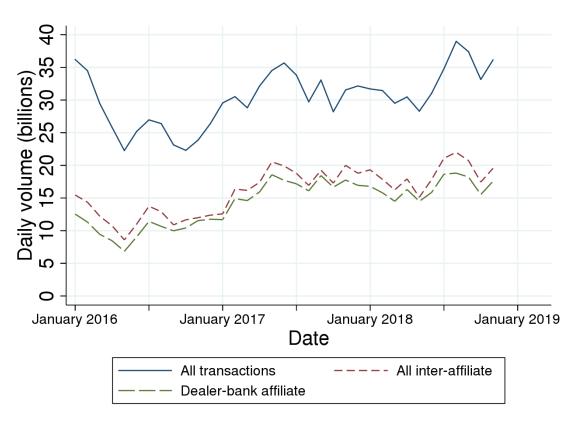
Rate median approach: Analysis of filter levels excluding inter-affiliate trades

	Spread to BoC target rate (bps)		
	Average	Standard Deviation	
All transactions: 25% trimmed	-0.1	0.9	
CORRA	0.0	2.1	
Unaffiliated entities only: 25% trimmed	-0.2	1.2	
Unaffiliated entities only: 30% trimmed	-0.1	1.2	
Unaffiliated entities only: 35% trimmed	0.0	1.3	

- Trimming more than the bottom 25% of trades by volume would have had a small impact on the average rate for an enhanced CORRA
- Increasing the filter would have led to additional lost volume
- The subgroup recommends to remain with a 25% filter

Inter-affiliate repos are mostly between banks and their dealer affiliates

Overnight repo volume (tom-next excluded)



	Daily volume (\$ billions)
	Average
All transactions	30
All inter-affiliate	16
Dealer-bank affiliate	14

Source: MTRS2 Collateral: GoC bonds and bills Filters: Tom-next excluded