



FEDERAL RESERVE BANK *of* NEW YORK

Reference Rate Production Update
ARRC Meeting – June 26, 2019
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Agenda

- Secured Overnight Financing Rate (SOFR) for May 31, 2019
- Market Segments Underlying Repo Reference Rates
- Contingency Data: Primary Dealer Survey
- Contingency Methodology
 - Overview
 - Illustrative Example



SOFR for May 31, 2019

- On the morning of June 3, access was disrupted to one of the three primary data sources used to calculate the SOFR, BGCR, and TGCR for May 31st.
 - The primary data sources include transaction-level tri-party repo data collected from the Bank of New York Mellon, as well as GCF Repo transaction data and data on bilateral Treasury repo transactions cleared through FICC's DVP service.
- We fell back to our contingency rate calculation methodology, as described on our [public website](#), in order to ensure timely rate publication.
 - This was the first use of the contingency methodology

DATE	RATE (PERCENT)	PERCENTILES				VOLUME (US\$ BILLIONS)
		1ST (PERCENT)	25TH (PERCENT)	75TH (PERCENT)	99TH (PERCENT)	
05/31 ²	2.49	N/A	N/A	N/A	N/A	1,136
05/30	2.40	2.28	2.39	2.46	2.54	1,083
05/29	2.40	2.28	2.39	2.47	2.53	1,099

r Revised

1 Rate was calculated with reduced volume

2 Rate was calculated using survey data

3 Because of insufficient current data, the published rate is a republication of the prior day's rate



Market Segments Underlying Repo Reference Rates

Secured Overnight Financing Rate (SOFR)

Bilateral repo transactions cleared through FICC

Broad General Collateral Rate (BGCR)

Tri-party repo transactions cleared through DTCC's GCF service

Tri-Party General Collateral Rate (TGCR)

Non-centrally-cleared tri-party repo transactions

Fed transactions and affiliated trades

Transactions trimmed from bilateral repo transactions cleared through FICC

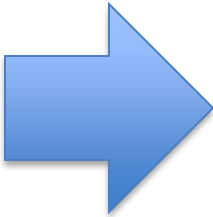


Contingency Data: Primary Dealer Repo Survey

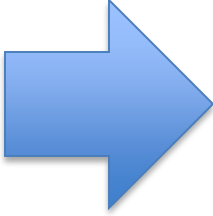
- In the event primary data is not available, the New York Fed uses information collected through a daily survey conducted by its Trading Desk of primary dealers' repo borrowing activity
 - Detailed account of each dealer's *actual* overnight borrowing activity across the same market segments captured in the primary data sources.
 - Dealers are asked to exclude Fed transactions, transactions with their affiliates, and those bilateral repo transactions falling below the 25th volume-weighted percentile rate of their FICC-cleared bilateral repo activity, in line with filtering performed on primary data sources.
 - This allows for a modular approach to data contingencies, with the survey stepping in only for impacted market segments, allowing use of available primary sources.
- Some important differences between the surveyed activity and the primary sources include:
 - While reflecting actual transactions, the primary dealer repo survey is not a transaction-level report, instead including each dealer's total volume and weighted-average rate.
 - Primary Dealer activity is substantial in each market segment, but not the entirety of the market segment.



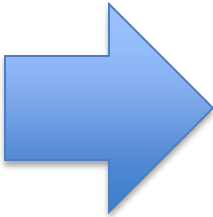
Contingency Methodology: Overview



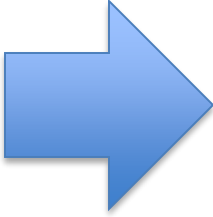
We use the contingency data to calculate a change in the general level of rates in an impacted market segment since the last date in which primary data were available.



We then apply that change in rates to each transaction in the most recently available primary data for that market segment.



Lastly, we combine the results of that exercise with the current primary data for the un-impacted market segments to calculate the day's rates. Percentiles are not published.



If primary data in an impacted market segment subsequently become available later the same day, the rates are recalculated and any of them may be republished at approximately 2:30 PM if there is a change greater than one basis point.

(No change was made in the afternoon for the published May 31, 2019 data)



Contingency Methodology: Illustrative Example

1. Primary data for **Segment A's** activity is unavailable.
2. Calculate the change in the volume-weighted average rate from t-1 to t for **Segment A** using Primary Dealer Repo Survey (in this **illustrative** example, +0.03%).

Afternoon Repo Survey, Treasury Collateral (Day t-1)

Dealer	Segment A		Segment B		Segment C	
	Volume	Rate	Volume	Rate	Volume	Rate
1	90	1.95%	10	2.35%	270	2.45%
2	190	2.00%	110	2.40%	570	2.50%
3	190	2.05%	110	2.45%	570	2.55%
4	390	2.00%	310	2.40%	1170	2.50%
...
23	40	1.95%	10	2.35%	120	2.45%
TOTAL	4300	1.99%	520	2.39%	6250	2.49%

Afternoon Repo Survey, Treasury Collateral (Day t)

Dealer	Segment A		Segment B		Segment C	
	Volume	Rate	Volume	Rate	Volume	Rate
1	100	2.00%	20	2.40%	300	2.50%
2	200	2.05%	120	2.45%	600	2.55%
3	200	2.10%	120	2.50%	600	2.60%
4	400	2.05%	320	2.45%	1200	2.55%
...
23	50	2.00%	10	2.40%	150	2.50%
TOTAL	4600	2.02%	500	2.42%	6000	2.52%

$\Delta = 0.03\%$

Note: the above data is not representative of the results of an actual primary dealer survey and is used for illustrative purposes only

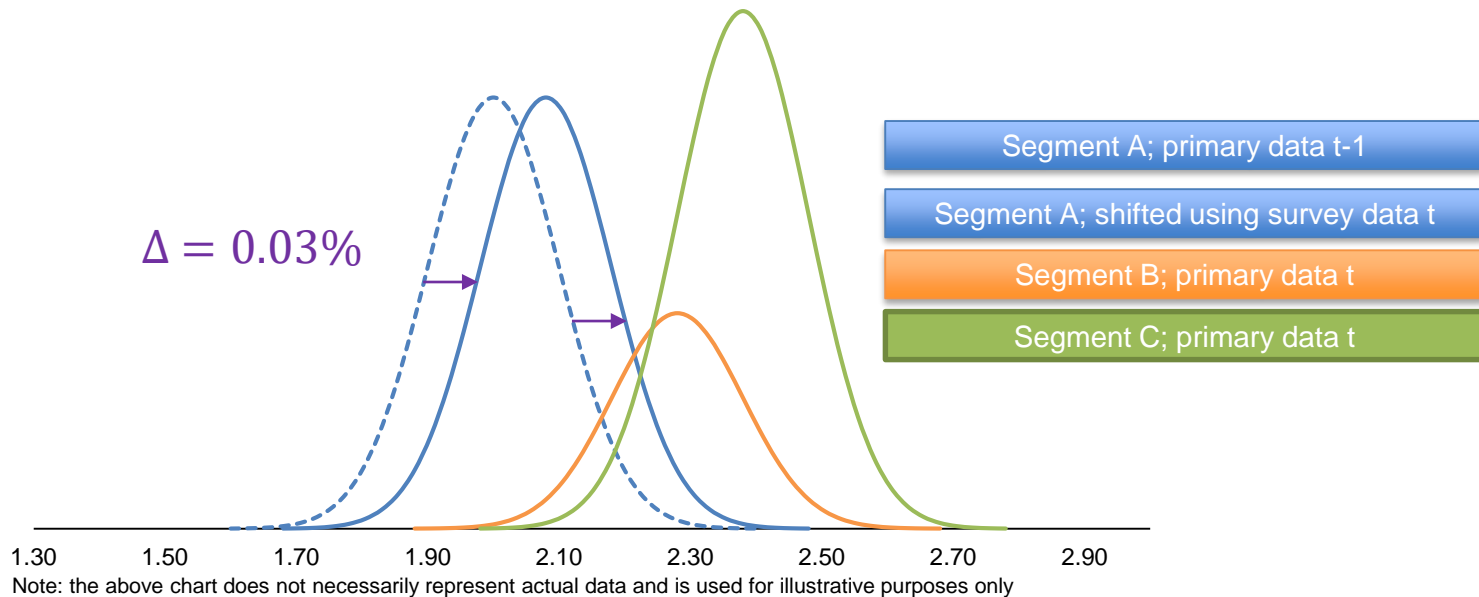


Contingency Methodology: Example (cont.)

3. Apply that change in rates to each transaction in the most recently available primary data for **Segment A**, essentially shifting the distribution.

Contingency Methodology Mechanics

t-1 primary data distribution shifted by rate change derived from dealer survey



4. Combine the shifted distribution of Segment A with the un-impacted market segments (in this example, **Segments B and C**) to calculate the day's rates as a volume-weighted median of the combined transactions from the three segments.



Questions?