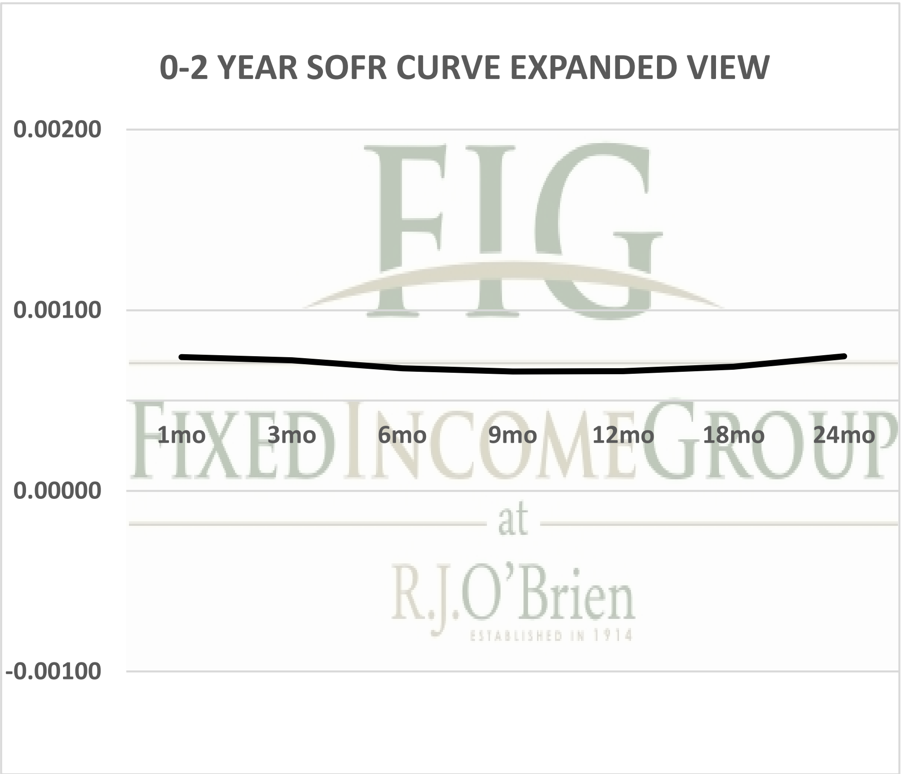
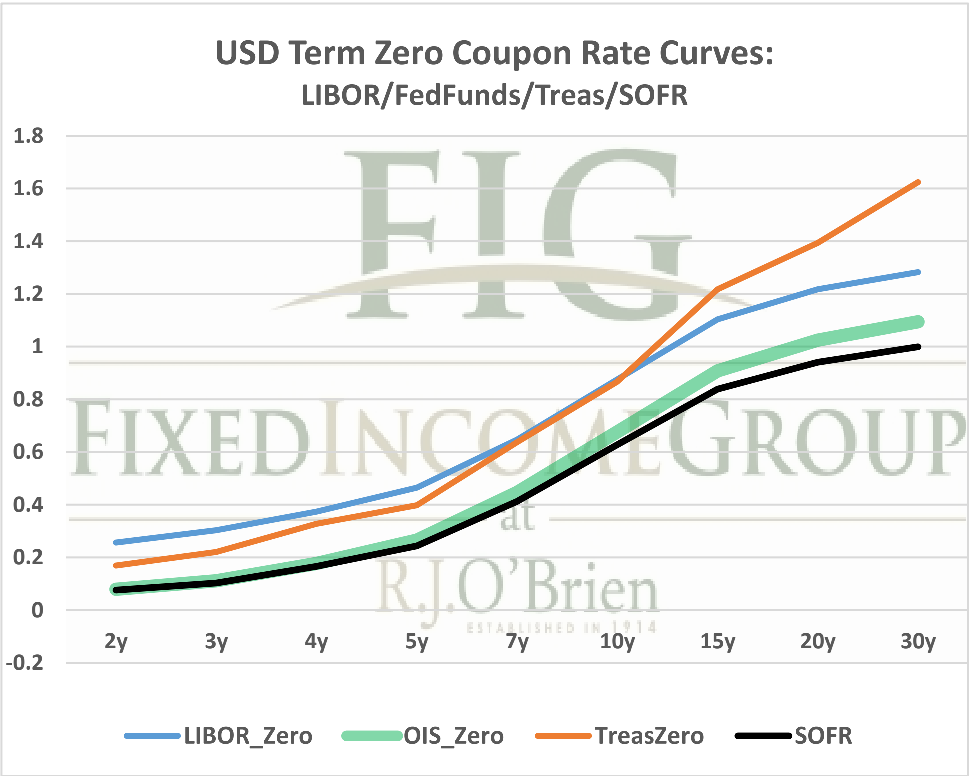
THE SOFR CURVE

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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11/24/2020 6:26 ct

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Term SOFR from 1-day Returns

0.07413%	**0.07221%**	**0.06780%**	**0.06607%**	**0.06618%**	**0.06871%**	**0.07449%**
1.000061772	1.000184537	1.00034091	1.000501055	1.000671034	1.001042092	1.00151053
1mo	**3mo**	**6mo**	**9mo**	**12mo**	**18mo**	**24mo**
11/24/2020	11/24/2020	11/24/2020	11/24/2020	11/24/2020	11/24/2020	11/24/2020
12/23/2020	2/23/2021	5/23/2021	8/23/2021	11/23/2021	5/23/2022	11/23/2022
30	92	181	273	365	546	730

Term SOFR+Credit from 1-day Returns

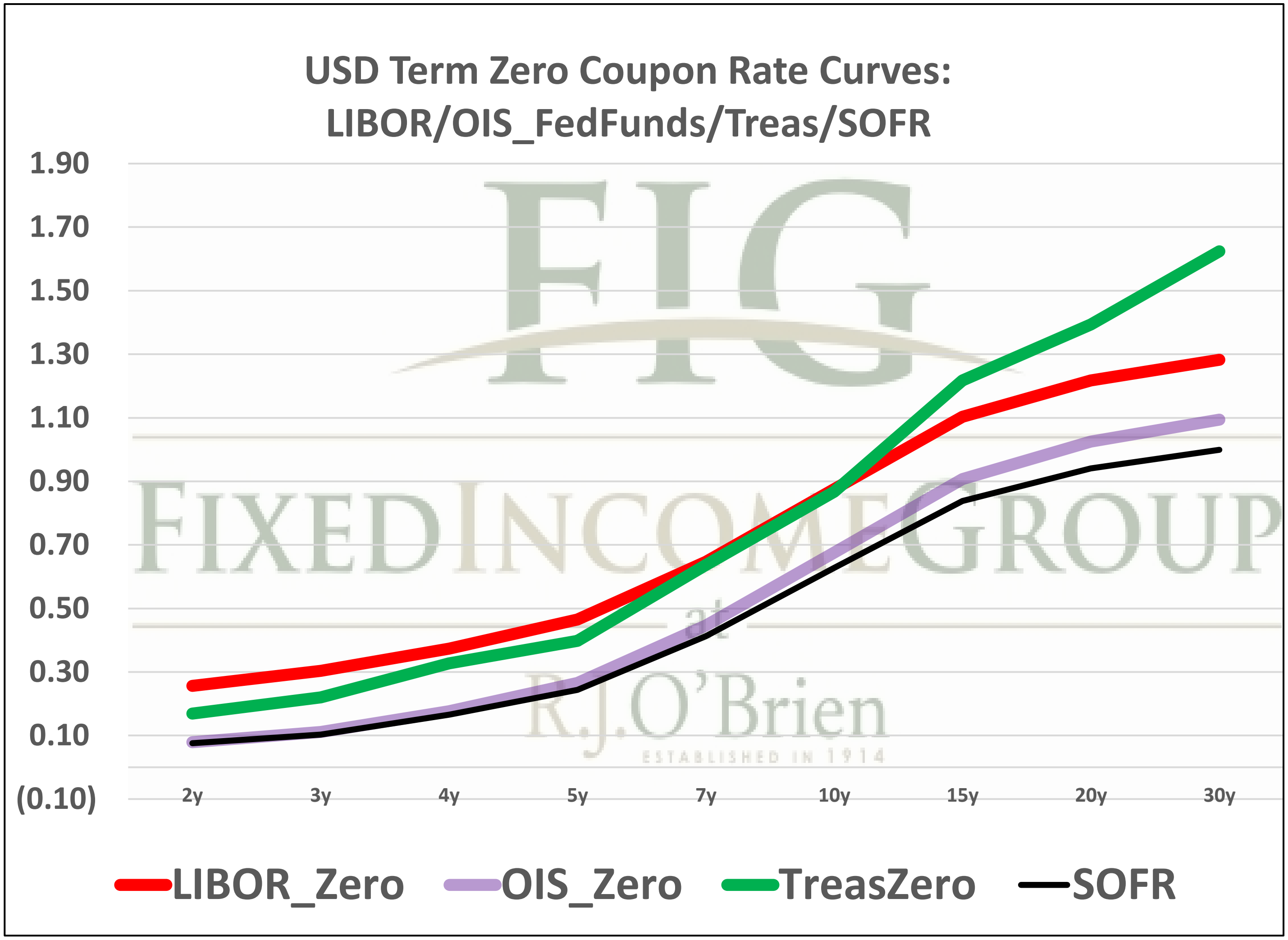
0.59389%	**0.59310%**	**0.58937%**	**0.58826%**	**0.58890%**	**0.59251%**	**0.59927%**
1.000494908	1.001515705	1.00296321	1.004460974	1.005970836	1.008986414	1.01215187
1mo	**3mo**	**6mo**	**9mo**	**12mo**	**18mo**	**24mo**
11/24/2020	11/24/2020	11/24/2020	11/24/2020	11/24/2020	11/24/2020	11/24/2020
12/23/2020	2/23/2021	5/23/2021	8/23/2021	11/23/2021	5/23/2022	11/23/2022
30	92	181	273	365	546	730

Term AMERIBOR from 1-day Returns

0.08565%	**0.07726%**	**0.07327%**	**0.07140%**	**0.07047%**		
1.00	**1.00**	**1.00**	**1.00**	**1.00**		
1mo	**3mo**	**6mo**	**9mo**	**12mo**		
11/24/2020	**11/24/2020**	**11/24/2020**	**11/24/2020**	**11/24/2020**		
12/23/2020	**2/23/2021**	**5/23/2021**	**8/23/2021**	**11/23/2021**		
30	**92**	**181**	**273**	**365**		

Term AMERIBOR+Credit from 1-day Returns

0.60707%	**0.59868%**	**0.59470%**	**0.59283%**	**0.59190%**		
1.00	1.00	1.00	1.00	1.00		
1mo	3mo	6mo	9mo	12mo		
11/24/2020	11/24/2020	11/24/2020	11/24/2020	11/24/2020		
12/23/2020	2/23/2021	5/23/2021	8/23/2021	11/23/2021		
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