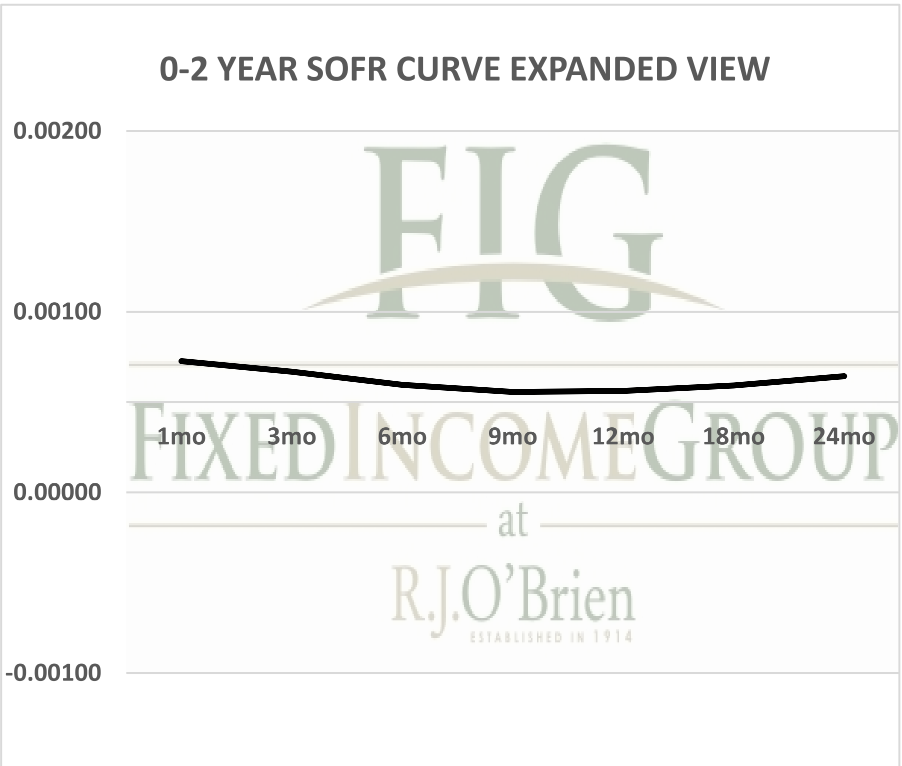
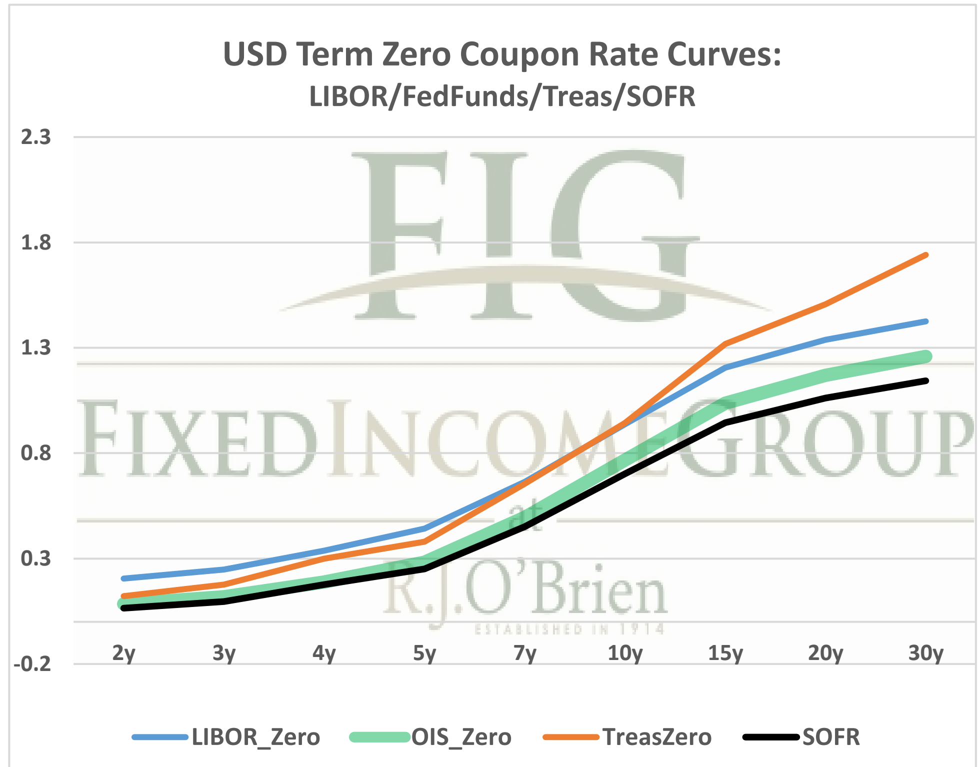
THE SOFR CURVE

Distributed by The Fixed Income Group at RJ O'Brien

Making the change from LIBOR to a new reference rate is not an insignificant exercise. It will take planning and changes to processes and systems. Sonia and SOFR appear likely to offer two options for users: compounded, setting in arrears (currently used in OIS markets) or a term rate setting in advance like LIBOR. You have questions, we have answers.





For more information on the Libor replacement contact:

Rocco Chierici
SVP the Fixed Income Group at RJO
312-373-5439

Corrine Baynes
VP the Fixed Income Group at RJO
800-367-3349

12/17/2020 6:35 ct

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Term SOFR from 1-day Returns

0.07263%	**0.06673%**	**0.05953%**	**0.05558%**	**0.05612%**	**0.05918%**	**0.06431%**
1.000062542	1.000166814	1.00030096	1.000422999	1.000568951	1.000899153	1.00130397
1mo	**3mo**	**6mo**	**9mo**	**12mo**	**18mo**	**24mo**
12/17/2020	12/17/2020	12/17/2020	12/17/2020	12/17/2020	12/17/2020	12/17/2020
1/16/2021	3/16/2021	6/16/2021	9/16/2021	12/16/2021	6/16/2022	12/16/2022
31	90	182	274	365	547	730

Term SOFR+Credit from 1-day Returns

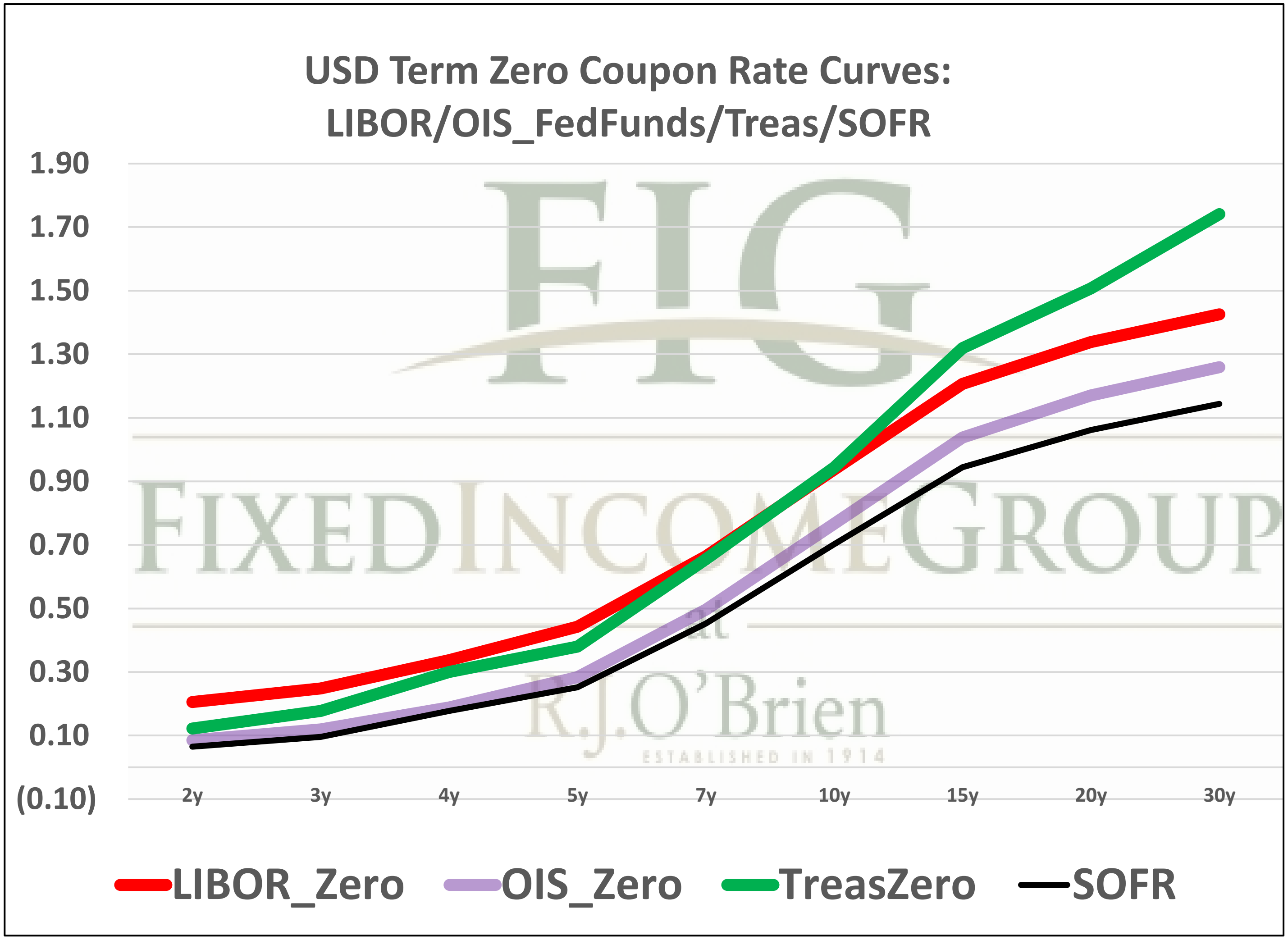
0.59680%	**0.59186%**	**0.58323%**	**0.57964%**	**0.58049%**	**0.58431%**	**0.59038%**
1.000513908	1.001479651	1.00294856	1.004411738	1.005885565	1.008878269	1.01197169
1mo	**3mo**	**6mo**	**9mo**	**12mo**	**18mo**	**24mo**
12/17/2020	12/17/2020	12/17/2020	12/17/2020	12/17/2020	12/17/2020	12/17/2020
1/16/2021	3/16/2021	6/16/2021	9/16/2021	12/16/2021	6/16/2022	12/16/2022
31	90	182	274	365	547	730

Term AMERIBOR from 1-day Returns

0.08497%	**0.08024%**	**0.07593%**	**0.07438%**	**0.07362%**		
1.00	**1.00**	**1.00**	**1.00**	**1.00**		
1mo	**3mo**	**6mo**	**9mo**	**12mo**		
12/17/2020	**12/17/2020**	**12/17/2020**	**12/17/2020**	**12/17/2020**		
1/16/2021	**3/16/2021**	**6/16/2021**	**9/16/2021**	**12/16/2021**		
31	**90**	**182**	**274**	**365**		

Term AMERIBOR+Credit from 1-day Returns

0.60753%	**0.60280%**	**0.59849%**	**0.59694%**	**0.59618%**		
1.00	1.00	1.00	1.00	1.00		
1mo	3mo	6mo	9mo	12mo		
12/17/2020	12/17/2020	12/17/2020	12/17/2020	12/17/2020		
1/16/2021	3/16/2021	6/16/2021	9/16/2021	12/16/2021		
31	90	182	274	365		


USD Term Zero Coupon Rate Curves:
LIBOR/OIS_FedFunds/Treas/SOFR
1.90
1.70
1.50
1.30
1.10
0.90
0.70
0.50
0.30
0.10
(0.10)
2y
3y
4y
5y
7y
10y
15y
20y
30y
LIBOR_Zero
OIS_Zero
TreasZero
SOFR
FIG
FIXED INCOME GROUP
at
R.J.O'Brien
ESTABLISHED IN 1914