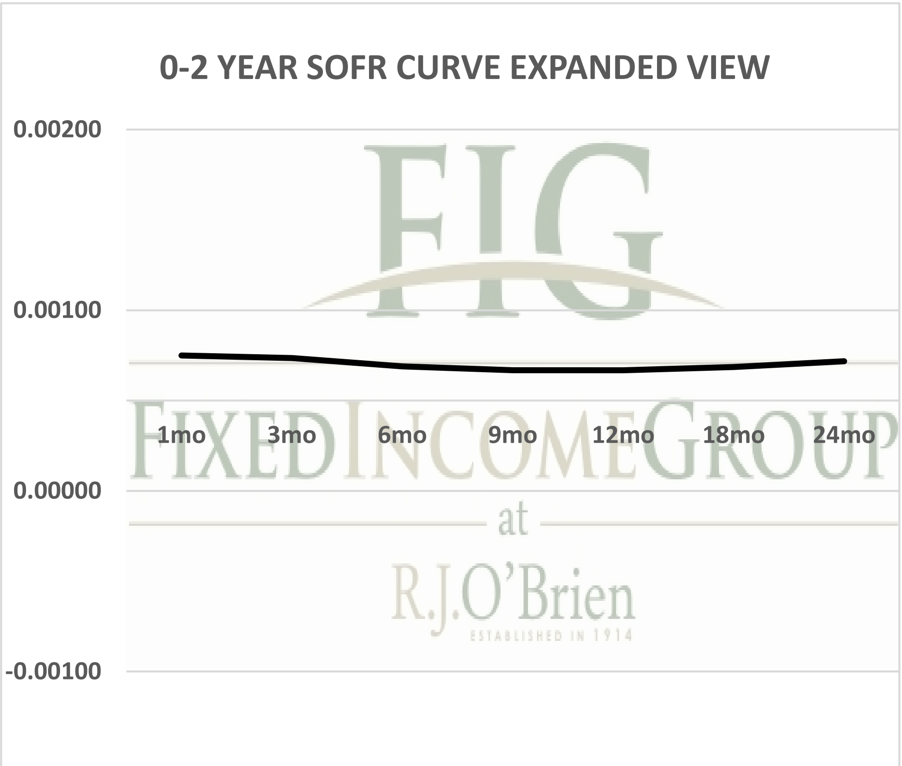
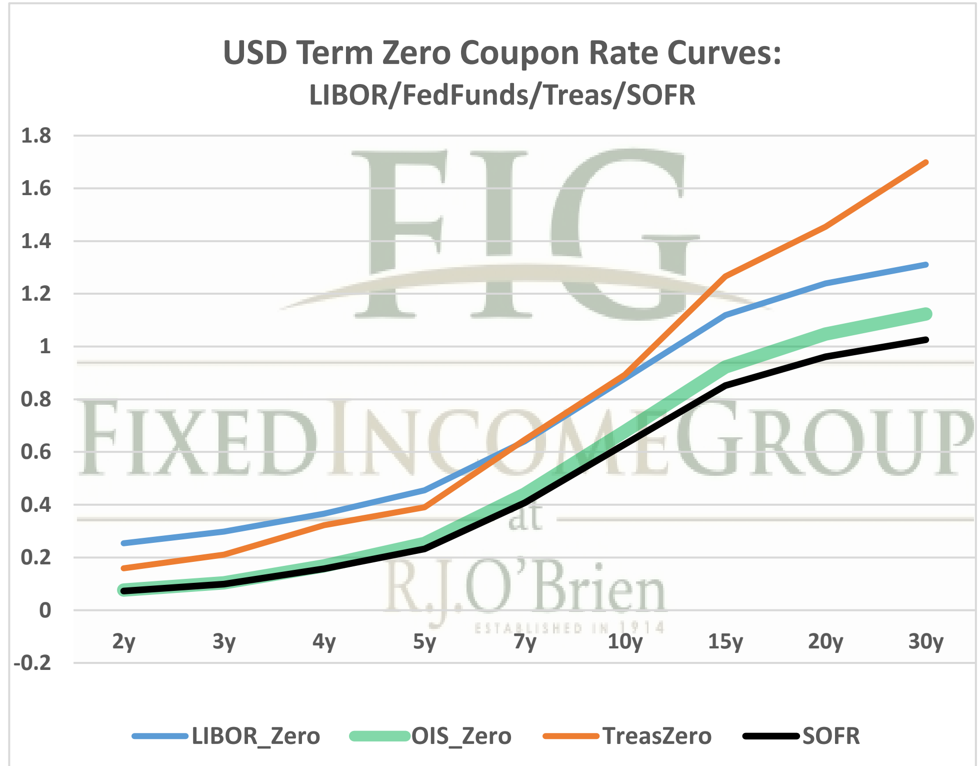
THE SOFR CURVE

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:

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11/27/2020 6:30 ct

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Term SOFR from 1-day Returns

0.07493%	**0.07348%**	**0.06887%**	**0.06678%**	**0.06676%**	**0.06848%**	**0.07178%**
1.000062442	1.000187777	1.00034628	1.000506428	1.000676828	1.001038608	1.00145552
1mo	**3mo**	**6mo**	**9mo**	**12mo**	**18mo**	**24mo**
11/27/2020	11/27/2020	11/27/2020	11/27/2020	11/27/2020	11/27/2020	11/27/2020
12/26/2020	2/26/2021	5/26/2021	8/26/2021	11/26/2021	5/26/2022	11/26/2022
30	92	181	273	365	546	730

Term SOFR+Credit from 1-day Returns

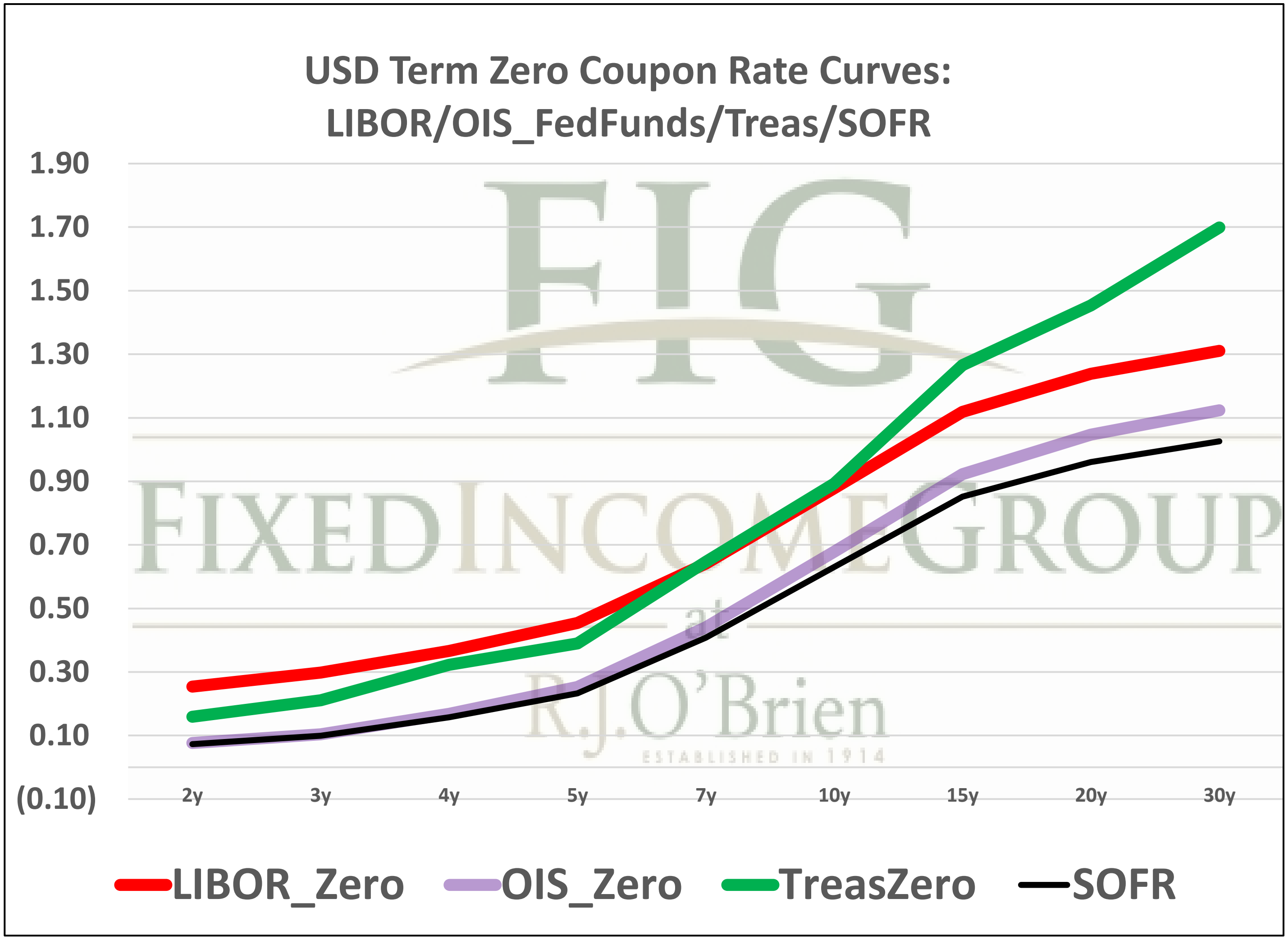
0.59926%	**0.59521%**	**0.59098%**	**0.58945%**	**0.58993%**	**0.59270%**	**0.59694%**
1.00049938	1.001521083	1.00297131	1.004470014	1.005981238	1.00898935	1.01210458
1mo	**3mo**	**6mo**	**9mo**	**12mo**	**18mo**	**24mo**
11/27/2020	11/27/2020	11/27/2020	11/27/2020	11/27/2020	11/27/2020	11/27/2020
12/26/2020	2/26/2021	5/26/2021	8/26/2021	11/26/2021	5/26/2022	11/26/2022
30	92	181	273	365	546	730

Term AMERIBOR from 1-day Returns

0.08482%	**0.07854%**	**0.07551%**	**0.07446%**	**0.07394%**		
1.00	**1.00**	**1.00**	**1.00**	**1.00**		
1mo	**3mo**	**6mo**	**9mo**	**12mo**		
11/27/2020	**11/27/2020**	**11/27/2020**	**11/27/2020**	**11/27/2020**		
12/26/2020	**2/26/2021**	**5/26/2021**	**8/26/2021**	**11/26/2021**		
30	**92**	**181**	**273**	**365**		

Term AMERIBOR+Credit from 1-day Returns

0.60654%	**0.60026%**	**0.59723%**	**0.59618%**	**0.59566%**		
1.00	1.00	1.00	1.00	1.00		
1mo	3mo	6mo	9mo	12mo		
11/27/2020	11/27/2020	11/27/2020	11/27/2020	11/27/2020		
12/26/2020	2/26/2021	5/26/2021	8/26/2021	11/26/2021		
30	92	181	273	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