

US Cash Interest Rate Product Analytics Package

For Business: September 16, 2024

Contents:

Treasuries

US Treasury Benchmark Carry and Roll Relative Value Report	2
Treasury Carry, Roll, and Relative Value Report	3
Yield Errors in Duration Space Using the Par Curve Model	15
Yield Errors Summary Report	16
10-Year Treasury Fair Value Model	17
5s/30s Treasury Benchmark Yield Curve Model	18
TRACE Treasury Daily Aggregate Statistics	19
Cash Treasury Market Liquidity Summary - New York, London, Tokyo	21
Hot Run vs. Off-the-run Spreads Report	24
T-bill Issuance Report	25
US Treasury Butterfly Report	26
Forward Butterfly Report	28
CFTC Positions Report	30
Speculative Futures Traders' Positions Report	31
Macro Hedge Fund Exposure and Leverage Report	33
Relative Value Hedge Fund Exposure and Leverage Report	34
CTA Exposure and Leverage Report	35
Excess Exposure of Active Core Bond Fund Managers	36
Treasury Curves and Butterflies Risk-Adjusted Carry Report	37
Treasury Auction Reports	41
Synthetic USD Government Bond Report	44

TIPS

TIPS Hot-run Relative Value Report	45
TIPS Fitted Curve Relative Value Report	46
TIPS Forward Yields and Breakevens	48
TIPS Breakeven Fair Value Model	51
Tips Forward	54
Primary dealer positions in TIPS	56
Primary dealer transactions in TIPS	57
Excess Exposure of TIPS Fund Managers	58
TIPS Asset Swap Spread Reports	59
Inflation Data Surprise Report	64

STRIPS

US Treasury Strips Relative Value and Asset Swap Report	65
STRIPS Spread to Treasuries Report	75
Current C-STRIPS Yield minus P-STRIPS Yield	76
Most Mispriced STRIPS Pairs	79

Agencies

Agency Relative Value Report	80
Agencies Spread to Treasuries Report	81
Short-term Agency Report	82
Agency Issuance Summary	83
Agency Callables Spread Report	84
Agency Euro Callable 3M BreakEven Report	85

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US Fixed Income Strategy

US Treasury Benchmark Carry and Roll Relative Value Report

Benchmark	Yield	Chg	1M Avg	3M Avg	3M H	3M L	Pct	1M Carry	1M Roll	1M C+R	(C+R)/Risk	1M Repo Special	3M Carry	3M Roll	3M C+R	3M (C+R)/Risk	3M Repo Special
3m	4.91	-5.4	5.11	5.25	5.40	4.91	0	-25.5	-5.9	-31.5	-4.0	0	0.0	0.0	0.0	0.0	0
6m	4.62	-8.1	4.84	5.07	5.38	4.62	0	-16.5	-6.6	-23.2	-2.9	0	-65.5	-34.7	-100.3	-3.2	0
12m	4.05	-8.9	4.36	4.73	5.20	4.05	0	-13.8	-7.4	-21.1	-2.5	0	-44.8	-27.4	-72.2	-2.3	0
2y	3.58	-7.1	3.85	4.25	4.77	3.58	0	-7.6	-2.1	-9.8	-1.1	9	-23.7	-7.2	-30.9	-1.0	6
3y	3.43	-4.6	3.69	4.05	4.59	3.43	0	-5.7	-0.5	-6.2	-0.7	0	-16.8	-1.8	-18.6	-0.6	0
5y	3.42	-4.2	3.62	3.94	4.44	3.42	0	-3.4	0.2	-3.2	-0.4	9	-10.0	0.6	-9.5	-0.3	4
7y	3.52	-4.0	3.69	3.97	4.45	3.52	0	-2.4	0.2	-2.2	-0.3	7	-6.8	0.6	-6.2	-0.2	6
10y	3.65	-3.0	3.79	4.04	4.48	3.64	2	-1.5	0.3	-1.2	-0.2	24	-4.7	0.9	-3.8	-0.1	9
20y	4.04	-2.8	4.17	4.38	4.76	4.02	3	-0.2	0.3	0.1	0.0	105	-1.6	0.9	-0.8	0.0	33
30y	3.98	-1.9	4.08	4.28	4.64	3.95	3	-0.7	0.0	-0.6	-0.1	7	-1.8	0.1	-1.7	-0.1	6

Yield Curve Steepeners	Yield	Chg	1M Avg	3M Avg	3M H	3M L	Pct	1M Carry	1M Roll	1M C+R	3M Carry	3M Roll	3M C+R
3m/6m	-29	-2.7	-27	-18	0	-34	11	-9.0	0.7	-8.3	0.0	0.0	0.0
3m/12m	-87	-3.5	-74	-52	-18	-94	3	-11.8	1.4	-10.4	0.0	0.0	0.0
6m/12m	-58	-0.8	-48	-35	-14	-59	3	-2.8	0.7	-2.1	-20.7	-7.3	-28.0
1/2	-47	1.6	-48	-43	-32	-53	21	-4.9	-6.3	-11.2	-17.7	-23.7	-41.4
2/3	-14	2.6	-17	-20	-12	-27	86	-2.0	-1.6	-3.6	-6.9	-5.5	-12.3
2/5	-15	3.0	-24	-31	-15	-47	100	-4.3	-2.3	-6.6	-13.6	-7.8	-21.4
2/10	7	4.1	-6	-20	7	-49	100	-6.1	-2.4	-8.6	-19.0	-8.1	-27.1
5/10	23	1.1	18	11	23	-3	100	-1.9	-0.1	-2.0	-5.3	-0.3	-5.7
5/20	62	1.4	55	44	62	21	100	-3.2	-0.1	-3.3	-8.4	-0.3	-8.7
10/20	39	0.2	38	33	39	24	100	-1.3	0.0	-1.3	-3.1	0.0	-3.0
2/30	40	5.2	23	4	40	-36	100	-7.0	-2.2	-9.2	-21.9	-7.3	-29.2
5/30	55	2.2	46	35	55	11	100	-2.7	0.2	-2.6	-8.3	0.5	-7.8
10/30	33	1.1	29	24	33	13	100	-0.9	0.3	-0.6	-2.9	0.8	-2.1
20/30	-7	0.9	-9	-9	-7	-12	100	0.5	0.2	0.7	0.1	0.8	0.9

Yield Long Belly Butterflies	Yield	Chg	1M Avg	3M Avg	3M H	3M L	Pct	1M Carry	1M Roll	1M C+R	3M Carry	3M Roll	3M C+R
6m/1/2	-5.1	-1.1	-1.4	1.7	8.8	-6.3	1.6	-0.5	-4.0	-4.5	3.3	-9.9	-6.7
1/2/3	-16.5	-0.5	-15.7	-11.7	-2.8	-19.6	17.5	1.5	2.3	3.8	5.4	9.1	14.5
1/5/30	-58.9	1.2	-58.9	-54.4	-44.5	-62.0	25.4	3.2	4.4	7.6	11.5	16.0	27.5
2/3/5	-6.8	1.1	-4.8	-4.1	-1.2	-8.1	4.8	-0.2	0.4	0.3	0.1	1.6	1.6
2/5/10	-18.8	0.9	-20.5	-20.9	-18.5	-22.9	96.8	1.2	1.1	2.3	4.2	3.7	7.9
2/5/30	-35.2	0.4	-35.0	-32.9	-26.4	-37.4	23.8	0.8	1.2	2.0	2.7	4.1	6.8
5/7/10	-1.3	-0.4	-1.6	-1.7	-0.4	-3.2	63.5	0.1	-0.1	0.0	0.6	-0.2	0.4
2/10/30	-12.7	1.5	-17.5	-22.1	-12.5	-31.1	98.4	2.6	1.3	4.0	8.0	4.5	12.5
5/10/30	-5.1	0.0	-5.7	-6.6	-4.3	-8.0	85.7	0.5	0.2	0.7	1.2	0.6	1.8

C+R/risk is an annualized number; risk is the 5-year standard deviation of 1-month or 3-month changes in yield.

Percentile indicates the percentile rank of the current spread relative to its three-month history.

All butterflies have 50:50 weights on the wings; carry and roll on butterflies are for positions that buy the belly of the weighted butterfly.

US Fixed Income Strategy

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Treasury Carry, Roll, and Relative Value Report

CUSIP	Coupon	Maturity	Yrs to Orig Mat	Issue	Yld Chg	1-D Yld Bad	Spot Dur	Mod PvbP	Par Curve Model				Matched-maturity SOFR				Match-maturity OIS				3 Months				Issue (\$bn)	SOMA %	Stripped (\$mn)	
									R/C	Pctl	Zs	YE	Spot	R/C	Pctl	Zs	Spot	R/C	Pctl	Zs	Special	Carry	Roll	C+R	C+R+R/C	Ret		
9128282Y5	2.125	Sep 30, 2024	0.0	7	4.637	-22.3	0.0	0.04	4	-47.7	0	-3.2	-64.6	-40.3	5.5	92	2.0	-38.0	5.5	87	1.8	0				31	32	0
91282CFN6	4.250	Sep 30, 2024	0.0	2	5.021	-14.1	0.0	0.04	4	-14.3	6	-1.9	-26.2	-1.9	8.2	97	2.6	0.4	8.0	97	2.4	0				43	0	0
912828YH7	1.500	Sep 30, 2024	0.0	5	4.741	-1.4	0.0	0.04	4	-36.6	5	-2.2	-54.2	-29.9	10.7	100	3.5	-27.6	11.0	98	3.1	0				45	32	0
91282CDB4	0.625	Oct 15, 2024	0.1	3	4.967	-13.2	0.0	0.08	8	-19.5	0	-2.5	-31.7	-4.8	2.5	70	1.0	-2.4	1.7	35	0.7	0				62	7	0
9128283D0	2.250	Oct 31, 2024	0.1	7	5.004	-6.8	0.0	0.12	12	-13.6	0	-2.0	-25.9	-0.8	2.6	75	1.2	1.7	2.1	45	0.9	0				29	24	0
91282CFQ9	4.375	Oct 31, 2024	0.1	2	4.999	-4.8	0.0	0.12	13	-11.9	3	-1.7	-26.3	-1.2	4.4	92	1.7	1.3	3.9	73	1.5	0				42	0	0
912828YM6	1.500	Oct 31, 2024	0.1	5	5.007	-11.2	0.0	0.12	12	-13.8	2	-1.8	-25.6	-0.5	2.8	47	1.1	2.1	2.1	33	0.9	0				45	34	0
912810ES3	7.500	Nov 15, 2024	0.2	31	3.625	-17.6	0.0	0.17	17	-70.0	0	-3.1	-161.5	-134.4	-0.7	25	-0.1	-131.6	-1.0	25	-0.2	0				11	64	0
912828G38	2.250	Nov 15, 2024	0.2	10	4.990	-3.1	0.0	0.17	17	-12.1	3	-1.7	-25.0	2.1	4.8	98	2.1	4.9	4.4	82	2.1	0				66	10	0
91282CDH1	0.750	Nov 15, 2024	0.2	3	4.952	-2.0	0.0	0.17	16	-15.5	0	-1.8	-28.8	-1.7	4.4	93	1.9	1.1	4.1	67	1.7	0				88	39	0
9128283J7	2.125	Nov 30, 2024	0.2	7	4.867	-4.3	5.7	0.21	21	-17.7	0	-2.0	-24.4	-4.2	2.8	75	0.7	-1.1	2.7	67	0.6	0				30	23	0
912828YY6	1.500	Nov 30, 2024	0.2	5	4.867	-3.8	4.0	0.21	21	-17.5	12	-1.4	-24.4	-4.2	7.0	100	1.6	-1.1	7.2	98	1.5	0				44	23	0
91282CFX4	4.500	Nov 30, 2024	0.2	2	4.821	-4.2	11.9	0.21	21	-20.9	0	-2.2	-29.0	-8.8	1.4	58	0.3	-5.7	1.3	57	0.3	0				47	10	0
91282CDN8	1.000	Dec 15, 2024	0.3	3	4.781	-3.5	1.1	0.25	25	-24.5	0	-2.6	-41.6	-8.2	2.2	65	0.6	-4.8	2.1	55	0.6	0				62	13	0
9128283P3	2.250	Dec 31, 2024	0.3	7	4.833	-7.1	0.0	0.29	29	-11.5	3	-1.7	-23.7	4.3	4.2	60	1.1	7.9	4.0	52	1.1	0	-252.6-24.6277.2	-288.7	1.213	32	21	0
91282CGD7	4.250	Dec 31, 2024	0.3	2	4.825	-5.1	0.0	0.29	29	-10.8	2	-1.5	-24.4	3.6	6.0	93	1.7	7.2	6.0	85	1.8	0	-257.0-24.6281.6	-292.4	1.212	42	0	0
912828YY0	1.750	Dec 31, 2024	0.3	5	4.826	-6.4	0.0	0.29	29	-13.3	2	-2.2	-24.4	3.6	1.7	45	0.6	7.3	1.4	35	0.6	0	-256.6-24.6281.2	-294.5	1.212	45	30	0
91282CDS7	1.125	Jan 15, 2025	0.3	3	4.760	-5.0	0.0	0.33	33	-10.1	3	-1.5	-23.3	3.4	3.4	58	1.0	7.3	3.2	53	1.1	0	-151.1-32.3-183.4	-193.5	1.181	60	14	0
9128283V0	2.500	Jan 31, 2025	0.4	7	4.716	-8.0	0.0	0.37	37	-10.9	3	-1.5	-21.5	4.6	1.2	33	0.6	8.6	0.8	30	0.5	0	-109.1-33.2-142.3	-153.2	1.156	32	19	0
91282CGG0	4.125	Jan 31, 2025	0.4	2	4.730	-6.1	0.0	0.37	37	-8.9	6	-1.2	-20.1	5.9	2.9	47	1.3	9.9	2.6	50	1.3	0	-106.4-33.2-139.6	-148.5	1.160	42	0	0
912828Z52	1.375	Jan 31, 2025	0.4	5	4.692	-5.1	0.0	0.37	37	-13.2	3	-1.7	-23.9	2.2	-0.5	25	-0.2	6.2	-1.0	20	-0.4	0	-113.7-33.2-146.9	-160.1	1.150	45	36	0
912810ET1	7.625	Feb 15, 2025	0.4	30	3.665	-15.9	14.8	0.42	43	-46.7	0	-2.6	-128.4	-91.6	-5.8	13	-0.8	-87.5	-6.2	13	-0.8	0	-237.3-36.7-274.0	-320.7	0.873	12	65	0
912828J27	2.000	Feb 15, 2025	0.4	10	4.720	-9.2	4.0	0.41	41	-12.0	3	-1.5	-24.9	14.0	1.8	43	0.6	18.0	1.4	37	0.5	0	-83.2-35.5-118.7	-130.7	1.142	66	19	0
91282CDZ1	1.500	Feb 15, 2025	0.4	3	4.724	-3.4	3.0	0.41	41	-12.5	5	-1.5	-24.5	14.4	3.2	58	1.1	18.4	2.9	57	1.0	0	-82.7-35.5-118.2	-130.7	1.143	80	38	0
9128283Z1	2.750	Feb 28, 2025	0.5	7	4.564	-8.2	0.0	0.45	45	-15.9	2	-2.3	-21.0	2.5	-0.7	32	-0.4	6.6	-1.2	28	-0.7	0	-78.0-34.8-112.8	-128.7	1.077	36	27	0
912828ZC7	1.125	Feb 28, 2025	0.5	5	4.570	-8.8	0.0	0.45	44	-15.0	2	-2.4	-20.5	3.1	-1.4	18	-0.8	7.1	-1.9	17	-1.1	0	-77.3-34.8-112.1	-127.1	1.078	47	32	0
91282CGN5	4.625	Feb 28, 2025	0.5	2	4.554	-7.1	0.0	0.45	45	-15.6	2	-2.2	-22.0	1.6	-0.5	30	-0.2	5.6	-1.0	33	-0.4	0	-79.2-34.8-114.0	-129.6	1.074	52	19	0
91282CED9	1.750	Mar 15, 2025	0.5	3	4.440	-6.1	2.0	0.49	48	-23.5	0	-2.7	-35.0	-4.0	1.1	58	0.4	0.1	0.6	53	0.3	0	-78.2-35.0-113.2	-136.7	1.030	56	14	0
9128284F4	2.625	Mar 31, 2025	0.5	7	4.427	-9.1	0.0	0.52	52	-16.6	0	-3.4	-23.3	0.9	-2.3	8	-1.1	4.9	-2.9	8	-1.3	0	-70.4-35.9-106.3	-122.9	0.994	34	54	0

Notes:

1. Treasury GC Repos O/N 5.38 1M 5.27 3M 5.13 6M 4.78
2. For bullets, Yield Error(YE) = Actual yield - model yield. The Rich/Cheap measure (R/C) = yield error - 3m avg of yield error; For ASW, R/C = residual of matched-maturity ASW regressed on underlying treasury yield over the past 3m. Percentile (Pctl) is using 3m history of R/C; For ASW, Percentile (Pctl) is calculated off ASW R/C. If the Percentile is low, the security is rich; if it is high, the security is cheap. Z-score(Zs) = R/C divided by 3m SD of R/C.
3. Specialness = general collateral rate - repo rate in bp.
4. Roll calculation is based on a fitted off-the-run curve and is expressed as par minus par yield on a 1M or 3M short maturity notes and bonds.
5. Spot bad is computed as the differences between the spot yield and yield taking account of interest accrued to business day-adjusted maturity.

US Fixed Income Strategy

CUSIP	Coupon	Maturity	Yrs to Orig Mat	Issue	Yld Chg	1-D Yld Bad	Spot Dur	Mod Pvbp	Par Curve Model				Matched-maturity SOFR				Match-maturity OIS				3 Months				Issue (\$bn)	SOMA %	Stripped (\$mn)			
									R/C	Pctl	Zs	YE	Spot	R/C	Pctl	Zs	Spot	R/C	Pctl	Zs	Special	Carry	Roll	C+R	C+R+R/C	Ret				
91282CGU9	3.875	Mar 31, 2025	0.5	2	4.481	-6.7	0.0	0.52	52	-12.0	2	-2.8	-18.0	6.2	1.7	58	0.8	10.3	1.3	50	0.7	0	-65.9	-35.8	101.7	-113.7	1.009	42	0	0
91282ZF0	0.500	Mar 31, 2025	0.5	5	4.491	-7.4	0.0	0.53	52	-11.9	2	-2.9	-16.9	7.3	1.3	45	0.6	11.3	0.8	42	0.5	0	-64.9	-35.9	100.8	-112.7	1.007	47	15	0
91282CEH0	2.625	Apr 15, 2025	0.6	3	4.392	-8.5	0.0	0.56	56	-12.4	0	-2.2	-17.0	3.5	0.9	57	0.3	7.5	0.4	52	0.1	0	-64.6	-37.7	102.3	-114.7	0.965	57	19	0
9128284M9	2.875	Apr 30, 2025	0.6	7	4.434	-5.7	0.0	0.60	60	-3.0	11	-1.1	-2.9	12.9	2.3	63	1.0	16.9	1.8	55	0.9	0	-54.7	-38.7	93.4	-96.4	0.955	33	25	0
91282CGX3	3.875	Apr 30, 2025	0.6	2	4.402	-7.9	0.0	0.60	61	-5.9	3	-2.3	-6.1	9.8	-1.1	27	-0.6	13.8	-1.8	20	-1.0	0	-56.9	-38.7	95.6	-101.5	0.949	46	9	0
912828ZL7	0.375	Apr 30, 2025	0.6	5	4.408	-7.7	0.0	0.61	59	-5.7	3	-1.9	-5.3	10.3	-0.1	33	-0.1	14.3	-0.7	32	-0.4	0	-56.1	-38.9	95.0	-100.7	0.945	47	10	0
912828XB1	2.125	May 15, 2025	0.7	10	4.350	-8.2	0.0	0.64	64	-4.3	6	-1.7	-4.0	10.0	0.0	37	0.0	13.8	-0.7	30	-0.4	0	-54.7	-41.2	95.9	-100.2	0.906	67	24	0
91282CEQ0	2.750	May 15, 2025	0.7	3	4.346	-7.7	0.0	0.64	64	-4.7	6	-1.7	-4.5	9.5	-0.3	33	-0.1	13.4	-0.9	27	-0.5	0	-55.1	-41.1	96.2	-100.9	0.906	76	41	0
9128284R8	2.875	May 31, 2025	0.7	7	4.297	-9.1	2.2	0.68	68	-5.4	8	-1.6	-2.4	10.2	-0.4	42	-0.2	13.9	-1.2	32	-0.6	0	-52.5	-45.3	97.8	-103.2	0.861	35	36	0
912828ZT0	0.250	May 31, 2025	0.7	5	4.315	-7.7	0.2	0.69	67	-4.2	14	-1.4	-0.2	12.0	-0.1	43	0.0	15.7	-0.8	35	-0.5	0	-50.9	-45.7	96.6	-100.8	0.861	50	17	0
91282CHD6	4.250	May 31, 2025	0.7	2	4.293	-8.9	3.3	0.68	69	-5.5	9	-1.8	-2.9	9.8	-0.8	35	-0.4	13.6	-1.6	27	-0.9	0	-52.9	-45.2	98.1	-103.6	0.862	50	16	0
91282CEU1	2.875	Jun 15, 2025	0.8	3	4.251	-9.8	1.1	0.72	72	-3.4	6	-1.8	-3.6	11.2	-1.6	20	-0.8	14.8	-2.5	13	-1.3	0	-50.4	-48.0	98.4	-101.8	0.819	47	6	0
912828XZ8	2.750	Jun 30, 2025	0.8	7	4.145	-11.3	0.0	0.77	76	-4.9	3	-1.9	-6.9	5.2	-1.3	22	-0.6	8.7	-2.2	13	-1.3	0	-52.3	-41.6	93.9	-98.8	0.800	34	48	0
91282CHL8	4.625	Jun 30, 2025	0.8	2	4.200	-8.5	0.0	0.76	77	-0.7	30	-0.4	-1.7	10.6	0.2	40	0.1	14.2	-0.6	30	-0.3	0	-50.2	-41.3	91.5	-92.2	0.817	42	0	0
912828ZW3	0.250	Jun 30, 2025	0.8	5	4.206	-8.3	0.0	0.77	75	-0.1	41	0.0	-0.4	11.2	0.6	42	0.3	14.8	-0.3	30	-0.2	0	-48.9	-41.9	90.8	-90.9	0.811	53	19	0
91282CEY3	3.000	Jul 15, 2025	0.8	3	4.158	-7.1	0.0	0.80	80	-0.2	41	-0.2	-0.8	11.1	-1.0	22	-0.5	14.7	-1.9	12	-1.1	0	-48.1	-37.4	85.5	-85.7	0.811	48	11	0
912828Y79	2.875	Jul 31, 2025	0.9	7	4.097	-9.9	0.0	0.85	84	-1.8	12	-1.4	-2.3	9.5	-2.0	15	-1.1	13.0	-2.9	10	-1.7	0	-47.1	-33.7	80.8	-82.6	0.802	32	33	0
91282CHN4	4.750	Jul 31, 2025	0.9	2	4.100	-8.8	0.0	0.84	85	-1.1	17	-0.9	-2.3	9.8	-0.9	25	-0.6	13.3	-1.8	7	-1.3	0	-47.3	-33.6	80.9	-82.0	0.805	42	0	0
91282CAB7	0.250	Jul 31, 2025	0.9	5	4.108	-8.6	0.0	0.85	83	-0.1	31	-0.1	-0.6	10.7	-0.5	32	-0.3	14.2	-1.4	10	-1.0	0	-46.2	-33.9	80.1	-80.2	0.801	55	17	0
912810EV6	6.875	Aug 15, 2025	0.9	30	3.430	-12.7	0.0	0.88	91	-21.6	0	-2.0	-65.8	-53.0	-3.1	32	-0.9	-49.3	-4.0	28	-1.1	0	-69.9	-30.8	100.7	-122.3	0.646	13	70	0
912828K74	2.000	Aug 15, 2025	0.9	10	4.072	-7.9	0.0	0.89	88	0.1	52	0.1	-0.7	11.2	-0.7	28	-0.3	14.8	-1.5	13	-0.8	0	-45.0	-30.9	75.9	-75.8	0.800	66	17	0
91282CFE6	3.125	Aug 15, 2025	0.9	3	4.069	-8.4	0.0	0.89	88	-0.3	38	-0.3	-1.2	10.9	-1.1	15	-0.6	14.5	-2.0	5	-1.2	0	-45.3	-30.9	76.2	-76.5	0.800	69	39	0
9128284Z0	2.750	Aug 31, 2025	1.0	7	4.057	-9.9	1.6	0.93	92	-1.5	2	-1.8	3.2	13.3	-2.7	8	-1.9	17.0	-3.6	8	-2.4	0	-40.7	-31.0	71.7	-73.2	0.801	33	34	0
91282CHV6	5.000	Aug 31, 2025	1.0	2	4.049	-8.7	2.8	0.92	94	-2.2	0	-2.8	2.0	12.5	-3.4	2	-2.2	16.2	-4.3	2	-2.6	0	-41.3	-30.9	72.2	-74.4	0.801	50	9	0
91282CAJ0	0.250	Aug 31, 2025	1.0	5	4.054	-9.1	0.1	0.94	90	-1.6	2	-1.9	3.3	13.0	-3.1	5	-2.0	16.7	-4.0	7	-2.4	0	-40.5	-31.2	71.7	-73.3	0.797	55	18	0
91282CFK2	3.500	Sep 15, 2025	1.0	3	4.016	-9.6	0.0	0.97	96	-0.5	22	-0.6	0.7	13.2	-2.2	10	-1.3	17.0	-2.9	5	-2.0	0	-39.9	-28.7	68.6	-69.1	0.796	41	0	0
9128285C0	3.000	Sep 30, 2025	1.0	7	3.992	-8.9	0.0	1.00	100	0.4	67	0.6	1.6	14.7	-1.8	17	-1.2	18.5	-2.5	13	-1.9	0	-39.4	-25.6	65.0	-64.6	0.801	31	29	0
91282CJB8	5.000	Sep 30, 2025	1.0	2	3.988	-10.5	0.0	0.98	102	-0.5	20	-0.8	0.8	14.3	-2.7	5	-2.1	18.1	-3.5	3	-2.5	0	-39.8	-25.5	65.3	-65.8	0.807	48	0	0
91282CAM3	0.250	Sep 30, 2025	1.0	5	3.988	-9.3	0.0	1.02	98	-0.1	39	-0.2	1.8	14.3	-2.2	12	-1.8	18.1	-2.9	5	-2.4	0	-39.1	-25.7	64.8	-64.9	0.792	60	13	0

US Fixed Income Strategy

CUSIP	Coupon	Maturity	Yrs to Orig Mat	Yld Issue	1-D Chg	Yld Bad	Spot Dur	Par Curve Model				Matched-maturity SOFR				Match-maturity OIS				3 Months				Issue (\$bn)	SOMA %	Stripped (\$mn)				
								R/C	Pctl	Zs	YE	Spot	R/C	Pctl	Zs	Spot	R/C	Pctl	Zs	Special	Carry	Roll	C+R	C+R+R/C	Ret					
91282CFP1	4.250	Oct 15, 2025	1.1	3	3.956	-8.7	0.0	1.03	105	0.5	67	0.6	0.8	14.8	-0.8	30	-0.6	18.7	-1.5	22	-1.3	0	-38.9	-23.5	-62.4	-61.9	0.800	40	0	0
9128285J5	3.000	Oct 31, 2025	1.1	7	3.919	-8.9	0.0	1.08	108	-0.6	14	-0.9	0.1	14.7	-2.7	13	-2.1	18.6	-3.4	10	-2.6	0	-38.0	-21.8	-59.8	-60.4	0.791	31	38	0
91282CJE2	5.000	Oct 31, 2025	1.1	2	3.929	-8.3	0.0	1.07	110	-0.2	38	-0.3	0.7	15.7	-2.8	5	-2.1	19.6	-3.5	5	-2.5	0	-38.1	-21.7	-59.8	-60.0	0.799	51	0	0
91282CAT8	0.250	Oct 31, 2025	1.1	5	3.921	-8.7	0.0	1.10	106	-0.3	34	-0.5	0.9	14.9	-3.3	3	-2.7	18.7	-4.1	3	-3.0	0	-37.4	-22.0	-59.4	-59.7	0.783	61	12	0
91282CFW6	4.500	Nov 15, 2025	1.2	3	3.891	-8.3	2.1	1.11	113	0.0	39	0.0	-2.0	15.5	-2.0	17	-1.9	19.4	-2.7	13	-2.4	0	-37.8	-20.0	-57.8	-57.8	0.790	54	26	0
912828M56	2.250	Nov 15, 2025	1.2	10	3.895	-8.5	1.1	1.12	111	-0.4	25	-0.4	-1.1	16.0	-3.3	7	-1.9	19.9	-4.0	5	-2.3	0	-37.2	-20.2	-57.4	-57.8	0.786	66	12	0
9128285N6	2.875	Nov 30, 2025	1.2	7	3.872	-8.9	0.6	1.16	116	-0.6	27	-0.7	2.2	15.9	-3.3	5	-2.3	19.8	-4.0	7	-2.5	0	-36.3	-18.9	-55.2	-55.8	0.785	35	32	0
91282CJL6	4.875	Nov 30, 2025	1.2	2	3.877	-8.7	1.1	1.15	118	-0.6	14	-1.3	2.2	16.4	-2.8	3	-2.4	20.3	-3.5	8	-2.8	0	-36.6	-18.7	-55.3	-55.9	0.791	55	1	0
91282CAZ4	0.375	Nov 30, 2025	1.2	5	3.877	-9.1	0.1	1.18	113	-0.4	28	-0.6	3.2	16.4	-2.7	8	-2.6	20.3	-3.4	8	-2.8	0	-35.6	-19.1	-54.7	-55.1	0.780	65	21	0
91282CGA3	4.000	Dec 15, 2025	1.3	3	3.844	-8.3	0.0	1.19	121	-0.2	41	-0.2	-0.2	16.4	-1.6	13	-1.6	20.3	-2.3	13	-2.2	0	-35.9	-17.6	-53.5	-53.7	0.782	40	0	0
9128285T3	2.625	Dec 31, 2025	1.3	7	3.826	-8.6	0.0	1.24	123	0.1	52	0.2	0.3	17.3	-2.8	2	-2.8	21.3	-3.5	3	-3.2	0	-35.0	-16.2	-51.2	-51.1	0.778	32	33	0
91282CJS1	4.250	Dec 31, 2025	1.3	2	3.830	-8.8	0.0	1.23	125	0.3	70	0.6	0.4	17.8	-2.0	10	-2.0	21.7	-2.7	5	-2.6	0	-35.3	-16.1	-51.4	-51.1	0.782	57	0	0
91282CBC4	0.375	Dec 31, 2025	1.3	5	3.824	-8.9	0.0	1.26	121	-0.2	33	-0.5	0.7	17.1	-2.4	10	-2.8	21.1	-3.1	5	-2.9	0	-34.5	-16.3	-50.8	-51.0	0.773	68	19	0
91282CGE5	3.875	Jan 15, 2026	1.3	3	3.787	-8.1	0.0	1.28	129	-1.2	14	-1.3	-1.9	15.9	-2.3	8	-2.0	19.9	-3.0	12	-2.4	0	-34.9	-15.2	-50.1	-51.3	0.774	40	0	0
9128286A3	2.625	Jan 31, 2026	1.4	7	3.765	-8.8	1.0	1.33	131	-1.9	3	-1.9	-1.0	16.1	-2.6	12	-2.9	20.1	-3.3	12	-3.0	0	-33.7	-14.4	-48.1	-50.0	0.770	32	20	0
91282CJV4	4.250	Jan 31, 2026	1.4	2	3.777	-8.7	1.7	1.32	133	-0.5	25	-0.8	-0.3	17.2	-2.0	17	-2.0	21.2	-2.6	13	-2.3	0	-33.8	-14.3	-48.1	-48.6	0.775	60	0	0
91282CBH3	0.375	Jan 31, 2026	1.4	5	3.790	-7.8	0.2	1.34	128	0.2	59	0.4	2.1	18.6	-1.5	28	-1.6	22.6	-2.1	18	-2.1	0	-32.7	-14.5	-47.2	-47.0	0.772	69	14	0
912810EW4	6.000	Feb 15, 2026	1.4	30	3.522	-8.5	2.2	1.35	140	-1.3	8	-1.6	-26.2	-5.5	-2.7	5	-2.3	-1.5	-3.4	7	-2.6	0	-38.5	-13.5	-52.0	-53.3	0.717	13	52	0
91282CGL9	4.000	Feb 15, 2026	1.4	3	3.740	-8.1	1.5	1.36	137	-1.5	14	-1.3	-3.9	16.3	-2.1	28	-1.9	20.3	-2.7	20	-2.1	0	-33.3	-13.6	-46.9	-48.4	0.768	56	28	0
912828P46	1.625	Feb 15, 2026	1.4	10	3.763	-7.9	0.6	1.37	134	-0.1	41	-0.2	-1.1	18.5	-1.9	20	-1.8	22.5	-2.6	15	-2.4	0	-32.4	-13.6	-46.0	-46.1	0.770	65	20	0
9128286F2	2.500	Feb 28, 2026	1.5	7	3.747	-7.9	0.9	1.41	139	-0.3	27	-0.7	2.4	18.3	-1.8	17	-2.3	22.3	-2.4	12	-2.5	0	-30.5	-13.9	-44.4	-44.7	0.775	34	22	0
91282CKB6	4.625	Feb 28, 2026	1.5	2	3.745	-7.8	1.7	1.40	142	-0.6	17	-1.0	1.6	18.0	-2.5	8	-2.6	22.1	-3.2	8	-2.5	0	-30.9	-13.8	-44.7	-45.3	0.777	66	4	0
91282CBQ3	0.500	Feb 28, 2026	1.5	5	3.742	-8.2	0.2	1.43	136	-0.5	8	-1.3	2.4	17.8	-2.6	7	-3.1	21.9	-3.3	7	-3.2	0	-30.2	-13.9	-44.1	-44.6	0.771	74	19	0
91282CGR6	4.625	Mar 15, 2026	1.5	3	3.721	-7.8	0.8	1.44	146	-0.1	36	-0.2	-0.3	17.9	-1.6	22	-2.0	22.0	-2.2	17	-2.4	0	-30.4	-13.2	-43.6	-43.7	0.773	40	0	0
9128286L9	2.250	Mar 31, 2026	1.5	7	3.711	-7.5	0.0	1.48	146	0.3	70	0.5	1.0	18.7	-2.2	15	-2.4	22.9	-2.8	13	-2.6	0	-29.7	-12.1	-41.8	-41.5	0.776	32	20	0
91282CKH3	4.500	Mar 31, 2026	1.5	2	3.715	-7.7	0.0	1.45	149	0.2	70	0.5	0.7	19.1	-2.2	10	-2.7	23.2	-2.8	10	-2.6	0	-30.0	-12.0	-42.0	-41.8	0.784	66	0	0
91282CBT7	0.750	Mar 31, 2026	1.5	5	3.703	-8.4	0.0	1.50	144	-0.3	30	-0.7	0.6	17.9	-2.9	5	-3.3	22.1	-3.5	7	-3.0	0	-29.5	-12.1	-41.6	-41.9	0.769	72	22	0
91282CGV7	3.750	Apr 15, 2026	1.6	3	3.680	-8.3	0.0	1.50	152	-1.2	2	-2.5	-1.0	17.4	-2.6	8	-3.0	21.6	-3.2	7	-3.0	0	-29.7	-11.3	-41.0	-42.2	0.777	43	6	0
9128286S4	2.375	Apr 30, 2026	1.6	7	3.676	-8.2	0.0	1.56	154	-0.1	38	-0.3	0.8	18.6	-2.2	7	-2.9	22.8	-2.8	7	-2.8	0	-28.7	-10.5	-39.2	-39.3	0.776	32	40	0

US Fixed Income Strategy

CUSIP	Coupon	Maturity	Yrs to Orig Mat	Yld Issue	1-D Chg	Yld Bad	Spot Dur	Par Curve Model				Matched-maturity SOFR				Match-maturity OIS				3 Months				Issue (\$bn)	SOMA %	Stripped (\$mn)				
								R/C	Pctl	Zs	YE	Spot	R/C	Pctl	Zs	Spot	R/C	Pctl	Zs	Special	Carry	Roll	C+R	C+R+R/C	Ret					
91282CKK6	4.875	Apr 30, 2026	1.6	2	3.687	-7.7	0.0	1.52	158	0.6	83	1.3	1.2	19.7	-2.0	12	-2.6	23.9	-2.6	12	-2.6	0	-29.0	-10.4	-39.4	-38.8	0.785	69	0	0
91282CBW0	0.750	Apr 30, 2026	1.6	5	3.674	-8.0	0.0	1.58	151	0.0	52	0.0	1.0	18.4	-2.6	7	-3.3	22.6	-3.1	7	-3.2	0	-28.4	-10.6	-39.0	-39.0	0.770	73	23	0
91282CHB0	3.625	May 15, 2026	1.7	3	3.670	-7.4	0.0	1.58	160	0.7	98	2.2	1.1	19.6	-1.5	18	-2.1	23.8	-2.0	12	-2.3	0	-28.5	-9.7	-38.2	-37.5	0.780	51	22	0
91282R36	1.625	May 15, 2026	1.7	10	3.670	-8.0	0.0	1.61	157	0.3	84	1.0	1.7	19.6	-1.9	13	-2.5	23.8	-2.4	8	-2.6	0	-28.0	-9.8	-37.8	-37.5	0.775	70	27	0
9128286X3	2.125	May 31, 2026	1.7	7	3.651	-8.2	0.3	1.64	161	0.2	75	0.6	1.6	19.0	-1.5	17	-2.4	23.3	-2.0	15	-2.7	0	-27.7	-9.3	-37.0	-36.8	0.773	35	32	0
91282CCF6	0.750	May 31, 2026	1.7	5	3.652	-8.5	0.1	1.66	159	-0.2	28	-0.6	2.2	19.2	-2.5	7	-3.4	23.4	-3.1	7	-3.2	0	-27.3	-9.4	-36.7	-36.9	0.770	73	19	0
91282CKS9	4.875	May 31, 2026	1.7	2	3.663	-7.5	0.8	1.61	166	0.3	81	1.0	2.0	20.3	-1.8	13	-2.4	24.5	-2.3	10	-2.5	0	-28.1	-9.2	-37.3	-37.0	0.782	73	6	0
91282CHH7	4.125	Jun 15, 2026	1.8	3	3.639	-7.5	0.0	1.66	169	0.3	81	0.9	-0.1	19.5	-1.6	13	-2.3	23.7	-2.1	10	-2.6	0	-27.7	-8.7	-36.4	-36.1	0.777	40	0	0
9128287B0	1.875	Jun 30, 2026	1.8	7	3.631	-7.1	0.0	1.73	168	1.2	98	1.7	1.3	20.0	-1.6	8	-2.3	24.3	-2.1	8	-2.3	0	-26.8	-7.9	-34.7	-33.5	0.775	34	30	0
91282CCJ8	0.875	Jun 30, 2026	1.8	5	3.621	-8.0	0.0	1.74	166	1.0	70	1.0	0.7	19.1	-2.3	5	-2.6	23.3	-2.8	7	-2.6	0	-26.7	-8.0	-34.7	-33.7	0.771	70	26	0
91282CKY6	4.625	Jun 30, 2026	1.8	2	3.630	-7.4	0.0	1.69	174	0.4	67	0.6	0.3	19.9	-2.5	2	-3.1	24.1	-3.1	2	-2.9	5	-26.6	-7.8	-34.4	-34.0	0.779	71	3	0
91282CHM6	4.500	Jul 15, 2026	1.8	3	3.613	-7.7	0.0	1.73	177	0.1	53	0.1	-0.2	19.5	-1.3	22	-1.9	23.8	-1.8	20	-2.5	0	-27.0	-7.4	-34.4	-34.3	0.778	40	0	0
912828Y95	1.875	Jul 31, 2026	1.9	7	3.608	-7.7	0.0	1.81	176	0.3	73	0.8	1.1	20.2	-1.1	25	-1.6	24.5	-1.6	20	-2.2	0	-25.8	-7.1	-32.9	-32.6	0.776	33	28	0
91282CCP4	0.625	Jul 31, 2026	1.9	5	3.601	-7.1	0.0	1.83	173	0.2	62	0.4	0.8	19.5	-1.8	8	-2.8	23.8	-2.3	7	-3.0	0	-25.6	-7.1	-32.7	-32.5	0.773	67	17	0
91282CLB5	4.375	Jul 31, 2026	1.9	2	3.606	-7.3	0.0	1.78	181	0.9	83	1.0	0.2	20.0	-1.8	3	-1.8	24.4	-1.9	3	-1.7	5	-25.5	-7.0	-32.5	-31.6	0.779	73	5	0
912810EX2	6.750	Aug 15, 2026	1.9	30	3.414	-8.0	1.8	1.79	191	-0.3	33	-0.3	-19.6	2.2	-2.8	7	-3.0	6.5	-3.3	2	-2.8	0	-29.2	-6.7	-35.9	-36.2	0.737	11	58	0
91282CHU8	4.375	Aug 15, 2026	1.9	3	3.584	-7.1	1.2	1.82	185	-0.9	14	-1.4	-2.0	19.1	-1.3	25	-2.1	23.5	-1.9	22	-2.1	0	-26.0	-6.7	-32.7	-33.6	0.777	58	27	0
9128282A7	1.500	Aug 15, 2026	1.9	10	3.591	-7.3	0.4	1.86	179	-0.6	11	-1.4	-0.3	19.9	-1.5	12	-2.3	24.2	-2.0	10	-2.5	0	-25.3	-6.7	-32.0	-32.6	0.775	65	16	0
912828YD6	1.375	Aug 31, 2026	2.0	7	3.572	-7.2	0.0	1.90	182	-1.4	0	-2.4	-0.4	18.7	-2.4	7	-3.0	23.3	-2.9	7	-2.9	0	-24.1	-7.2	-31.3	-32.7	0.774	36	35	0
91282CCW9	0.750	Aug 31, 2026	2.0	5	3.578	-7.6	0.0	1.91	181	-0.3	16	-0.9	0.4	19.4	-1.5	12	-2.4	23.9	-2.1	10	-2.6	0	-23.8	-7.2	-31.0	-31.3	0.775	69	12	0
91282CLH2	3.750	Aug 31, 2026	2.0	2	3.575	-7.1	0.0	1.87	188	-0.1	33	-0.3	-0.8	19.1	-1.3	7	-1.4	23.6	-1.3	7	-1.3	5	-23.7	-7.2	-30.9	-31.0	0.777	74	7	0
91282CHY0	4.625	Sep 15, 2026	2.0	3	3.573	-7.0	0.0	1.90	194	-0.2	23	-0.6	-0.3	20.1	-1.4	18	-2.2	24.5	-2.0	12	-2.5	0	-24.1	-6.9	-31.0	-31.2	0.780	44	0	0
912828YG9	1.625	Sep 30, 2026	2.0	7	3.556	-7.2	0.0	1.96	190	-0.3	20	-0.9	-0.2	19.6	-2.1	7	-2.9	24.0	-2.6	8	-2.7	0	-23.6	-6.1	-29.7	-30.0	0.781	35	49	0
91282CCZ2	0.875	Sep 30, 2026	2.0	5	3.548	-7.0	0.0	1.98	189	0.7	94	1.7	-0.8	18.7	-1.2	8	-2.2	23.2	-1.7	8	-2.4	0	-23.5	-6.1	-29.6	-28.9	0.777	68	17	0
91282CJC6	4.625	Oct 15, 2026	2.1	3	3.559	-6.8	0.0	1.94	201	0.0	47	0.1	0.0	21.0	-1.2	22	-1.9	25.5	-1.6	22	-2.1	0	-23.7	-5.7	-29.4	-29.4	0.793	46	0	0
912828YQ7	1.625	Oct 31, 2026	2.1	7	3.555	-7.0	0.4	2.04	198	0.3	86	1.1	1.7	21.8	-1.4	18	-2.4	26.3	-1.9	10	-2.7	0	-22.6	-5.4	-28.0	-27.7	0.787	35	34	0
91282CDG3	1.125	Oct 31, 2026	2.1	5	3.553	-6.8	0.3	2.06	196	0.2	70	0.5	1.6	21.5	-1.2	17	-1.8	26.0	-1.7	15	-2.2	0	-22.6	-5.4	-28.0	-27.8	0.785	67	15	0
912810EY0	6.500	Nov 15, 2026	2.2	30	3.203	-6.0	0.8	1.99	216	8.7	98	1.7	-35.1	-12.4	0.0	17	0.0	-7.8	-0.4	15	-0.2	0	-28.3	-4.8	-33.1	-24.4	0.713	11	61	0
91282CJK8	4.625	Nov 15, 2026	2.2	3	3.544	-6.3	0.6	2.02	209	0.5	98	1.7	-0.4	21.8	-1.0	27	-1.7	26.3	-1.4	25	-2.0	0	-23.2	-4.9	-28.1	-27.6	0.794	49	2	0

US Fixed Income Strategy

CUSIP	Coupon	Maturity	Yrs to Orig Mat	Yld Issue	1-D Chg	Yld Bad	Spot Dur	Mod Pvbp	Par Curve Model				Matched-maturity SOFR				Match-maturity OIS				3 Months				Issue (\$bn)	SOMA %	Stripped (\$mn)			
									R/C	Pctl	Zs	YE	Spot	R/C	Pctl	Zs	Spot	R/C	Pctl	Zs	Special	Carry	Roll	C+R	C+R+R/C	Ret				
912828U24	2.000	Nov 15, 2026	2.2	10	3.545	-6.5	0.3	2.08	202	0.1	53	0.1	0.5	21.8	-0.5	45	-0.7	26.3	-0.9	38	-1.4	0	-22.5	-4.9	-27.4	-27.3	0.788	69	26	0
912828YU8	1.625	Nov 30, 2026	2.2	7	3.538	-6.1	0.0	2.13	205	-0.2	28	-0.4	1.2	22.1	-1.7	13	-2.0	26.6	-2.1	10	-2.1	0	-22.0	-4.7	-26.7	-26.9	0.789	35	38	0
91282CDK4	1.250	Nov 30, 2026	2.2	5	3.526	-7.0	0.0	2.14	204	-0.6	2	-2.3	0.1	20.9	-2.0	7	-3.1	25.4	-2.5	7	-3.1	0	-22.1	-4.7	-26.8	-27.4	0.785	64	8	0
91282CJP7	4.375	Dec 15, 2026	2.3	3	3.520	-6.1	0.0	2.11	217	-0.5	19	-1.2	-0.9	21.2	-1.6	10	-2.6	25.8	-2.0	12	-2.5	0	-22.6	-4.3	-26.9	-27.4	0.791	50	0	0
912828YX2	1.750	Dec 31, 2026	2.3	7	3.509	-6.2	0.0	2.21	213	0.0	52	-0.1	-0.6	21.0	-1.6	12	-2.2	25.6	-2.1	10	-2.3	0	-21.8	-3.9	-25.7	-25.7	0.787	35	34	0
91282CDQ1	1.250	Dec 31, 2026	2.3	5	3.498	-5.9	0.0	2.22	211	0.2	77	0.9	-1.6	19.8	-1.2	13	-1.7	24.4	-1.6	10	-2.0	0	-21.8	-3.9	-25.7	-25.5	0.783	65	12	0
91282CJT9	4.000	Jan 15, 2027	2.3	3	3.516	-5.9	0.0	2.19	223	-0.3	28	-0.6	-0.1	22.5	-1.5	27	-2.0	27.1	-2.0	20	-2.1	0	-21.8	-3.7	-25.5	-25.8	0.794	52	0	0
912828Z78	1.500	Jan 31, 2027	2.4	7	3.508	-6.0	0.2	2.29	219	0.2	64	0.5	1.2	22.3	-1.3	18	-1.7	27.0	-1.8	13	-1.9	0	-20.9	-3.5	-24.4	-24.2	0.792	99	22	0
912810EZ7	6.625	Feb 15, 2027	2.4	30	3.285	-5.9	0.7	2.23	241	-1.3	14	-1.3	-23.3	1.0	-2.6	5	-2.4	5.7	-3.0	7	-2.3	0	-24.3	-3.3	-27.6	-28.9	0.743	10	70	0
91282CKA8	4.125	Feb 15, 2027	2.4	3	3.507	-5.9	0.4	2.27	232	-0.1	47	-0.2	-0.4	23.1	-2.0	8	-2.5	27.8	-2.5	8	-2.4	0	-21.1	-3.3	-24.4	-24.5	0.796	58	7	0
912828V98	2.250	Feb 15, 2027	2.4	10	3.504	-5.6	0.3	2.32	225	0.2	70	0.3	0.0	22.8	-1.8	8	-1.8	27.5	-2.3	10	-2.1	0	-20.7	-3.3	-24.0	-23.8	0.794	66	31	0
912828ZB9	1.125	Feb 28, 2027	2.5	7	3.494	-5.8	0.1	2.39	225	0.2	72	0.6	2.0	22.3	-1.6	12	-2.1	27.0	-2.0	13	-2.1	0	-19.5	-3.7	-23.2	-23.0	0.796	37	63	0
91282CEC1	1.875	Feb 28, 2027	2.5	5	3.488	-6.0	0.2	2.37	228	-0.9	0	-2.8	1.1	21.7	-2.1	7	-3.0	26.4	-2.6	7	-2.9	0	-19.8	-3.7	-23.5	-24.4	0.795	62	15	0
91282CKE0	4.250	Mar 15, 2027	2.5	3	3.472	-5.8	0.0	2.36	240	-0.6	12	-1.1	-1.4	20.8	-1.6	10	-2.3	25.6	-2.1	13	-2.3	0	-20.1	-3.5	-23.6	-24.2	0.794	56	0	0
912828ZE3	0.625	Mar 31, 2027	2.5	7	3.487	-5.7	0.0	2.47	231	0.4	66	0.7	1.3	22.9	-2.2	7	-2.6	27.7	-2.7	7	-2.7	0	-19.0	-3.0	-22.0	-21.6	0.800	36	38	0
91282CEF4	2.500	Mar 31, 2027	2.5	5	3.464	-5.4	0.0	2.40	238	0.4	84	1.2	-1.6	20.6	-1.5	8	-1.9	25.4	-2.0	8	0.0	0	-19.7	-3.1	-22.8	-22.4	0.799	60	16	0
91282CKJ9	4.500	Apr 15, 2027	2.6	3	3.480	-5.3	0.0	2.38	248	-0.1	41	-0.2	-0.2	22.8	-2.1	7	-2.6	27.7	-2.6	10	-2.5	0	-19.7	-2.8	-22.5	-22.6	0.810	59	2	0
912828ZN3	0.500	Apr 30, 2027	2.6	7	3.472	-5.5	0.0	2.56	237	0.2	66	0.6	0.9	22.6	-1.9	7	-2.5	27.4	-2.4	7	-2.5	0	-18.6	-2.6	-21.2	-21.0	0.802	38	16	0
91282CEN7	2.750	Apr 30, 2027	2.6	5	3.474	-5.6	0.0	2.48	246	-0.1	52	-0.2	0.3	22.7	-2.0	8	-2.5	27.6	-2.5	10	-2.5	0	-19.1	-2.6	-21.7	-21.8	0.807	56	12	0
91282CKR1	4.500	May 15, 2027	2.7	3	3.481	-5.2	0.9	2.46	256	0.5	92	1.3	0.1	24.0	-1.8	12	-2.4	28.9	-2.2	10	-2.4	0	-19.2	-2.3	-21.5	-21.0	0.813	65	11	0
912828X88	2.375	May 15, 2027	2.7	10	3.485	-5.6	0.5	2.53	248	0.1	64	0.1	1.2	24.4	-2.4	7	-2.1	29.3	-2.8	7	-2.4	0	-18.7	-2.3	-21.0	-20.9	0.811	71	22	0
912828ZS2	0.500	May 31, 2027	2.7	7	3.471	-5.3	0.1	2.64	244	0.3	88	1.2	2.2	23.4	-1.6	7	-2.0	28.3	-2.1	8	-2.2	0	-18.0	-2.2	-20.2	-19.9	0.806	42	26	0
91282CET4	2.625	May 31, 2027	2.7	5	3.470	-5.6	0.3	2.56	253	-0.1	36	-0.4	1.4	23.3	-1.9	7	-2.5	28.2	-2.3	7	-2.6	0	-18.6	-2.2	-20.8	-20.9	0.809	55	13	0
91282CKV2	4.625	Jun 15, 2027	2.8	3	3.448	-5.3	0.0	2.54	265	-0.1	39	-0.2	-2.1	21.7	-1.5	3	-1.7	26.6	-1.9	7	-2.0	5	-18.5	-2.0	-20.5	-20.6	0.807	60	3	0
912828ZV5	0.500	Jun 30, 2027	2.8	7	3.461	-5.2	0.0	2.72	251	0.5	78	0.9	1.0	23.4	-1.9	7	-2.1	28.4	-2.4	8	-2.2	0	-17.7	-1.7	-19.4	-18.9	0.809	47	21	0
91282CEW7	3.250	Jun 30, 2027	2.8	5	3.452	-5.3	0.0	2.62	263	0.3	75	0.9	-0.9	22.5	-1.8	7	-2.1	27.4	-2.3	7	-2.4	0	-18.6	-1.7	-20.3	-20.0	0.809	51	7	0
91282CKZ3	4.375	Jul 15, 2027	2.8	3	3.454	-5.4	0.0	2.63	271	0.2	65	0.6	-0.9	23.1	-2.0	2	-2.2	28.0	-2.3	2	-2.1	5	-17.9	-1.6	-19.5	-19.3	0.812	67	14	0
91282CAD3	0.375	Jul 31, 2027	2.9	7	3.455	-5.2	0.1	2.81	258	-0.1	31	-0.2	1.1	23.6	-1.5	10	-1.8	28.6	-1.9	12	-2.1	0	-17.2	-1.5	-18.7	-18.8	0.812	49	11	0
91282CFB2	2.750	Jul 31, 2027	2.9	5	3.459	-5.0	0.5	2.72	268	-0.2	17	-0.9	0.7	24.1	-1.8	8	-2.2	29.0	-2.3	8	-2.5	0	-17.7	-1.5	-19.2	-19.4	0.814	50	8	0

US Fixed Income Strategy

CUSIP	Coupon	Maturity	Yrs to Orig Mat	Yld Issue	1-D Chg	Yld Bad	Spot Dur	Mod PvbP	Par Curve Model				Matched-maturity SOFR				Match-maturity OIS				3 Months				Issue (\$bn)	SOMA %	Stripped (\$mn)				
									R/C	Pctl	Zs	YE	Spot	R/C	Pctl	Zs	Spot	R/C	Pctl	Zs	Special	Carry	Roll	C+R	C+R+R/C	Ret					
912810FA1	6.375	Aug 15, 2027	2.9	30	3.376	-6.0	0.5	2.66	289	-0.5	17	-0.9	-9.2	16.2	-2.5	5	-2.4	21.2	-2.9	7	-2.5	0	-19.1	-1.5	-20.6	-21.1	0.796	11	60	0	
91282CLG4	3.750	Aug 15, 2027	2.9	3	3.450	-5.2	0.3	2.73	276	0.3	78	1.3	-1.0	23.5	-1.5	3	-1.2	28.6	-1.6	3	-1.2	5	-17.2	-1.4	-18.6	-18.3	0.814	69	16	0	
9128282R0	2.250	Aug 15, 2027	2.9	10	3.460	-5.0	0.2	2.78	269	0.0	48	0.1	0.5	24.6	-1.1	20	-1.6	29.6	-1.5	17	-2.0	0	-17.3	-1.4	-18.7	-18.7	0.816	70	38	0	
91282CFH9	3.125	Aug 31, 2027	3.0	5	3.452	-4.9	0.0	2.79	277	-0.1	34	-0.3	-0.1	24.1	-1.7	8	-2.2	29.1	-2.1	10	-2.4	0	-16.8	-1.9	-18.7	-18.8	0.816	51	12	0	
91282CAH4	0.500	Aug 31, 2027	3.0	7	3.448	-5.1	0.0	2.89	265	0.2	78	0.7	0.4	23.8	-1.1	12	-1.7	28.8	-1.6	13	-2.0	0	-16.2	-1.8	-18.0	-17.8	0.815	51	27	0	
91282CLL3	3.375	Sep 15, 2027	3.0	3	3.431	-4.6	0.0	2.83	282	-0.1	0	-1.4	-2.1	22.3	-0.3	60	-0.7	27.4	-0.3	60	-0.6	0	-16.8	-1.8	-18.6	-18.7	0.813	59	0	0	
91282CFM8	4.125	Sep 30, 2027	3.0	5	3.427	-5.0	0.0	2.79	290	-0.8	11	-1.1	-2.6	22.4	-1.6	10	-2.2	27.5	-2.1	7	-2.7	0	-17.0	-1.5	-18.5	-19.3	0.823	44	0	0	
91282CAL5	0.375	Sep 30, 2027	3.0	7	3.438	-5.8	0.0	2.97	271	-0.5	2	-2.0	-0.3	23.5	-2.3	7	-2.9	28.6	-2.7	7	-3.0	0	-16.0	-1.4	-17.4	-17.9	0.818	57	16	0	
91282CFU0	4.125	Oct 31, 2027	3.1	5	3.448	-5.1	0.3	2.87	297	0.4	89	1.4	0.2	25.4	-1.6	8	-2.0	30.5	-2.0	8	-2.2	0	-16.4	-1.2	-17.6	-17.2	0.830	43	0	0	
91282CAU5	0.500	Oct 31, 2027	3.1	7	3.455	-4.8	0.0	3.04	278	0.8	98	2.8	2.1	26.1	-1.1	15	-1.4	31.2	-1.5	15	-1.7	0	-15.5	-1.1	-16.6	-15.8	0.827	59	20	0	
912810FB9	6.125	Nov 15, 2027	3.2	30	3.412	-4.6	0.0	2.83	312	2.4	98	2.2	-4.4	22.3	-1.0	7	-1.0	27.4	-1.4	7	-1.3	0	-17.1	-1.0	-18.1	-15.7	0.824	23	65	0	
9128283F5	2.250	Nov 15, 2027	3.2	10	3.449	-5.1	0.0	2.99	291	-0.3	16	-0.9	0.4	26.0	-1.8	10	-2.2	31.1	-2.2	10	-2.4	0	-15.9	-1.0	-16.9	-17.2	0.829	66	32	0	
91282CFZ9	3.875	Nov 30, 2027	3.2	5	3.445	-5.0	0.0	2.96	303	0.0	48	0.1	-0.2	26.0	-1.8	8	-2.2	31.1	-2.2	10	-2.3	0	-16.1	-0.9	-17.0	-17.0	0.831	48	10	0	
91282CAY7	0.625	Nov 30, 2027	3.2	7	3.444	-4.7	0.0	3.12	286	0.0	45	0.0	0.6	25.8	-1.5	13	-2.1	30.9	-1.9	15	-2.1	0	-15.3	-0.9	-16.2	-16.2	0.828	64	21	0	
91282CGC9	3.875	Dec 31, 2027	3.3	5	3.423	-5.1	0.0	3.04	311	-1.1	0	-2.1	-2.5	24.5	-2.1	8	-2.8	29.6	-2.5	8	-2.8	0	-16.0	-0.5	-16.5	-17.6	0.828	43	0	0	
91282CBB6	0.625	Dec 31, 2027	3.3	7	3.443	-4.6	0.0	3.20	292	-0.1	36	-0.4	0.5	26.5	-1.4	13	-1.7	31.7	-1.8	13	-1.9	0	-15.0	-0.5	-15.5	-15.6	0.832	68	18	0	
91282CGH8	3.500	Jan 31, 2028	3.4	5	3.436	-5.0	0.0	3.14	316	-0.4	5	-1.5	-1.1	26.4	-2.2	7	-2.9	31.6	-2.6	7	-2.7	513						43	0	0	
91282CBJ9	0.750	Jan 31, 2028	3.4	7	3.442	-4.8	0.0	3.27	300	-0.1	39	-0.3	0.4	27.0	0.0	0	0.0	32.3	0.0	15	0.0	0	-14.7					0.835	70	13	0
9128283W8	2.750	Feb 15, 2028	3.4	10	3.454	-5.0	0.0	3.22	315	0.0	41	-0.1	1.0	28.5	-1.4	22	-1.6	33.8	-1.7	17	-1.8	0	-14.8	-0.4	-15.2	-15.2	0.839	71	14	0	
91282CGP0	4.000	Feb 29, 2028	3.5	5	3.435	-4.9	0.0	3.20	327	-0.2	17	-0.9	-0.7	26.9	-1.9	7	-2.5	32.2	-2.3	8	-2.5	0	-14.6	-0.8	-15.4	-15.6	0.837	53	19	0	
91282CBP5	1.125	Feb 29, 2028	3.5	7	3.446	-4.8	0.0	3.34	309	0.1	66	0.3	1.2	28.0	-1.4	10	-2.0	33.3	-1.8	12	-2.1	0	-13.9	-0.7	-14.6	-14.5	0.841	75	18	0	
91282CGT2	3.625	Mar 31, 2028	3.5	5	3.434	-5.0	0.0	3.24	332	0.0	52	0.0	-1.0	27.2	-1.4	10	-2.0	32.5	-1.8	10	-2.0	0	-14.4	-0.5	-14.9	-14.9	0.847	43	0	0	
91282CBS9	1.250	Mar 31, 2028	3.5	7	3.450	-4.7	0.0	3.39	316	0.3	94	1.4	1.3	28.9	-1.2	15	-1.4	34.2	-1.6	13	-1.6	0	-13.7	-0.4	-14.1	-13.8	0.848	73	23	0	
91282CHA2	3.500	Apr 30, 2028	3.6	5	3.438	-4.7	0.3	3.33	338	0.2	84	1.0	0.2	28.1	-1.5	10	-1.9	33.4	-1.9	10	-2.0	0	-14.1	-0.2	-14.3	-14.1	0.850	47	9	0	
91282CBZ3	1.250	Apr 30, 2028	3.6	7	3.452	-4.8	0.1	3.47	323	0.4	97	1.6	2.2	29.5	-0.9	20	-1.1	34.9	-1.3	17	-1.3	0	-13.4	-0.2	-13.6	-13.2	0.852	74	16	0	
9128284N7	2.875	May 15, 2028	3.7	10	3.451	-4.5	0.0	3.41	337	0.1	61	0.2	1.1	29.6	-1.1	22	-1.1	35.0	-1.4	20	-1.2	0	-13.7	-0.1	-13.8	-13.7	0.854	75	15	0	
91282CHE4	3.625	May 31, 2028	3.7	5	3.438	-4.8	0.0	3.41	347	0.3	86	1.1	-0.5	28.5	-1.5	8	-1.8	33.9	-1.9	8	-1.9	0	-13.9	-0.1	-14.0	-13.7	0.851	51	16	0	
91282CCE9	1.250	May 31, 2028	3.7	7	3.445	-5.2	0.0	3.55	330	-0.1	28	-0.4	0.8	29.2	-1.4	12	-1.5	34.6	-1.7	12	-1.6	0	-13.2	0.0	-13.2	-13.3	0.853	74	16	0	
91282CHK0	4.000	Jun 30, 2028	3.8	5	3.429	-5.1	0.0	3.47	357	-0.3	9	-1.4	-1.5	27.9	-1.8	7	-2.3	33.4	-2.2	7	-2.3	0	-13.9	0.2	-13.7	-14.0	0.851	43	0	0	

US Fixed Income Strategy

CUSIP	Coupon	Maturity	Yrs to Orig Mat	Yld Issue	1-D Chg	Yld Bad	Spot Dur	Par Curve Model				Matched-maturity SOFR				Match-maturity OIS				3 Months				Issue (\$bn)	SOMA %	Stripped (\$mn)				
								R/C	Pctl	Zs	YE	Spot	R/C	Pctl	Zs	Spot	R/C	Pctl	Zs	Special	Carry	Roll C+R	C+R+R/C	Ret						
91282CCH2	1.250	Jun 30, 2028	3.8	7	3.443	-4.8	0.0	3.63	336	-0.2	8	-1.2	0.7	29.3	-1.5	8	-1.7	34.8	-1.9	10	-1.8	0	-13.1	0.2	-12.9	-13.1	0.855	71	20	0
91282CHQ7	4.125	Jul 31, 2028	3.9	5	3.436	-4.8	0.0	3.54	365	0.2	67	0.6	-0.9	28.9	-1.4	7	-1.6	34.4	-1.7	8	-1.7	0	-13.5	0.3	-13.2	-13.0	0.854	43	0	0
91282CCR0	1.000	Jul 31, 2028	3.9	7	3.445	-4.5	0.0	3.73	341	-0.1	39	-0.4	0.9	29.9	-1.2	13	-1.3	35.3	-1.6	12	-1.5	0	-12.7	0.3	-12.4	-12.5	0.859	68	10	0
912810FE3	5.500	Aug 15, 2028	3.9	30	3.340	-4.8	0.0	3.52	381	1.1	86	1.6	-10.8	19.5	-0.8	8	-0.8	25.0	-1.2	10	-1.1	0	-14.3	0.2	-14.1	-13.0	0.830	12	61	0
9128284V9	2.875	Aug 15, 2028	3.9	10	3.452	-4.4	0.0	3.65	359	-0.2	34	-0.5	1.1	30.7	-0.8	23	-0.8	36.2	-1.1	20	-1.1	0	-13.0	0.3	-12.7	-12.9	0.861	75	14	0
91282CHX2	4.375	Aug 31, 2028	4.0	5	3.441	-4.7	0.0	3.61	374	0.6	97	1.9	-0.4	29.7	-0.8	13	-1.0	35.2	-1.2	13	-1.2	0	-12.8	-0.1	-12.9	-12.3	0.858	51	9	0
91282CCV1	1.125	Aug 31, 2028	4.0	7	3.443	-4.4	0.0	3.81	349	-0.2	12	-1.1	0.6	29.9	-0.9	15	-1.0	35.4	-1.3	13	-1.2	0	-12.1	0.0	-12.1	-12.3	0.862	70	13	0
91282CJA0	4.625	Sep 30, 2028	4.0	5	3.439	-4.6	0.6	3.60	384	0.1	66	0.4	-0.4	29.9	-1.2	12	-1.4	35.4	-1.5	10	-1.5	0	-12.7	0.1	-12.6	-12.5	0.868	49	0	0
91282CCY5	1.250	Sep 30, 2028	4.0	7	3.448	-4.4	0.2	3.85	356	0.0	48	0.0	1.3	30.8	-0.7	15	-0.8	36.4	-1.1	15	-1.1	0	-12.0	0.2	-11.8	-11.8	0.869	69	12	0
91282CJF9	4.875	Oct 31, 2028	4.1	5	3.438	-4.7	0.0	3.67	394	0.2	66	0.7	-0.9	30.2	-1.2	10	-1.4	35.8	-1.5	12	-1.6	0	-12.6	0.3	-12.3	-12.1	0.869	52	0	0
91282CDF5	1.375	Oct 31, 2028	4.1	7	3.444	-4.6	0.0	3.93	364	-0.2	25	-0.7	0.6	30.8	-1.1	10	-1.2	36.4	-1.5	10	-1.4	0	-11.8	0.4	-11.4	-11.6	0.870	68	16	0
912810FF0	5.250	Nov 15, 2028	4.2	30	3.407	-5.2	0.0	3.69	401	0.9	86	1.1	-4.2	27.2	-0.2	23	-0.2	32.8	-0.6	18	-0.5	0	-12.9	0.4	-12.5	-11.6	0.861	11	29	0
9128285M8	3.125	Nov 15, 2028	4.2	10	3.455	-4.5	0.0	3.83	382	0.3	80	1.0	1.2	32.1	-0.7	23	-0.7	37.7	-1.0	18	-0.9	0	-12.1	0.4	-11.7	-11.4	0.874	81	26	0
91282CJN2	4.375	Nov 30, 2028	4.2	5	3.439	-4.6	0.0	3.78	397	0.8	97	1.9	-0.6	30.6	-0.6	17	-0.6	36.2	-1.0	13	-0.8	0	-12.4	0.4	-12.0	-11.2	0.870	56	1	0
91282CDL2	1.500	Nov 30, 2028	4.2	7	3.446	-4.5	0.0	4.00	371	0.1	67	0.4	0.8	31.3	-0.7	15	-0.7	36.9	-1.1	12	-1.0	0	-11.7	0.5	-11.2	-11.1	0.873	64	10	0
91282CJR3	3.750	Dec 31, 2028	4.3	5	3.437	-4.6	0.4	3.91	399	0.0	59	0.3	-0.4	30.7	-0.8	12	-1.0	36.3	-1.2	13	-1.2	0	-12.2	0.7	-11.5	-11.5	0.870	58	0	0
91282CDP3	1.375	Dec 31, 2028	4.3	7	3.437	-4.4	0.2	4.09	377	-0.9	3	-2.6	0.1	30.7	-1.4	10	-1.7	36.3	-1.8	10	-1.7	0	-11.6	0.7	-10.9	-11.8	0.873	64	12	0
91282CDW8	1.750	Jan 31, 2029	4.4	7	3.448	-4.6	0.0	4.14	387	0.0	50	0.0	0.7	32.1	-1.0	12	-1.1	37.7	-1.4	13	-1.3	0	-11.4	0.7	-10.7	-10.7	0.877	61	13	0
91282CJW2	4.000	Jan 31, 2029	4.4	5	3.434	-4.5	0.0	3.97	408	0.0	56	0.2	-1.3	30.6	-0.8	13	-0.8	36.3	-1.1	13	-1.1	0	-12.0	0.7	-11.3	-11.3	0.870	61	0	0
912810FG8	5.250	Feb 15, 2029	4.4	30	3.344	-5.5	0.0	3.93	426	-0.5	23	-0.5	-10.6	21.7	0.0	40	0.0	27.4	-0.3	25	-0.3	0	-12.7	0.6	-12.1	-12.6	0.847	11	62	0
9128286B1	2.625	Feb 15, 2029	4.4	10	3.444	-4.5	0.0	4.11	398	-0.5	11	-1.5	0.0	31.8	-0.7	18	-0.7	37.4	-1.0	17	-1.0	0	-11.5	0.7	-10.8	-11.3	0.876	82	26	0
91282CEB3	1.875	Feb 28, 2029	4.5	7	3.449	-4.2	0.0	4.21	394	0.3	86	1.2	1.2	32.3	-0.2	23	-0.2	38.0	-0.6	18	-0.5	0	-10.8	0.4	-10.4	-10.1	0.880	59	15	0
91282CKD2	4.250	Feb 28, 2029	4.5	5	3.425	-4.3	0.0	4.04	418	0.4	94	1.7	-1.6	29.9	-0.2	25	-0.3	35.6	-0.6	20	-0.6	0	-11.5	0.3	-11.2	-10.8	0.870	67	4	0
91282CEE7	2.375	Mar 31, 2029	4.5	7	3.452	-4.2	0.3	4.20	406	-0.2	34	-0.5	1.6	32.7	-0.7	15	-0.8	38.4	-1.0	15	-1.1	0	-10.8	0.6	-10.2	-10.4	0.887	56	16	0
91282CKG5	4.125	Mar 31, 2029	4.5	5	3.435	-4.5	0.5	4.05	424	0.1	66	0.4	-0.5	31.1	-0.5	20	-0.5	36.8	-0.9	15	-0.8	0	-11.3	0.5	-10.8	-10.7	0.882	67	0	0
91282CEM9	2.875	Apr 30, 2029	4.6	7	3.450	-4.3	0.0	4.24	418	-0.1	48	-0.3	1.0	32.7	-0.3	25	-0.4	38.4	-0.7	20	-0.6	0	-10.8	0.7	-10.1	-10.2	0.887	50	12	0
91282CKP5	4.625	Apr 30, 2029	4.6	5	3.431	-4.5	0.0	4.09	437	-0.1	44	-0.3	-1.3	30.8	-0.6	17	-0.6	36.5	-0.9	13	-0.9	0	-11.3	0.6	-10.7	-10.8	0.882	70	0	0
9128286T2	2.375	May 15, 2029	4.7	10	3.448	-4.1	0.0	4.32	416	0.0	47	0.1	0.8	32.5	0.0	33	0.0	38.3	-0.3	28	-0.3	0	-10.7	0.8	-9.9	-9.9	0.888	84	42	0
91282CES6	2.750	May 31, 2029	4.7	7	3.450	-4.5	0.0	4.33	423	-0.2	6	-1.5	0.8	32.8	-0.6	17	-0.6	38.5	-0.9	13	-0.9	0	-10.7	0.8	-9.9	-10.1	0.888	48	13	0

US Fixed Income Strategy

CUSIP	Coupon	Maturity	Yrs to Orig Mat	Yld Issue	1-D Chg	Yld Bad	Spot Dur	Par Curve Model				Matched-maturity SOFR				Match-maturity OIS				3 Months				Issue (\$bn)	SOMA %	Stripped (\$mn)				
								R/C	Pctl	Zs	YE	Spot	R/C	Pctl	Zs	Spot	R/C	Pctl	Zs	Special	Carry	Roll	C+R	C+R+R/C	Ret					
91282CKT7	4.500	May 31, 2029	4.7	5	3.425	-4.4	0.0	4.18	443	0.2	73	0.8	-2.1	30.2	-0.2	28	-0.2	36.0	-0.6	25	-0.5	0	-11.2	0.7	-10.5	-10.3	0.880	74	6	0
91282CEV9	3.250	Jun 30, 2029	4.8	7	3.457	-4.3	0.3	4.37	436	0.1	75	0.8	1.4	33.5	-0.2	23	-0.2	39.2	-0.5	18	-0.5	0	-10.7	0.9	-9.8	-9.7	0.889	43	7	0
91282CKX8	4.250	Jun 30, 2029	4.8	5	3.438	-4.3	0.4	4.28	447	0.4	88	1.0	-0.7	31.6	-0.5	10	-0.6	37.3	-0.9	10	-0.8	6	-10.6	0.9	-9.7	-9.3	0.883	72	3	0
91282CFC0	2.625	Jul 31, 2029	4.9	7	3.456	-4.0	0.0	4.51	435	0.2	89	1.5	1.0	33.4	0.1	32	0.1	39.2	-0.3	27	-0.3	0	-10.3	0.9	-9.4	-9.2	0.890	41	8	0
91282CLC3	4.000	Jul 31, 2029	4.9	5	3.435	-4.4	0.0	4.38	452	0.3	93	1.6	-1.4	31.3	-0.1	8	-0.1	37.0	-0.1	8	-0.1	6	-10.4	0.9	-9.5	-9.2	0.883	74	5	0
912810FJ2	6.125	Aug 15, 2029	4.9	30	3.436	-4.5	0.0	4.26	480	0.4	83	1.0	-1.8	31.4	-0.2	27	-0.2	37.2	-0.5	23	-0.5	0	-11.1	0.8	-10.3	-9.9	0.879	11	64	0
912828YB0	1.625	Aug 15, 2029	4.9	10	3.421	-4.2	0.0	4.65	428	-0.9	3	-1.7	-2.5	29.8	-0.4	33	-0.5	35.6	-0.7	27	-0.7	0	-10.2	0.9	-9.3	-10.2	0.884	93	51	0
91282CFJ5	3.125	Aug 31, 2029	5.0	7	3.455	-4.1	0.0	4.54	448	-0.1	34	-0.6	0.6	33.3	-0.1	32	-0.1	39.1	-0.4	30	-0.4	0	-9.9	0.6	-9.3	-9.4	0.890	42	12	0
91282CLK5	3.625	Aug 31, 2029	5.0	5	3.423	-4.2	0.0	4.50	455	0.5	87	1.5	-2.7	30.1	-0.9	7	-1.0	35.9	-0.9	7	-1.0	4	-10.0	0.6	-9.4	-8.9	0.881	76	7	0
91282CFL0	3.875	Sep 30, 2029	5.0	7	3.460	-4.2	0.2	4.47	464	0.1	72	0.6	1.1	33.9	-0.1	23	-0.1	39.7	-0.4	23	-0.4	0	-10.0	0.7	-9.3	-9.2	0.897	36	0	0
91282CFT3	4.000	Oct 31, 2029	5.1	7	3.466	-4.0	0.0	4.54	472	0.6	98	2.0	0.9	34.6	0.0	25	0.0	40.4	-0.3	20	-0.3	0	-9.9	0.8	-9.1	-8.5	0.898	35	0	0
912828YS3	1.750	Nov 15, 2029	5.2	10	3.435	-4.5	0.0	4.83	448	0.7	66	0.7	-2.0	31.5	-0.8	15	-0.6	37.4	-1.2	15	-0.8	0	-9.6	0.9	-8.7	-8.0	0.893	89	62	0
91282CFY2	3.875	Nov 30, 2029	5.2	7	3.467	-4.2	0.0	4.64	478	0.6	97	2.6	0.8	34.8	0.0	33	0.4	40.7	0.1	32	0.1	0	-9.8	0.8	-9.0	-8.4	0.898	39	10	0
91282CGB1	3.875	Dec 31, 2029	5.3	7	3.472	-3.9	0.0	4.72	485	0.6	97	2.7	0.9	35.4	0.2	33	0.2	41.3	-0.1	30	-0.1	0	-9.8	1.0	-8.8	-8.2	0.898	35	0	0
91282CGJ4	3.500	Jan 31, 2030	5.4	7	3.470	-4.3	0.0	4.84	487	0.0	52	0.0	0.3	35.2	-0.5	20	-0.5	41.1	-0.8	18	-0.7	0	-9.5	0.9	-8.6	-8.6	0.898	35	0	0
91282Z94	1.500	Feb 15, 2030	5.4	10	3.468	-4.1	0.0	5.11	462	-0.9	5	-1.9	0.1	35.0	-0.7	18	-0.7	40.9	-1.0	17	-0.9	0	-9.0	1.0	-8.0	-8.9	0.902	88	34	0
91282CGQ8	4.000	Feb 28, 2030	5.5	7	3.473	-4.2	0.0	4.87	501	0.2	97	1.7	0.6	35.5	0.1	30	0.1	41.4	-0.2	28	-0.2	0	-9.1	0.6	-8.5	-8.3	0.898	43	19	0
91282CGS4	3.625	Mar 31, 2030	5.5	7	3.476	-4.2	0.2	4.90	502	-0.1	38	-0.2	0.9	35.8	-0.4	25	-0.4	41.7	-0.7	20	-0.6	0	-9.0	0.7	-8.3	-8.4	0.906	35	0	0
91282CGZ8	3.500	Apr 30, 2030	5.6	7	3.478	-4.2	0.0	5.00	507	0.0	59	0.1	0.4	35.9	-0.3	27	-0.3	41.8	-0.6	20	-0.6	0	-8.9	0.8	-8.1	-8.1	0.905	38	9	0
912810FM5	6.250	May 15, 2030	5.7	31	3.475	-3.9	0.0	4.75	552	1.1	98	2.8	-0.3	35.5	0.7	45	0.6	41.5	0.4	37	0.3	0	-9.5	0.8	-8.7	-7.6	0.901	17	62	0
912828ZQ6	0.625	May 15, 2030	5.7	10	3.473	-4.2	0.0	5.46	467	-1.0	12	-1.9	0.0	35.3	-0.5	17	-0.5	41.3	-0.8	17	-0.7	0	-8.3	0.9	-7.4	-8.4	0.908	110	27	0
91282CHF1	3.750	May 31, 2030	5.7	7	3.485	-4.1	0.0	5.05	517	0.3	91	1.4	0.7	36.5	0.0	25	0.0	42.5	-0.3	25	-0.2	0	-8.9	0.8	-8.1	-7.8	0.905	42	16	0
91282CHJ3	3.750	Jun 30, 2030	5.8	7	3.489	-4.2	0.2	5.13	524	0.3	89	1.2	1.0	36.8	0.2	28	0.1	42.8	-0.1	27	-0.1	0	-8.9	0.9	-8.0	-7.7	0.905	35	0	0
91282CHR5	4.000	Jul 31, 2030	5.9	7	3.490	-4.0	0.0	5.19	535	0.2	91	1.2	0.5	36.8	0.1	27	0.1	42.8	-0.2	25	-0.2	0	-8.8	0.9	-7.9	-7.7	0.904	35	0	0
91282CAE1	0.625	Aug 15, 2030	5.9	10	3.486	-3.9	0.0	5.70	484	-0.6	23	-1.0	0.2	36.3	0.4	35	0.3	42.3	0.1	33	0.1	0	-7.9	1.0	-6.9	-7.5	0.911	133	21	0
91282CHW4	4.125	Aug 31, 2030	6.0	7	3.493	-4.0	0.5	5.25	544	-0.1	31	-0.4	0.7	37.0	0.1	28	0.1	43.0	-0.2	27	-0.2	0	-8.3	0.6	-7.7	-7.8	0.903	40	9	0
91282CHZ7	4.625	Sep 30, 2030	6.0	7	3.497	-4.1	0.0	5.17	559	0.1	70	0.4	0.6	37.3	0.2	30	0.2	43.3	-0.1	28	-0.1	0	-8.4	0.7	-7.7	-7.6	0.911	37	0	0
91282CJG7	4.875	Oct 31, 2030	6.1	7	3.496	-4.1	0.0	5.22	571	0.1	67	0.3	0.3	37.3	0.2	30	0.1	43.3	-0.2	27	-0.1	0	-8.4	0.7	-7.7	-7.6	0.909	38	0	0
91282CAV3	0.875	Nov 15, 2030	6.2	10	3.482	-4.4	0.0	5.88	505	-0.8	0	-1.6	-1.0	35.9	0.1	30	0.1	42.0	-0.2	28	-0.1	0	-7.6	0.8	-6.8	-7.6	0.911	134	19	0

US Fixed Income Strategy

CUSIP	Coupon	Maturity	Yrs to Orig Mat	Yld Issue	1-D Chg	Yld Bad	Spot Dur	Mod Pvbp	Par Curve Model				Matched-maturity SOFR				Match-maturity OIS				3 Months				Issue (\$bn)	SOMA %	Stripped (\$mn)			
									R/C	Pctl	Zs	YE	Spot	R/C	Pctl	Zs	Spot	R/C	Pctl	Zs	Special	Carry	Roll	C+R	C+R+R/C	Ret				
91282CJM4	4.375	Nov 30, 2030	6.2	7	3.503	-4.2	0.3	5.36	569	0.0	52	0.0	1.0	38.0	-0.1	20	-0.1	44.0	-0.4	17	-0.3	0	-8.3	0.8	-7.5	-7.5	0.909	39	1	0
91282CJQ5	3.750	Dec 31, 2030	6.3	7	3.504	-4.1	0.0	5.53	565	-0.2	28	-0.7	0.7	38.0	-0.1	25	-0.1	44.1	-0.4	22	-0.3	0	-8.1	0.9	-7.2	-7.4	0.909	40	0	0
91282CJX0	4.000	Jan 31, 2031	6.4	7	3.507	-4.0	0.0	5.57	576	-0.2	23	-0.8	0.7	38.2	-0.1	22	-0.1	44.3	-0.4	20	-0.3	0	-8.0	0.8	-7.2	-7.4	0.908	41	0	0
912810FP8	5.375	Feb 15, 2031	6.4	30	3.435	-4.3	0.6	5.45	608	1.8	80	1.2	-7.0	31.1	-0.4	18	-0.3	37.1	-0.8	17	-0.5	0	-8.6	0.8	-7.8	-6.0	0.887	16	51	0
91282CBL4	1.125	Feb 15, 2031	6.4	10	3.469	-4.2	0.1	6.07	527	-0.9	6	-1.2	-3.5	34.5	0.4	35	0.3	40.5	0.1	32	0.1	0	-7.5	0.9	-6.6	-7.5	0.907	140	25	0
91282CKC4	4.250	Feb 28, 2031	6.5	7	3.504	-4.4	0.0	5.62	587	-0.4	3	-1.9	0.7	37.9	-0.4	18	-0.3	43.9	-0.7	18	-0.5	0	-7.7	0.6	-7.1	-7.5	0.907	44	4	0
91282CKF7	4.125	Mar 31, 2031	6.5	7	3.509	-4.2	0.0	5.61	592	-0.2	14	-0.7	0.9	38.3	-0.2	25	-0.2	44.4	-0.5	20	-0.4	0	-7.7	0.7	-7.0	-7.2	0.916	43	0	0
91282CKN0	4.625	Apr 30, 2031	6.6	7	3.511	-4.2	0.0	5.62	608	0.1	67	0.3	0.9	38.4	-0.1	23	-0.1	44.5	-0.4	20	-0.3	0	-7.7	0.7	-7.0	-6.9	0.915	44	0	0
91282CCB5	1.625	May 15, 2031	6.7	10	3.520	-4.0	0.0	6.17	551	-0.2	14	-0.8	1.7	39.3	0.1	30	0.1	45.4	-0.2	25	-0.2	0	-7.1	0.8	-6.3	-6.5	0.922	149	30	0
91282CKU4	4.625	May 31, 2031	6.7	7	3.518	-4.2	0.3	5.70	615	0.1	67	0.4	1.4	39.0	-0.1	23	-0.1	45.1	-0.4	17	-0.3	0	-7.7	0.7	-7.0	-6.9	0.914	47	6	0
91282CKW0	4.250	Jun 30, 2031	6.8	7	3.513	-4.0	0.0	5.84	615	0.1	68	0.3	0.5	38.3	0.2	43	0.2	44.4	-0.1	24	0.0	6	-7.3	0.8	-6.5	-6.4	0.913	46	3	0
91282CLD1	4.125	Jul 31, 2031	6.9	7	3.519	-4.0	0.0	5.94	619	0.3	83	0.8	0.7	38.8	0.4	33	0.3	44.9	0.4	31	0.2	6	-7.2	0.8	-6.4	-6.1	0.914	46	5	0
91282CCS8	1.250	Aug 15, 2031	6.9	10	3.533	-3.9	0.0	6.49	560	-0.4	6	-1.3	1.8	40.1	0.0	28	0.0	46.2	-0.3	27	-0.2	0	-6.8	0.9	-5.9	-6.3	0.925	142	20	0
91282CLJ8	3.750	Aug 31, 2031	7.0	7	3.523	-4.0	0.3	6.08	617	-0.1	60	-0.2	1.0	39.0	-0.9	7	-0.8	45.1	-0.9	7	-0.8	6	-6.8	0.6	-6.2	-6.3	0.915	47	7	0
91282CDJ7	1.375	Nov 15, 2031	7.2	10	3.543	-3.7	0.1	6.66	579	-0.6	3	-1.7	0.9	40.8	-0.5	23	-0.4	47.0	-0.7	18	-0.6	0	-6.4	0.8	-5.6	-6.2	0.930	145	23	0
91282CDY4	1.875	Feb 15, 2032	7.4	10	3.559	-3.6	0.1	6.79	606	0.2	59	0.2	0.6	42.1	0.6	37	0.3	48.3	0.3	35	0.2	0	-6.4	0.8	-5.6	-5.4	0.932	141	26	0
91282CEP2	2.875	May 15, 2032	7.7	10	3.565	-3.4	0.2	6.72	648	0.3	77	0.8	-0.3	42.4	0.4	40	0.3	48.6	0.1	37	0.1	0	-6.3	0.8	-5.5	-5.2	0.935	133	24	0
91282CFF3	2.750	Aug 15, 2032	7.9	10	3.579	-2.8	0.1	6.99	662	0.5	97	1.4	-0.7	43.2	0.7	43	0.7	49.4	0.5	43	0.4	0	-6.1	0.8	-5.3	-4.8	0.938	121	18	0
91282CFV8	4.125	Nov 15, 2032	8.2	10	3.573	-3.4	0.0	6.83	719	0.0	48	0.2	-2.3	42.3	-0.2	30	-0.2	48.6	-0.5	25	-0.4	0	-6.2	0.8	-5.4	-5.4	0.937	111	11	0
91282CGM7	3.500	Feb 15, 2033	8.4	10	3.597	-3.2	0.0	7.20	718	-0.4	16	-1.1	-1.0	44.4	-0.3	32	-0.3	50.7	-0.6	28	-0.5	0	-5.8	0.8	-5.0	-5.4	0.943	115	14	0
91282CHC8	3.375	May 15, 2033	8.7	10	3.608	-3.1	0.1	7.35	731	-0.4	2	-1.5	0.0	45.0	-0.4	30	-0.4	51.3	-0.7	27	-0.5	0	-5.6	0.8	-4.8	-5.2	0.952	109	9	0
91282CHT1	3.875	Aug 15, 2033	8.9	10	3.620	-3.2	0.0	7.48	765	-0.5	2	-1.9	1.6	45.7	-0.5	25	-0.4	52.0	-0.7	22	-0.6	0	-5.5	0.8	-4.7	-5.2	0.952	122	12	0
91282CJJ1	4.500	Nov 15, 2033	9.2	10	3.622	-3.3	0.0	7.43	805	-0.6	2	-2.1	2.6	45.4	-0.8	17	-0.7	51.7	-1.1	17	-0.8	0	-5.5	0.8	-4.7	-5.3	0.956	115	1	0
91282CJZ5	4.000	Feb 15, 2034	9.4	10	3.638	-3.1	0.0	7.79	804	0.1	62	0.1	4.9	46.6	-0.3	25	-0.3	52.9	-0.6	22	-0.4	6	-5.0	0.8	-4.2	-4.1	0.960	124	3	0
91282CKQ3	4.375	May 15, 2034	9.7	10	3.643	-3.2	0.0	7.79	836	0.3	72	0.6	6.5	46.5	-0.3	28	-0.2	52.9	-0.5	25	-0.4	6	-4.9	0.8	-4.1	-3.8	0.967	133	10	0
91282CLF6	3.875	Aug 15, 2034	9.9	10	3.649	-3.0	0.0	8.17	835	0.3	59	0.5	7.6	46.5	-0.1	7	-0.1	52.8	-0.1	7	-0.1	9	-4.7	0.9	-3.8	-3.5	0.969	89	16	0
912810FT0	4.500	Feb 15, 2036	11.4	30	3.578	-3.0	0.0	8.97	977	0.1	59	0.3	-0.8	36.4	0.2	33	0.2	42.8	0.0	32	0.0	0	-4.7	1.0	-3.7	-3.6	0.967	26	68	0
912810PT9	4.750	Feb 15, 2037	12.4	30	3.652	-3.0	0.2	9.48	1055	0.4	89	1.4	1.7	41.8	0.3	30	0.2	48.3	0.1	28	0.0	0	-4.3	1.1	-3.2	-2.8	0.997	17	70	0
912810PU6	5.000	May 15, 2037	12.7	30	3.668	-2.9	0.0	9.44	1086	0.4	89	1.2	2.3	42.9	0.2	30	0.2	49.4	0.0	30	0.0	0	-4.1	1.0	-3.1	-2.7	1.007	21	70	0

US Fixed Income Strategy

CUSIP	Coupon	Maturity	Yrs to Orig Mat	Yld Issue	1-D Chg	Yld Bad	Spot Dur	Par Curve Model			Matched-maturity SOFR				Match-maturity OIS				3 Months					Issue (\$bn)	SOMA %	Stripped (\$mn)					
								R/C	Pctl	Zs	YE	Spot	R/C	Pctl	Zs	Spot	R/C	Pctl	Zs	Special	Carry	Roll	C+R	C+R+R/C	Ret						
912810PW2	4.375	Feb 15, 2038	13.4	30	3.702	-2.9	0.1	10.18	1094	0.1	89	1.0	0.3		45.0	0.2	28	0.1	51.5	0.0	27	0.0	0	-3.8	1.2	-2.6	-2.5	1.029	23	70	0
912810PX0	4.500	May 15, 2038	13.7	30	3.720	-2.9	0.1	10.17	1117	0.1	59	0.3	0.5		46.3	0.2	28	0.1	52.8	0.0	25	0.0	0	-3.7	1.2	-2.5	-2.4	1.040	26	70	0
912810QA9	3.500	Feb 15, 2039	14.4	30	3.758	-2.9	0.0	11.14	1086	-0.2	39	-0.3	-2.1		49.0	0.5	30	0.2	55.6	0.3	28	0.1	0	-3.4	1.3	-2.1	-2.3	1.073	26	70	0
912810QB7	4.250	May 15, 2039	14.7	30	3.785	-2.9	0.1	10.81	1153	-0.2	36	-0.3	-0.2		51.4	0.1	25	0.1	58.0	-0.1	23	0.0	0	-3.3	1.3	-2.0	-2.2	1.079	39	70	0
912810QC5	4.500	Aug 15, 2039	14.9	30	3.800	-2.9	0.0	10.94	1185	0.0	44	0.0	-0.3		52.5	-0.1	20	0.0	59.1	-0.3	18	-0.1	0	-3.3	1.4	-1.9	-1.9	1.082	41	70	0
912810QD3	4.375	Nov 15, 2039	15.2	30	3.808	-3.0	0.0	11.02	1189	0.1	52	0.2	-1.4		53.1	0.2	25	0.1	59.8	0.0	23	0.0	0	-3.2	1.4	-1.8	-1.7	1.093	45	70	0
912810QE1	4.625	Feb 15, 2040	15.4	30	3.811	-2.9	0.0	11.15	1224	0.1	45	0.1	-2.5		53.3	0.3	27	0.1	59.9	0.1	23	0.0	0	-3.3	1.4	-1.9	-1.8	1.092	45	70	0
912810QH4	4.375	May 15, 2040	15.7	30	3.816	-2.9	0.0	11.28	1218	-0.8	27	-0.9	-3.9		53.5	-0.1	23	0.0	60.2	-0.3	20	-0.1	0	-3.1	1.4	-1.7	-2.5	1.103	43	70	0
912810SR0	1.125	May 15, 2040	15.7	20	3.931	-2.8	0.0	13.69	928	0.7	62	0.6	1.5		65.0	-1.4	2	-0.5	71.7	-1.6	3	-0.5	0	-2.4	1.7	-0.7	0.0	1.203	60	33	0
912810QK7	3.875	Aug 15, 2040	15.9	30	3.838	-2.8	0.0	11.77	1186	-1.4	3	-1.6	-4.2		55.4	-0.6	10	-0.4	62.1	-0.9	10	-0.4	0	-3.0	1.5	-1.5	-2.9	1.117	43	70	0
912810SQ2	1.125	Aug 15, 2040	15.9	20	3.956	-2.8	0.0	13.93	932	1.0	66	0.8	1.9		67.3	-1.0	7	-0.4	73.9	-1.2	5	-0.4	0	-2.3	1.7	-0.6	0.4	1.214	77	36	0
912810QL5	4.250	Nov 15, 2040	16.2	30	3.841	-2.8	0.0	11.59	1232	-1.7	5	-1.5	-4.9		55.6	-0.6	17	-0.4	62.2	-0.9	13	-0.5	0	-3.0	1.4	-1.6	-3.3	1.116	43	70	0
912810ST6	1.375	Nov 15, 2040	16.2	20	3.982	-2.9	0.0	13.75	957	0.5	61	0.5	3.2		69.7	-1.6	2	-0.6	76.3	-1.8	3	-0.7	0	-2.3	1.7	-0.6	-0.1	1.216	86	36	0
912810QN1	4.750	Feb 15, 2041	16.4	30	3.833	-3.0	0.0	11.59	1293	-1.8	3	-1.4	-6.5		54.7	-0.6	15	-0.4	61.4	-0.8	12	-0.5	0	-3.1	1.4	-1.7	-3.5	1.107	43	68	0
912810SW9	1.875	Feb 15, 2041	16.4	20	3.990	-3.1	0.0	13.46	1008	0.6	66	0.6	3.4		70.4	-1.4	2	-0.6	77.0	-1.7	3	-0.6	0	-2.4	1.7	-0.7	-0.1	1.203	90	26	0
912810QQ4	4.375	May 15, 2041	16.7	30	3.864	-2.9	0.0	11.77	1267	-1.7	2	-1.7	-5.3		57.6	-1.0	10	-0.6	64.3	-1.2	10	-0.7	0	-2.9	1.4	-1.5	-3.2	1.123	42	70	0
912810SY5	2.250	May 15, 2041	16.7	20	3.997	-3.1	0.0	13.17	1049	0.4	64	0.5	3.6		70.9	-1.5	5	-0.7	77.6	-1.7	5	-0.8	0	-2.3	1.6	-0.7	-0.3	1.197	86	34	0
912810QS0	3.750	Aug 15, 2041	16.9	30	3.910	-2.9	0.0	12.34	1214	-1.6	0	-1.8	-3.5		61.9	-1.1	8	-0.6	68.6	-1.3	8	-0.7	0	-2.7	1.5	-1.2	-2.8	1.142	42	70	0
912810TA6	1.750	Aug 15, 2041	16.9	20	4.032	-2.8	0.0	13.90	1006	1.6	92	1.5	4.0		74.1	-0.8	5	-0.4	80.8	-1.0	5	-0.4	0	-2.2	1.7	-0.5	1.1	1.220	84	11	0
912810QT8	3.125	Nov 15, 2041	17.2	30	3.948	-2.9	0.0	12.76	1160	-1.8	3	-1.5	-2.5		65.6	-0.9	12	-0.5	72.3	-1.2	12	-0.6	0	-2.5	1.5	-1.0	-2.8	1.164	45	70	0
912810TC2	2.000	Nov 15, 2041	17.2	20	4.037	-3.0	0.0	13.71	1037	1.4	97	1.7	3.6		74.6	-0.9	7	-0.4	81.3	-1.1	7	-0.4	0	-2.2	1.6	-0.6	0.8	1.214	71	11	0
912810QU5	3.125	Feb 15, 2042	17.4	30	3.980	-2.9	0.1	12.99	1164	-0.8	6	-1.3	-1.0		68.7	-1.2	10	-0.6	75.5	-1.4	8	-0.6	0	-2.5	1.5	-1.0	-1.8	1.169	47	70	0
912810TF5	2.375	Feb 15, 2042	17.4	20	4.044	-2.9	0.1	13.59	1080	1.2	89	1.5	3.6		75.2	-1.0	7	-0.5	81.9	-1.3	7	-0.6	0	-2.2	1.5	-0.7	0.5	1.203	59	14	0
912810QW1	3.000	May 15, 2042	17.7	30	4.017	-3.0	0.0	13.10	1155	0.4	92	1.3	1.5		72.4	-0.9	10	-0.5	79.1	-1.2	10	-0.5	0	-2.3	1.4	-0.9	-0.5	1.180	44	70	0
912810TH1	3.250	May 15, 2042	17.7	20	4.021	-3.0	0.0	12.90	1180	0.2	53	0.3	2.4		72.7	-1.8	5	-1.0	79.4	-2.0	5	-1.0	0	-2.3	1.4	-0.9	-0.7	1.176	50	10	0
912810TK4	3.375	Aug 15, 2042	17.9	20	4.025	-2.9	0.0	13.06	1202	-0.2	16	-1.0	1.8		73.0	-1.7	7	-1.0	79.8	-2.0	5	-1.0	0	-2.4	1.4	-1.0	-1.2	1.170	41	5	0
912810QX9	2.750	Aug 15, 2042	17.9	30	4.040	-2.8	0.0	13.54	1136	1.0	97	2.5	1.7		74.5	-0.4	13	-0.2	81.3	-0.6	12	-0.3	0	-2.3	1.4	-0.9	0.1	1.187	42	63	0
912810TM0	4.000	Nov 15, 2042	18.2	20	4.000	-2.7	0.1	12.65	1283	-1.0	2	-2.7	-0.6		70.4	-2.2	5	-1.5	77.2	-2.4	7	-1.4	0	-2.4	1.3	-1.1	-2.1	1.151	41	4	0
912810QY7	2.750	Nov 15, 2042	18.2	30	4.048	-2.9	0.1	13.56	1144	0.6	97	1.3	1.2		75.3	-1.3	5	-0.7	82.1	-1.5	7	-0.7	0	-2.2	1.4	-0.8	-0.2	1.185	42	47	0

US Fixed Income Strategy

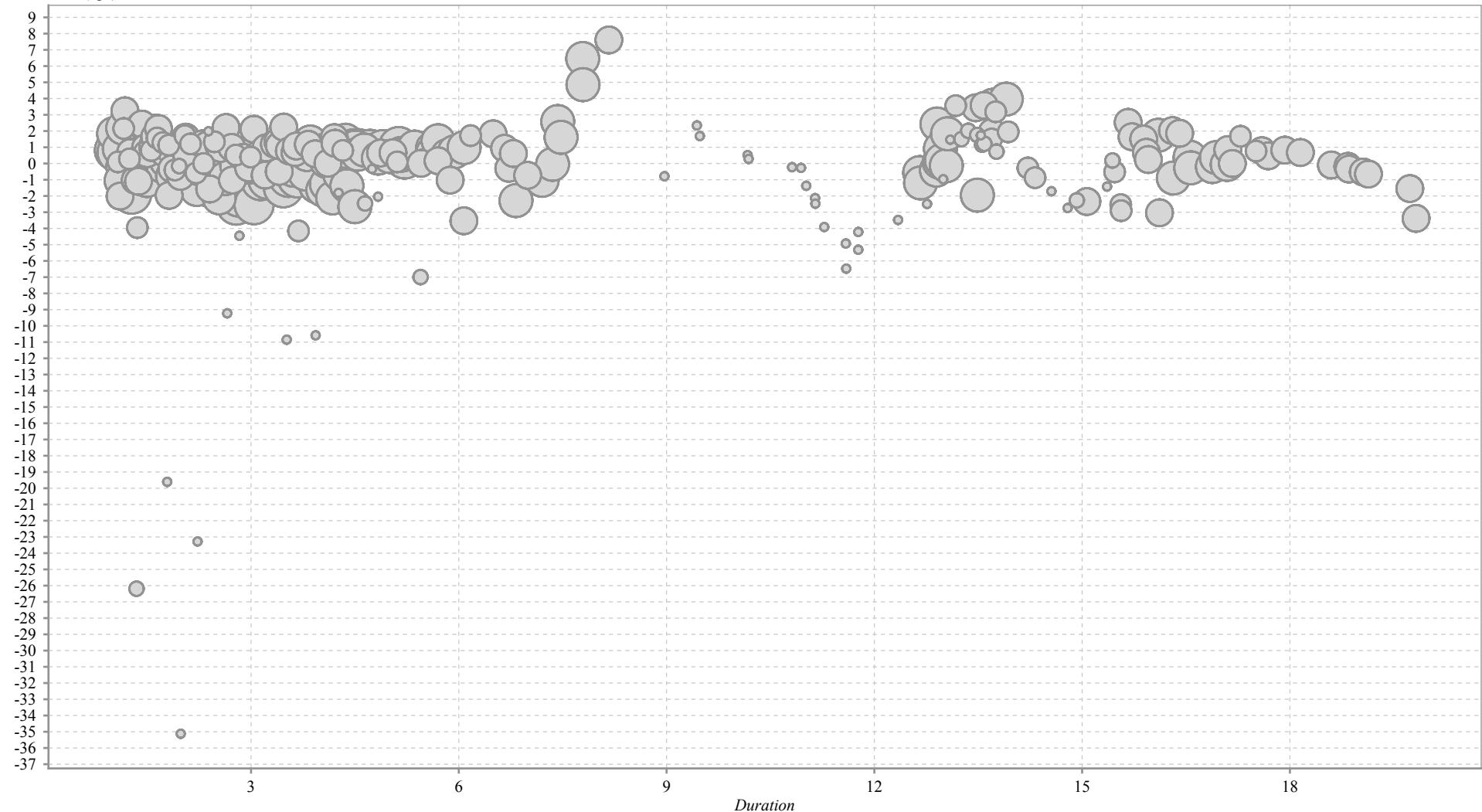
CUSIP	Coupon	Maturity	Yrs to Orig Mat	Yld Issue	1-D Chg	Yld Bad	Spot Dur	Par Curve Model				Matched-maturity SOFR				Match-maturity OIS				3 Months					Issue (\$bn)	SOMA %	Stripped (\$mn)			
								R/C	Pctl	Zs	YE	Spot	R/C	Pctl	Zs	Spot	R/C	Pctl	Zs	Special	Carry	Roll	C+R	C+R+R/C	Ret					
912810QZ4	3.125	Feb 15, 2043	18.4	30	4.056	-2.8	0.1	13.49	1190	0.4	95	1.6	1.8	76.1	-1.2	10	-0.7	82.9	-1.4	10	-0.7	0	-2.2	1.3	-0.9	-0.5	1.173	42	54	0
912810TQ1	3.875	Feb 15, 2043	18.4	20	4.022	-2.8	0.1	12.97	1277	-0.7	0	-2.4	0.2	72.7	-1.9	8	-1.2	79.4	-2.1	8	-1.2	0	-2.4	1.3	-1.1	-1.8	1.151	44	11	0
912810TS7	3.875	May 15, 2043	18.7	20	4.037	-2.8	0.0	12.95	1285	-0.3	8	-1.3	0.9	74.1	-1.9	8	-1.2	80.9	-2.2	8	-1.2	0	-2.3	1.2	-1.1	-1.4	1.152	42	7	0
912810RB6	2.875	May 15, 2043	18.7	30	4.073	-2.8	0.0	13.70	1170	1.0	97	1.8	1.9	77.7	-1.3	7	-0.7	84.5	-1.5	7	-0.7	0	-2.1	1.2	-0.9	0.1	1.178	42	28	0
912810RC4	3.625	Aug 15, 2043	18.9	30	4.065	-2.8	0.1	13.36	1263	0.7	97	1.7	2.0	76.9	-1.2	13	-0.7	83.7	-1.5	8	-0.7	0	-2.2	1.2	-1.0	-0.3	1.154	42	48	0
912810TU2	4.375	Aug 15, 2043	18.9	20	4.023	-2.8	0.1	12.90	1354	-0.6	0	-2.3	-0.4	72.7	-2.0	7	-1.5	79.5	-2.2	7	-1.4	0	-2.4	1.1	-1.3	-1.9	1.134	44	4	0
912810RD2	3.750	Nov 15, 2043	19.2	30	4.065	-2.9	0.0	13.26	1287	0.5	95	1.3	1.5	77.0	-1.5	7	-0.9	83.8	-1.7	8	-0.9	0	-2.2	1.1	-1.1	-0.6	1.147	42	47	0
912810TW8	4.750	Nov 15, 2043	19.2	20	4.015	-2.7	0.0	12.67	1411	-0.6	2	-1.7	-1.2	72.0	-1.8	10	-1.3	78.8	-2.0	8	-1.3	0	-2.4	1.0	-1.4	-2.0	1.124	42	0	0
912810RE0	3.625	Feb 15, 2044	19.4	30	4.074	-2.9	0.0	13.59	1282	0.6	97	1.9	1.2	78.1	-1.5	10	-0.9	84.9	-1.7	8	-0.9	0	-2.2	1.0	-1.2	-0.6	1.141	42	44	0
912810TZ1	4.500	Feb 15, 2044	19.4	20	4.040	-2.8	0.0	13.04	1389	0.1	62	0.3	-0.1	74.6	-1.9	7	-1.2	81.4	-2.2	7	-1.2	0	-2.3	1.0	-1.3	-1.2	1.122	43	2	0
912810RG5	3.375	May 15, 2044	19.7	30	4.082	-2.8	0.0	13.76	1261	0.7	97	2.3	0.7	78.9	-1.5	13	-0.9	85.8	-1.7	12	-0.9	0	-2.1	0.9	-1.2	-0.5	1.139	42	48	0
912810UB2	4.625	May 15, 2044	19.7	20	4.045	-2.6	0.0	12.94	1415	0.9	95	1.3	0.1	75.2	-1.7	3	-0.9	82.1	-1.9	5	-0.9	0	-2.3	0.9	-1.4	-0.5	1.117	44	5	0
912810UD8	4.125	Aug 15, 2044	19.9	20	4.043	-2.8	0.0	13.49	1369	0.2	80	1.0	-1.9	75.1	-0.7	26	-1.1	81.9	-0.7	26	-1.1	33	-1.6	0.9	-0.7	-0.5	1.110	13	7	0
912810RH3	3.125	Aug 15, 2044	19.9	30	4.086	-2.8	0.0	14.22	1241	0.5	95	2.1	-0.3	79.4	-1.4	13	-0.8	86.2	-1.7	13	-0.8	0	-2.1	0.9	-1.2	-0.7	1.131	42	33	0
912810RJ9	3.000	Nov 15, 2044	20.2	30	4.089	-2.8	0.0	14.32	1234	0.4	94	1.7	-0.9	79.9	-1.6	10	-0.9	86.7	-1.8	8	-0.9	0	-2.0	0.8	-1.2	-0.8	1.123	42	41	0
912810RK6	2.500	Feb 15, 2045	20.4	30	4.095	-2.7	0.0	15.07	1180	0.1	64	0.5	-2.3	80.7	-1.5	10	-0.9	87.5	-1.8	10	-0.9	0	-1.9	0.7	-1.2	-1.1	1.115	42	22	0
912810RM2	3.000	May 15, 2045	20.7	30	4.088	-2.6	0.0	14.56	1251	-0.3	23	-0.8	-1.7	80.1	-1.8	8	-1.0	87.0	-2.0	8	-1.0	0	-2.0	0.6	-1.4	-1.7	1.097	42	63	0
912810RN0	2.875	Aug 15, 2045	20.9	30	4.089	-2.7	0.0	14.92	1243	-0.3	30	-0.7	-2.3	80.5	-1.7	8	-1.0	87.3	-1.9	8	-1.0	0	-2.0	0.5	-1.5	-1.8	1.080	42	49	0
912810RP5	3.000	Nov 15, 2045	21.2	30	4.083	-2.6	0.0	14.79	1269	-0.9	3	-1.7	-2.7	80.1	-2.1	5	-1.2	87.0	-2.4	5	-1.2	0	-1.9	0.4	-1.5	-2.4	1.065	42	69	0
912810RQ3	2.500	Feb 15, 2046	21.4	30	4.098	-2.5	0.0	15.56	1207	-0.6	3	-1.5	-2.9	81.9	-2.1	2	-1.2	88.8	-2.4	2	-1.1	0	-1.9	0.3	-1.6	-2.2	1.053	40	34	0
912810RS9	2.500	May 15, 2046	21.7	30	4.101	-2.6	0.0	15.56	1214	-0.4	6	-1.3	-2.5	82.4	-2.2	2	-1.2	89.4	-2.5	2	-1.2	0	-1.8	0.2	-1.6	-2.0	1.041	43	38	0
912810RT7	2.250	Aug 15, 2046	21.9	30	4.105	-2.4	0.0	16.12	1186	-0.6	6	-1.6	-3.0	83.0	-2.3	2	-1.2	89.9	-2.6	3	-1.1	0	-1.8	0.1	-1.7	-2.3	1.024	41	18	0
912810RU4	2.875	Nov 15, 2046	22.2	30	4.101	-2.4	0.0	15.36	1278	-0.4	12	-1.4	-1.4	82.9	-2.2	2	-1.2	89.9	-2.4	2	-1.1	0	-1.8	0.0	-1.8	-2.2	1.016	43	65	0
912810RV2	3.000	Feb 15, 2047	22.4	30	4.106	-2.3	0.0	15.47	1302	-0.2	25	-0.8	-0.5	83.7	-2.2	2	-1.1	90.7	-2.5	2	-1.1	0	-1.9	0.0	-1.9	-2.1	1.003	41	28	0
912810RX8	3.000	May 15, 2047	22.7	30	4.110	-2.4	0.0	15.44	1308	0.1	58	0.3	0.2	84.5	-2.0	2	-1.1	91.4	-2.2	2	-1.0	0	-1.8	-0.1	-1.9	-1.8	0.997	44	49	0
912810RY6	2.750	Aug 15, 2047	22.9	30	4.116	-2.3	0.0	15.96	1278	0.2	83	0.9	0.2	85.3	-1.9	2	-1.0	92.3	-2.1	3	-1.0	0	-1.8	-0.2	-2.0	-1.8	0.982	44	26	0
912810RZ3	2.750	Nov 15, 2047	23.2	30	4.118	-2.2	0.0	15.93	1284	0.4	97	1.8	0.7	85.9	-1.9	3	-1.0	92.9	-2.1	3	-1.0	0	-1.7	-0.3	-2.0	-1.6	0.976	41	21	0
912810SA7	3.000	Feb 15, 2048	23.4	30	4.118	-2.3	0.1	15.89	1328	0.3	95	1.8	1.5	86.3	-1.9	3	-1.0	93.3	-2.1	3	-1.0	0	-1.8	-0.3	-2.1	-1.8	0.967	45	17	0
912810SC3	3.125	May 15, 2048	23.7	30	4.112	-2.4	0.0	15.72	1355	-0.3	2	-1.7	1.6	86.0	-2.6	2	-1.3	93.0	-2.8	2	-1.2	0	-1.8	-0.4	-2.2	-2.5	0.964	49	19	0

US Fixed Income Strategy

CUSIP	Coupon	Maturity	Yrs to Orig Mat	Yld Issue	1-D Chg	Yld Bad	Spot Dur	Par Curve Model				Matched-maturity SOFR				Match-maturity OIS				3 Months					Issue (\$bn)	SOMA %	Stripped (\$mn)			
								R/C	Pctl	Zs	YE	Spot	R/C	Pctl	Zs	Spot	R/C	Pctl	Zs	Special	Carry	Roll	C+R	C+R+R/C	Ret					
912810SD1	3.000	Aug 15, 2048	23.9	30	4.114	-2.3	0.0	16.10	1343	-0.2	14	-1.0	1.7	86.4	-2.4	2	-1.2	93.5	-2.6	2	-1.1	0	-1.8	-0.4	-2.2	-2.4	0.952	50	13	0
912810SE9	3.375	Nov 15, 2048	24.2	30	4.110	-2.4	0.0	15.66	1409	-0.1	42	-0.3	2.5	86.4	-2.6	2	-1.2	93.4	-2.8	2	-1.2	0	-1.8	-0.4	-2.2	-2.3	0.955	55	18	0
912810SF6	3.000	Feb 15, 2049	24.4	30	4.111	-2.2	0.0	16.30	1357	0.1	55	0.2	2.0	86.8	-2.4	2	-1.1	93.9	-2.6	2	-1.1	0	-1.8	-0.4	-2.2	-2.1	0.939	56	15	0
912810SH2	2.875	May 15, 2049	24.7	30	4.108	-2.3	0.0	16.41	1345	0.1	62	0.2	1.9	86.8	-2.3	2	-1.1	93.9	-2.5	2	-1.1	0	-1.7	-0.5	-2.2	-2.1	0.935	58	20	0
912810SJ8	2.250	Aug 15, 2049	24.9	30	4.108	-2.4	0.0	17.51	1250	0.1	67	0.4	0.8	87.2	-2.2	2	-1.0	94.2	-2.4	2	-1.0	0	-1.6	-0.6	-2.2	-2.1	0.912	63	31	0
912810SK5	2.375	Nov 15, 2049	25.2	30	4.110	-1.9	0.0	17.29	1275	0.9	98	2.1	1.7	87.7	-1.4	2	-0.6	94.8	-1.6	2	-0.7	0	-1.6	-0.6	-2.2	-1.3	0.916	61	32	0
912810SL3	2.000	Feb 15, 2050	25.4	30	4.106	-1.8	0.0	18.15	1219	0.6	97	2.1	0.7	87.7	-1.4	5	-0.6	94.8	-1.6	7	-0.6	0	-1.6	-0.6	-2.2	-1.6	0.898	61	15	0
912810SN9	1.250	May 15, 2050	25.7	30	4.081	-1.9	0.0	19.82	1103	-0.5	3	-1.6	-3.4	85.5	-1.7	2	-0.7	92.6	-1.9	3	-0.7	0	-1.4	-0.7	-2.1	-2.6	0.863	74	19	0
912810SP4	1.375	Aug 15, 2050	25.9	30	4.091	-1.8	0.0	19.73	1124	-0.1	28	-0.6	-1.5	86.8	-1.5	5	-0.6	93.9	-1.7	5	-0.6	0	-1.5	-0.7	-2.2	-2.3	0.867	89	24	0
912810SS8	1.625	Nov 15, 2050	26.2	30	4.088	-1.9	0.0	19.13	1171	-0.1	34	-0.4	-0.6	86.9	-1.6	3	-0.6	94.0	-1.7	3	-0.6	0	-1.5	-0.7	-2.2	-2.3	0.880	86	22	0
912810SU3	1.875	Feb 15, 2051	26.4	30	4.081	-1.8	0.0	18.85	1220	0.1	73	0.6	-0.3	86.6	-1.0	5	-0.4	93.7	-1.2	5	-0.4	0	-1.6	-0.6	-2.2	-2.1	0.886	90	17	0
912810SX7	2.375	May 15, 2051	26.7	30	4.076	-2.0	0.0	17.93	1314	0.2	84	1.1	0.8	86.4	-0.7	5	-0.3	93.6	-0.9	5	-0.4	0	-1.6	-0.6	-2.2	-2.0	0.906	95	22	0
912810SZ2	2.000	Aug 15, 2051	26.9	30	4.069	-2.0	0.0	18.84	1253	-0.1	16	-0.9	-0.2	86.0	-0.9	3	-0.4	93.2	-1.1	3	-0.4	0	-1.6	-0.6	-2.2	-2.3	0.892	91	19	0
912810TB4	1.875	Nov 15, 2051	27.2	30	4.063	-1.9	0.0	19.06	1236	0.0	50	-0.1	-0.5	85.8	-0.7	5	-0.3	92.9	-0.9	5	-0.3	0	-1.5	-0.6	-2.1	-2.1	0.894	90	24	0
912810TD0	2.250	Feb 15, 2052	27.4	30	4.055	-1.9	0.0	18.60	1311	0.0	44	-0.2	-0.1	85.4	-0.6	3	-0.3	92.5	-0.8	3	-0.3	0	-1.6	-0.5	-2.1	-2.1	0.905	85	26	0
912810TG3	2.875	May 15, 2052	27.7	30	4.048	-1.8	0.0	17.59	1435	0.0	47	-0.1	0.8	85.0	-0.5	3	-0.3	92.2	-0.7	3	-0.3	0	-1.7	-0.4	-2.1	-2.1	0.926	79	24	0
912810TJ7	3.000	Aug 15, 2052	27.9	30	4.038	-2.0	0.0	17.69	1468	-0.1	25	-0.6	0.5	84.4	-0.5	5	-0.3	91.5	-0.7	5	-0.3	0	-1.7	-0.4	-2.1	-2.2	0.928	70	19	0
912810TL2	4.000	Nov 15, 2052	28.2	30	4.014	-1.8	0.0	16.57	1675	0.3	72	0.7	-0.3	82.4	0.0	20	0.0	89.6	-0.2	17	-0.1	0	-1.8	-0.3	-2.1	-1.8	0.945	64	11	0
912810TN8	3.625	Feb 15, 2053	28.4	30	4.015	-1.9	0.1	17.17	1609	-0.2	17	-1.0	0.0	82.9	-0.4	15	-0.3	90.1	-0.6	12	-0.3	0	-1.8	-0.3	-2.1	-2.3	0.944	66	14	0
912810TR9	3.625	May 15, 2053	28.7	30	4.007	-1.9	0.0	17.09	1619	-0.4	8	-1.8	-0.1	82.5	-0.6	10	-0.3	89.7	-0.7	10	-0.4	0	-1.8	-0.2	-2.0	-2.4	0.953	63	9	0
912810TT5	4.125	Aug 15, 2053	28.9	30	3.996	-2.0	0.0	16.88	1731	-0.2	19	-1.1	-0.2	81.7	-0.3	17	-0.2	89.0	-0.5	15	-0.3	0	-1.9	-0.1	-2.0	-2.2	0.958	72	12	0
912810TV0	4.750	Nov 15, 2053	29.2	30	3.979	-1.8	0.0	16.32	1874	0.2	78	0.8	-0.9	80.5	0.0	22	0.0	87.7	-0.2	17	-0.1	0	-1.9	-0.1	-2.0	-1.8	0.969	66	1	0
912810TX6	4.250	Feb 15, 2054	29.4	30	3.988	-1.9	0.0	16.94	1777	0.1	58	0.4	0.4	81.7	-0.5	12	-0.4	89.0	-0.7	10	-0.4	6	-1.8	0.0	-1.8	-1.7	0.974	71	3	0
912810UA4	4.625	May 15, 2054	29.7	30	3.978	-2.0	0.0	16.56	1867	0.2	72	0.6	0.4	81.1	-0.4	18	-0.3	88.4	-0.6	15	-0.4	6	-1.8	0.0	-1.8	-1.6	0.985	76	10	0
912810UC0	4.250	Aug 15, 2054	29.9	30	3.976	-1.9	0.0	17.10	1798	0.2	84	1.0	0.9	81.4	0.1	45	0.1	88.6	0.0	45	0.1	6	-1.8	0.1	-1.7	-1.5	0.990	52	16	0

Yield Errors in Duration Space Using the Par Curve Model

Yield Error (bps)

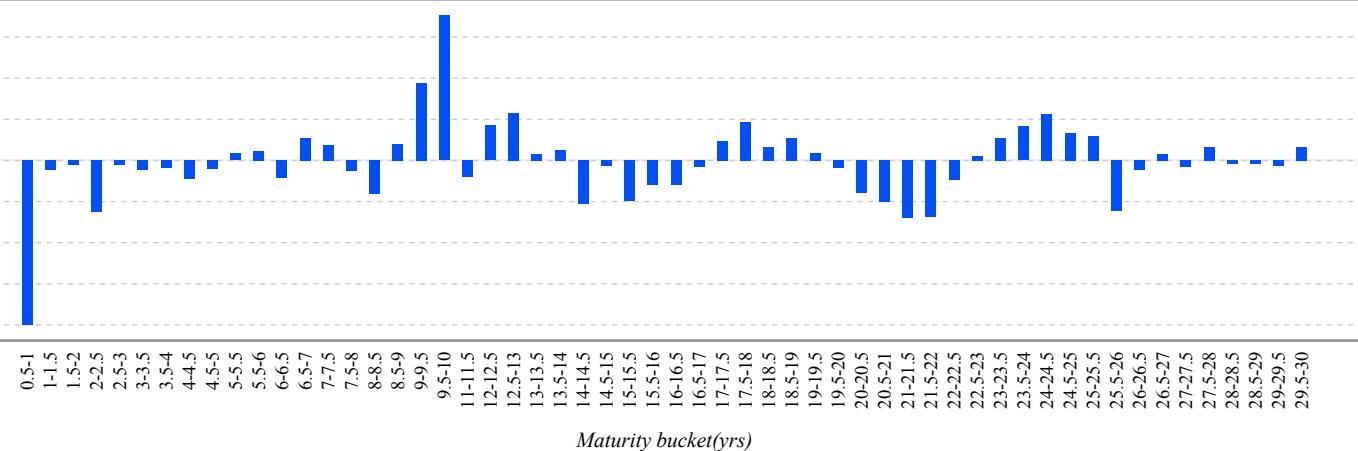


Note:

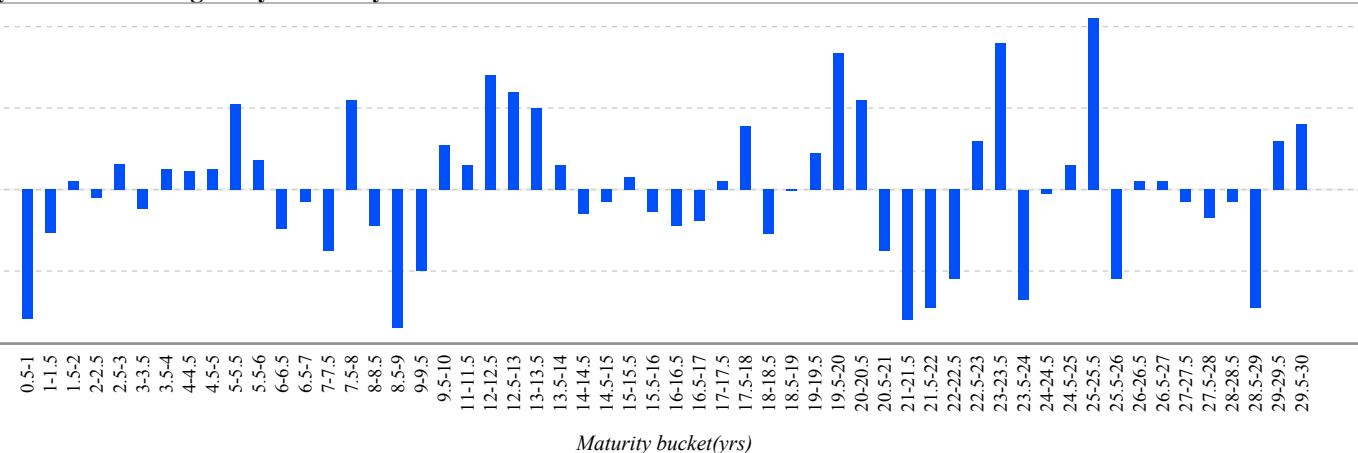
The size of dots is proportional to the percentage of outstanding amount *NOT* in the hands of the Fed.

Yield Error Summary Report

Average yield error by maturity bucket (bp)

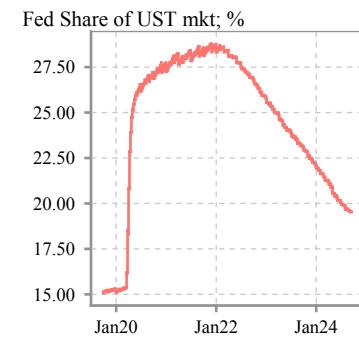
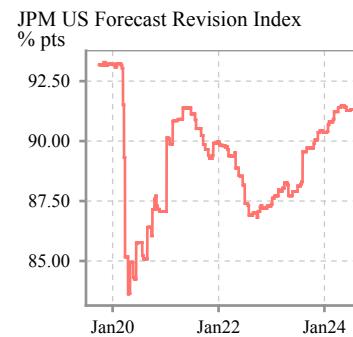
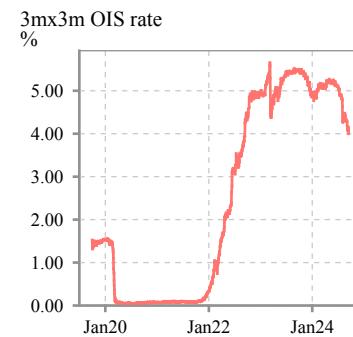
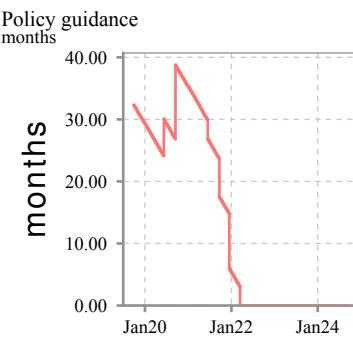
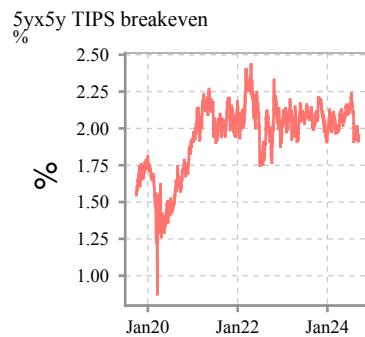
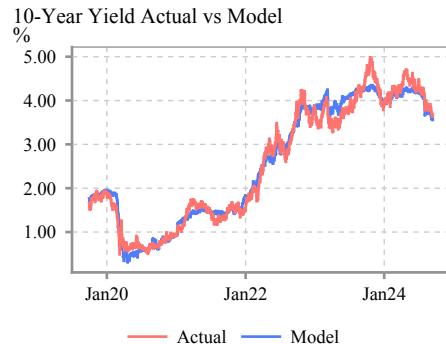


Zscore of yield error averaged by maturity bucket



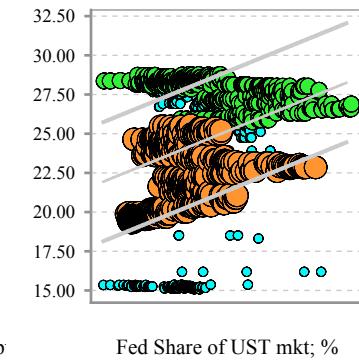
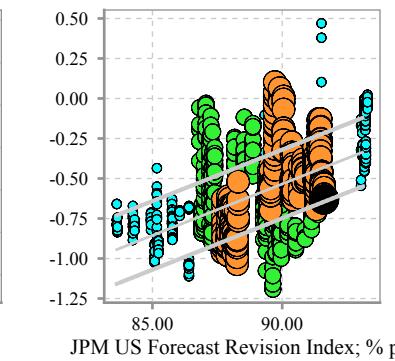
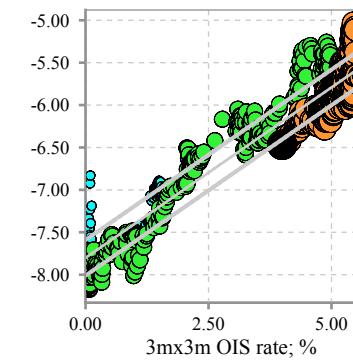
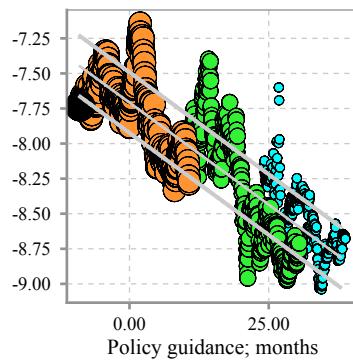
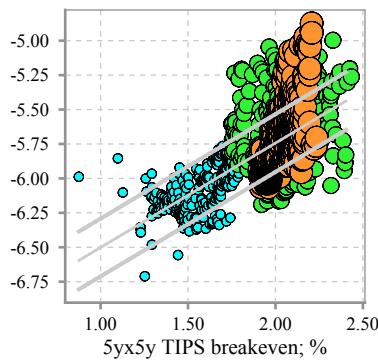
US Fixed Income Strategy

10-Year Treasury Fair Value Model



Partial regressions

Factor vs 10Y Treasury (%) adjusted for other model factors



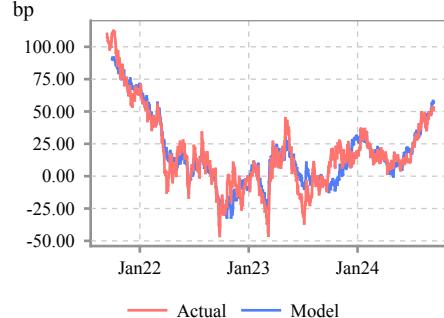
Note:

Model is fitted using a 5-year history.

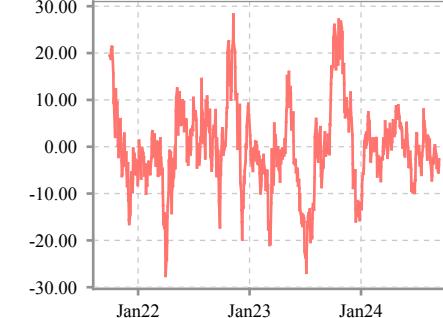
US Fixed Income Strategy

5s/30s Treasury Benchmark Yield Curve Model

5s/30s Curve Actual vs Model



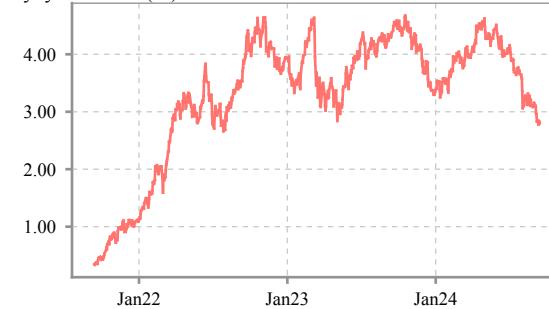
Residual



5s/30s Yield Curve (bp) Model

	Coeff	T-stat	Current Value
Intercept	181.3	26.0	
1y1y OIS rates (%)	-30.9	-82.2	2.80
5y5y seasonally-adjusted TIPS breakevens (%)	19.4	6.3	1.95
SOMA share of marketable Treasury debt outstanding (%)	-4.7	-36.4	15.92
R-squared	90.3		9.18
Standard Error; bp	9.2		55.30
Current 10s/30s curve; bp	55.3		-2.68
Residual	-2.7		

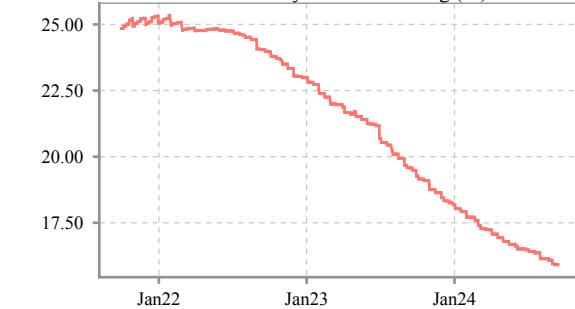
1y1y OIS rates (%)



5y5y seasonally-adjusted TIPS breakevens (%)

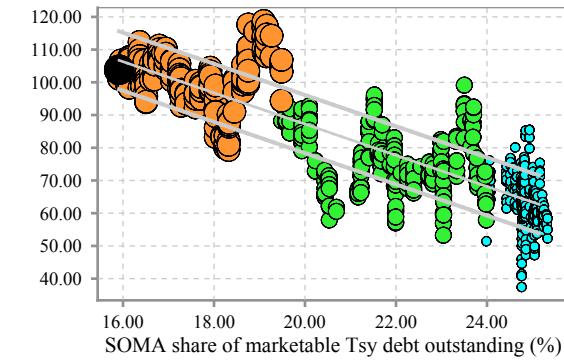
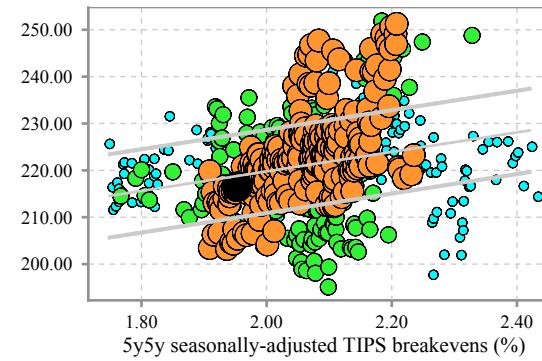
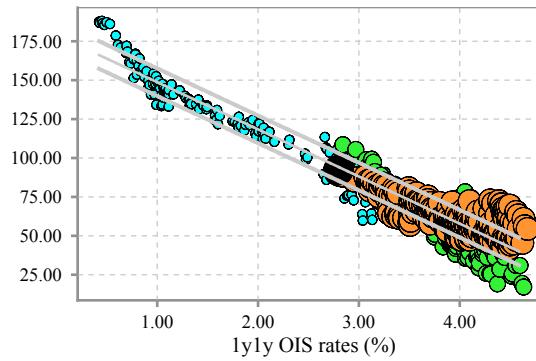


SOMA share of marketable Tsy debt outstanding (%)



Partial regressions

Factor vs. the 5s/30s curve (bp) adjusted for other model factors



Note:

Model is fitted using 3-year history.

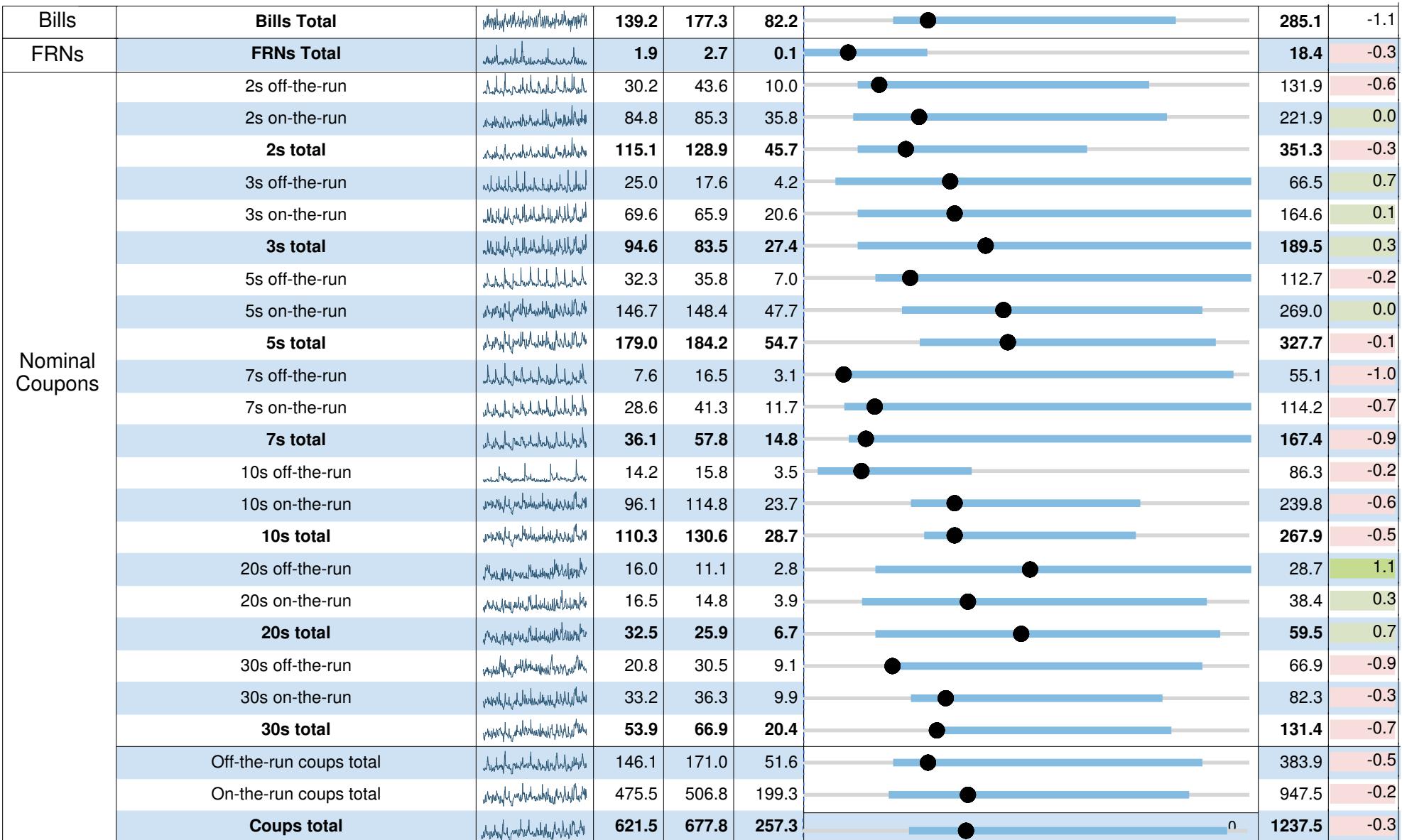
US Fixed Income Strategy

TRACE Treasury Daily Aggregate Statistics – Trading volumes

Par value amounts; \$bn

Page 19

		09-13-24	1Y avg	1Y min	09-13-24	1-year range	1M range	1Y max	Z-score
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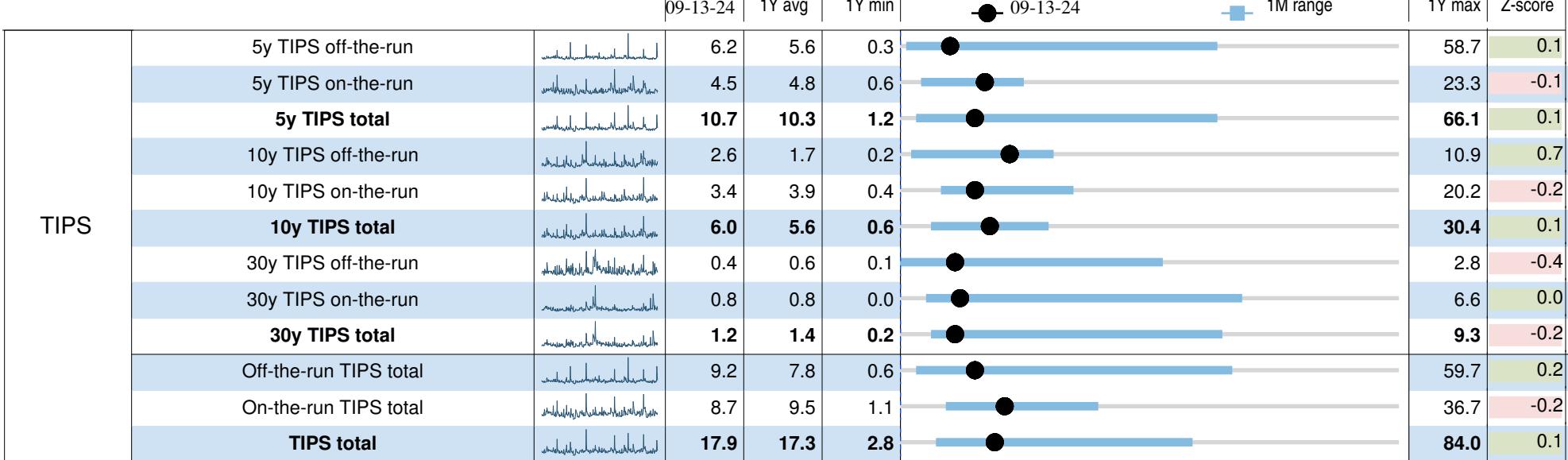


US Fixed Income Strategy

TRACE Treasury Daily Aggregate Statistics – Trading volumes

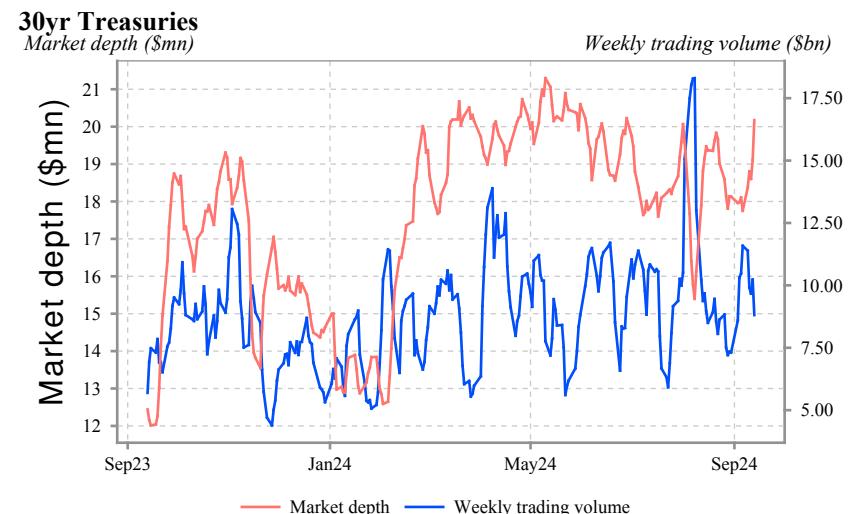
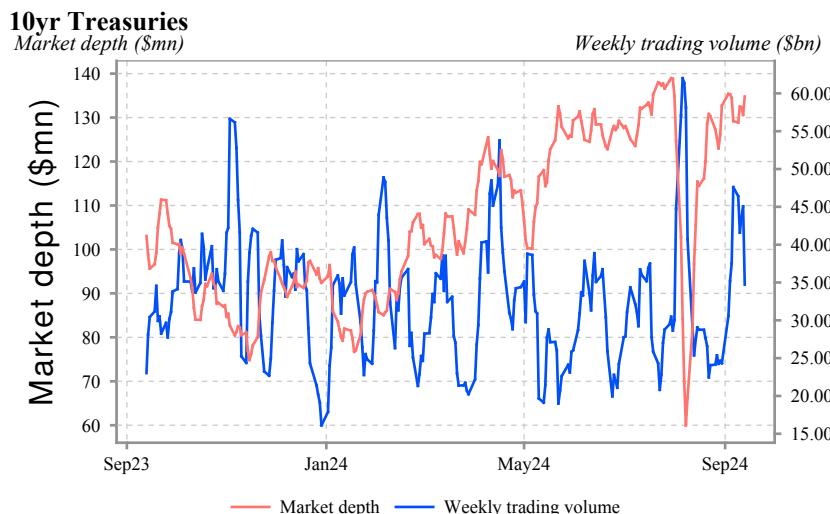
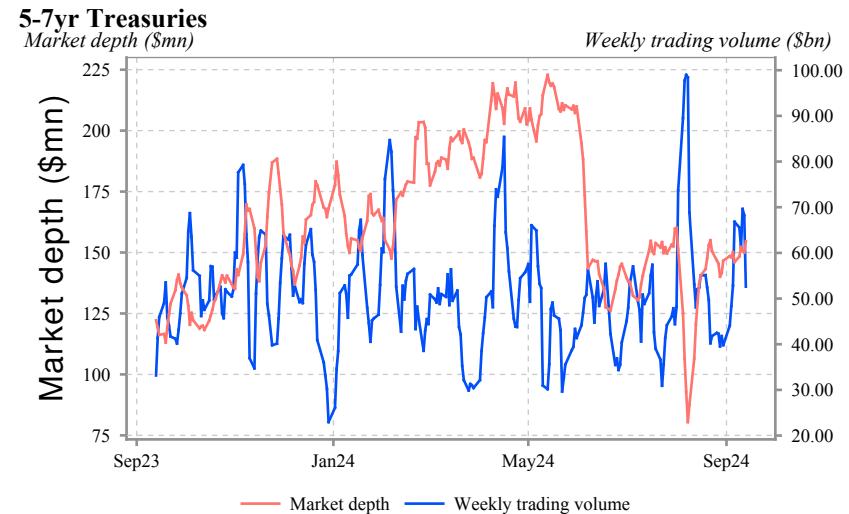
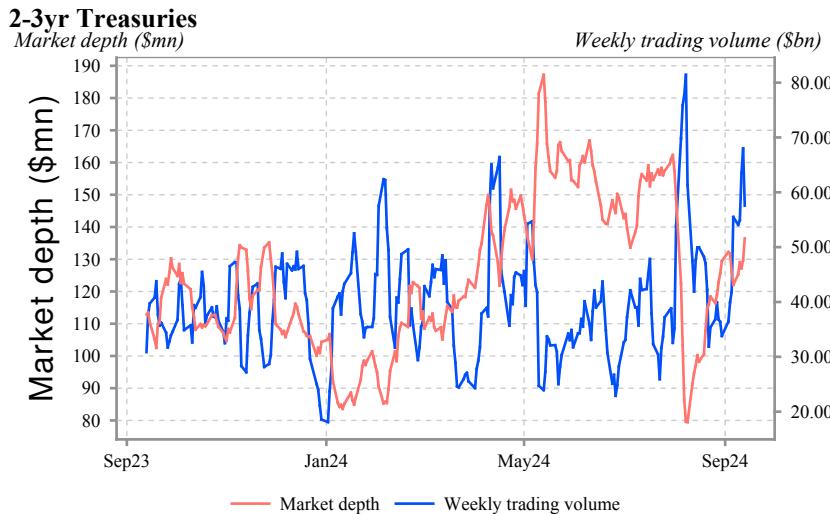
Par value amounts; \$bn

Page 20



Fixed Income Strategy

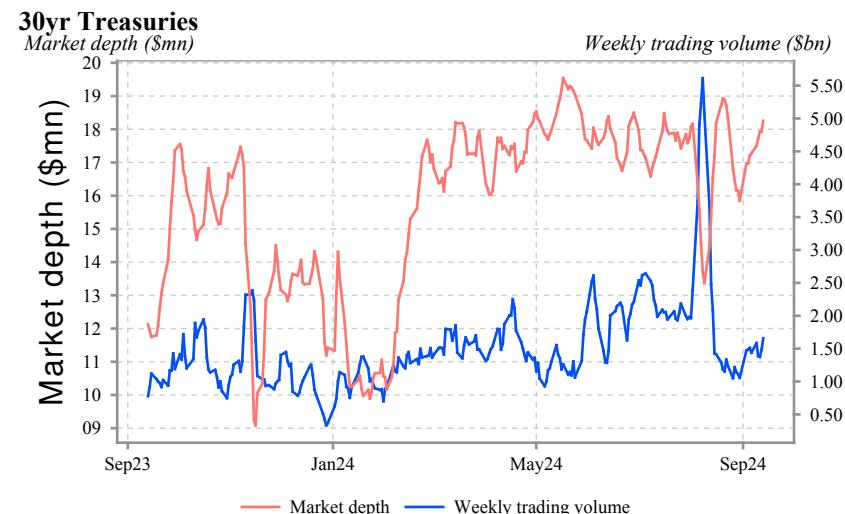
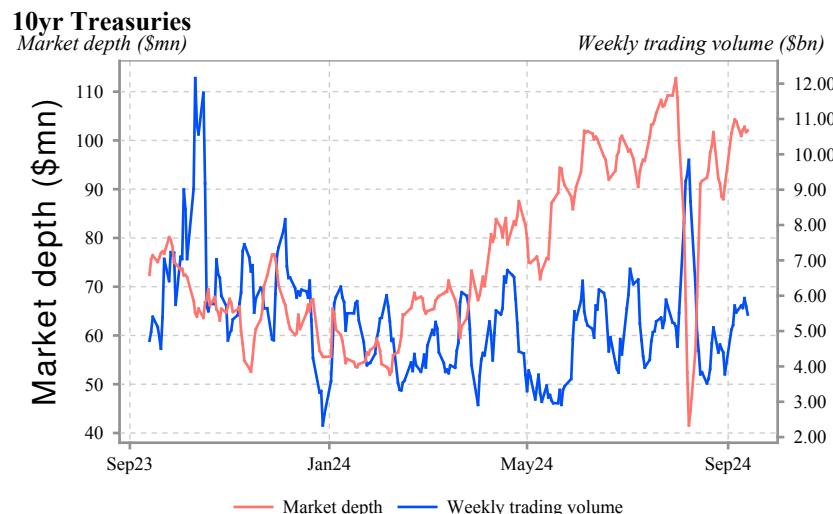
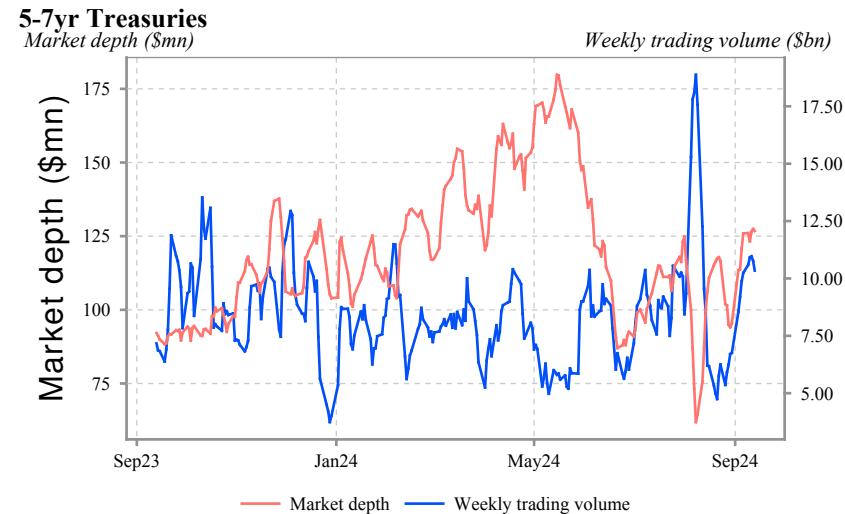
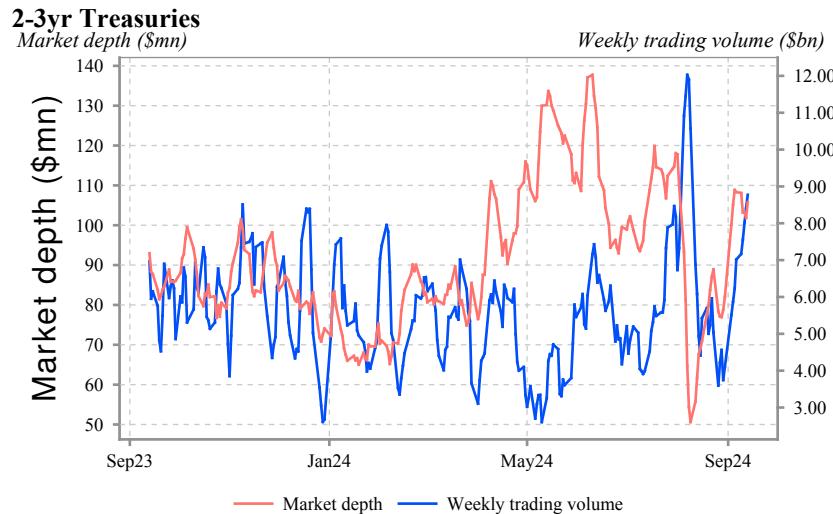
Cash Treasury Market Liquidity Summary



Market depth is defined as the weekly moving average of the top 3 bid/ask sizes in OTR Treasuries, averaged between 8:30am and 10:30am daily. Both market depth and volume data are taken from BrokerTec, an interdealer electronic trading platform

Fixed Income Strategy

Cash Treasury Market Liquidity Summary - London time



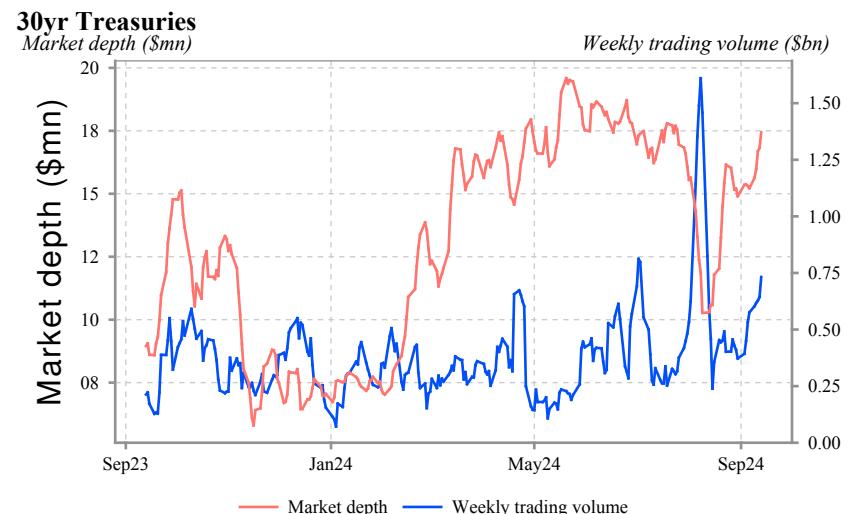
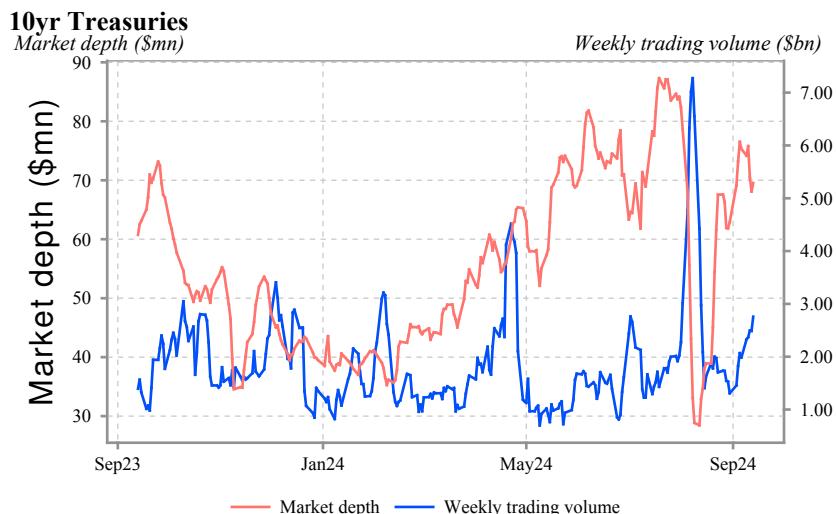
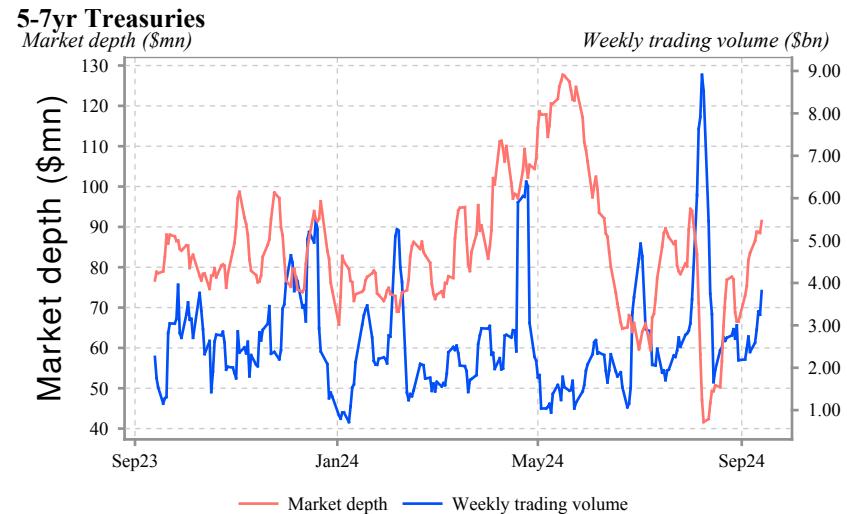
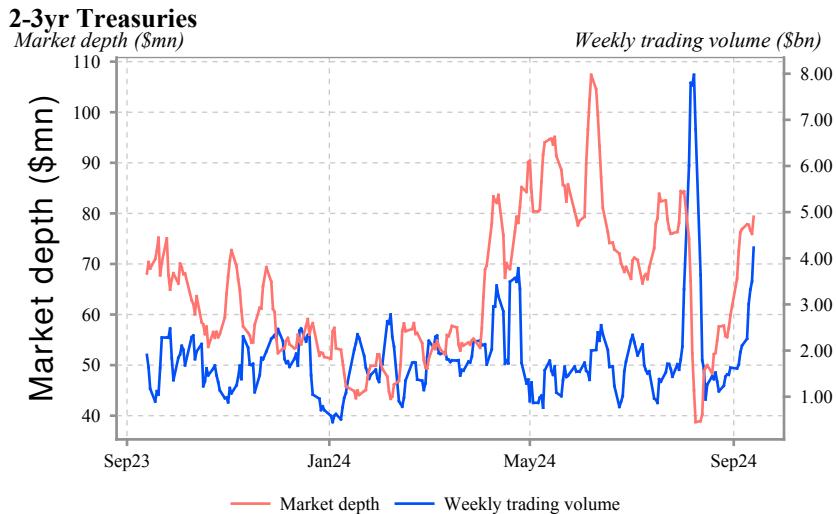
Market depth is defined as the weekly moving average of the top 3 bid/ask sizes in OTR Treasuries, averaged between 8:30am and 10:30am daily. Both market depth and volume data are taken from BrokerTec, an interdealer electronic trading platform

Source: J.P. Morgan, BrokerTec

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Fixed Income Strategy

Cash Treasury Market Liquidity Summary - Tokyo time



Market depth is defined as the weekly moving average of the top 3 bid/ask sizes in OTR Treasuries, averaged between 8:30am and 10:30am daily. Both market depth and volume data are taken from BrokerTec, an interdealer electronic trading platform.

Source: J.P. Morgan, BrokerTec

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US Fixed Income Strategy

Hot-Run vs Off-the-Run Spreads

		09/13/2024	09/12/2024	09/11/2024	09/10/2024	09/09/2024	09/06/2024	09/05/2024	09/04/2024	09/03/2024	08/30/2024
2 year	Current-Olds	-3.1	-3.2	-3.1	-3.5	-3.5	-3.5	-3.4	-3.5	-3.2	-3.2
	Current-Double Olds	-5.5	-5.7	-5.8	-6.5	-6.5	-6.3	-6.7	-6.7	-6.6	-6.4
	Current-Triple Olds	-8.8	-9.1	-9.0	-9.2	-9.6	-9.3	-9.6	-9.4	-9.7	-9.6
3 year	Current-Olds	-1.9	-2.5	-2.8	-3.0	-0.5	-0.4	-0.7	-0.8	-0.8	-0.8
	Current-Double Olds	-2.3	-3.1	-3.5	-3.5	0.3	0.1	-0.3	-0.5	-0.6	-0.8
	Current-Double Olds	-1.7	-2.5	-2.6	-2.6	-2.6	-2.9	-3.3	-3.4	-3.6	-3.7
5 year	Current-Olds	-1.1	-1.4	-1.4	-1.2	-1.4	-1.4	-1.6	-1.6	-1.6	-1.6
	Current-Double Olds	-1.5	-1.6	-1.7	-1.7	-1.9	-1.8	-2.2	-2.2	-2.4	-2.4
	Current-Triple Olds	-0.2	-0.4	-0.2	-0.4	-0.6	-0.6	-0.8	-0.9	-1.2	-1.4
7 year	Current-Olds	0.4	0.4	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.1
	Current-Double Olds	1.0	1.0	0.9	0.8	0.7	0.8	0.7	0.7	0.6	0.6
	Current-Triple Olds	0.5	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.0	0.0
10 year	Current-Olds	0.6	0.4	0.3	0.3	0.1	0.2	-0.0	-0.0	-0.0	-0.1
	Current-Double Olds	1.0	0.9	0.9	0.9	0.7	0.8	0.5	0.4	0.3	0.1
	Current-Triple Olds	2.6	2.3	2.2	2.2	2.0	1.9	1.7	1.5	1.3	1.3
30 year	Current-Olds	-0.2	-0.2	-0.3	-0.3	-0.2	-0.4	-0.4	-0.5	-0.4	-0.3
	Current-Double Olds	-1.1	-1.1	-1.2	-1.2	-1.2	-1.3	-1.4	-1.4	-1.4	-1.4
	Current-Triple Olds	-0.3	-0.2	-0.5	-0.5	-0.4	-0.4	-0.6	-0.3	-0.6	-0.2

Hot-Run	Current	Olds	Double Olds	Triple Olds
2Y	3.750	Aug 31, 2026	4.375	Jul 31, 2026
			4.625	Jun 30, 2026
3Y	3.375	Sep 15, 2027	3.750	Aug 15, 2027
			4.375	Jul 15, 2027
5Y	3.625	Aug 31, 2029	4.000	Jul 31, 2029
			4.250	Jun 30, 2029
7Y	3.750	Aug 31, 2031	4.125	Jul 31, 2031
			4.250	Jun 30, 2031
10Y	3.875	Aug 15, 2034	4.375	May 15, 2034
			4.000	Feb 15, 2034
30Y	4.250	Aug 15, 2054	4.625	May 15, 2054
			4.250	Feb 15, 2054
			4.750	Nov 15, 2053

US Fixed Income Strategy

jpmorganmarkets.com

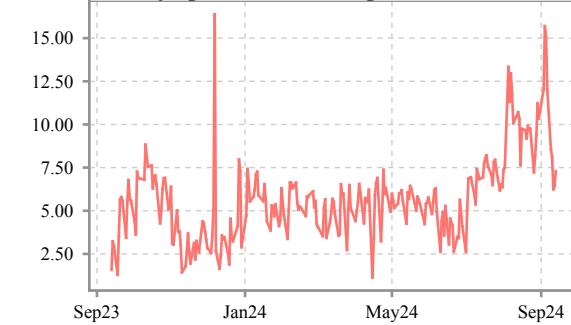
T-bill issuance report

Projections for bill issuance and Treasury operating cash balance; \$bn

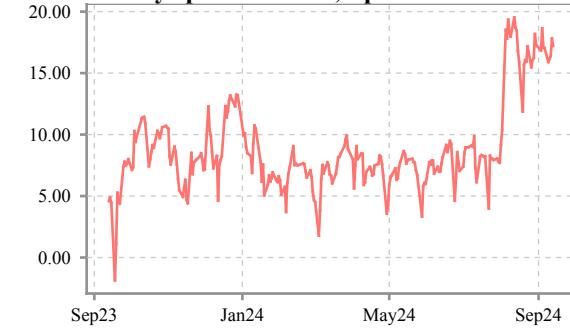
Projected gross issuance of bills

Settle date	4Wk	6Wk	8Wk	3m	17w	6m	12m	CMB	Bill net issuance
20-Aug	95			90		60		0	25
22-Aug		75			76		70	0	11
27-Aug	95			90		60		35	55
29-Aug		75		76		70		0	11
3-Sep	90			90		60		0	10
5-Sep		70			76		70	46	0
10-Sep	90			85		60		0	-5
12-Sep		70		76		70		0	-29

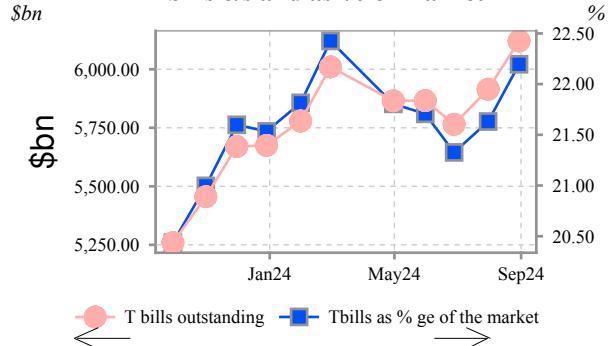
3M Treasury spread to OIS; bp



6M Treasury spread to OIS; bp



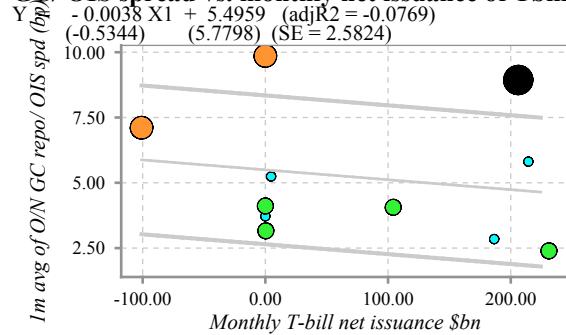
T-bills o/s and as % of market



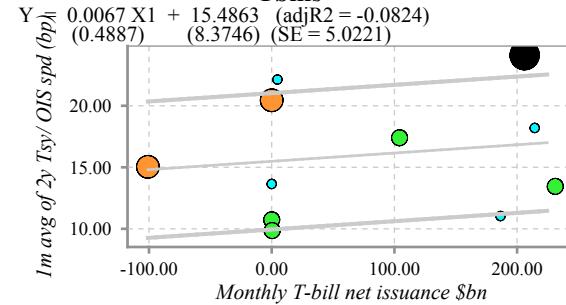
2Y and 5Y Treasury spread to OIS; bp



GC/OIS spread vs. monthly net issuance of Tbills



2Y Tsy/ OIS spread vs. monthly net issuance of Tbills



1Y Treasury spread to OIS; bp

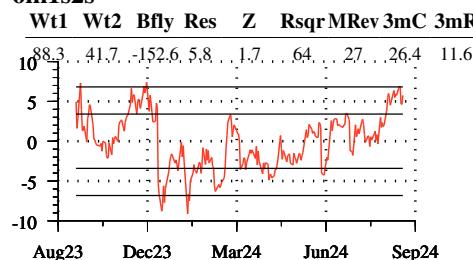


Regression on last 1-year of data

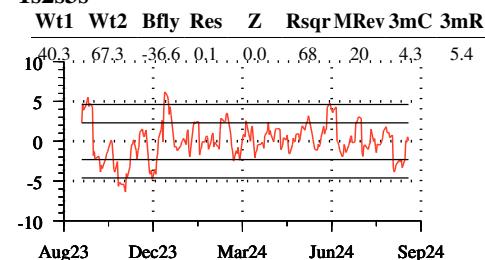
US Treasury Butterfly Report

Benchmark Butterflies (Level and Curve Neutral)

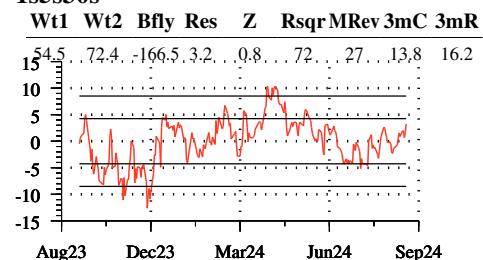
6m1s2s



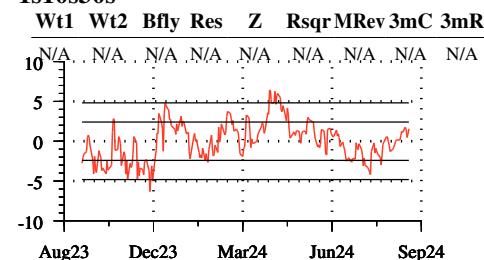
1s2s3s



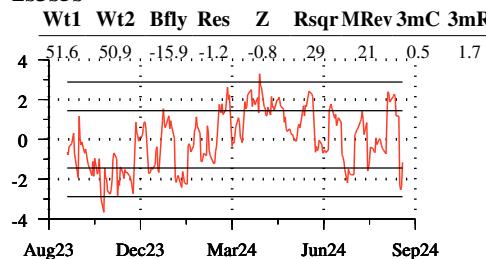
1s5s30s



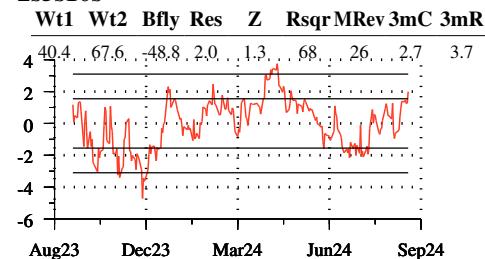
1s10s30s



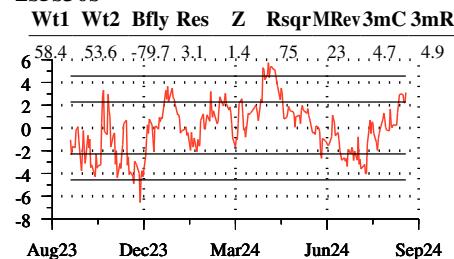
2s3s5s



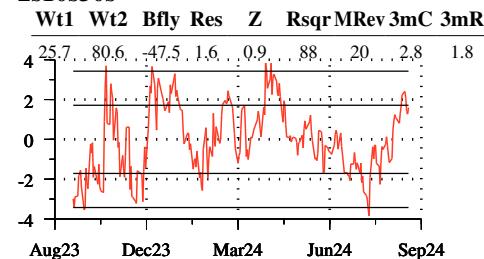
2s5s10s



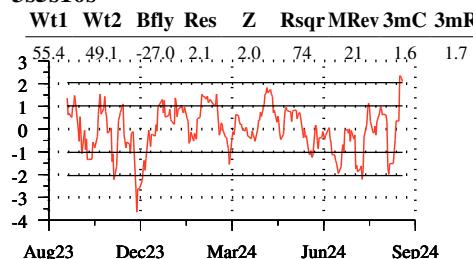
2s5s30s



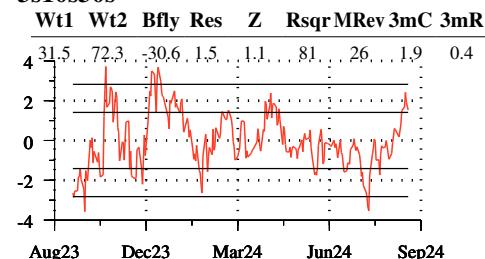
2s10s30s



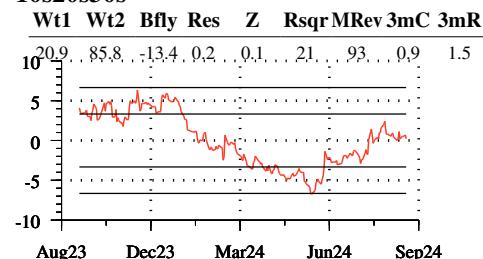
3s5s10s



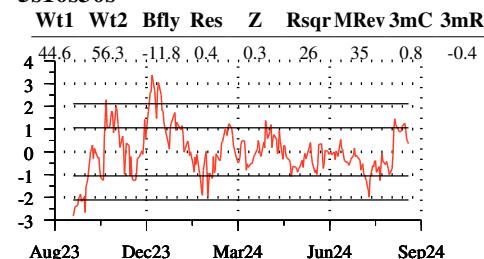
3s10s30s



10s20s30s



5s10s30s

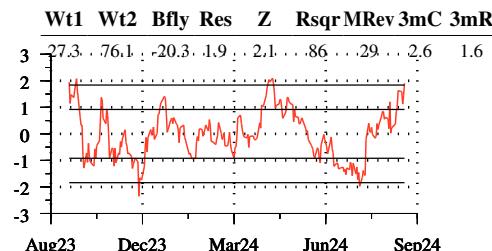


Note:

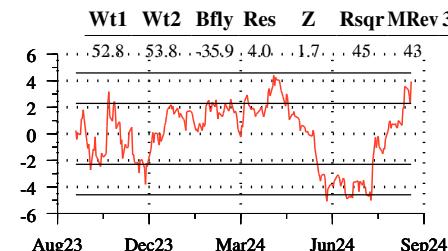
1. Wt1 and Wt2 are risk weights. Bfly: Current value of the butterfly spread. Res: residual. Z: ZScore. Rsqz: R-Squared. MRev: number of business days in which the residual is expected to revert to zero from a peak or trough. 3m C and 3m R: Weighted butterfly 3m carry and 3m roll, respectively. Calculated for a "long the belly" trade. 1 year history is used in the weights calculation and regression.

Par Rate Butterflies (Level and Curve Neutral)

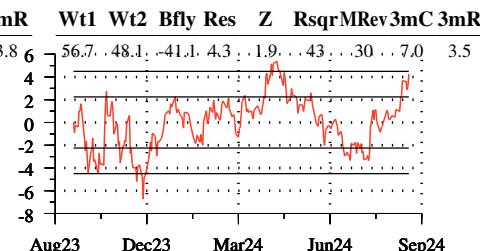
2Y/5Y/7Y



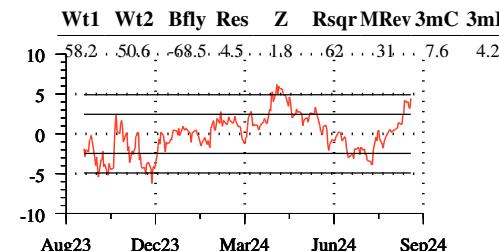
2Y/5Y/11Y



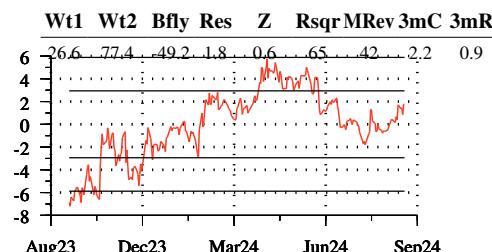
2Y/5Y/15Y



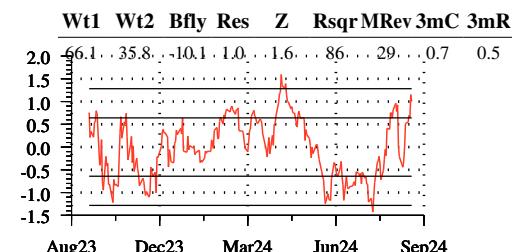
2Y/5Y/20Y



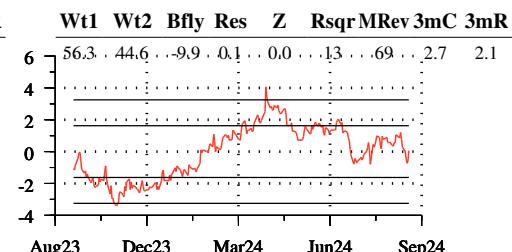
2Y/9Y/20Y



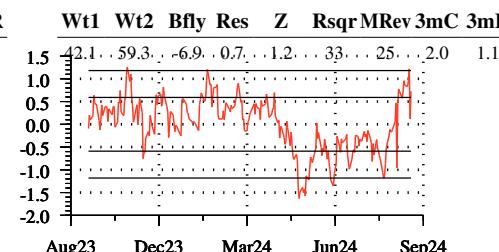
3Y/4Y/7Y



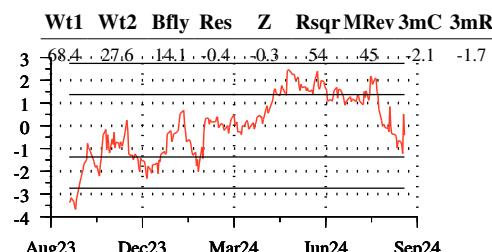
2Y/3Y/5Y



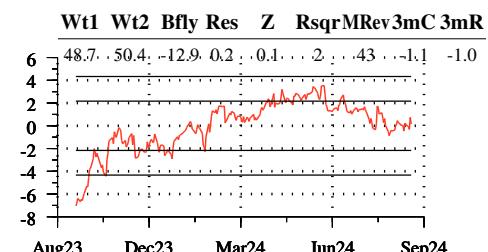
5Y/7Y/9Y



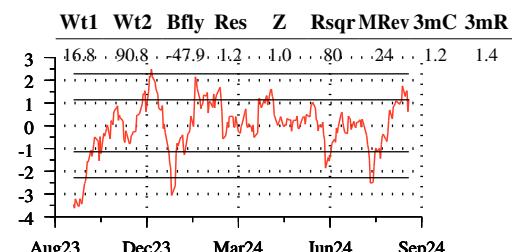
7Y/9Y/15Y



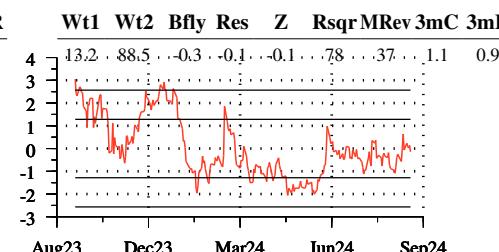
5Y/9Y/20Y



9Y/15Y/20Y



9Y/20Y/25Y



Note:

1. Fitted par yields are generated by fitting a cubic spline through off-the-run bonds that are trading close to GC on the repo curve.
2. Wt1 and Wt2 are risk weights. Bfly: Current value of the butterfly spread. Res: residual. Z: ZScore. Rsq: R-Squared. MRev: number of business days in which the residual is expected to revert to zero from a peak or trough. 3m C and 3m R: Weighted butterfly 3m carry and 3m roll, respectively. Calculated for a "long the belly" trade. 1 year history is used in weights calculation and regression.

US Treasury Butterfly Report - Spot and Forward (Level and Curve Neutral)

Benchmark Butterflies	Spot						1m Forward						3m Forward						3m Carry	3m Roll	Mrev
	Wt1	Wt2	Bfly	Res	Z	Rsqr	Wt1	Wt2	Bfly	Res	Z	Rsqr	Wt1	Wt2	Bfly	Res	Z	Rsqr			
6m1s2s	88.3	41.7	-152.6	5.8	1.7	64	80.0	44.0	-118.4	5.5	1.4	60	62.4	52.1	-57.8	6.2	1.2	44	26.4	11.6	27
1s2s3s	40.3	67.3	-36.6	0.1	0.0	68	38.1	69.0	-32.5	0.2	0.1	65	35.2	71.0	-25.6	0.5	0.2	54	4.3	5.4	20
1s5s30s	54.5	72.4	-166.5	3.2	0.8	72	50.8	73.7	-153.1	3.1	0.7	67	45.0	75.5	-130.5	3.5	0.8	54	13.8	16.2	27
1s10s30s	24.2	88.0	-83.2	1.6	0.6	84	22.7	88.0	-75.2	1.5	0.6	85	20.2	88.2	-62.7	1.7	0.7	88	6.9	6.8	22
2s3s5s	51.6	50.9	-15.9	-1.2	-0.8	29	50.9	51.3	-14.3	-1.5	-1.0	22	49.2	52.6	-12.9	-1.6	-1.0	14	0.5	1.7	21
2s5s10s	40.4	67.6	-48.8	2.0	1.3	68	39.3	68.4	-47.0	2.0	1.3	65	37.7	69.2	-42.8	2.2	1.3	60	2.7	3.7	26
2s5s30s	58.4	53.6	-79.7	3.1	1.4	75	56.9	54.4	-76.1	3.1	1.3	72	54.7	55.2	-68.9	3.2	1.4	64	4.7	4.9	23
2s10s30s	25.7	80.6	-47.5	1.6	0.9	88	25.0	80.6	-44.2	1.6	0.9	89	23.9	80.8	-39.6	1.5	0.9	91	2.8	1.8	20
3s5s10s	55.4	49.1	-27.0	2.1	2.0	74	54.9	49.7	-26.8	2.2	2.2	74	54.1	50.1	-24.7	2.4	2.2	69	1.6	1.7	21
3s10s30s	31.5	72.3	-30.6	1.5	1.1	81	31.1	72.3	-28.6	1.6	1.1	82	30.5	72.4	-26.0	1.5	1.0	84	1.9	0.4	20
3s5s30s	71.3	34.9	-41.0	2.9	2.1	91	70.7	35.4	-39.9	3.1	2.2	91	69.6	35.8	-36.7	3.2	2.2	91	2.6	1.9	19
5s10s30s	44.6	56.3	-11.8	0.4	0.3	26	44.5	56.1	-10.3	0.4	0.3	28	44.1	56.3	-9.3	0.2	0.2	31	0.8	-0.4	22
10s20s30s	20.9	85.8	-13.4	0.2	0.1	21	25.3	80.4	-7.1	0.7	0.2	15	25.8	79.8	-6.3	0.6	0.2	15	0.9	1.5	77
Par Butterflies																					
2y/5y/7y	27.3	76.1	-20.3	1.9	2.1	86	27.0	76.3	-19.1	1.9	2.1	87	26.3	77.2	-18.1	1.9	1.8	85	2.6	1.6	29
2y/5y/11y	52.8	53.8	-35.9	4.0	1.7	45	52.1	53.6	-30.0	3.8	1.7	38	51.1	53.3	-21.2	3.7	1.5	26	7.4	3.8	43
2y/5y/15y	56.7	48.1	-41.1	4.3	1.9	43	55.5	48.3	-35.5	4.1	1.9	39	53.9	48.9	-27.8	3.8	2.1	32	7.0	3.5	30
2y/5y/20y	58.2	50.6	-68.5	4.5	1.8	62	57.1	50.8	-63.0	4.3	1.9	61	55.4	51.5	-55.5	4.1	2.0	61	7.6	4.2	31
2y/9y/20y	26.6	77.4	-49.2	1.8	0.6	65	25.7	77.5	-46.1	1.7	0.6	69	24.5	77.7	-41.5	1.8	0.6	75	2.2	0.9	42
3y/4y/7y	66.1	35.8	-10.1	1.0	1.6	86	65.5	36.3	-9.5	1.0	1.7	88	64.2	37.5	-9.0	1.2	1.9	88	0.7	0.5	29
2y/3y/5y	56.3	44.6	-9.9	0.1	0.0	13	57.0	43.4	-7.5	0.2	0.1	14	58.9	40.8	-2.8	0.6	0.4	19	2.7	2.1	69
5y/7y/9y	42.1	59.3	-6.9	0.7	1.2	33	42.6	58.3	-4.9	0.6	1.1	31	43.7	56.6	-1.0	0.4	0.7	30	2.0	1.1	25
7y/9y/15y	68.4	27.6	14.1	-0.4	-0.3	54	67.6	28.5	13.2	-0.3	-0.2	51	65.9	30.1	11.3	-0.1	-0.0	45	-2.1	-1.7	45
5y/9y/20y	48.7	50.4	-12.9	0.2	0.1	2	47.6	51.4	-13.3	0.2	0.1	5	45.5	53.4	-14.8	0.2	0.1	10	-1.1	-1.0	43
9y/15y/20y	16.8	90.8	-47.9	1.2	1.0	80	16.9	90.8	-48.0	1.1	1.0	80	16.9	91.1	-48.4	1.1	0.9	79	1.2	1.4	24
9y/20y/25y	13.2	88.5	-0.3	-0.1	-0.1	78	13.0	88.7	-0.3	-0.2	-0.2	77	12.4	89.4	-0.4	-0.4	-0.2	74	1.1	0.9	37
Most Mispriced Par Butterflies																					
2y/9y/19y	25.9	76.9	-42.6	1.6	0.6	66	25.1	77.1	-39.9	1.6	0.6	71	23.8	77.4	-36.0	1.7	0.6	77	1.8	0.6	43
3y/14y/24y	10.9	97.8	-61.4	1.6	1.1	95	10.7	98.0	-61.0	1.5	1.1	95	10.5	98.4	-60.4	1.5	1.1	96	2.3	2.2	24
5y/14y/20y	7.9	99.4	-56.8	1.0	0.6	89	7.9	99.6	-57.4	1.0	0.6	90	7.8	100.1	-58.6	1.0	0.6	90	0.8	1.2	30
5y/17y/23y	10.2	95.5	-30.3	0.8	0.8	95	10.3	95.1	-28.8	0.8	0.8	95	10.6	94.5	-25.7	0.8	0.8	96	1.7	1.5	27
8y/15y/24y	22.7	85.5	-48.2	1.1	1.0	83	22.7	85.7	-48.0	1.1	1.0	82	22.6	86.0	-47.9	1.1	0.9	81	1.6	1.6	24
13y/19y/24y	26.1	75.3	1.2	-0.8	-0.7	29	27.0	74.2	2.8	-0.8	-0.7	28	28.6	72.1	5.8	-0.9	-0.7	28	0.7	0.7	33
2y/18y/24y	6.6	98.0	-23.0	1.2	1.2	99	6.5	97.8	-21.0	1.1	1.1	99	6.2	97.6	-17.7	1.0	1.0	99	2.6	1.9	24
7y/19y/24y	12.7	89.0	-3.5	0.4	0.4	93	12.6	89.1	-2.9	0.3	0.4	93	12.3	89.2	-1.9	0.3	0.3	92	1.2	1.0	29
7y/16y/21y	11.5	95.7	-42.5	0.9	0.8	87	11.6	95.5	-41.8	0.9	0.8	87	12.0	95.1	-40.4	0.9	0.8	87	1.2	1.3	27
2y/15y/19y	1.7	105.2	-49.1	0.4	0.4	98	1.8	105.3	-49.4	0.5	0.4	98	1.9	105.5	-50.1	0.5	0.4	98	0.6	1.0	30
4y/15y/22y	8.8	99.8	-56.2	1.2	0.9	94	8.9	99.7	-55.5	1.2	0.9	94	9.0	99.5	-54.0	1.1	0.8	94	1.7	1.8	25
6y/14y/23y	15.9	91.3	-53.6	1.2	0.8	83	16.2	91.2	-53.4	1.2	0.8	84	16.7	90.9	-52.9	1.2	0.9	84	1.6	1.8	28
4y/18y/21y	4.1	99.8	-21.8	0.5	0.7	99	4.2	99.5	-20.7	0.5	0.7	99	4.4	99.0	-18.4	0.5	0.8	99	1.1	0.9	30

Notes:

1. Carry and roll computed for a long body, short wings trade. The 3m carry and roll on spot, 1m forward, and 3m forward butterflies is mathematically identical.

2. Risk weights for curve- and level-neutral butterflies are derived from regression betas as follows: YM-0.5*(YS+YL) = Beta1*(YL-YS)+Beta2*(YM)

Risk weights are defined as follows: Wt1 = Wt(short leg)=(0.5-Beta1)/(1-Beta2); Wt2 = Wt(long leg)=(0.5+Beta1)/(1-Beta2)

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Most Mispriced Par Butterflies	Spot						1m Forward						3m Forward								
	Wt1	Wt2	Bfly	Res	Z	R sqr	Wt1	Wt2	Bfly	Res	Z	R sqr	Wt1	Wt2	Bfly	Res	Z	R sqr	3m Carry	3m Roll	Mrev
6y/13y/18y	7.6	95.3	-39.8	0.8	0.4	75	7.6	95.6	-41.3	0.8	0.4	76	7.8	96.0	-43.9	0.9	0.5	78	-0.2	0.5	59
9y/17y/23y	18.3	87.8	-29.7	0.7	0.6	80	18.2	87.8	-28.7	0.6	0.6	79	18.0	87.9	-27.1	0.5	0.4	78	1.8	1.7	32
2y/5y/20y	58.2	50.6	-68.5	4.5	1.8	62	57.1	50.8	-63.0	4.3	1.9	61	55.4	51.5	-55.5	4.1	2.0	61	7.6	4.2	31
3y/9y/21y	34.7	67.8	-36.2	1.7	0.7	50	33.8	68.2	-34.6	1.7	0.7	55	32.3	69.0	-32.6	1.7	0.7	61	0.7	-0.2	33
2y/8y/16y	32.0	68.2	-20.5	2.0	0.7	57	31.3	68.0	-15.8	1.8	0.7	63	30.5	67.5	-8.2	1.6	0.7	72	4.7	2.7	39
4y/7y/13y	54.5	45.7	-3.7	1.1	1.1	24	54.2	45.4	-0.8	0.9	0.9	19	53.8	44.7	4.4	0.7	0.7	21	2.1	0.3	26
2y/4y/9y	54.7	51.2	-35.9	2.7	1.5	58	54.5	50.7	-31.2	2.7	1.6	57	54.3	49.7	-23.5	2.9	1.9	54	5.7	3.9	41
6y/9y/15y	52.2	42.6	15.6	-0.6	-0.3	33	51.4	43.3	15.1	-0.5	-0.2	33	50.1	44.5	13.9	-0.3	-0.1	33	-1.7	-1.7	65
1y/2y/4y	54.1	57.7	-58.0	0.7	0.3	74	51.2	58.1	-45.6	0.4	0.2	66	47.2	58.3	-28.1	0.3	0.1	39	7.9	8.2	29
6y/7y/9y	54.9	45.3	-3.0	0.3	0.7	29	55.7	44.3	-1.8	0.3	0.5	31	57.7	42.0	0.7	0.1	0.2	33	1.6	0.8	19
2y/5y/14y	56.2	48.7	-38.2	4.1	1.9	44	55.1	48.8	-32.5	4.0	1.9	39	53.5	49.2	-24.3	3.7	2.0	29	7.0	3.4	31
4y/5y/7y	58.2	43.4	-7.9	0.9	1.2	56	58.0	43.8	-8.4	0.8	1.0	56	57.9	44.3	-9.6	0.7	0.7	54	0.5	0.1	42
4y/9y/17y	39.0	58.2	-3.8	0.6	0.3	45	38.2	58.9	-3.6	0.6	0.3	49	36.7	60.1	-3.9	0.6	0.3	52	-0.8	-1.3	39
3y/9y/14y	29.7	67.2	5.9	0.6	0.4	80	28.8	67.6	7.6	0.6	0.4	83	27.3	68.2	10.0	0.6	0.3	85	-0.3	-1.3	33
5y/6y/15y	82.8	19.0	-9.4	-0.1	-0.1	94	82.5	18.9	-7.8	-0.1	-0.1	96	81.9	18.6	-4.9	-0.1	-0.1	97	0.0	0.1	49
2y/3y/6y	66.3	34.5	-12.0	1.0	0.5	37	66.2	34.2	-9.2	1.0	0.6	40	66.5	33.3	-4.4	1.2	0.8	51	4.0	2.7	65

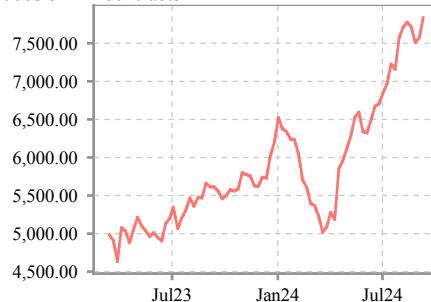
Derivatives Strategy

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CFTC Positions Report

Asset Managers

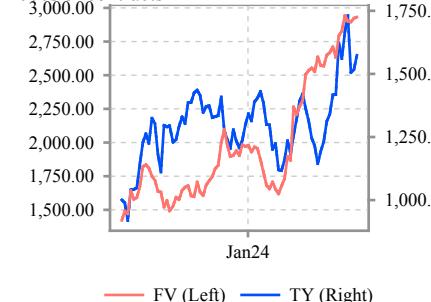
Net longs in all interest rate contracts*
000s of TY contracts



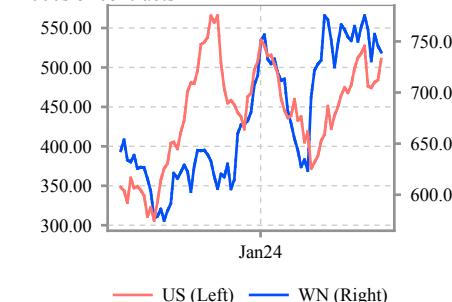
Net longs in S6 and TU contracts
000s of contracts



Net longs in FV and TY contracts
000s of contracts

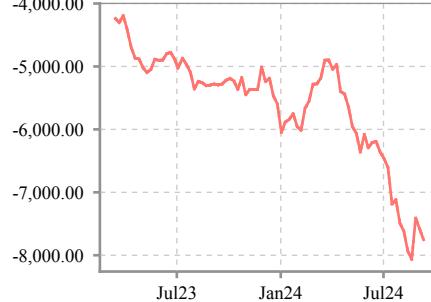


Net longs in US and WN contracts
000s of contracts

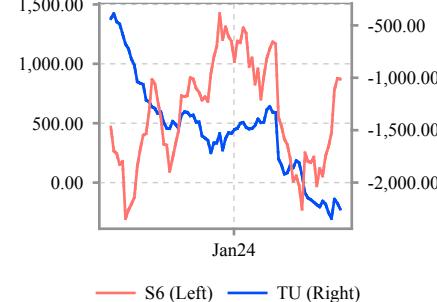


Leveraged Funds

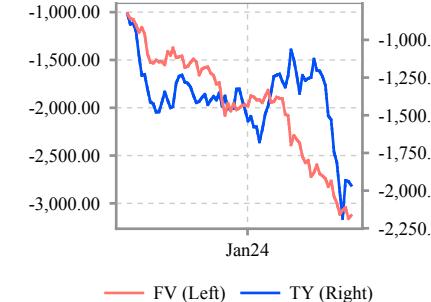
Net longs in all interest rate contracts*
000s of TY contracts



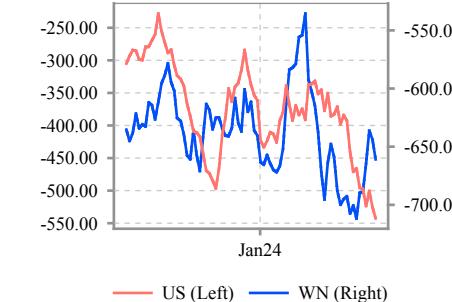
Net longs in S6 and TU contracts
000s of contracts



Net longs in FV and TY contracts
000s of contracts

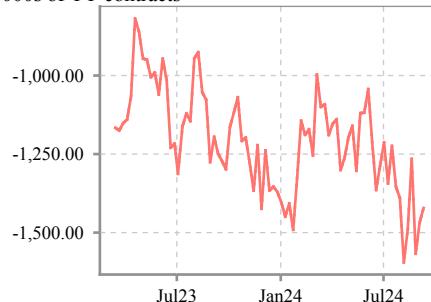


Net longs in US and WN contracts
000s of contracts

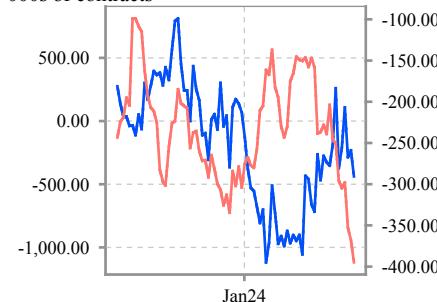


Dealers

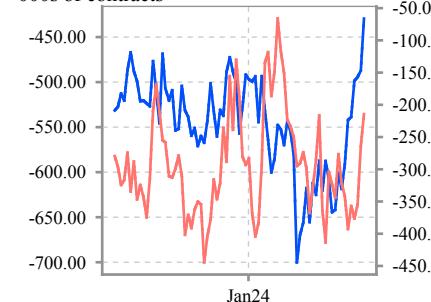
Net longs in all interest rate contracts*
000s of TY contracts



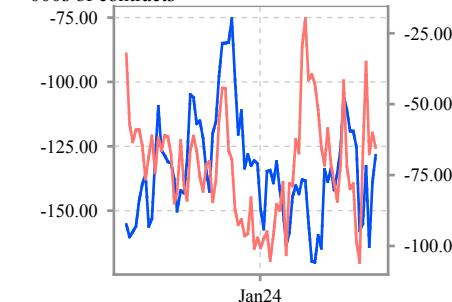
Net longs in S6 and TU contracts
000s of contracts



Net longs in FV and TY contracts
000s of contracts



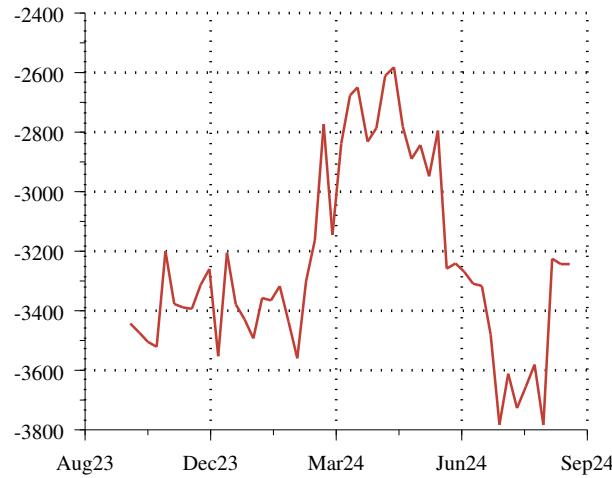
Net longs in US and WN contracts
000s of contracts



* Duration-weighted net longs (longs minus shorts) in S6, TU, FV, TY, US and WN contracts.

Speculative Futures Traders' Positions

Aggregate net position in S6s,2s,5s,10s,30s,ultra-long (1000's of 10y equiv)



Net position in S6s (1000's of 10y equivalents)



Net position in 2s (1000's of 10y equivalents)



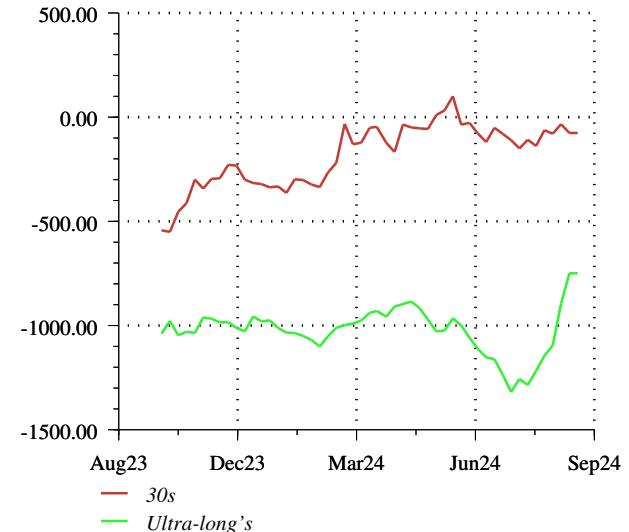
Net position in 5s (1000's of 10y equivalents)



Net position in 10s (1000's of 10y equivalents)



Net position in 30s and ultra-longs (1000's of 10y equivalents)
(bp)



Notes:

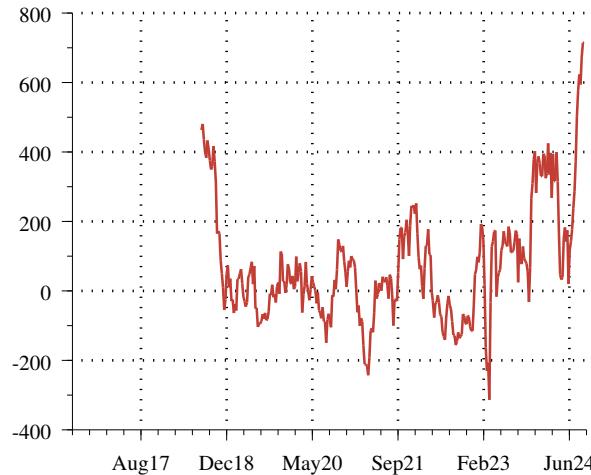
1) Data is compiled from the Commitments of Traders (COT) Report. The COT report is updated every Friday, and provides a breakdown of open interest in futures contracts as of the previous Tuesday.

2) Net positions defined as the number of long minus the number of short positions in futures contracts, held by non-commercial traders. Non-commercial traders use futures contracts to express outright views, and not as hedges against other instruments.

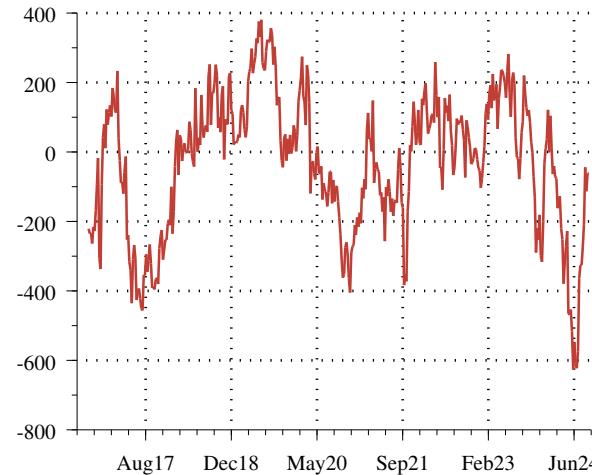
3) Data for ultra-long bond futures contracts is available only from May 4, 2010.

Speculative Futures Traders' Positions

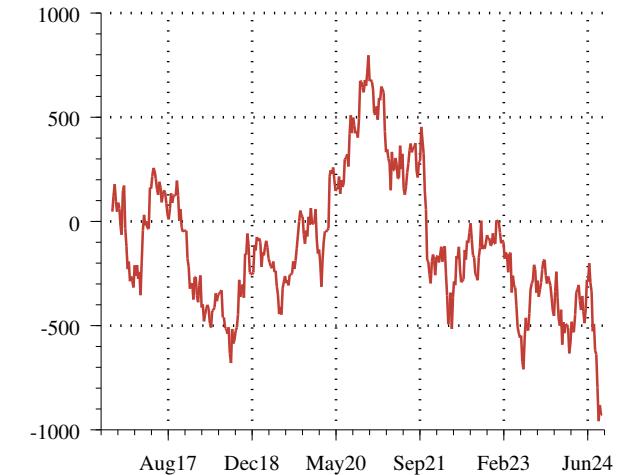
Number of (S6+2s) /5s steepening positions (1000's of 10y equiv)



Number of 5s/10s steepening positions (1000's of 10y equiv)

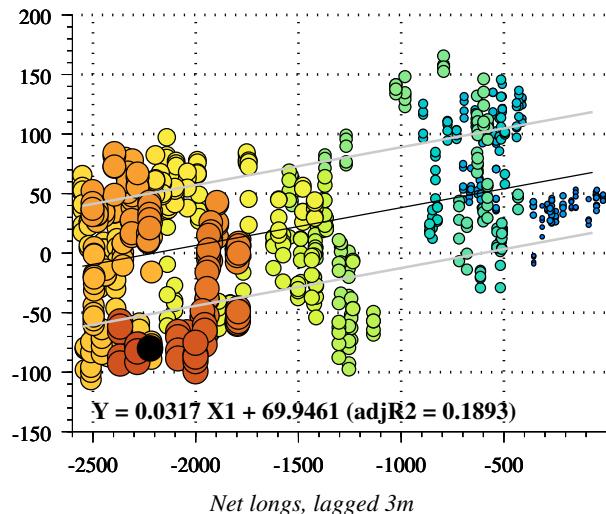


Number of 10s/30s steepening positions (1000's of 10y equiv)



3m chg in 5y vs net spec longs, lagged 3m (past 3y)

3m chg in 5y ylds



US Fixed Income Strategy

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Macro hedge fund exposure report

Macro HF Exposure to 10Y US Treasuries



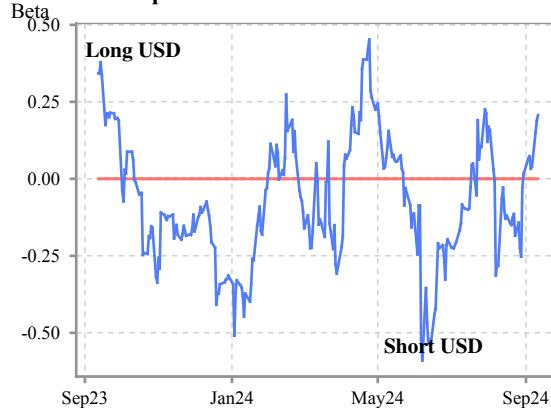
Macro HF exposure to global fixed income ex-US



Macro HF Exposure to US equities



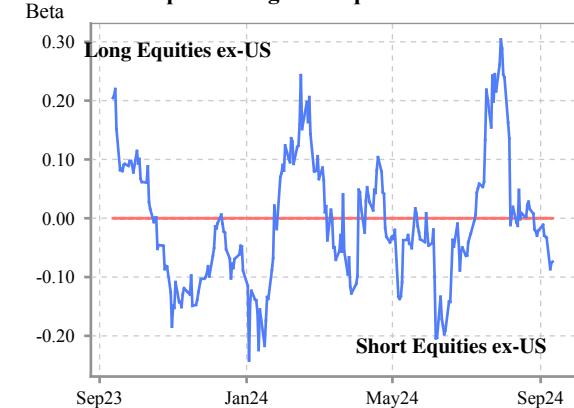
Macro HF Exposure to US dollar



Macro HF Exposure to commodities



Macro HF Exposure to global equities ex-US



	Current Beta	Current	1m Back	3m Back	6m Back	1y Z-score
US 10Y Treasuries	0.04	-0.05	-0.34	-1.87	-0.54	
Global fixed income ex-US	0.86	2.55	3.94	-0.64	0.64	
US equities	0.13	2.09	1.40	0.44	-0.36	
USD Dollar	0.21	1.35	-0.08	-2.24	-0.74	
Commodities	-0.01	-0.01	-0.52	-2.31	0.07	
Global equities ex-US	-0.07	-0.63	-0.09	-1.80	-0.65	

Note:

1) Positive numbers denote HF exposures to the following: 1) long J.P. Morgan US 7-10Y bond index, 2) long J.P. Morgan global bond index ex-US, 3) long S&P 500 Index, 4) long USD/short foreign cash, 5) long J.P. Morgan commodities index and 6) long MSCI World ex-US Index

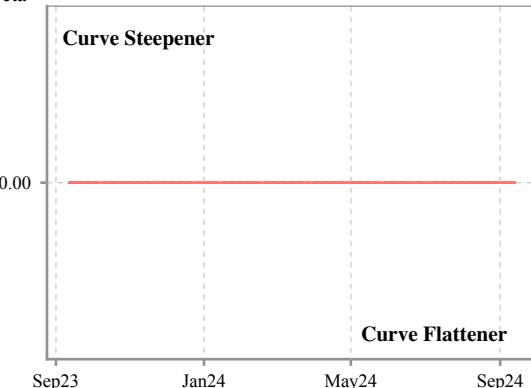
2) We regress daily excess returns on the HFRX Macro/CTA Index against daily excess returns in the six variables over the past 6 weeks to determine HF exposures. Excess returns are over 1-month USD cash.

US Fixed Income Strategy

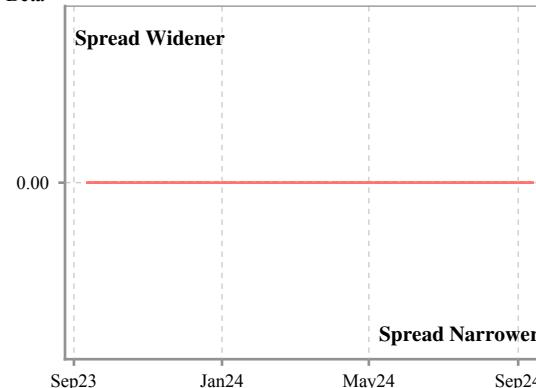
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Relative value hedge fund exposure and leverage report

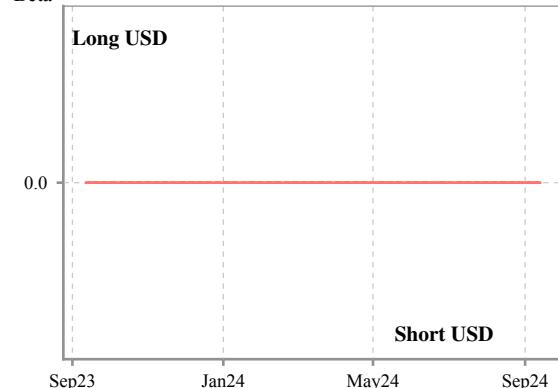
RV HF Exposure to 2s/10s Swap Curve Steepeners
Beta



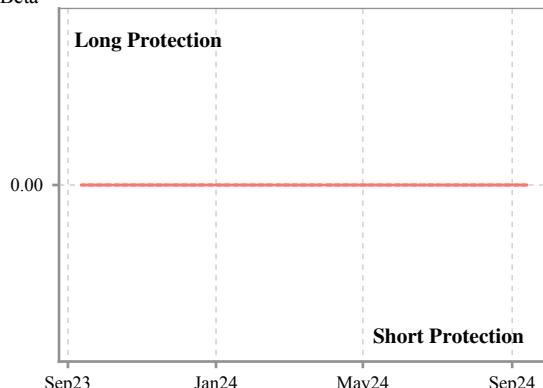
RV HF Exposure to 5y Swap Spread Wideners
Beta



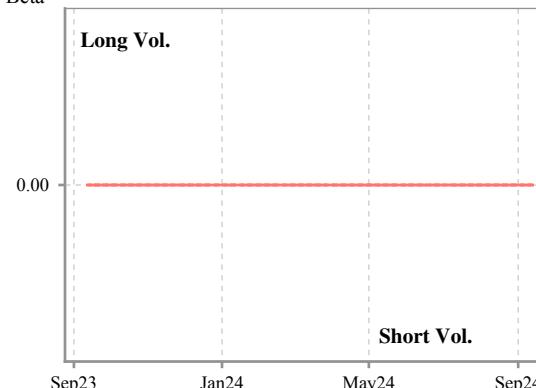
RV HF Exposure to Long USD
Beta



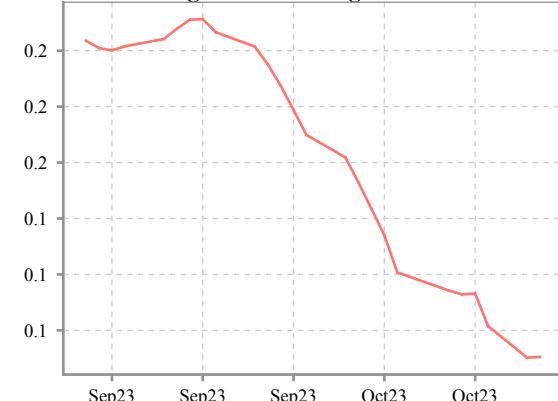
RV HF Exposure to Long 5Y CDX.IG Protection
Beta



RV HF Exposure to Long 6mx10y Vol.
Beta



Index of RV Hedge Fund Leverage



	Current Beta	Current	1m Back	3m Back	6m Back	1y Z-score
2s/10s Swap Curve Steepener						
5y Swap Spread Widener						
Long US Dollar						
Long 5y CDX.IG						
Long 6mx10y Swaption Vol.						
Leverage						

Note:

1) Positive numbers denote the following HF exposures: 1) curve steepener, 2) swap spread widener, 3) long USD, 4) long CDS protection, and 5) long vol.

2) We regress 5-day changes in the natural log of the HFRX Relative Value Arbitrage Index against 5-day changes in the five variables over the past 6 weeks to determine HF exposures.

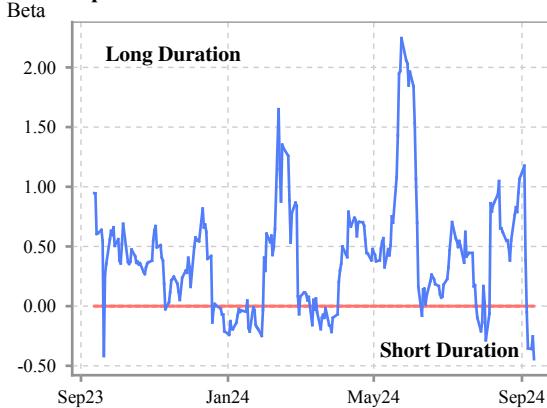
Hedge fund leverage defined as the average of the absolute values of the 1-year z-scores for each of the five beta coefficients in the multiple regression above. Higher value implies more leverage.

US Fixed Income Strategy

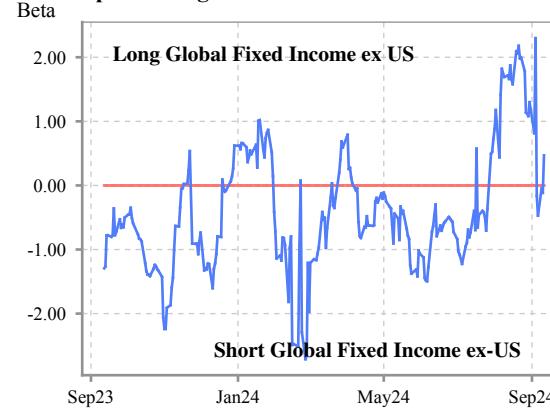
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CTA Exposure and Leverage Report

CTA Exposure to 10Y US Treasuries



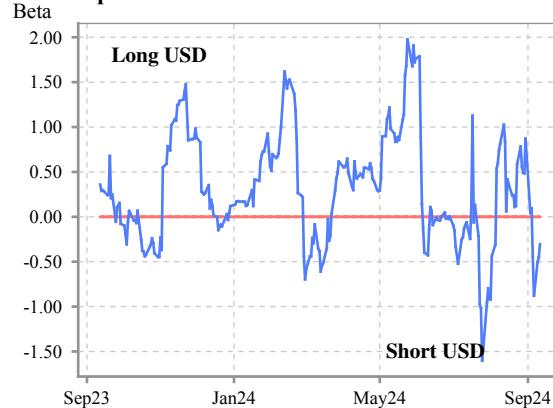
CTA exposure to global fixed income ex-US



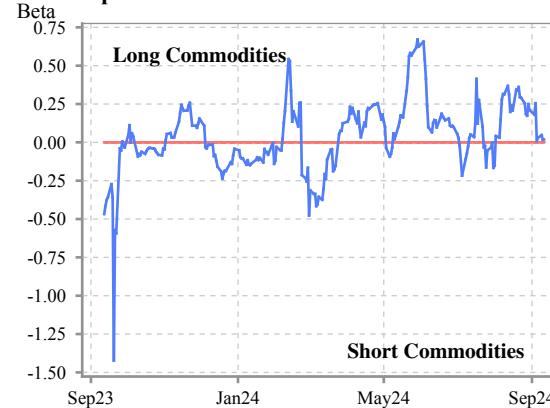
CTA Exposure to US equities



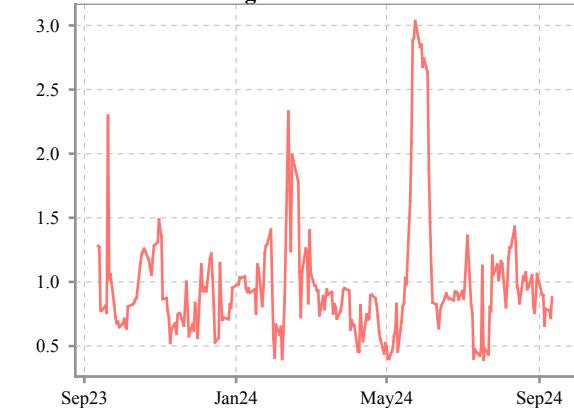
CTA Exposure to US dollar



CTA Exposure to commodities



Index of CTA Leverage



	Current Beta	Current	1y Z-score	1m Back	3m Back	6m Back
US 10Y Treasuries	-0.44	-1.8	1.1	-0.5	-0.9	
Global fixed income ex-US	0.47	0.9	2.9	-0.1	0.0	
Global equities	0.04	0.6	-0.5	-1.4	-0.7	
USD Dollar	-0.30	-1.0	1.2	-1.1	-2.1	
Commodities	0.02	-0.1	1.5	0.5	-0.7	
Leverage		0.9	1.4	0.7	0.9	

Note:

1) Positive numbers denote CTA exposures to the following: 1) long J.P. Morgan US 7-10Y bond index, 2) long J.P. Morgan global bond index ex-US, 3) long S&P 500 Index, 4) long USD/short foreign cash, and 5) long J.P. Morgan commodities index.

2) We regress daily excess returns on the NEIX CTA Index against daily excess returns in the five variables over the past one month to determine CTA exposures. Excess returns are over 1-month USD cash.

CTA leverage defined as the average of the absolute values of the 1-year z-scores for each of the five beta coefficients in the multiple regression above. Higher value implies more leverage.

U.S. Fixed Income Strategy

morganmarkets.jpmorgan.com

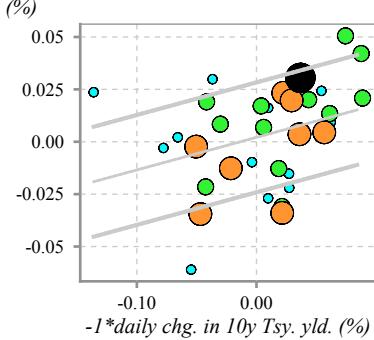
Excess Exposure of Active Core Bond Fund Managers

Excess Exposure of Actively-Managed Core Bond Fund Index*

	3M Beta**	3M T-Stat
10Y Yields	0.155	1.4
5s/30s Curve	0.006	3.2
JULI	-0.012	-2.7
MBS	0.004	2.0
3Mx10Y Vol	-0.000	-0.1

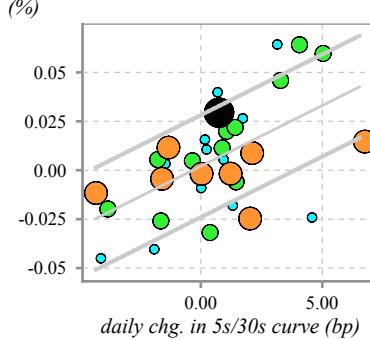
Index vs. 10Y Yields

$$Y = 0.1555 X_1 + 0.0062 X_2 - 0.0122 X_3 + 0.0042 X_4 - 0.0001 X_5 + 0.0021 \quad (\text{adjR}^2 = 0.4275)$$



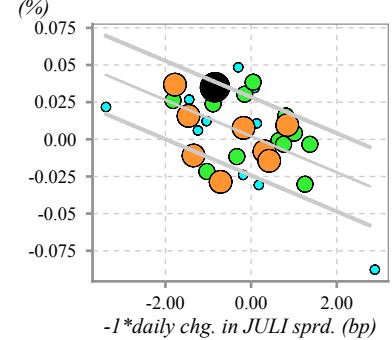
Index vs. 5s/30s Curve

$$Y = 0.0062 X_1 + 0.1555 X_2 - 0.0122 X_3 + 0.0042 X_4 - 0.0001 X_5 + 0.0021 \quad (\text{adjR}^2 = 0.4275)$$



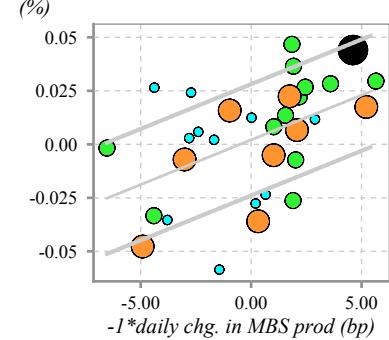
Index vs. JULI

$$Y = -0.0122 X_1 + 0.1555 X_2 + 0.0062 X_3 + 0.0042 X_4 - 0.0001 X_5 + 0.0021 \quad (\text{adjR}^2 = 0.4275)$$



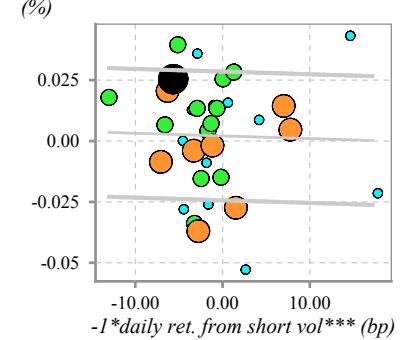
Index vs. MBS

$$Y = 0.0042 X_1 + 0.1555 X_2 + 0.0062 X_3 - 0.0122 X_4 - 0.0001 X_5 + 0.0021 \quad (\text{adjR}^2 = 0.4275)$$

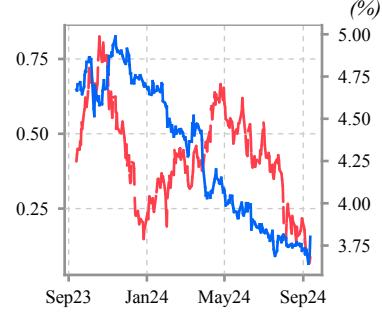


Index vs. 3Mx10Y Volatility

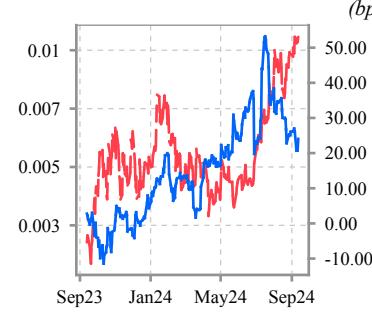
$$Y = -0.0001 X_1 + 0.1555 X_2 + 0.0062 X_3 - 0.0122 X_4 + 0.0042 X_5 + 0.0021 \quad (\text{adjR}^2 = 0.4275)$$



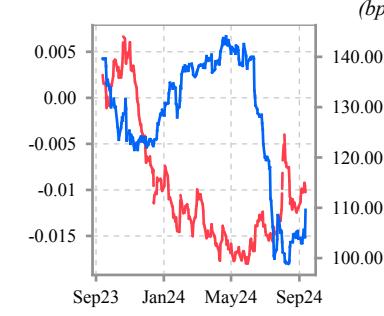
3M Beta of 10Y Yields plotted versus Level of 10Y Yields



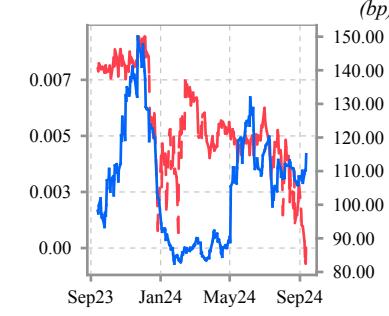
3M Beta of 5s/30s Curve plotted versus Level of 5s/30s Curve



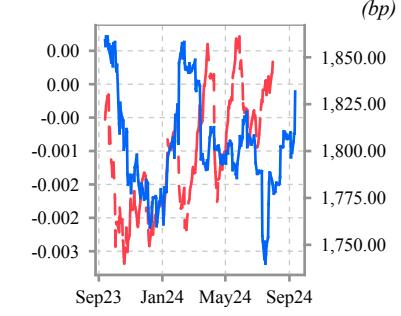
3M Beta of credit plotted versus JULI spread



3M Beta of MBS plotted versus MBS Production Coupon spread



3M Beta of Volatility plotted versus Short Volatility Returns**



* Core bond funds typically invest in a variety of investment-grade fixed income products, including U.S. Treasuries, MBS, and IG corporate bonds. The core bond fund index is comprised of the 20 largest (by assets under management) actively-managed US core bond funds. Daily excess return of the index is computed as the asset value wt'd. avg. of the excess returns of the constituents relative to the US subindex of the J.P. Morgan Global Aggregate Bond Index (JPM GABI US). ** Positive numbers denote Bond Fund exposures to the following relative to the benchmark: (1) long 10Y duration, (2) 5s/30s curve steepeners, (3) long credit, (4) long mortgages, and (5) long volatility. *** Return from selling daily delta-hedged 3Mx10Y straddles, rolled monthly. **** Source: Bloomberg

Derivatives Strategy

Treasury Curves and Butterflies Risk-adjusted Carry Report

Trade	Wts	3M Carry/Slide			Mispricing	Wtd Sprd	Risk Adj		
		Current	6M Avg	ZScore			Std Dev	Carry	Beta1
-7Y/+8Y/-9Y/+11Y	-0.257/1.000/-1.000/0.253	2.000	2.549	-1.007	-0.200	0.536	3.734	53324704.000	-0.004
-1Y/+18M/+2Y/-SFR6	-1.000/0.348/1.000/-0.429	22.700	8.268	3.184	-1.000	8.567	2.650	48753832.000	49848232.000
+3Y/-SFR2/+SFR4/-SFR8	0.664/-1.000/1.000/-0.803	38.200	6.662	2.763	-8.900	14.983	2.549	47728952.000	56779560.000
-1Y/+18M/+4Y/-SFR8	-1.000/1.000/0.054/-0.178	23.900	7.859	3.049	-3.100	9.798	2.439	55991448.000	56549952.000
-6Y/+8Y/-9Y/+12Y	-0.174/1.000/-1.000/0.170	2.300	2.807	-0.931	-0.200	0.950	2.422	56548608.000	-0.003
+3Y/-SFR2/+SFR3/-SFR8	0.012/-1.000/1.000/-0.171	29.400	4.771	2.915	-7.300	12.401	2.371	47530856.000	50013832.000
-10Y/+20Y/-SFR2/+SFR3	-0.675/0.514/-1.000/1.000	32.800	7.043	2.891	-8.800	13.879	2.363	50326200.000	56346328.000
-1Y/+18M/+5Y/-SFR12	-1.000/0.626/1.000/-0.806	29.800	10.271	2.978	-4.700	12.619	2.361	47175592.000	56551104.000
+4Y/-SFR2/+SFR4/-SFR10	0.624/-1.000/1.000/-0.822	41.900	7.096	2.765	-11.700	17.777	2.357	54846272.000	55657944.000
-10Y/+21Y/-SFR2/+SFR3	-0.634/0.474/-1.000/1.000	32.500	6.776	2.893	-8.700	13.922	2.334	48126704.000	56771680.000
-1Y/+18M/-SFR2/-SFR10	-1.000/1.000/-0.009/-0.126	25.200	8.081	3.008	-3.900	10.823	2.328	48653000.000	53323336.000
-1Y/+18M/-SFR2	-1.000/1.000/-0.110	32.100	11.114	2.858	-8.400	13.931	2.304	56548992.000	48653000.000
+20Y/-30Y/-SFR2/+SFR3	0.942/-1.000/-1.000/0.889	35.100	7.975	2.769	-9.400	15.256	2.301	57233552.000	49422272.000
-2Y/-SFR2/+SFR3/-SFR10	-0.030/-1.000/1.000/-0.142	30.500	5.003	2.902	-8.000	13.289	2.295	57582112.000	57820872.000
+22Y/-30Y/-SFR2/+SFR3	0.930/-1.000/-1.000/0.904	34.200	7.213	2.787	-8.900	14.907	2.294	46568128.000	56457552.000
-18M/-SFR2/+SFR3/-SFR10	-0.027/-1.000/1.000/-0.146	30.700	5.057	2.900	-8.000	13.397	2.292	57298064.000	55438560.000
+25Y/-30Y/-SFR2/+SFR3	0.904/-1.000/-1.000/0.929	33.200	6.255	2.815	-8.600	14.508	2.288	54864296.000	49909600.000
-12Y/+15Y/-SFR2/+SFR3	-1.000/0.851/-1.000/0.957	33.200	6.990	2.843	-9.000	14.553	2.281	58019144.000	54598736.000
+6Y/-SFR2/+SFR4/-SFR12	0.767/-0.999/1.000/-1.000	44.000	8.174	2.742	-12.600	19.392	2.269	57009576.000	47579736.000
-4Y/-SFR2/+SFR3/-SFR10	-0.068/-1.000/1.000/-0.103	30.500	4.964	2.897	-8.100	13.455	2.267	46290664.000	56868832.000
-SFR2/+SFR3/+SFR4/-SFR8	-1.000/0.217/1.000/-0.447	42.600	7.066	2.752	-12.200	18.854	2.259	53850736.000	47533016.000
-1Y/+2Y/+3Y/-SFR8	-1.000/1.000/0.298/-0.448	30.100	9.785	2.919	-3.600	13.348	2.255	48753832.000	55952200.000
-1Y/+2Y/+5Y/-SFR10	-1.000/1.000/0.414/-0.592	31.100	9.781	2.944	-4.700	13.865	2.243	54077144.000	48922712.000
-5Y/+8Y/-9Y/+12Y	-0.146/1.000/-1.000/0.139	2.500	2.957	-0.902	-0.300	1.115	2.243	45993016.000	-0.003
+9Y/-10Y/-SFR2/+SFR3	0.946/-1.000/-1.000/0.888	34.000	7.620	2.801	-9.100	15.175	2.241	46642896.000	53912152.000
-1Y/+18M/+3Y/-SFR10	-1.000/0.376/1.000/-0.542	31.900	10.850	2.868	-4.200	14.238	2.240	46038432.000	57444864.000
-3Y/-SFR2/+SFR3/-SFR12	-0.073/-1.000/1.000/-0.104	30.900	5.138	2.889	-8.300	13.874	2.227	54350520.000	56870176.000
+18M/-SFR2/+SFR4/-SFR10	0.245/-1.000/1.000/-0.432	40.200	6.316	2.745	-12.300	18.059	2.226	46612496.000	57979496.000
-12Y/+21Y/-SFR2/+SFR3	-1.000/0.917/-1.000/0.971	32.200	5.933	2.837	-8.400	14.530	2.216	49908184.000	56660192.000
-1Y/+18M/-12Y/+15Y	-1.000/0.958/-1.000/0.873	28.300	10.150	2.909	-5.000	12.772	2.216	57796080.000	-0.095
+21Y/-25Y/-SFR2/+SFR3	0.920/-1.000/-1.000/0.905	33.800	7.366	2.798	-9.700	15.265	2.214	50235624.000	55405976.000
+2Y/-SFR2/+SFR4/-SFR10	0.274/-1.000/1.000/-0.472	42.000	6.779	2.737	-12.700	19.053	2.204	46582128.000	48156232.000

Note:

- Risk adjusted carry is expected return (assuming mean reversion of residual as well as carry/slide) divided by standart deviation.
- The report uses 1 year of history, except for the standard deviation of 3-month changes in the weighted, which is estimated over 5 years of history.
- A "+" indicates long position in yield curve trades, and a spread widening position in spread trades.
- Betas is daily changes of the weighted trade regressed against a constant-maturity 3M ED over a 3M period ending COB of the day prior to the date listed at the top of this report. Beta2 is over the 3M period ending Jan.16,2001.

Derivatives Strategy

Treasury Curves and Butterflies Risk-adjusted Carry Report

Trade	Wts	3M Carry/Slide			Mispricing	Wtd Sprd	Risk Adj		
		Current	6M Avg	ZScore			Std Dev	Carry	Beta1
+8Y/-9Y/-10Y/+11Y	0.936/-1.000/-0.953/1.000	3.100	3.888	-0.951	-0.700	1.407	2.203	46712568.000	-0.017
-1Y/+18M/+4Y/-SFR12	-1.000/0.480/1.000/-0.671	33.000	11.168	2.883	-5.200	15.037	2.195	53002408.000	56449280.000
-SFR2/+SFR4	-1.000/0.874	52.900	13.867	2.571	-22.800	24.225	2.184	53002408.000	46403816.000
+2Y/-4Y/-SFR2/+SFR3	0.081/-0.253/-1.000/1.000	30.500	4.877	2.885	-8.400	13.996	2.179	54313544.000	56377888.000
+3Y/-4Y/-SFR2/+SFR3	0.187/-0.360/-1.000/1.000	30.900	5.128	2.871	-8.400	14.182	2.179	46290736.000	49470632.000
-1Y/+18M/-9Y/-SFR2	-1.000/1.000/-0.119/-0.027	27.300	8.977	2.941	-5.000	12.565	2.173	53816824.000	47728544.000
+7Y/-10Y/-SFR2/+SFR3	1.000/-0.964/-1.000/0.786	37.100	10.493	2.764	-10.900	17.081	2.172	57443424.000	49617872.000
+5Y/-6Y/-SFR2/+SFR3	0.941/-1.000/-1.000/0.909	31.600	5.474	2.847	-9.200	14.579	2.167	57239048.000	56955240.000
-18M/-SFR2/+SFR3	-0.168/-1.000/1.000	36.700	8.059	2.786	-12.300	16.936	2.167	56779704.000	57239048.000
-1Y/+18M/+8Y/-9Y	-1.000/0.876/0.953/-1.000	31.700	12.758	2.878	-6.100	14.629	2.167	47728544.000	-0.014
-SFR2/-SFR3/+SFR4	-1.000/-0.126/1.000	55.500	14.753	2.549	-24.300	25.658	2.163	56997336.000	49908184.000
-1Y/+18M/-12Y/-SFR2	-1.000/1.000/-0.101/-0.044	28.000	9.143	2.920	-5.200	12.955	2.161	47073064.000	56598200.000
+2Y/-5Y/-SFR2/+SFR3	0.018/-0.192/-1.000/1.000	31.000	5.088	2.875	-8.400	14.352	2.160	49773272.000	58020680.000
-1Y/+18M/-5Y/-SFR2	-1.000/1.000/-0.153/0.013	25.400	8.153	2.960	-4.200	11.761	2.160	53166512.000	56710192.000
+3Y/-5Y/-SFR2/+SFR3	0.031/-0.205/-1.000/1.000	31.100	5.144	2.872	-8.400	14.406	2.159	53119992.000	47021040.000
-2Y/-10Y/-SFR2/+SFR3	-0.075/-0.112/-1.000/1.000	32.700	6.132	2.852	-9.100	15.157	2.157	57443880.000	56868928.000
+2Y/-3Y/-SFR2/+SFR3	0.274/-0.446/-1.000/1.000	29.500	4.302	2.916	-8.300	13.685	2.156	56707144.000	46297472.000
-18M/-6Y/-SFR2/+SFR3	-0.011/-0.164/-1.000/1.000	31.400	5.236	2.868	-8.600	14.577	2.154	55164696.000	53115016.000
-2Y/-9Y/-SFR2/+SFR3	-0.062/-0.124/-1.000/1.000	32.400	5.930	2.858	-9.100	15.046	2.153	53391888.000	57669976.000
-2Y/-7Y/-SFR2/+SFR3	-0.037/-0.143/-1.000/1.000	31.700	5.474	2.863	-8.800	14.721	2.153	57338432.000	53816536.000
-1Y/+18M/-4Y/-SFR2	-1.000/1.000/-0.178/0.037	24.600	7.965	2.965	-4.100	11.437	2.151	45994096.000	49679656.000
-1Y/+18M	-1.000/0.867	30.300	10.643	2.836	-7.500	14.121	2.146	47854368.000	-0.020
-2Y/-11Y/-SFR2/+SFR3	-0.083/-0.104/-1.000/1.000	32.700	6.068	2.845	-9.100	15.241	2.145	56021608.000	47294336.000
-1Y/+18M/-8Y/-SFR2	-1.000/1.000/-0.126/-0.020	26.600	8.506	2.943	-4.900	12.409	2.144	47579736.000	47283216.000
-1Y/+2Y/+4Y/-SFR10	-1.000/1.000/0.236/-0.418	32.400	10.079	2.889	-5.300	15.117	2.143	57878904.000	54561456.000
-18M/-10Y/-SFR2/+SFR3	-0.070/-0.121/-1.000/1.000	33.400	6.348	2.844	-9.400	15.598	2.141	47265128.000	56392088.000
-1Y/+2Y/+7Y/-SFR12	-1.000/1.000/0.485/-0.671	32.200	9.967	2.912	-4.800	15.040	2.141	57443880.000	56090176.000
-1Y/+18M/-25Y/-SFR2	-1.000/1.000/-0.102/-0.051	28.400	9.327	2.914	-5.400	13.279	2.139	56997336.000	56145800.000
-1Y/+18M/-15Y/-SFR2	-1.000/1.000/-0.098/-0.045	27.900	9.011	2.920	-5.200	13.049	2.138	54804304.000	53665368.000
-1Y/+4Y/+SFR8/-SFR10	-0.470/1.000/0.360/-1.000	17.500	5.695	2.928	-2.500	8.194	2.136	49682368.000	56350064.000
-2Y/-SFR2/+SFR4	-0.167/-1.000/1.000	56.000	14.430	2.568	-23.900	26.240	2.134	53114512.000	49682368.000
-1Y/+18M/-22Y/-SFR2	-1.000/1.000/-0.105/-0.048	28.200	9.202	2.919	-5.300	13.215	2.134	57796080.000	46267936.000

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Derivatives Strategy

Treasury Curves and Butterflies Risk-adjusted Carry Report

Trade	Wts	3M Carry/Slide			Mispricing	Wtd Sprd	Risk Adj	Beta1	Beta2
		Current	6M Avg	ZScore					
-2Y/-8Y/-SFR2/+SFR3	-0.049/-0.135/-1.000/1.000	31.800	5.431	2.858	-9.000	14.903	2.134	57585064.000	55380528.000
-6Y/-SFR2/+SFR3/+SFR12	-0.212/-1.000/1.000/0.038	31.400	5.189	2.865	-8.700	14.725	2.132	46273000.000	46641600.000
-1Y/+4Y/+5Y/-SFR12	-0.688/1.000/0.523/-1.000	26.800	9.511	2.858	-4.100	12.577	2.131	55657464.000	57009120.000
-18M/-11Y/-SFR2/+SFR3	-0.078/-0.113/-1.000/1.000	33.500	6.299	2.837	-9.400	15.732	2.129	48148040.000	53836720.000
-2Y/-30Y/-SFR2/+SFR3	-0.098/-0.095/-1.000/1.000	33.000	6.166	2.837	-9.200	15.509	2.128	54142648.000	49359544.000
+6Y/-10Y/-SFR2/+SFR3	1.000/-0.898/-1.000/0.711	38.000	11.484	2.734	-11.600	17.987	2.113	46297472.000	48042976.000
+6Y/-9Y/-SFR2/+SFR3	1.000/-0.974/-1.000/0.777	36.200	9.927	2.783	-11.500	17.138	2.112	49280784.000	49277808.000
-18M/-30Y/-SFR2/+SFR3	-0.094/-0.105/-1.000/1.000	33.900	6.464	2.826	-9.500	16.147	2.100	48080368.000	56168808.000
-2Y/-20Y/-SFR2/+SFR3	-0.090/-0.102/-1.000/1.000	32.600	5.952	2.844	-9.200	15.534	2.099	57668400.000	56978560.000
+3Y/-SFR2/+SFR4/-SFR12	0.265/-1.000/1.000/-0.487	45.600	8.381	2.690	-13.900	21.751	2.096	56127000.000	54805360.000
-1Y/+18M/+20Y/-22Y	-1.000/0.912/0.920/-1.000	29.000	10.012	2.869	-5.700	13.837	2.096	54318192.000	0.003
-1Y/+18M/+21Y/-22Y	-1.000/0.922/0.917/-1.000	28.400	9.594	2.884	-5.500	13.561	2.094	48404952.000	0.004
-1Y/+3Y/+5Y/-SFR12	-0.960/1.000/0.745/-1.000	37.300	13.234	2.787	-5.900	17.859	2.089	47294336.000	53408120.000
-1Y/+18M/+2Y/-SFR10	-1.000/0.092/1.000/-0.271	31.700	9.802	2.880	-5.500	15.196	2.086	49720552.000	47991240.000
-SFR2/+SFR3/+SFR4/-SFR12	-1.000/0.118/1.000/-0.370	46.200	8.188	2.703	-14.600	22.236	2.078	57898480.000	47651160.000
-18M/-20Y/-SFR2/+SFR3	-0.086/-0.112/-1.000/1.000	33.500	6.213	2.834	-9.500	16.130	2.077	49958528.000	55730736.000
+15Y/-30Y/-SFR2/+SFR3	0.872/-1.000/-1.000/0.882	35.700	8.660	2.783	-9.700	17.193	2.076	53577296.000	56342560.000
-1Y/+18M/+20Y/-30Y	-1.000/0.858/0.974/-1.000	31.900	11.523	2.791	-5.900	15.413	2.070	47263760.000	-0.035
+5Y/-10Y/-SFR2/+SFR3	1.000/-0.811/-1.000/0.648	37.800	11.214	2.722	-12.000	18.304	2.065	53166512.000	57415584.000
-1Y/+18M/+21Y/-30Y	-1.000/0.869/0.971/-1.000	31.200	11.071	2.805	-5.600	15.108	2.065	53391888.000	-0.033
-1Y/+18M/+22Y/-25Y	-1.000/0.895/0.939/-1.000	29.500	10.352	2.848	-5.700	14.297	2.063	55432888.000	0.010
-1Y/+2Y/+6Y/-SFR12	-1.000/1.000/0.220/-0.419	33.800	10.686	2.851	-6.000	16.387	2.063	54720752.000	56867320.000
+9Y/-12Y/-SFR2/+SFR3	1.000/-0.949/-1.000/0.815	33.500	6.297	2.711	-9.000	16.283	2.057	53526312.000	58293536.000
+5Y/-9Y/-SFR2/+SFR3	1.000/-0.879/-1.000/0.708	36.100	9.792	2.767	-12.000	17.578	2.054	58153728.000	46067984.000
-1Y/+5Y/+SFR10/-SFR12	-0.398/1.000/0.291/-1.000	16.100	5.902	2.845	-3.000	7.875	2.045	55410504.000	53817712.000
+8Y/-10Y/-SFR2/+SFR4	0.757/-1.000/-1.000/0.983	53.700	14.407	2.621	-17.200	26.366	2.037	46568464.000	53559528.000
-1Y/+18M/+3Y/-4Y	-1.000/0.716/1.000/-0.868	29.500	9.786	2.826	-4.900	14.506	2.034	49573872.000	-0.012
+6Y/-8Y/-SFR2/+SFR3	0.961/-1.000/-1.000/0.843	32.700	6.171	2.793	-10.700	16.128	2.027	58183392.000	49359544.000
+6Y/-11Y/-SFR2/+SFR3	1.000/-0.845/-1.000/0.671	37.900	10.892	2.687	-11.600	18.701	2.027	49054832.000	55828344.000
+18M/-4Y/-SFR2/+SFR4	0.516/-0.692/-1.000/1.000	38.300	5.470	2.722	-12.900	18.922	2.024	47694288.000	58154688.000
-1Y/+2Y/+SFR2/-SFR8	-1.000/1.000/0.097/-0.272	29.200	9.502	2.865	-4.400	14.443	2.022	58295960.000	50528176.000
-11Y/+15Y/-SFR2/+SFR4	-1.000/0.633/-0.907/1.000	48.100	11.115	2.635	-16.000	23.792	2.022	47531144.000	55033800.000

Note:

- Risk adjusted carry is expected return (assuming mean reversion of residual as well as carry/slide) divided by standart deviation.
- The report uses 1 year of history, except for the standard deviation of 3-month changes in the weighted, which is estimated over 5 years of history.
- A "+" indicates long position in yield curve trades, and a spread widening position in spread trades.
- Betas is daily changes of the weighted trade regressed against a constant-maturity 3M ED over a 3M period ending COB of the day prior to the date listed at the top of this report. Beta2 is over the 3M period ending Jan.16,2001.

Derivatives Strategy

Treasury Curves and Butterflies Risk-adjusted Carry Report

Trade	Wts	3M Carry/Slide			Mispricing	Wtd Sprd	Risk Adj	Beta1	Beta2
		Current	6M Avg	ZScore					
-1Y/+3Y/+4Y/-SFR12	-1.000/0.712/1.000/-0.938	39.700	13.851	2.773	-6.300	19.647	2.021	54363008.000	57693496.000
+4Y/-6Y/-SFR2/+SFR3	1.000/-0.906/-1.000/0.785	31.800	5.729	2.817	-8.700	15.779	2.015	55900232.000	56772448.000
+7Y/-12Y/-SFR2/+SFR3	1.000/-0.871/-1.000/0.722	36.500	9.208	2.688	-10.900	18.232	2.002	49495496.000	49694608.000
+8Y/-11Y/-SFR2/+SFR4	0.846/-1.000/-1.000/0.917	52.700	13.845	2.593	-16.800	26.338	2.001	53747576.000	47263136.000
-1Y/+18M/+11Y/-12Y	-1.000/0.906/0.950/-1.000	27.700	8.579	2.859	-5.200	13.934	1.988	54052024.000	0.018
+3Y/-SFR2/+SFR3	1.000/-1.000/0.139	43.200	16.234	2.448	-21.300	21.800	1.982	54237744.000	56867320.000
+5Y/-8Y/-SFR2/+SFR3	1.000/-0.934/-1.000/0.763	33.000	6.431	2.774	-11.300	16.691	1.977	57498056.000	49775408.000
+21Y/-30Y/-SFR2/+SFR4	0.735/-1.000/-1.000/1.000	52.400	11.844	2.595	-17.100	26.519	1.976	57986832.000	56127000.000
+8Y/-9Y/-SFR2/+SFR4	0.673/-1.000/-0.933/1.000	49.500	12.027	2.644	-16.700	25.051	1.976	48674424.000	49677160.000
-SFR2/+SFR3/+SFR8/-SFR10	-1.000/0.861/0.939/-1.000	34.400	5.771	2.846	-10.900	17.422	1.974	57677024.000	57470792.000
-1Y/+2Y/+3Y/-SFR12	-1.000/0.320/1.000/-0.529	37.900	12.832	2.754	-6.400	19.223	1.972	56664360.000	55045424.000
-SFR2/+SFR4/+SFR8/-SFR10	-0.927/1.000/0.669/-1.000	45.400	7.731	2.692	-15.300	23.072	1.968	53114512.000	50325720.000
+18M/-5Y/-SFR2/+SFR4	0.369/-0.557/-1.000/1.000	41.000	6.338	2.699	-13.300	20.841	1.967	53526312.000	53044408.000
-1Y/+18M/+2Y/-4Y	-1.000/0.262/1.000/-0.434	30.500	9.270	2.861	-5.900	15.528	1.964	57582976.000	-0.040
-1Y/+18M/+4Y/-5Y	-1.000/0.809/1.000/-0.965	29.300	9.380	2.869	-4.800	14.924	1.963	46273000.000	-0.012
-SFR2/+SFR3/+SFR10/-SFR12	-1.000/0.872/0.947/-1.000	34.600	6.854	2.779	-10.200	17.675	1.958	53118848.000	47691200.000
+8Y/-12Y/-SFR2/+SFR4	0.907/-1.000/-1.000/0.878	51.900	13.219	2.575	-16.500	26.523	1.957	46506896.000	46039944.000
-1Y/+2Y/+SFR2/-SFR12	-1.000/1.000/0.035/-0.233	33.300	10.498	2.818	-6.300	17.041	1.954	46186080.000	49122264.000
-4Y/+8Y/-9Y/+12Y	-0.120/1.000/-1.000/0.111	2.700	3.114	-0.849	-0.400	1.384	1.950	46730984.000	-0.003
+18M/-7Y/-SFR2/+SFR4	0.225/-0.439/-1.000/1.000	44.300	7.819	2.673	-14.900	22.726	1.949	57227704.000	53683360.000
+18M/-9Y/-SFR2/+SFR4	0.156/-0.391/-1.000/1.000	46.800	9.381	2.660	-16.000	24.025	1.948	49719928.000	49694056.000
+9Y/-11Y/-SFR2/+SFR4	0.575/-0.825/-1.000/1.000	51.000	10.959	2.601	-16.800	26.197	1.947	49775240.000	49420136.000
-1Y/+18M/+5Y/-7Y	-1.000/0.722/1.000/-0.913	32.300	11.189	2.811	-7.400	16.618	1.944	56208224.000	-0.035
+3Y/-10Y/-SFR2/+SFR4	0.158/-0.412/-1.000/1.000	50.500	11.194	2.629	-16.900	25.997	1.943	58074488.000	53265904.000
+18M/-12Y/-SFR2/+SFR4	0.081/-0.320/-1.000/1.000	48.600	9.837	2.629	-16.400	25.021	1.942	49054832.000	47383496.000
-1Y/+18M/+7Y/-8Y	-1.000/0.904/0.921/-1.000	27.600	8.321	2.878	-6.300	14.244	1.938	55814528.000	-0.016
+4Y/-10Y/-SFR2/+SFR4	0.201/-0.461/-1.000/1.000	51.100	11.536	2.628	-17.200	26.380	1.937	52959936.000	56929368.000
+5Y/-11Y/-SFR2/+SFR4	0.187/-0.446/-1.000/1.000	51.000	11.259	2.616	-17.400	26.358	1.935	48126992.000	54343648.000
+3Y/-11Y/-SFR2/+SFR4	0.122/-0.374/-1.000/1.000	50.300	10.805	2.621	-16.900	26.038	1.932	55410504.000	46102000.000
-12Y/-SFR2/+SFR3/+SFR4	-0.313/-1.000/0.055/1.000	49.900	10.156	2.630	-16.800	25.835	1.932	50008096.000	56868568.000
+2Y/-12Y/-SFR2/+SFR4	0.085/-0.329/-1.000/1.000	49.400	10.089	2.625	-16.700	25.590	1.930	49595392.000	57793968.000
+4Y/-11Y/-SFR2/+SFR4	0.152/-0.407/-1.000/1.000	50.800	11.016	2.619	-17.100	26.319	1.930	54221224.000	57244968.000

Note:

- Risk adjusted carry is expected return (assuming mean reversion of residual as well as carry/slide) divided by standart deviation.
- The report uses 1 year of history, except for the standard deviation of 3-month changes in the weighted, which is estimated over 5 years of history.
- A "+" indicates long position in yield curve trades, and a spread widening position in spread trades.
- Betas is daily changes of the weighted trade regressed against a constant-maturity 3M ED over a 3M period ending COB of the day prior to the date listed at the top of this report. Beta2 is over the 3M period ending Jan.16,2001.

Treasury Auctions Report

Auction Date	Size (\$bn)	Tail (bp)	Bid to Cover	Indirect Bid %	50:50 butterfly changes around auctions (bp)*				Matched maturity swap spread changes around auctions (bp)				
					Before Auction**	Auction day**	After Auction-Olds**	After Auction-Hot run**	Before Auction**	Auction day**	After Auction-Olds**	After Auction-Hot run**	
2-year auctions													
08/27/2024	69.0	-0.3	2.7	69.0	-2.6	-0.4	3.2	3.8	-0.5	0.1	-2.5	-2.5	
07/23/2024	69.0	-2.0	2.8	76.6	1.2	-1.3	0.3	0.0	0.1	0.5	-0.9	-0.8	
06/25/2024	69.0	0.1	2.8	65.6	0.6	-0.1	1.1	1.8	-1.2	0.3	0.9	0.0	
05/28/2024	69.0	1.2	2.4	57.9	2.9	0.3	-3.9	-4.5	-1.2	-0.2	0.0	0.1	
04/23/2024	69.0	-0.6	2.7	66.2	2.4	-1.2	-0.3	-0.3	-1.3	0.4	2.7	2.5	
03/25/2024	66.0	0.5	2.6	65.8	-0.6	-0.1	1.1	1.3	1.0	0.4	-1.4	-1.4	
3-year auctions													
08/06/2024	58.0	0.0	2.5	64.4	-1.3	-0.2	-0.8	0.5	-0.4	-0.8	1.4	-0.1	
07/09/2024	58.0	-0.6	2.7	64.0	-1.0	-0.2	-1.8	-1.3	0.4	-0.3	0.4	0.0	
06/10/2024	58.0	1.2	2.4	64.1	0.4	-0.4	-0.4	-0.8	-1.3	0.0	-2.2	-2.0	
05/07/2024	58.0	0.0	2.6	65.5	-0.8	0.1	-1.3	-1.2	-0.5	0.3	0.6	0.5	
04/09/2024	58.0	2.0	2.5	60.3	-0.2	0.3	-2.2	-2.2	0.5	0.2	0.7	0.8	
03/11/2024	56.0	-1.2	2.6	70.0	0.8	-0.2	0.9	1.3	-1.4	-0.2	1.1	0.8	
5-year auctions													
08/28/2024	70.0	0.2	2.4	70.5	-1.2	0.1	0.7	1.3	-0.8	0.1	-1.0	-1.5	
07/24/2024	70.0	1.3	2.4	67.2	0.1	-0.6	-1.7	-1.5	-0.2	-0.9	2.1	1.9	
06/26/2024	70.0	-0.2	2.4	68.9	0.3	-0.1	-2.3	-2.0	-0.7	0.1	0.2	0.0	
05/28/2024	70.0	1.4	2.3	65.0	0.5	0.3	-2.2	-2.2	-0.8	-0.2	0.4	0.3	
04/24/2024	70.0	0.6	2.4	65.7	-0.3	0.0	-1.2	-1.6	0.5	1.2	0.4	0.7	
03/26/2024	67.0	-0.8	2.4	70.5	-1.3	0.1	0.0	0.0	1.9	0.0	-0.6	-0.5	
7-year auctions													
08/29/2024	44.0	0.8	2.5	75.1	2.1	0.0	0.7	0.9	-1.9	-1.3	-0.3	-0.4	
07/25/2024	44.0	-0.3	2.6	74.4	1.9	-1.3	0.2	0.6	-1.2	0.0	2.3	1.8	
06/27/2024	44.0	-0.1	2.6	69.7	0.9	-0.3	-0.6	-0.5	-1.3	0.2	0.9	0.8	
05/29/2024	44.0	1.3	2.4	66.9	-0.4	1.7	-2.8	-2.6	-0.5	-1.0	0.4	0.2	
04/25/2024	44.0	0.0	2.5	65.1	1.3	0.4	-1.8	-1.5	0.5	-0.2	0.9	0.7	
03/27/2024	43.0	-1.0	2.6	69.7	-0.7	-0.2	1.4	1.4	2.3	-0.5	-0.7	-0.7	
10-year auctions													
09/11/2024	39.0	-1.4	2.6	76.0	1.3	-1.0	0.0	0.0	-0.6	-0.2	0.0	0.0	
08/07/2024	42.0	3.0	2.3	66.2	3.0	0.0	-0.3	-0.4	0.0	-0.8	1.3	1.3	
07/10/2024	39.0	-0.8	2.6	67.6	0.6	0.0	0.7	0.7	-0.3	-0.1	0.2	0.3	
06/11/2024	39.0	-1.8	2.7	74.6	0.6	0.1	-0.8	-0.8	-1.4	0.1	-2.3	-2.3	
05/08/2024	42.0	1.1	2.5	65.5	1.5	0.2	0.2	0.3	-0.8	0.0	1.2	1.1	
04/10/2024	39.0	3.2	2.3	61.8	0.0	-0.7	-0.6	-0.5	-0.2	-0.2	-0.9	-1.0	
20-year auctions													
08/21/2024	16.0	0.0	2.5	71.0	0.1	-0.2	0.7	0.6	-0.9	1.5	-0.6	-0.5	
07/17/2024	13.0	0.0	2.7	77.2	0.5	0.5	0.3	0.2	-1.2	0.2	-2.8	-2.6	
06/18/2024	13.0	-2.8	2.7	77.9	2.2	1.5	-0.7	-0.1	-3.1	-1.4	-0.3	-0.9	
05/22/2024	16.0	-0.1	2.5	70.8	-0.4	-0.3	0.2	-0.2	1.5	0.2	-1.1	-0.6	
04/17/2024	13.0	-2.5	2.8	74.7	0.4	0.9	0.1	0.3	-2.0	-0.2	0.7	0.5	
03/19/2024	13.0	-1.8	2.8	73.5	-0.8	1.6	-1.4	-0.6	-0.7	-0.6	1.5	0.7	

* Butterflies used are 1Y bill/2Y/3Y, 2Y/3Y/5Y, 3Y/5Y/10Y, 3Y/7Y/10Y, 5Y/10Y/Bond futures, 10y/20y/30y and 2Y/7Y/30Y for 2Y, 3Y, 5Y, 7Y, 10Y, 20y and 30Y auctions, respectively

* Prior change is 1-week change for the on-the-run issue; Roll adjusted change in the existing on-the-run auction date for auction date change; After auction change is for 1-week subsequent to auction for the old and hot-run issue starting 1 day after auction.

Fixed Income Strategy

Treasury Auctions Report

Auction Date	Size (\$bn)	Tail (bp)	Bid to Cover	Indirect Bid %	50:50 butterfly changes around auctions (bp)*				Matched maturity swap spread changes around auctions (bp)				
					Before Auction**	Auction day**	After Auction-Olds**	After Auction-Hot run**	Before Auction**	Auction day**	After Auction-Olds**	After Auction-Hot run**	
30-year auctions													
09/12/2024	22.0	1.5	2.4	68.7	-0.4	0.3	0.0	0.0	-0.1	0.4	0.0	0.0	0.0
08/08/2024	25.0	2.9	2.3	65.3	5.4	-0.2	-0.6	-0.4	-2.6	-1.1	2.0	2.5	
07/11/2024	22.0	2.1	2.3	60.8	-3.9	-0.9	0.2	0.3	2.0	-0.8	-0.4	-0.4	
06/13/2024	22.0	-1.4	2.5	68.5	-1.8	-0.9	0.7	0.6	0.0	-0.8	0.1	0.0	
05/09/2024	25.0	-0.6	2.4	64.9	-2.5	-0.9	-1.3	-1.5	-0.6	0.0	2.7	2.3	
04/11/2024	22.0	1.1	2.4	64.4	3.4	0.8	2.0	2.2	-0.5	0.9	-1.6	-1.3	

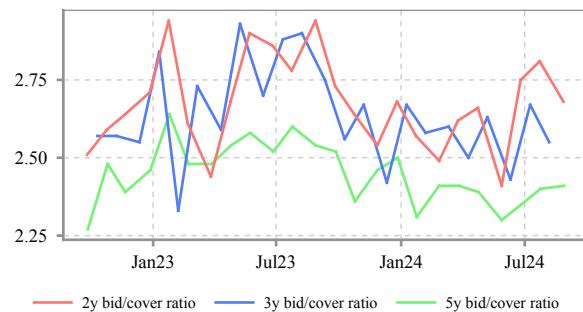
* Butterflies used are 1Y bill/2Y/3Y, 2Y/3Y/5Y, 3Y/5Y/10Y, 3Y/7Y/10Y, 5Y/10Y/Bond futures, 10y/20y/30y and 2Y/7Y/30Y for 2Y, 3Y, 5Y, 7Y, 10Y, 20y and 30Y auctions, respectively

** Prior change is 1-week change for the on-the-run issue; Roll adjusted change in the existing on-the-run on auction date for auction date change; After auction change is for 1-week subsequent to auction for the old and hot-run issue starting 1 day after auction.

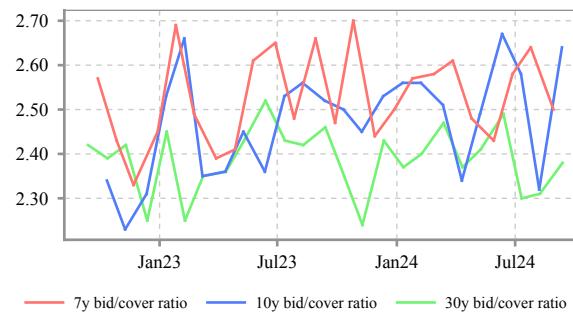
U.S. Fixed Income Strategy

Treasury Auction Demand Statistics

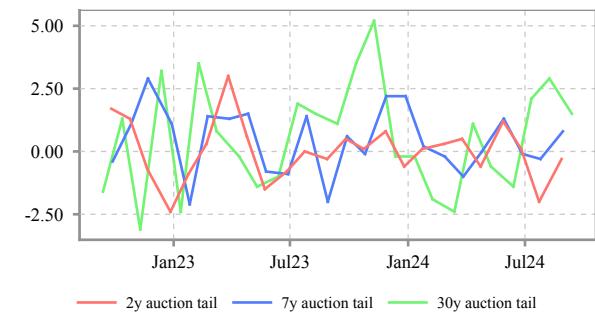
Bid-to-cover ratio (2-, 3-, 5-year)



Bid-to-cover ratio (7-, 10-, 30-year)

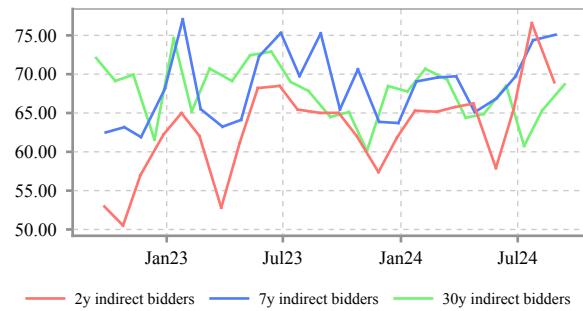


Auction tail
(bp of yield)



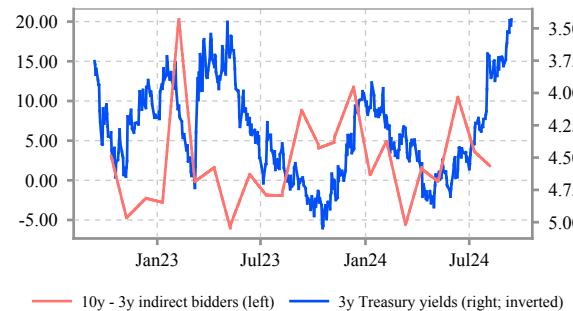
Indirect bidders

(%)



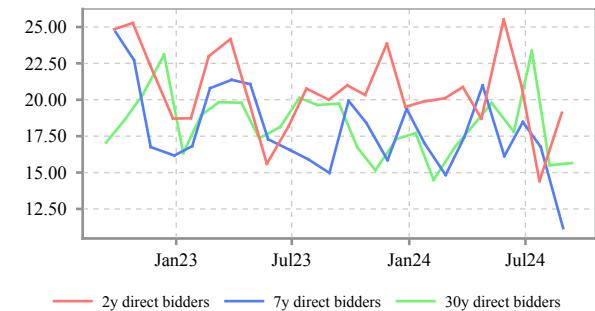
(10-year - 3-year indirect bidders) versus 3-year Treasury yields

(%) (%; inverted)



Direct bidders

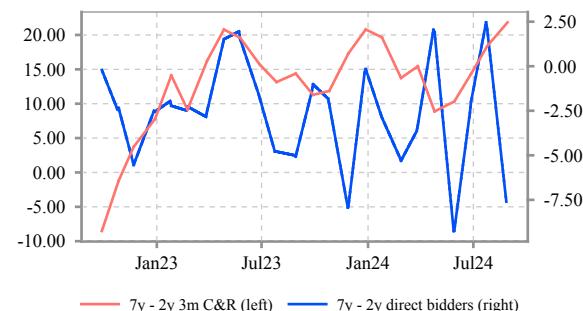
(%)



(7-year - 2-year 3m C&R*) versus (7-year - 2-year direct bidders)

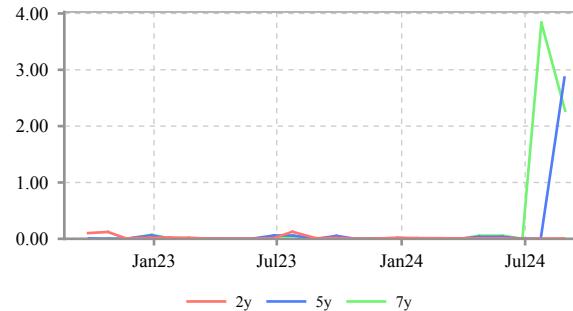
(bp)

(%)



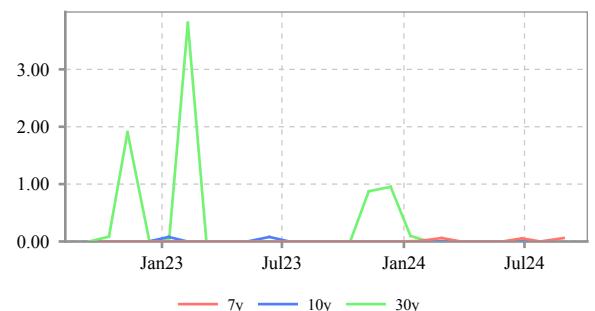
Depository institutions, percentage at auction

(%)



Pension funds, percentage at auction

(%)

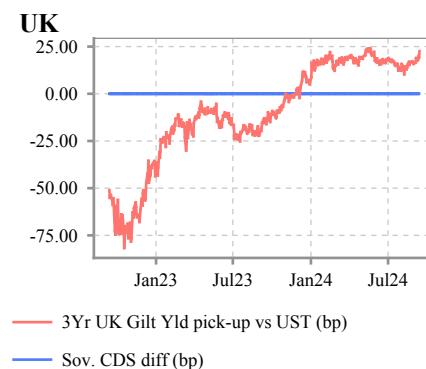
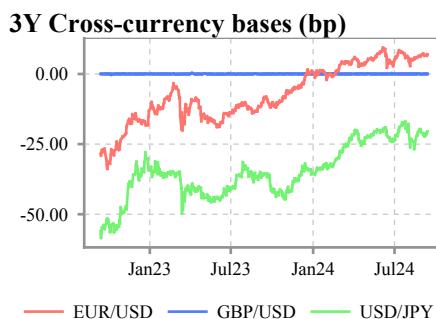


* 3-month carry and roll

US Fixed Income Strategy

Synthetic USD Government Bond Report

Structure	Local Currency Yield	Local currency asset swap(bp)	3s/6s Libor basis (bp)	Cross-currency basis (bp)	Synthetic USD Asset Swap (bp)	Synthetic USD Yield (%)	Roll (%)	Duration (yrs)	3M return (% of notional)	Risk	Ann. Return/Risk	Yld pick-up vs UST (bp)	Sov. CDS diff (bp)
2Y German (EUR)	2.14	-32.6	4.6	8.45	-36.42	3.29	-0.15	1.9	0.54	1.2	0.93	-27.8	.0
3Y German (EUR)	2.01	-34.3	4.8	6.91	-36.39	3.13	-0.04	2.8	0.67	1.6	0.82	-32.2	.0
5Y German (EUR)	2.00	-31.1	4.4	5.31	-31.97	3.09	-0.01	4.5	0.73	2.4	0.60	-35.4	.0
2Y UK Gilt	3.74	-1.8	15.9	-0.13	14.20	3.80	-0.10	1.9	0.87	1.1	1.65	22.8	.0
3Y UK Gilt	3.61	2.5	15.9	0.01	18.40	3.68	-0.03	2.8	0.97	1.5	1.31	22.6	.0
5Y UK Gilt	3.53	10.3	15.7	0.01	25.97	3.67	0.01	4.5	1.14	2.3	0.99	22.5	.0
2Y JGB	0.37	-14.6	.0	-16.25	1.69	3.67	-0.12	1.9	0.70	1.2	1.17	10.3	.0
3Y JGB	0.39	-18.4	.0	-20.49	2.12	3.51	-0.04	2.8	0.78	1.7	0.94	6.3	.0
5Y JGB	0.49	-17.0	.0	-27.05	10.06	3.52		4.5		2.5		6.6	.0
2Y Tsy	3.57	-8.6					-0.11	1.9	0.69	1.2	1.14		
3Y Tsy	3.45	-4.2					-0.03	2.8	0.78	1.7	0.92		
5Y Tsy	3.45	3.4					0.00	4.5	0.87	2.5	0.69		



Notes: This report characterizes synthetic USD-denominated bonds created by asset swapping foreign government bonds and using cross-currency basis swaps.

- 1) The synthetic USD asset swap is $100 * (\text{par govie rate} - \text{par swap rate}) + (6\text{M}/3\text{M LIBOR basis}) - (\text{cross currency basis swap spread})$.
- 2) The synthetic USD yield is $(\text{synthetic USD asset swap})/100 + (\text{USD swap rate})$.
- 3) 3-month roll is estimated as one-fourth of the difference between the yield and the 1Y-shorter maturity yield.
- 4) 3-month return is one-fourth the yield plus the roll.
- 5) Risk is (5-year standard deviation of 3-month changes in yield)*(modified duration).
- 6) Annualized return/risk is $2 * (3\text{-month return/risk})$.

US Fixed Income Strategy

TIPS Hot-Run Relative Value Report

TIPS Hot Run Summary

	Coupon	Maturity	Yield	Price	Index Ratio¹	Duration	pvbp/mm²
5 year	TIPS	2.125	APR 15, 2029	1.470	102-28+	4.32	456
	Nominal	3.625	AUG 31, 2029	3.423	100-29	4.50	455
10 year	TIPS	1.875	JUL 15, 2034	1.569	102-25	8.94	923
	Nominal	3.875	AUG 15, 2034	3.649	101-28	8.17	835
30 year	TIPS	2.125	FEB 15, 2054	1.884	105-13+	22.00	2380
	Nominal	4.250	AUG 15, 2054	3.976	104-24	17.10	1798

Spreads of hot-run TIPS to hot-run Nominals

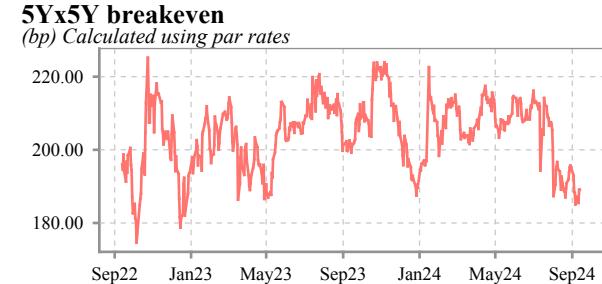
	Spread	Change	3M Avg	3M Wide	3M Narrow	3M Z-score
5yr TIPS/5s	195.3	2.1	207.6	230.0	185.8	-1.0
10yr TIPS/10s	208.0	2.0	217.8	232.4	202.2	-1.1
30yr TIPS/30s	209.3	2.2	219.3	233.1	204.5	-1.1

TIPS curve/butterfly spreads

	Spread	Change	3M Avg	3M Wide	3M Narrow	3M Z-score
5s/10s	9.8	1.3	0.8	9.8	-7.9	2.3
5s/30s	41.3	2.1	23.3	41.3	1.1	1.8
10s/30s	31.5	0.9	22.6	31.5	9.0	1.4
5s/10s/30s	-10.9	0.2	-10.9	-7.1	-13.8	0.0

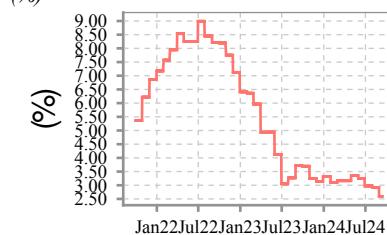
Hedging with nominal bonds

	Yield Beta⁴	Hedge Ratio⁵
5s	56.7%	0.569
10s	60.1%	0.665
30s	67.9%	0.899



	Chg	Current	1d	1w	1m
5Yx5Y BE		189	0.1	4.1	0.0

YoY NSA CPI (%)



	YoY NSA, CPI, %
2019	2.29
2020	1.36
2021	7.04
2022	7.11
2023	3.14
Average	4.19

J.P. Morgan NSA CPI projections

Date	CPI-U	M/M NSA % Chg	
,	276.589	0.83	
,	277.948	0.49	
,	278.802	0.31	
,	280.197	0.50	Forecast
,	281.868	0.60	Forecast
,	282.661	0.28	Forecast

Notes:

1. Index ratio = (CPI-U today)/(CPI-U at issue date)
2. pvbp per \$1mn of face; for TIPS, it is computed as (TIPS duration)*(nominal dirty price) = (TIPS duration)*(real dirty price)*(index ratio)
3. Butterfly spreads are defined as 100*(yield on body - 0.5*(sum of yields of wings))
4. Yield beta = Beta of daily yield changes in TIPS regressed on daily yield changes in nominals over the past 3 months
5. Hedge ratio is the face value (in \$mn) of nominal Treasuries needed to hedge \$1mn of TIPS face value; it is calculated as (TIPS pvbp)/(Nominal pvbp)*(Yield beta)

US Fixed Income Strategy

TIPS Fitted Curve Relative Value Report

Cpn	Mat	Yld	1d Chg	Clean Price	Index Ratio ¹	Mod Dur ²	pvbp	Model ³						3M Return (bp) ⁴			Treasury with Closest Maturity								
								Yld Err	R/C	Perct	Hi	Lo	Z-score	Roll	RealRet	TotRet	Cpn	Mat	Yld	pvbp	B/E Sprd	Yield Beta ⁵	Hedge Ratio ⁶	3M Roll (bp)	3M TotRet (bp)
0.125	15-Oct-24	3.911	-5.3	99-22+	1.22525	0.08	9	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	-10000.0	1.500	Oct-24	5.007	12	109.6	-33%	-0.253	0.0	0.0
2.375	15-Jan-25	5.023	-6.9	99-4+	1.66771	0.32	53	0.0	-5.1	0	6.2	-5.1	0.0	-38.2	120.4	129.3	2.500	Jan-25	4.716	37	-30.6	-31%	-0.439	-33.2	115.6
0.250	15-Jan-25	5.013	-6.4	98-14+	1.32722	0.32	42	0.0	-6.5	0	7.4	-6.5	0.0	-38.2	120.1	129.1	1.125	Jan-25	4.760	33	-25.3	-51%	-0.656	-32.3	118.1
0.125	15-Apr-25	3.700	-12.9	97-31+	1.21702	0.57	68	0.0	12.6	72	16.3	-13.8	0.0	-32.5	81.3	90.3	2.625	Apr-25	4.392	56	69.2	34%	0.408	-37.7	96.5
0.375	15-Jul-25	2.432	-10.0	98-10+	1.32560	0.82	107	0.0	12.6	97	12.6	-10.5	0.0	-27.6	44.1	53.1	2.000	Aug-25	4.072	88	163.9	38%	0.461	-30.9	80.0
0.125	15-Oct-25	2.140	-9.2	97-27+	1.21154	1.07	126	0.0	-8.0	0	3.3	-8.0	0.0	-24.8	32.9	41.9	0.250	Oct-25	3.921	106	178.0	41%	0.495	-22.0	78.3
0.625	15-Jan-26	2.218	-10.3	97-29+	1.32299	1.31	170	0.0	-2.6	11	3.6	-4.4	0.0	-20.4	32.9	41.9	1.625	Feb-26	3.763	134	154.4	46%	0.587	-13.6	77.0
2.000	15-Jan-26	2.243	-10.0	99-21+	1.58385	1.30	205	0.0	-3.9	2	3.5	-4.1	0.0	-20.3	33.8	42.8	1.625	Feb-26	3.763	134	151.9	46%	0.711	-13.6	77.0
0.125	15-Apr-26	2.071	-10.1	96-31+	1.19869	1.56	182	0.0	1.0	62	5.0	-3.7	0.0	-15.9	30.7	39.7	0.750	Apr-26	3.674	151	160.2	49%	0.582	-10.6	77.0
0.125	15-Jul-26	1.609	-9.5	97-10+	1.31146	1.81	231	0.0	1.5	77	2.4	-4.2	0.0	-11.7	21.4	30.3	4.500	Jul-26	3.613	177	200.4	49%	0.645	-7.4	77.8
0.125	15-Oct-26	1.564	-9.0	97-2+	1.15041	2.06	230	0.0	-6.1	0	2.8	-6.1	0.0	-7.8	24.8	33.8	1.125	Oct-26	3.553	196	198.8	48%	0.564	-5.4	78.5
0.375	15-Jan-27	1.676	-8.0	97-1+	1.30137	2.30	290	0.0	-1.4	0	2.0	-1.4	0.0	-3.9	33.3	42.3	2.250	Feb-27	3.504	225	182.8	47%	0.600	-3.3	79.4
2.375	15-Jan-27	1.682	-8.6	101-18+	1.55881	2.25	357	0.0	-0.8	3	2.0	-1.1	0.0	-3.9	33.7	42.6	2.250	Feb-27	3.504	225	182.2	46%	0.734	-3.3	79.4
0.125	15-Apr-27	1.661	-7.8	96-4+	1.11338	2.55	273	0.0	3.3	97	3.3	-2.9	0.0	-2.5	35.6	44.6	2.750	Apr-27	3.474	246	181.2	48%	0.529	-2.6	80.7
0.375	15-Jul-27	1.426	-7.5	97-3+	1.28509	2.79	349	0.0	5.1	97	5.1	-2.1	0.0	-1.3	31.8	40.8	2.250	Aug-27	3.460	269	203.4	50%	0.642	-1.4	81.6
1.625	15-Oct-27	1.420	-7.2	100-19+	1.06120	2.97	318	0.0	-1.8	9	2.1	-2.2	0.0	-1.2	32.6	41.6	4.125	Oct-27	3.448	297	202.8	51%	0.540	-1.2	83.0
0.500	15-Jan-28	1.512	-7.1	96-23+	1.27443	3.28	404	0.0	1.0	84	1.7	-1.7	0.0	-1.3	33.4	42.4	2.750	Feb-28	3.454	315	194.2	50%	0.643	-0.4	83.9
1.750	15-Jan-28	1.516	-7.1	100-24+	1.50054	3.22	486	0.0	0.8	62	2.3	-2.2	0.0	-1.3	33.6	42.5	2.750	Feb-28	3.454	315	193.8	51%	0.780	-0.4	83.9
3.625	15-Apr-28	1.540	-6.9	107-7+	1.94360	3.32	693	0.0	0.5	66	1.0	-1.3	0.0	-1.9	33.4	42.4	3.500	Apr-28	3.438	338	189.7	53%	1.085	-0.2	85.0
1.250	15-Apr-28	1.527	-7.0	99-1+	1.04804	3.47	360	0.0	0.1	58	2.3	-1.6	0.0	-1.9	32.2	41.2	3.500	Apr-28	3.438	338	191.0	52%	0.558	-0.2	85.0
0.750	15-Jul-28	1.366	-6.8	97-22+	1.25234	3.75	459	0.0	1.4	97	1.4	-1.2	0.0	-1.9	27.1	36.0	4.375	Aug-28	3.441	374	207.4	53%	0.644	-0.1	85.8
2.375	15-Oct-28	1.393	-6.5	103-28+	1.02633	3.85	411	0.0	-5.7	0	0.8	-5.7	0.0	-1.8	28.9	37.9	4.875	Oct-28	3.438	394	204.4	54%	0.565	0.3	86.9
0.875	15-Jan-29	1.443	-6.4	97-19+	1.24497	4.22	513	0.0	-1.1	0	0.7	-1.1	0.0	-1.2	30.8	39.8	2.625	Feb-29	3.444	398	200.1	54%	0.692	0.7	87.6
2.500	15-Jan-29	1.451	-6.4	104-12+	1.46417	4.09	625	0.0	-0.6	14	0.9	-1.1	0.0	-1.2	31.3	40.2	2.625	Feb-29	3.444	398	199.3	54%	0.851	0.7	87.6
3.875	15-Apr-29	1.482	-6.1	110-17+	1.91223	4.17	881	0.0	-0.2	38	1.0	-1.2	0.0	-0.6	35.6	44.5	4.625	Apr-29	3.431	437	194.9	56%	1.126	0.6	88.2
2.125	15-Apr-29	1.470	-6.3	102-28+	1.01633	4.32	452	0.0	-1.7	0	1.5	-1.7	0.0	-0.6	34.8	43.8	4.625	Apr-29	3.431	437	196.1	56%	0.579	0.6	88.2
0.250	15-Jul-29	1.344	-6.2	94-28+	1.22895	4.77	556	0.0	1.5	97	1.5	-1.7	0.0	0.2	34.2	43.2	1.625	Aug-29	3.421	428	207.6	55%	0.721	0.9	88.4
0.125	15-Jan-30	1.423	-5.5	93-11+	1.22183	5.27	602	0.0	0.1	53	0.9	-1.0	0.0	1.2	41.1	50.1	1.500	Feb-30	3.468	462	204.5	55%	0.719	1.0	90.2
0.125	15-Jul-30	1.364	-5.8	93-2+	1.22609	5.77	658	0.0	1.9	19	1.9	-0.8	-0.2	1.7	43.0	52.0	4.125	Aug-30	3.493	544	213.0	56%	0.673	0.6	90.3
0.125	15-Jan-31	1.449	-5.8	92-0+	1.20760	6.26	695	-1.0	-0.2	30	1.3	-1.1	1.6	1.8	46.8	55.7	1.125	Feb-31	3.469	527	202.0	56%	0.746	0.9	90.7
0.125	15-Jul-31	1.415	-6.0	91-20+	1.17288	6.75	726	-2.0	-0.7	2	1.3	-0.8	-0.6	1.7	46.2	55.2	1.250	Aug-31	3.533	560	211.8	57%	0.733	0.9	92.5
0.125	15-Jan-32	1.490	-5.9	90-17+	1.13403	7.24	744	-0.9	-1.3	0	0.6	-1.3	-2.3	1.4	46.8	55.8	1.875	Feb-32	3.559	606	206.9	52%	0.639	0.8	93.2
3.375	15-Apr-32	1.512	-5.5	113-9+	1.77103	6.68	1340	-1.8	-0.8	44	2.3	-1.9	1.3	1.1	45.5	54.5	1.875	Feb-32	3.559	606	204.7	52%	1.148	0.8	93.2
0.625	15-Jul-32	1.470	-5.4	93-24+	1.08195	7.58	769	-0.6	-0.9	11	0.7	-1.2	-1.4	1.1	44.5	53.5	2.750	Aug-32	3.579	662	210.9	59%	0.686	0.8	93.8
1.125	15-Jan-33	1.551	-5.3	96-21+	1.05533	7.89	805	1.9	0.0	53	0.5	-2.0	-0.9	0.9	45.2	54.2	3.500	Feb-33	3.597	718	204.7	59%	0.666	0.8	94.3
1.375	15-Jul-33	1.526	-5.2	98-24+	1.03506	8.26	844	1.8	0.0	50	0.7	-1.8	-1.3	0.8	43.9	52.9	3.875	Aug-33	3.620	765	209.5	60%	0.659	0.8	95.2
1.750	15-Jan-34	1.587	-5.2	101-13+	1.02266	8.56	888	3.1	1.0	84	1.4	-2.0	-0.3	0.7	44.8	53.8	4.000	Feb-34	3.638	804	205.2	60%	0.664	0.8	96.0
Note ⁷	15-Jul-34	1.569	156.9	102-24+	1.00183	8.94	920	3.1	2.3	98	2.3	-2.3	1.3	0.6	44.3	53.3	3.875	Aug-34	3.649	835	208.0	54%	0.592	0.9	96.9

1. Index ratio = (CPI-U today)/(CPI-U at issue date) 2. pvbp per \$1mn of face; for TIPS, it is computed as (TIPS duration)*(nominal dirty price) = (TIPS duration)*(real dirty price)*(index ratio)
 3. The model uses a fitted par curve to determine richness/cheapness. Yield error = actual yield - model yield. The Rich/Cheap (R/C) measure = yield error - 3 month average of yield error. Hi/Lo shows the range of the R/C over the past 3 months
 4. Roll = the expected change in yield over 3-months assuming the fitted curve and yield error are constant. Real return = return over 3-months if the roll is realized (excluding inflation accrual). Inflation return = forecasted CPI chg over the next three months, which equals 9.0 . Total return = Real return + Inflation return. 5. Yield beta = Beta of daily yield changes in TIPS regressed on daily yield changes in nominals over the past 3 months. 6. Hedge ratio is the face value (in \$mn) of nominal Treasuries needed to hedge \$1bn of TIPS face value; it is calculated as (TIPS pvbp)*(Nominal pvbp)*(Yield beta)

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US Fixed Income Strategy

TIPS Fitted Curve Relative Value Report

Cpn	Mat	Yld	1d Chg	Clean Price	Index Ratio ¹	Mod Dur ²	pvbp	Model ³						3M Return (bp) ⁴			Treasury with Closest Maturity								
								Yld Err	R/C	Perct	Hi	Lo	Z-score	Roll	RealRet	TotRet	B/E	Yield	Hedge	3M Roll	3M TotRet				
																	Spred	Beta ⁵	Ratio ⁶	(bp)	(bp)				
2.125	15-Feb-40	1.751	-4.9	105-1+	1.45442	13.15	2009	-1.3	1.1	81	2.4	-1.6	1.2	1.1	57.4	66.4	4.625	Feb-40	3.811	1224	206.0	58%	0.955	1.4	109.2
2.125	15-Feb-41	1.753	-4.5	105-9+	1.43548	13.87	2097	-4.0	1.1	78	5.0	-1.7	1.4	1.1	57.7	66.7	1.875	Feb-41	3.990	1008	223.7	62%	1.283	1.7	120.3
0.750	15-Feb-42	1.835	-4.6	83-28+	1.39120	16.07	1876	-0.6	-0.8	0	0.6	-0.8	-2.1	1.0	61.8	70.8	3.125	Feb-42	3.980	1164	214.5	62%	0.998	1.5	116.9
0.625	15-Feb-43	1.874	-4.5	80-20+	1.36730	17.10	1885	0.8	0.2	75	0.6	-0.6	-0.2	0.9	61.5	70.4	4.625	May-44	4.045	1415	217.1	66%	0.883	0.9	111.7
1.375	15-Feb-44	1.873	-4.4	91-29+	1.34883	16.80	2083	0.4	-0.8	16	0.7	-1.2	-1.3	0.7	57.0	66.0	3.625	Feb-44	4.074	1282	220.1	66%	1.070	1.0	114.1
0.750	15-Feb-45	1.889	-4.1	80-25+	1.33496	18.56	2002	-0.4	-0.5	17	0.8	-1.0	-0.8	0.4	54.1	63.1	2.500	Feb-45	4.095	1180	220.6	67%	1.143	0.7	111.5
1.000	15-Feb-46	1.898	-4.3	84-8+	1.32671	18.89	2112	0.6	-0.9	25	0.8	-1.5	-1.0	0.1	48.9	57.9	2.500	Feb-46	4.098	1207	220.0	67%	1.179	0.3	105.3
0.875	15-Feb-47	1.902	-4.2	81-10+	1.30227	19.91	2109	1.0	-0.6	6	0.7	-1.6	-1.4	-0.2	42.5	51.5	3.000	Feb-47	4.106	1302	220.4	68%	1.099	0.0	100.3
1.000	15-Feb-48	1.897	-4.2	83-3+	1.27478	20.41	2162	1.6	-0.2	19	0.6	-1.8	-1.0	-0.4	38.4	47.4	3.000	Feb-48	4.118	1328	222.2	68%	1.110	-0.3	96.7
1.000	15-Feb-49	1.891	-4.0	82-20+	1.24926	21.15	2184	2.1	0.7	98	0.7	-1.4	2.0	-0.4	37.2	46.2	3.000	Feb-49	4.111	1357	222.0	68%	1.098	-0.4	93.9
0.250	15-Feb-50	1.873	-4.2	67-9+	1.22273	24.17	1989	0.3	1.0	91	1.1	-0.8	1.5	-0.4	37.0	45.9	2.000	Feb-50	4.106	1219	223.3	69%	1.119	-0.6	89.8
0.125	15-Feb-51	1.843	-4.2	64-6+	1.20743	25.60	1985	-2.3	0.4	77	2.7	-0.8	0.6	-0.1	42.5	51.5	1.875	Feb-51	4.081	1220	223.8	68%	1.112	-0.6	88.6
0.125	15-Feb-52	1.840	-4.1	63-6+	1.12926	26.54	1895	-2.7	0.3	58	3.0	-0.9	1.2	0.3	53.1	62.1	2.250	Feb-52	4.055	1311	221.5	68%	0.981	-0.5	90.5
1.500	15-Feb-53	1.882	-4.1	91-20+	1.05754	22.71	2200	2.1	0.3	92	0.4	-1.7	0.7	0.7	62.4	71.4	3.625	Feb-53	4.015	1609	213.4	68%	0.925	-0.3	94.4
2.125	15-Feb-54	1.884	-4.1	105-13+	1.02429	22.00	2376	0.8	-0.9	25	1.0	-1.8	-1.2	1.2	72.9	81.9	4.250	Feb-54	3.988	1777	210.4	68%	0.908	0.0	97.4

US Fixed Income Strategy

TIPS Forward Yields and Breakevens

Coupon	Maturity	Orig Issue	Par Amt O/S (\$bn)	Fed Holdings (\$bn)	Yield ¹				Yield Carry (bp) ²				Breakeven ³				Breakeven Carry(bp) ⁴			
					Spot	1M Fwd	2M Fwd	3M Fwd	6M Fwd	1M	2M	3M	6M	Spot	1M Fwd	3M Fwd	6M Fwd	1M	3M	6M
0.125	Oct 15, 2024	5	35.2	3.46	3.911	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	109.6	N/A	N/A	N/A	N/A	N/A	N/A
2.375	Jan 15, 2025	20	28.0	11.71	5.023	5.285	5.453	5.378	N/A	26.3	43.0	35.5	N/A	-30.6	-77.7	-175.2	N/A	47.0	144.6	N/A
0.250	Jan 15, 2025	10	41.0	10.97	5.013	5.272	5.434	5.333	N/A	25.9	42.1	32.1	N/A	-25.3	-73.9	-208.5	N/A	48.6	183.2	N/A
0.125	Apr 15, 2025	5	35.6	9.39	3.700	3.619	3.353	2.825	-2.217	-8.2	-34.7	-87.5	-591.8	69.2	60.3	92.1	393.4	8.9	-22.9	-324.2
0.375	Jul 15, 2025	10	41.0	8.03	2.432	2.237	1.894	1.388	-0.910	-19.5	-53.9	-104.5	-334.3	163.9	169.9	223.4	403.1	-6.0	-59.5	-239.2
0.125	Oct 15, 2025	5	34.3	2.30	2.140	1.972	1.700	1.329	-0.018	-16.9	-44.1	-81.2	-215.8	178.0	182.9	221.7	321.8	-4.9	-43.7	-143.8
0.625	Jan 15, 2026	10	42.4	14.64	2.218	2.088	1.880	1.606	0.744	-13.1	-33.8	-61.2	-147.5	154.4	157.1	183.3	241.9	-2.7	-28.9	-87.4
2.000	Jan 15, 2026	20	N/A	8.93	2.243	2.113	1.905	1.631	0.769	-13.1	-33.8	-61.3	-147.5	151.9	154.6	180.8	239.4	-2.7	-28.9	-87.5
0.125	Apr 15, 2026	5	39.9	14.90	2.071	1.955	1.779	1.552	0.876	-11.6	-29.2	-52.0	-119.6	160.2	162.4	183.8	228.6	-2.2	-23.6	-68.4
0.125	Jul 15, 2026	10	36.8	8.88	1.609	1.488	1.314	1.098	0.467	-12.2	-29.6	-51.2	-114.3	200.4	203.7	224.6	266.8	-3.3	-24.2	-66.4
0.125	Oct 15, 2026	5	38.3	2.31	1.564	1.457	1.304	1.118	0.589	-10.8	-26.0	-44.6	-97.5	198.8	202.0	220.9	257.0	-3.1	-22.1	-58.2
0.375	Jan 15, 2027	10	38.5	12.24	1.676	1.584	1.453	1.294	0.860	-9.2	-22.3	-38.2	-81.7	182.8	185.0	200.3	228.4	-2.3	-17.5	-45.7
2.375	Jan 15, 2027	20	16.5	5.61	1.682	1.588	1.455	1.292	0.848	-9.4	-22.8	-39.0	-83.4	182.2	184.6	200.5	229.6	-2.5	-18.3	-47.4
0.125	Apr 15, 2027	5	39.4	1.38	1.661	1.578	1.462	1.321	0.942	-8.3	-20.0	-34.0	-71.9	181.2	183.0	196.2	220.4	-1.8	-14.9	-39.2
0.375	Jul 15, 2027	10	36.9	7.62	1.426	1.344	1.230	1.095	0.732	-8.3	-19.7	-33.2	-69.5	203.4	205.8	219.2	243.2	-2.4	-15.9	-39.8
1.625	Oct 15, 2027	5	40.0	N/A	1.420	1.343	1.237	1.112	0.780	-7.8	-18.3	-30.8	-64.0	202.8	204.8	217.1	239.1	-2.1	-14.4	-36.3
0.500	Jan 15, 2028	10	38.8	8.65	1.512	1.444	1.351	1.240	0.953	-6.8	-16.2	-27.2	-55.9	194.2	195.9	206.6	225.1	-1.8	-12.4	-30.9
1.750	Jan 15, 2028	20	15.6	5.02	1.516	1.447	1.352	1.239	0.946	-6.9	-16.5	-27.8	-57.1	193.8	195.7	206.7	225.8	-1.9	-12.9	-32.0
3.625	Apr 15, 2028	30	16.8	8.39	1.540	1.474	1.385	1.279	1.004	-6.6	-15.6	-26.2	-53.6	189.7	191.4	201.9	219.9	-1.7	-12.1	-30.2
1.250	Apr 15, 2028	5	40.0	N/A	1.527	1.464	1.377	1.274	1.009	-6.4	-15.1	-25.3	-51.8	191.0	192.5	202.3	219.4	-1.5	-11.2	-28.4
0.750	Jul 15, 2028	10	36.7	9.95	1.366	1.304	1.219	1.121	0.866	-6.3	-14.7	-24.6	-50.0	207.4	209.3	219.2	236.0	-1.9	-11.8	-28.6
2.375	Oct 15, 2028	5	42.0	N/A	1.393	1.333	1.253	1.159	0.917	-6.0	-14.1	-23.4	-47.6	204.4	206.0	215.2	231.1	-1.5	-10.8	-26.7
0.875	Jan 15, 2029	10	36.2	13.10	1.443	1.389	1.316	1.232	1.016	-5.4	-12.7	-21.2	-42.7	200.1	201.5	209.8	223.8	-1.4	-9.7	-23.7
2.500	Jan 15, 2029	20	14.2	4.10	1.451	1.396	1.321	1.233	1.011	-5.6	-13.1	-21.9	-44.1	199.3	200.8	209.6	224.3	-1.6	-10.4	-25.1
3.875	Apr 15, 2029	30	19.7	9.60	1.482	1.429	1.357	1.274	1.061	-5.4	-12.5	-20.9	-42.1	194.9	196.3	204.5	218.4	-1.4	-9.6	-23.5
2.125	Apr 15, 2029	5	44.1	0.11	1.470	1.419	1.351	1.272	1.070	-5.2	-11.9	-19.9	-40.0	196.1	197.3	204.7	217.6	-1.2	-8.6	-21.5
0.250	Jul 15, 2029	10	39.8	12.20	1.344	1.295	1.229	1.153	0.960	-4.9	-11.5	-19.2	-38.4	207.6	209.0	216.6	229.2	-1.4	-9.0	-21.6
0.125	Jan 15, 2030	10	41.1	9.70	1.423	1.379	1.321	1.254	1.087	-4.3	-10.1	-16.9	-33.5	204.5	205.7	212.4	223.4	-1.2	-7.9	-18.9
0.125	Jul 15, 2030	10	42.9	8.30	1.364	1.323	1.269	1.207	1.054	-4.1	-9.4	-15.6	-31.0	213.0	214.1	220.2	230.4	-1.1	-7.3	-17.4
0.125	Jan 15, 2031	10	43.3	6.97	1.449	1.412	1.364	1.309	1.173	-3.6	-8.4	-14.0	-27.6	202.0	203.0	208.5	217.5	-1.0	-6.5	-15.5
0.125	Jul 15, 2031	10	46.8	8.58	1.415	1.381	1.336	1.284	1.158	-3.4	-7.9	-13.1	-25.7	211.8	212.8	218.1	226.8	-1.0	-6.3	-14.9
0.125	Jan 15, 2032	10	51.1	7.90	1.490	1.459	1.418	1.371	1.257	-3.1	-7.2	-11.9	-23.3	206.9	207.7	212.4	220.1	-0.8	-5.5	-13.2
3.375	Apr 15, 2032	31	5.0	1.17	1.512	1.479	1.435	1.385	1.263	-3.3	-7.6	-12.7	-24.9	204.7	205.8	211.0	219.5	-1.1	-6.3	-14.8
0.625	Jul 15, 2032	10	48.6	1.63	1.470	1.440	1.401	1.356	1.247	-3.0	-6.9	-11.4	-22.3	210.9	211.7	216.2	223.6	-0.8	-5.3	-12.7
1.125	Jan 15, 2033	10	49.8	2.81	1.551	1.523	1.486	1.444	1.342	-2.7	-6.4	-10.7	-20.8	204.7	205.4	209.5	216.4	-0.7	-4.8	-11.7
1.375	Jul 15, 2033	10	47.2	0.17	1.526	1.499	1.464	1.423	1.326	-2.7	-6.2	-10.3	-20.0	209.5	210.2	214.2	220.8	-0.7	-4.7	-11.3
1.750	Jan 15, 2034	10	50.9	0.95	1.587	1.562	1.528	1.489	1.398	-2.5	-5.8	-9.7	-18.8	205.2	205.9	209.8	216.3	-0.7	-4.7	-11.1

Notes:

1. Forward yields are calculated using JPMorgan's CPI forecast 2. Yield carry is defined for a long TIPS position; it is calculated as $100 * (\text{forward yield} - \text{spot yield})$ 3. Breakeven shown for the Treasury with the closest maturity; see previous page 4. Breakeven carry is defined for a long breakeven position (long TIPS, short nominals); it is calculated as $(\text{spot breakeven} - \text{forward breakeven})$

5. Repo Rates: 1M = 5.270 2M = 5.240 3M = 5.130 6M = 4.780

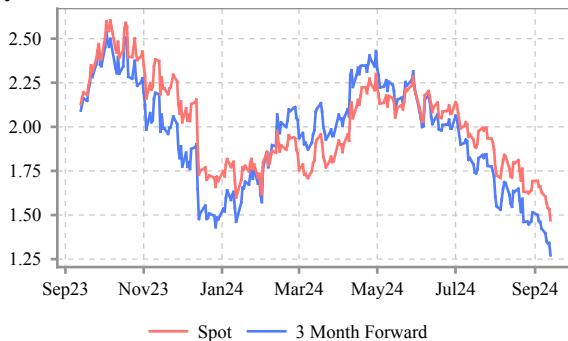
US Fixed Income Strategy

Coupon	Maturity	Orig Issue	Par Amt O/S (\$bn)	Fed Holdings (\$bn)	Yield ¹					Yield Carry (bp) ²				Breakeven ³				Breakeven Carry(bp) ⁴		
					Spot	1M Fwd	2M Fwd	3M Fwd	6M Fwd	1M	2M	3M	6M	Spot	1M Fwd	3M Fwd	6M Fwd	1M	3M	6M
1.875	Jul 15, 2034	10	20.0	1.05	1.569	1.546	1.514	1.477	1.392	-2.3	-5.5	-9.1	-17.6	208.0	208.7	212.4	218.3	-0.7	-4.4	-10.3
2.125	Feb 15, 2040	30	15.2	9.06	1.751	1.736	1.715	1.691	1.637	-1.5	-3.6	-5.9	-11.4	206.0	206.4	208.7	212.7	-0.3	-2.7	-6.6
2.125	Feb 15, 2041	30	24.0	15.00	1.753	1.738	1.719	1.696	1.645	-1.4	-3.4	-5.6	-10.8	223.7	224.3	227.0	231.2	-0.6	-3.3	-7.5
0.750	Feb 15, 2042	30	23.1	8.14	1.835	1.823	1.806	1.788	1.745	-1.2	-2.8	-4.7	-9.0	214.5	214.8	216.7	220.1	-0.3	-2.3	-5.6
0.625	Feb 15, 2043	30	23.0	11.03	1.874	1.863	1.848	1.830	1.790	-1.1	-2.6	-4.4	-8.3	217.1	217.4	219.2	222.4	-0.2	-2.1	-5.3
1.375	Feb 15, 2044	30	23.0	6.32	1.873	1.861	1.846	1.828	1.788	-1.1	-2.7	-4.5	-8.5	220.1	220.4	222.4	225.7	-0.3	-2.3	-5.6
0.750	Feb 15, 2045	30	23.0	4.44	1.889	1.879	1.865	1.849	1.812	-1.0	-2.4	-4.0	-7.6	220.6	220.9	222.7	225.6	-0.3	-2.1	-5.1
1.000	Feb 15, 2046	30	N/A	10.76	1.898	1.888	1.874	1.859	1.823	-1.0	-2.3	-3.9	-7.5	220.0	220.3	222.1	225.0	-0.3	-2.1	-5.0
0.875	Feb 15, 2047	30	18.7	6.69	1.902	1.892	1.879	1.865	1.831	-0.9	-2.2	-3.7	-7.1	220.4	220.6	222.2	225.0	-0.2	-1.9	-4.6
1.000	Feb 15, 2048	30	N/A	9.79	1.897	1.888	1.875	1.860	1.828	-0.9	-2.2	-3.6	-6.9	222.2	222.4	224.0	226.7	-0.2	-1.8	-4.5
1.000	Feb 15, 2049	30	N/A	6.86	1.891	1.882	1.870	1.856	1.824	-0.9	-2.1	-3.5	-6.7	222.0	222.3	223.8	226.4	-0.2	-1.8	-4.4
0.250	Feb 15, 2050	30	15.6	2.44	1.873	1.865	1.854	1.842	1.814	-0.8	-1.9	-3.1	-5.9	223.3	223.5	224.8	227.1	-0.2	-1.5	-3.8
0.125	Feb 15, 2051	30	18.0	4.58	1.843	1.835	1.825	1.813	1.787	-0.7	-1.8	-2.9	-5.6	223.8	224.0	225.2	227.3	-0.2	-1.4	-3.5
0.125	Feb 15, 2052	30	19.6	2.94	1.840	1.833	1.823	1.811	1.786	-0.7	-1.7	-2.8	-5.4	221.5	221.6	222.7	224.7	-0.1	-1.2	-3.2
1.500	Feb 15, 2053	30	19.9	2.88	1.882	1.873	1.862	1.849	1.820	-0.8	-2.0	-3.3	-6.2	213.4	213.5	214.8	217.1	-0.2	-1.5	-3.7
2.125	Feb 15, 2054	30	17.4	0.39	1.884	1.875	1.864	1.851	1.821	-0.9	-2.0	-3.3	-6.3	210.4	210.6	211.9	214.3	-0.2	-1.5	-3.9

US Fixed Income Strategy

TIPS Yields, Breakeven Spread and Breakeven Curve Report Spot and 3 Month Forward Yields

5 year



10 year



30 year



Spot and 3 Month Forward Breakeven Spreads

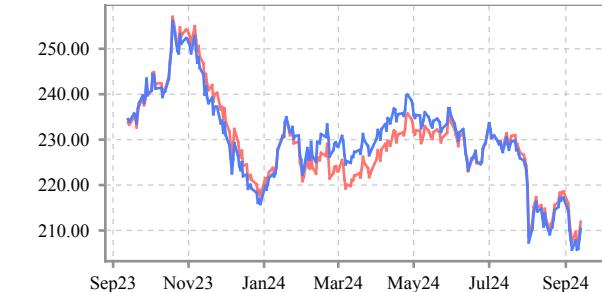
5 year Breakeven Spread



10 year Breakeven Spread

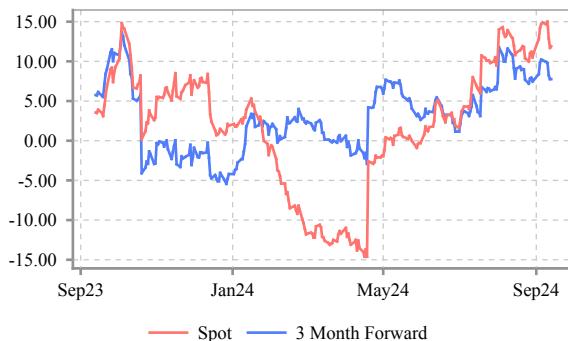


30 year Breakeven Spread

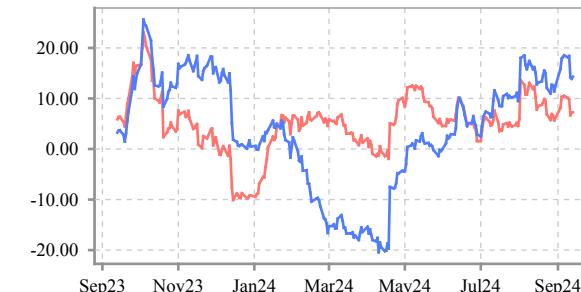


Spot and 3 Month Forward Breakeven Curves

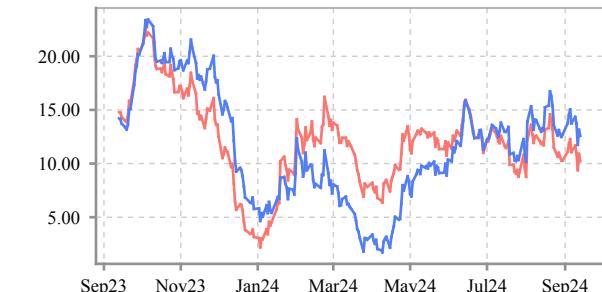
5s/10s Breakeven Curve



5s/30s Breakeven Curve



10s/30s Breakeven Curve

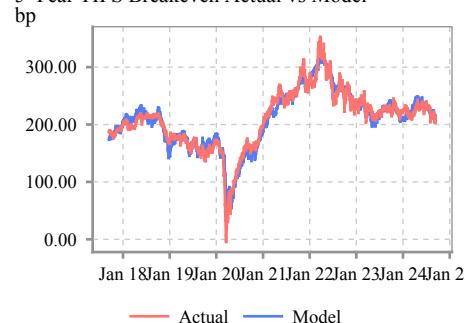


US Fixed Income Strategy

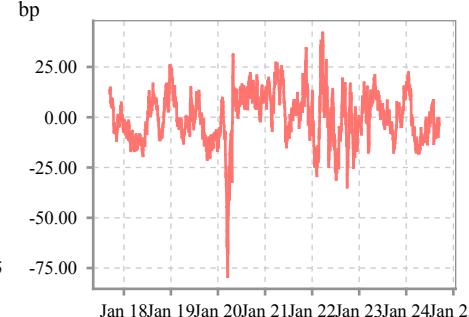
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5-Year TIPS Breakeven Fair Value Model

5-Year TIPS Breakeven Actual vs Model



Residual
bp



Model

	Coeff	T-stat	Current Value
Intercept	-371.42	-49.6	
JPMCCI	3.67	63.0	278.37
JPMCCI^2	-0.01	-47.2	77492.58
3mx3m/15mx3m OIS curve; bp	0.26	55.7	-123.40
Residual (bp)	-3.30		
Current 1Mx5Y Breakeven (bp)	212.35		
R-squared (%)	93.77		

JPMCCI

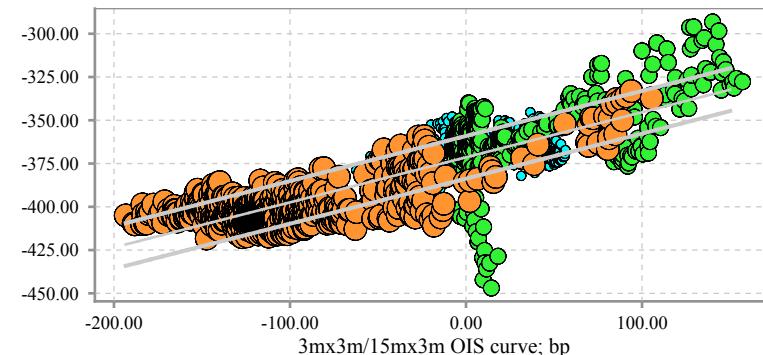
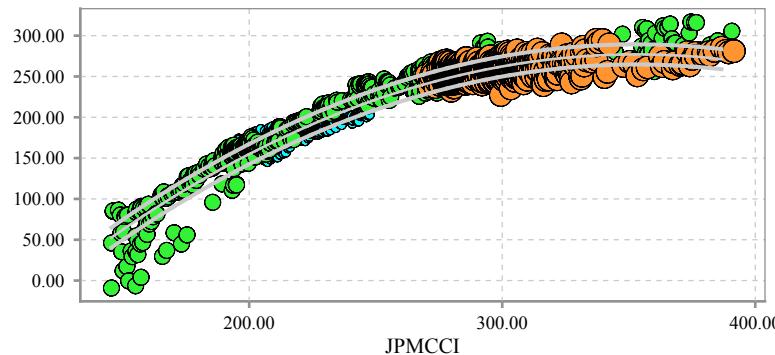


3mx3m/15mx3m OIS curve; bp



Partial regressions

5Y TIPS breakeven (bp) adjusted for other model factors, regressed against specified factor



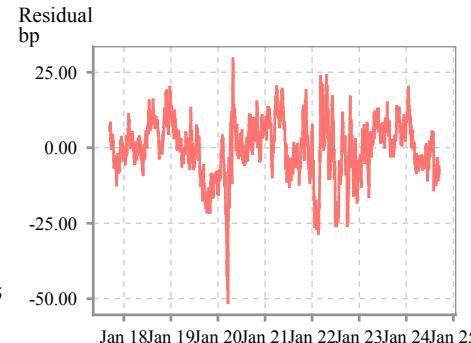
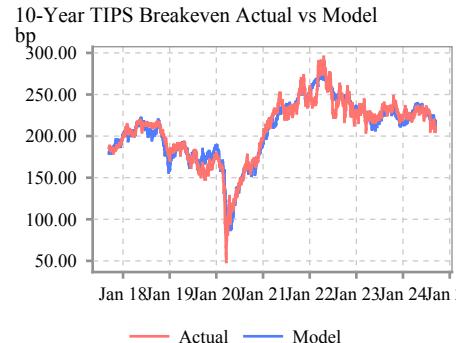
Note:

Model is fitted using daily data over the past 7 years and uses 1-month forward seasonally-adjusted breakevens to account for the effects of near-term carry and seasonality.

US Fixed Income Strategy

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10-Year TIPS Breakeven Fair Value Model

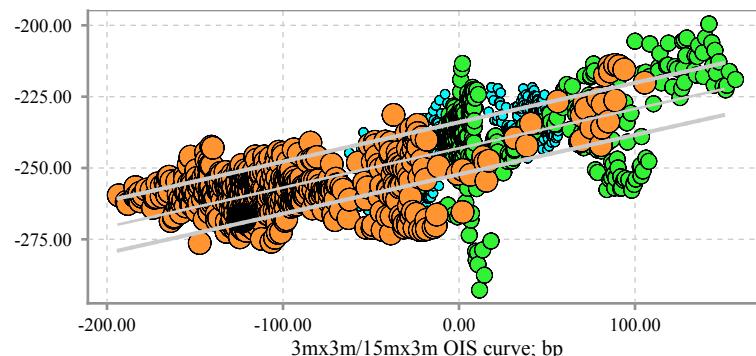
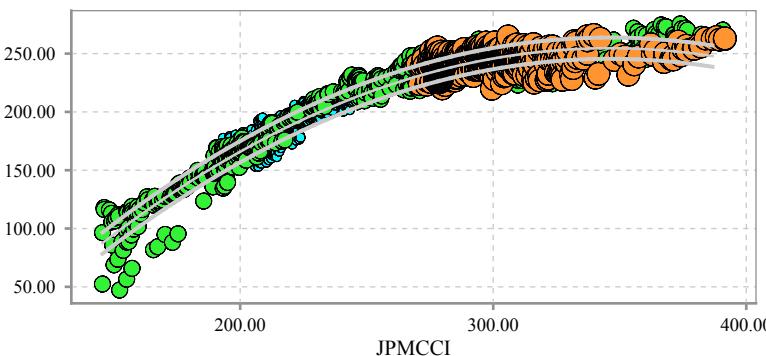


Model	Coeff	T-stat	Current Value
Intercept	-243.09	-43.9	
JPMCCI	2.87	66.7	278.37
JPMCCI^2	0.00	-51.0	77492.58
3mx3m/15mx3m OIS curve; bp	0.14	40.0	-123.40
Residual (bp)	-7.34		
Current 1Mx10Y Breakeven (bp)	211.08		
R-squared (%)	93.68		



Partial regressions

10Y TIPS breakeven (bp) adjusted for other model factors, regressed against specified factor



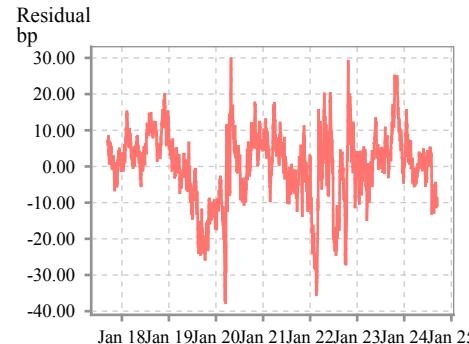
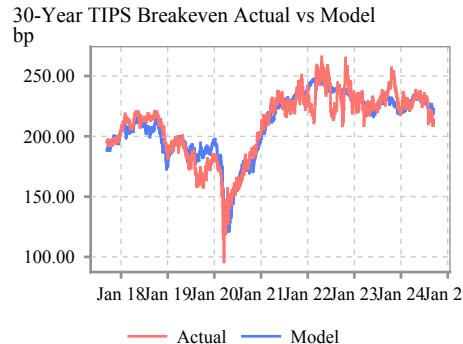
Note:

Model is fitted using daily data over the past 7 years and uses 1-month forward seasonally-adjusted breakevens to account for the effects of near-term carry and seasonality.

US Fixed Income Strategy

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30-Year TIPS Breakeven Fair Value Model

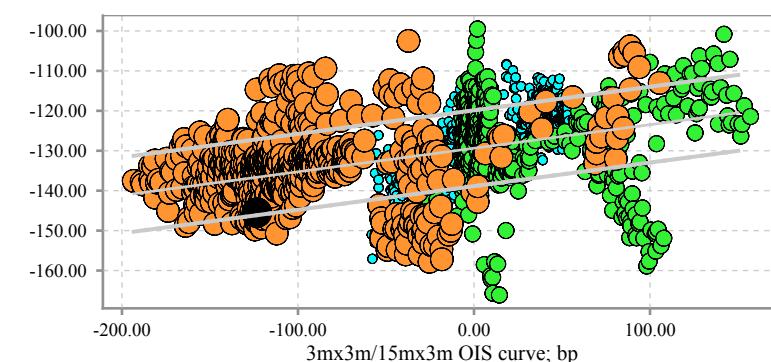
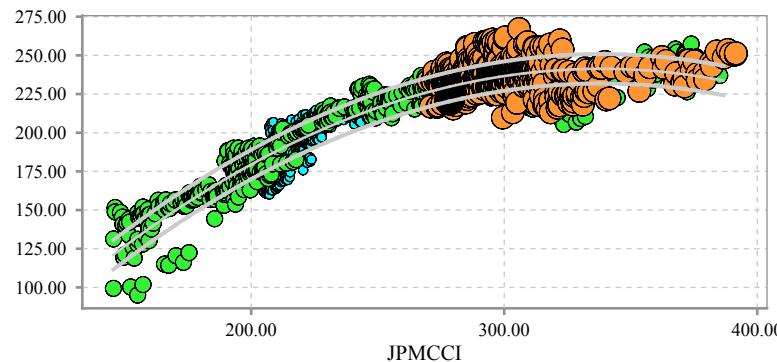


Model	Coeff	T-stat	Current Value
Intercept	-129.34	-22.4	
JPMCCI	2.19	48.8	278.37
JPMCCI^2	0.00	-38.3	77492.58
3mx3m/15mx3m OIS curve; bp	0.06	16.5	-123.40
Residual (bp)	-8.78		
Current 1Mx30Y Breakeven (bp)	213.62		
R-squared (%)	87.49		



Partial regressions

30Y TIPS breakeven (bp) adjusted for other model factors, regressed against specified factor



Note:

Model is fitted using daily data over the past 7 years and uses 1-month forward seasonally-adjusted breakevens to account for the effects of near-term carry and seasonality.

Derivatives Strategy

TIPS Forward Report

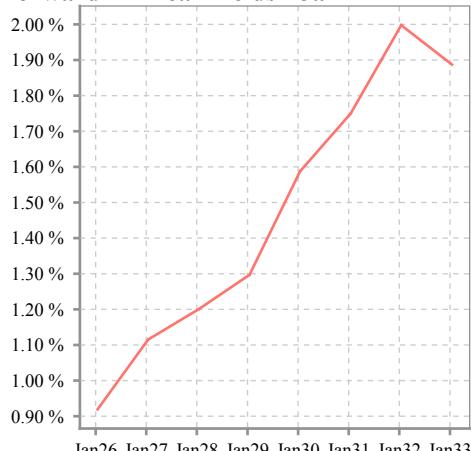
Jan Issues

Maturity	Coupon	Half-Yrs to Mat	Fwd 1Y		Fwd 1Y BEI
			Real Yield	Real Yields	
20260115	0.625	2.7	2.218 %		1.544 %
20260115	2.000	2.7	2.243 %	0.919 %	1.519 %
20270115	0.375	4.7	1.676 %		1.828 %
20270115	2.375	4.7	1.682 %	1.115 %	1.822 %
20280115	0.500	6.7	1.512 %		1.942 %
20280115	1.750	6.7	1.516 %	1.201 %	1.938 %
20290115	0.875	8.7	1.443 %		2.001 %
20290115	2.500	8.7	1.451 %	1.297 %	1.993 %
20300115	0.125	10.7	1.423 %	1.587 %	2.045 %
20310115	0.125	12.7	1.449 %	1.750 %	2.020 %
20320115	0.125	14.7	1.490 %	1.998 %	2.069 %
20330115	1.125	16.7	1.551 %	1.887 %	2.047 %
20340115	1.750	18.7	1.587 %		2.052 %

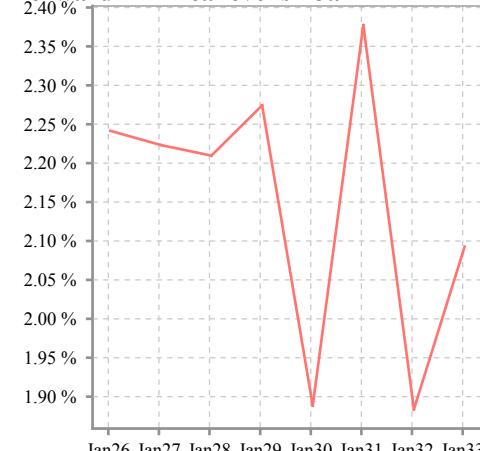
Apr Issues

Maturity	Coupon	Half-Yrs to Mat	Fwd 1Y		Fwd 1Y BEI
			Real Yield	Real Yields	
20250415	0.125	1.2	3.700 %		1.122 %
20260415	0.125	3.2	2.071 %	1.013 %	1.602 %
20270415	0.125	5.2	1.661 %	1.182 %	1.812 %
20280415	1.250	7.2	1.527 %	1.266 %	1.910 %
20290415	2.125	9.2	1.470 %	1.574 %	1.961 %
20320415	3.375	15.2	1.512 %		2.047 %

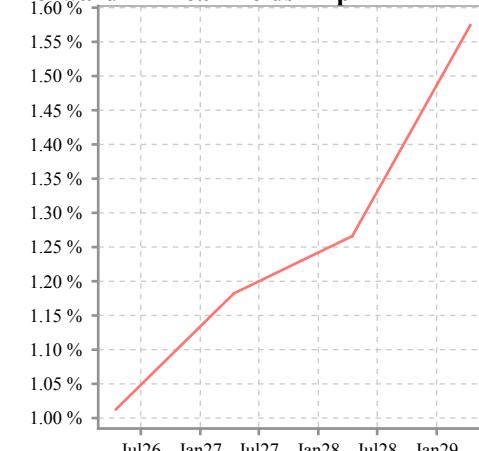
Forward 1Y Real Yields - Jan



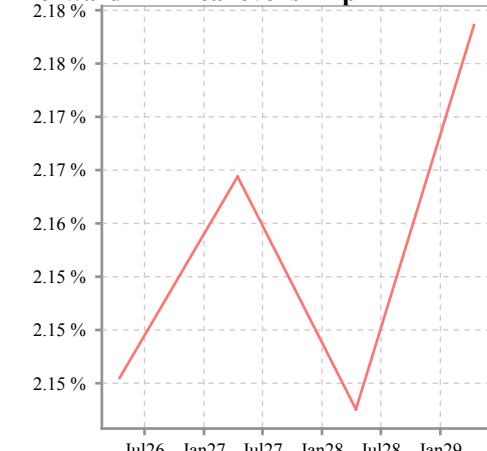
Forward 1Y Breakevens - Jan



Forward 1Y Real Yields - Apr



Forward 1Y Breakevens - Apr



Derivatives Strategy

TIPS Forward Report (cont.)

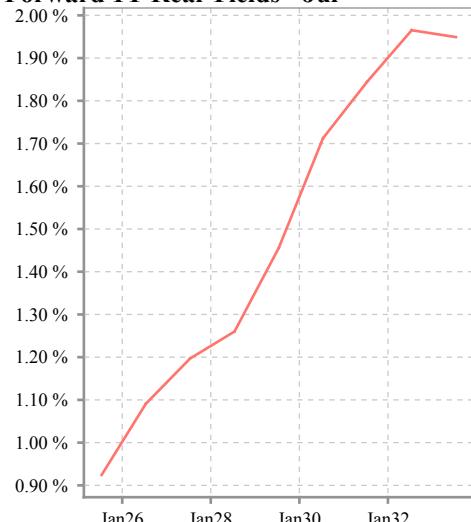
July Issues

Maturity	Coupon	Half-Yrs to Mat	Fwd 1Y		Fwd 1Y	
			Real Yield	Real Yields	BEI	BEI
20250715	0.375	1.7	2.432 %	0.924 %	1.639 %	2.309 %
20260715	0.125	3.7	1.609 %	1.091 %	2.004 %	2.089 %
20270715	0.375	5.7	1.426 %	1.197 %	2.034 %	2.189 %
20280715	0.750	7.7	1.366 %	1.260 %	2.074 %	2.083 %
20290715	0.250	9.7	1.344 %	1.456 %	2.076 %	2.388 %
20300715	0.125	11.7	1.364 %	1.713 %	2.130 %	2.052 %
20310715	0.125	13.7	1.415 %	1.845 %	2.118 %	2.046 %
20320715	0.625	15.7	1.470 %	1.965 %	2.109 %	1.984 %
20330715	1.375	17.7	1.526 %	1.949 %	2.095 %	1.948 %
20340715	1.875	19.7	1.569 %		2.080 %	

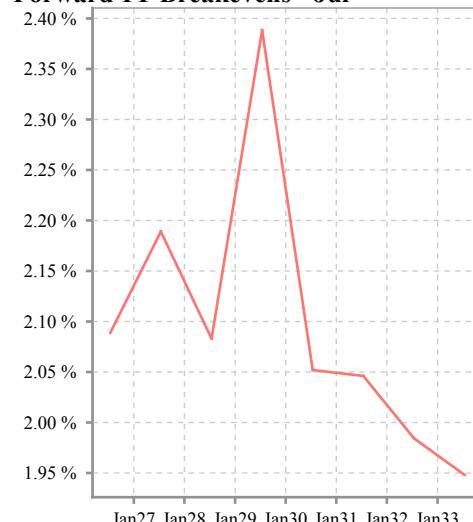
Feb Issues

Maturity	Coupon	Half-Yrs to Mat	Fwd 1Y		Fwd 1Y	
			Real Yield	Real Yields	BEI	BEI
20400215	2.125	30.9	1.751 %	1.784 %	2.060 %	4.979 %
20410215	2.125	32.9	1.753 %	3.187 %	2.237 %	0.633 %
20420215	0.750	34.9	1.835 %	2.555 %	2.145 %	2.634 %
20430215	0.625	36.9	1.874 %	1.854 %	2.171 %	2.755 %
20440215	1.375	38.9	1.873 %	2.199 %	2.201 %	2.293 %
20450215	0.750	40.9	1.889 %	2.082 %	2.206 %	2.088 %
20460215	1.000	42.9	1.898 %	1.988 %	2.200 %	2.279 %
20470215	0.875	44.9	1.902 %	1.785 %	2.204 %	2.623 %
20480215	1.000	46.9	1.897 %	1.751 %	2.222 %	2.185 %
20490215	1.000	48.9	1.891 %	1.433 %	2.220 %	2.551 %
20500215	0.250	50.9	1.873 %	1.081 %	2.233 %	2.365 %
20510215	0.125	52.9	1.843 %	1.760 %	2.238 %	1.608 %
20520215	0.125	54.9	1.840 %	3.035 %	2.215 %	-0.084 %
20530215	1.500	56.9	1.882 %	1.941 %	2.134 %	1.261 %
20540215	2.125	58.9	1.884 %		2.104 %	

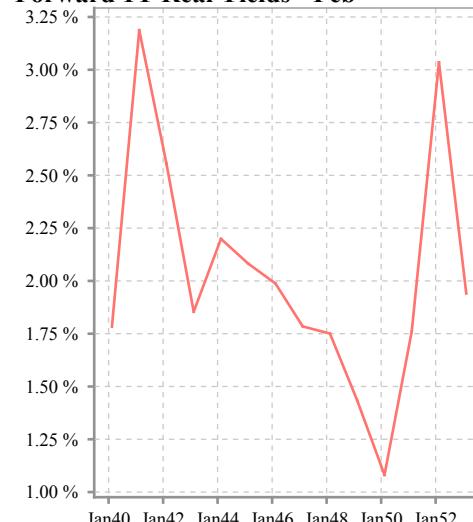
Forward 1Y Real Yields - Jul



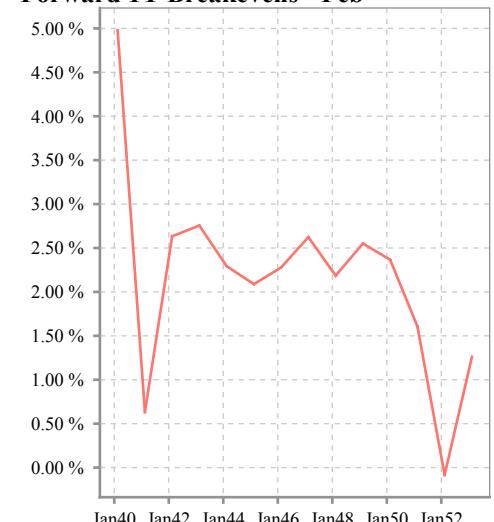
Forward 1Y Breakevens - Jul



Forward 1Y Real Yields - Feb



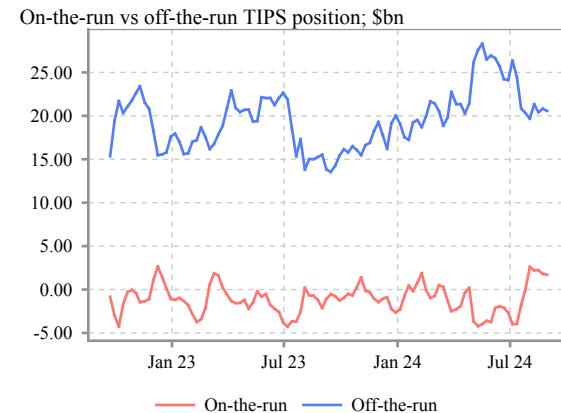
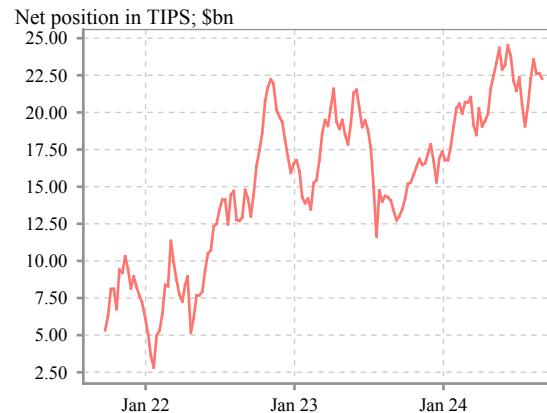
Forward 1Y Breakevens - Feb



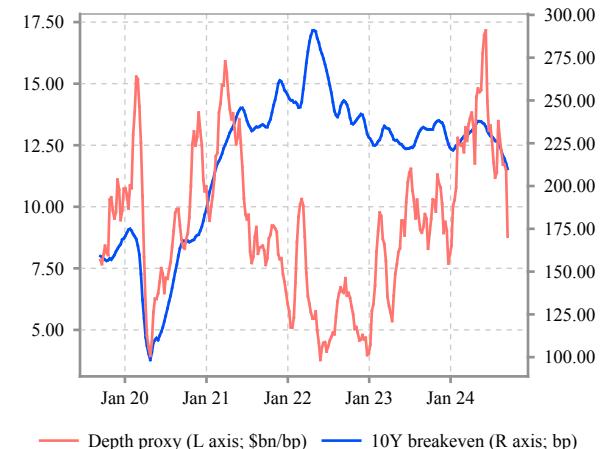
US Fixed Income Strategy

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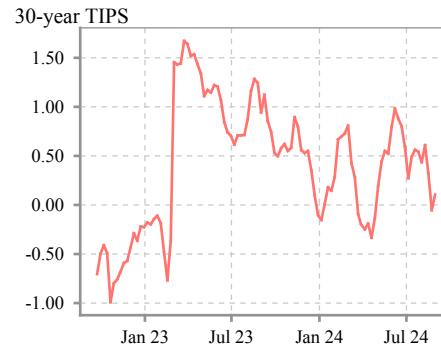
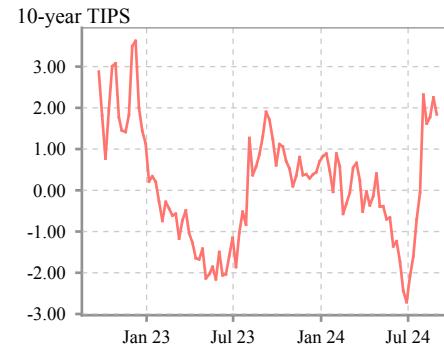
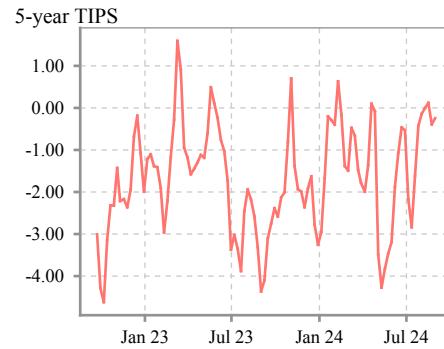
Primary dealer positions in TIPS



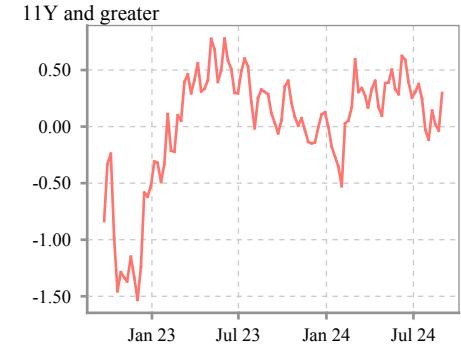
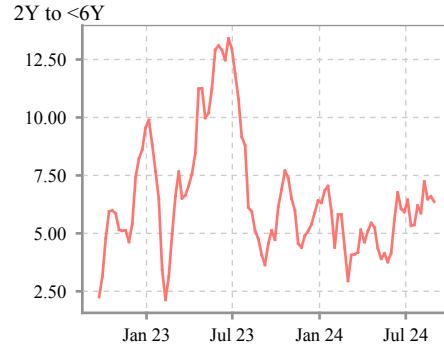
TIPS market depth proxy* vs 10-year breakevens



On-the-run positions in TIPS (\$bn)



Positions by maturity sector (\$bn)



Source: Federal Reserve Bank of New York, J.P. Morgan

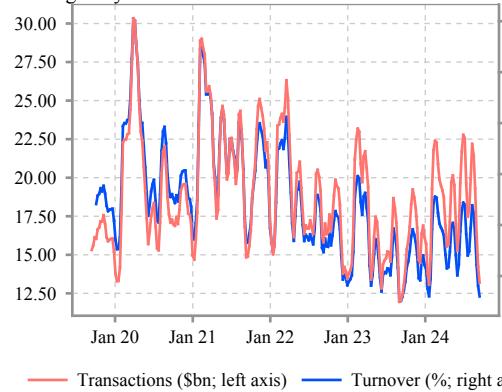
* Depth proxy is six-week moving average of dealer transactions in TIPS divided by the 1-week average of the magnitude of daily changes in 10-year TIPS breakevens
Note: Six-week moving average of 10-year breakevens is shown.

US Fixed Income Strategy

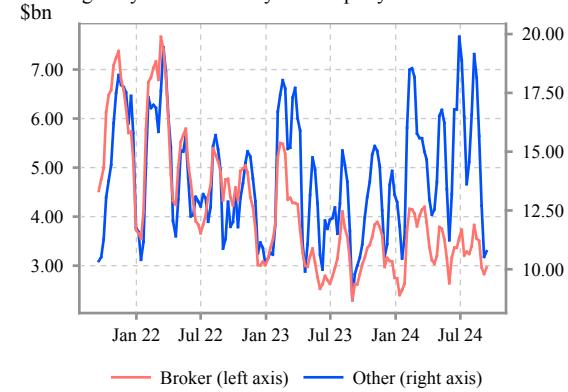
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Primary dealer transactions in TIPS

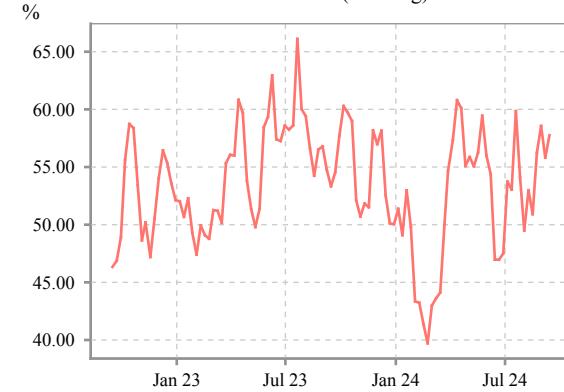
4wk avg daily transactions and turnover



4wk avg daily transactions by counterparty

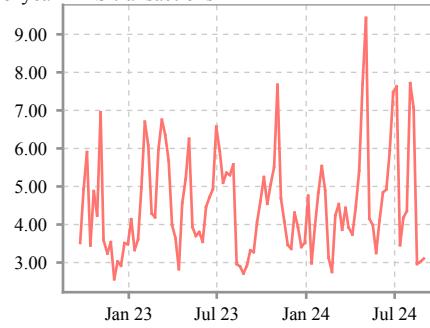


On-the-run transactions as % of total (4wk avg)

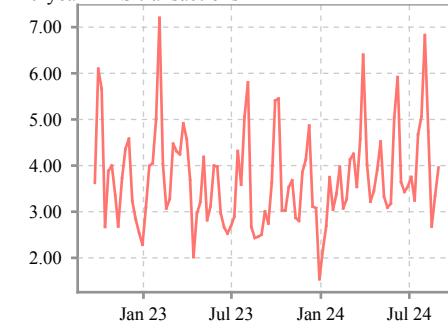


On-the-run transactions in TIPS (\$bn)

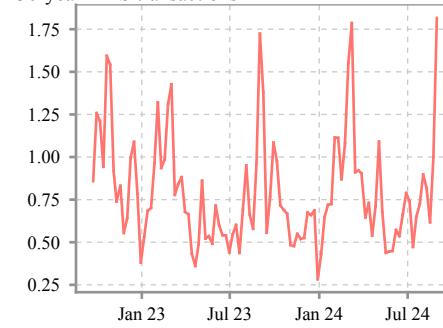
5-year TIPS transactions



10-year TIPS transactions

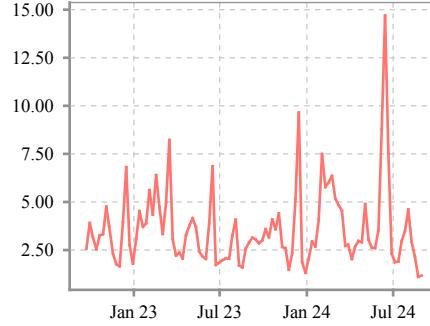


30-year TIPS transactions

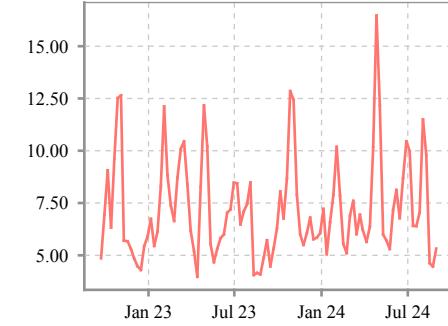


Transactions by maturity sector (\$bn)

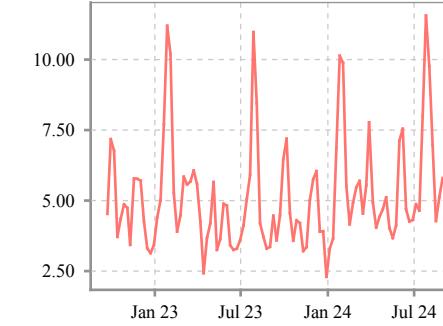
Less than 2Y



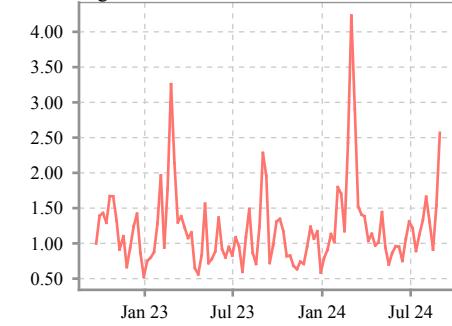
2Y to <6Y



6Y to <11Y



11Y and greater



Source: Federal Reserve Bank of New York, US Treasury, J.P. Morgan

U.S. Fixed Income Strategy

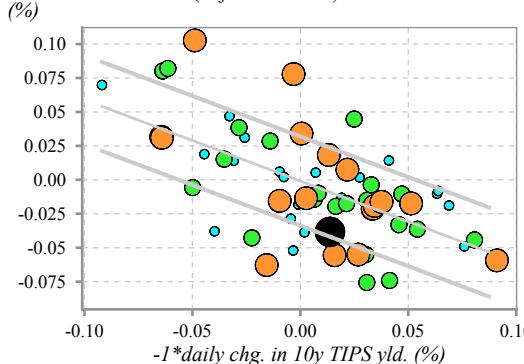
Excess Exposure of TIPS Fund Managers

Excess Exposure of Top 15 TIPS Fund Index*

	3M Beta**	3M T-Stat
10Y TIPS yield	-.6	-5.3
5s/30s real curve	.9	6.3
10Y Breakeven	-.4	-2.6

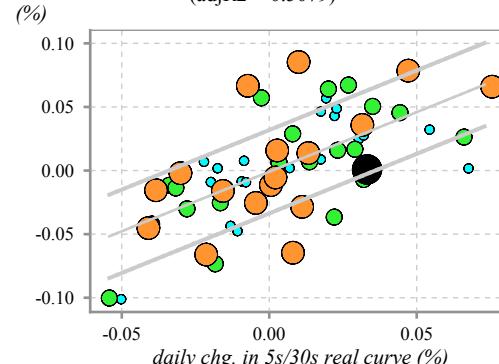
Index vs. 10Y TIPS Yield

$Y = -0.5980 X_1 + 0.9368 X_2 - 0.4022 X_3 - 0.0009$
(adjR² = 0.5079)



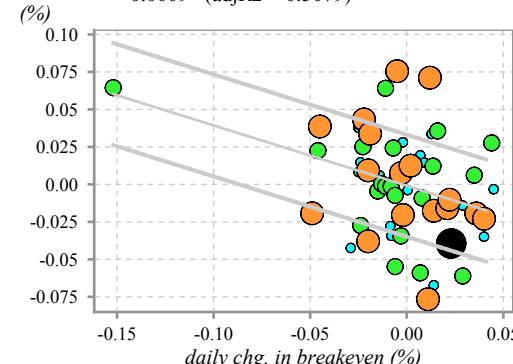
Index vs. 5s/30s real curve

$Y = 0.9368 X_1 - 0.5980 X_2 - 0.4022 X_3 - 0.0009$
(adjR² = 0.5079)

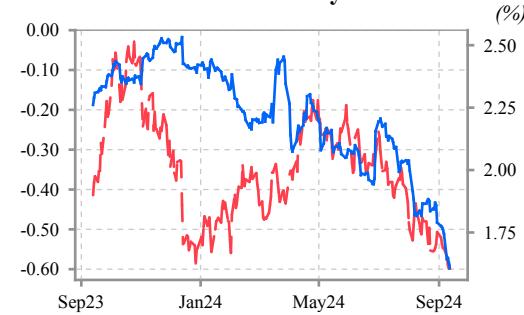


Index vs. 10Y Breakeven

$Y = -0.4022 X_1 - 0.5980 X_2 + 0.9368 X_3 - 0.0009$
(adjR² = 0.5079)



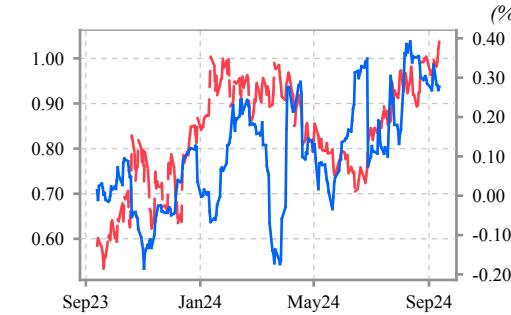
3M Beta of 10Y TIPS yields plotted versus Level of 10Y TIPS yields



— Excess 10Y TIPS yld. exposure (left)

— 10Y TIPS yield (right)

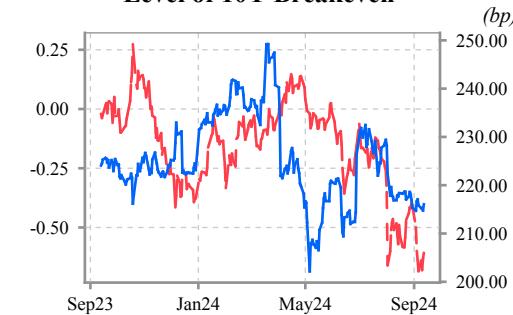
3M Beta of 5s/30s real curve plotted versus Level of 5s/30s real curve



— Excess 5s/30s real curve exposure (left)

— 5s/30s real yield curve (right)

3M Beta of 10Y Breakeven plotted versus Level of 10Y Breakeven

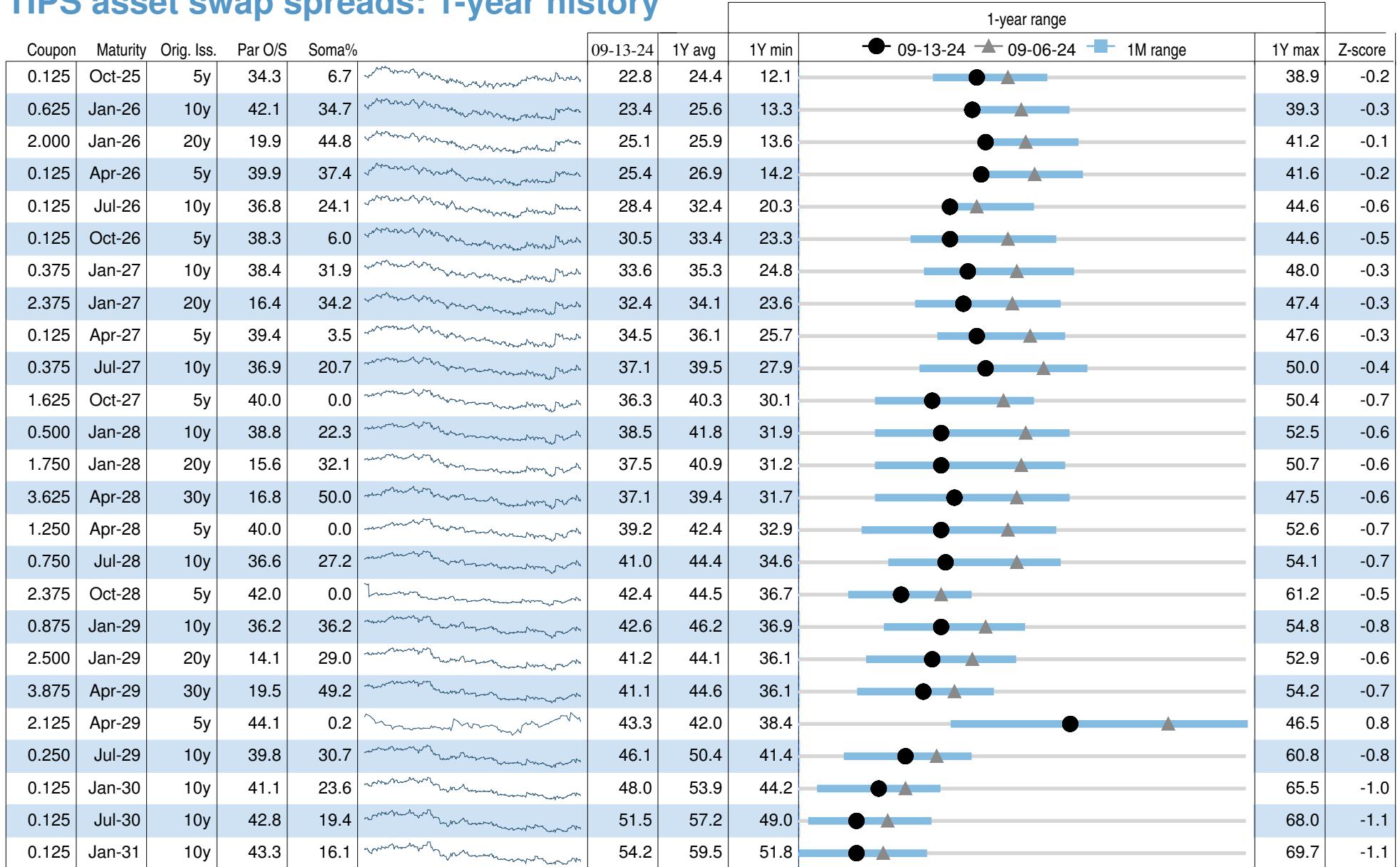


— Excess 10Y breakeven exposure (left)

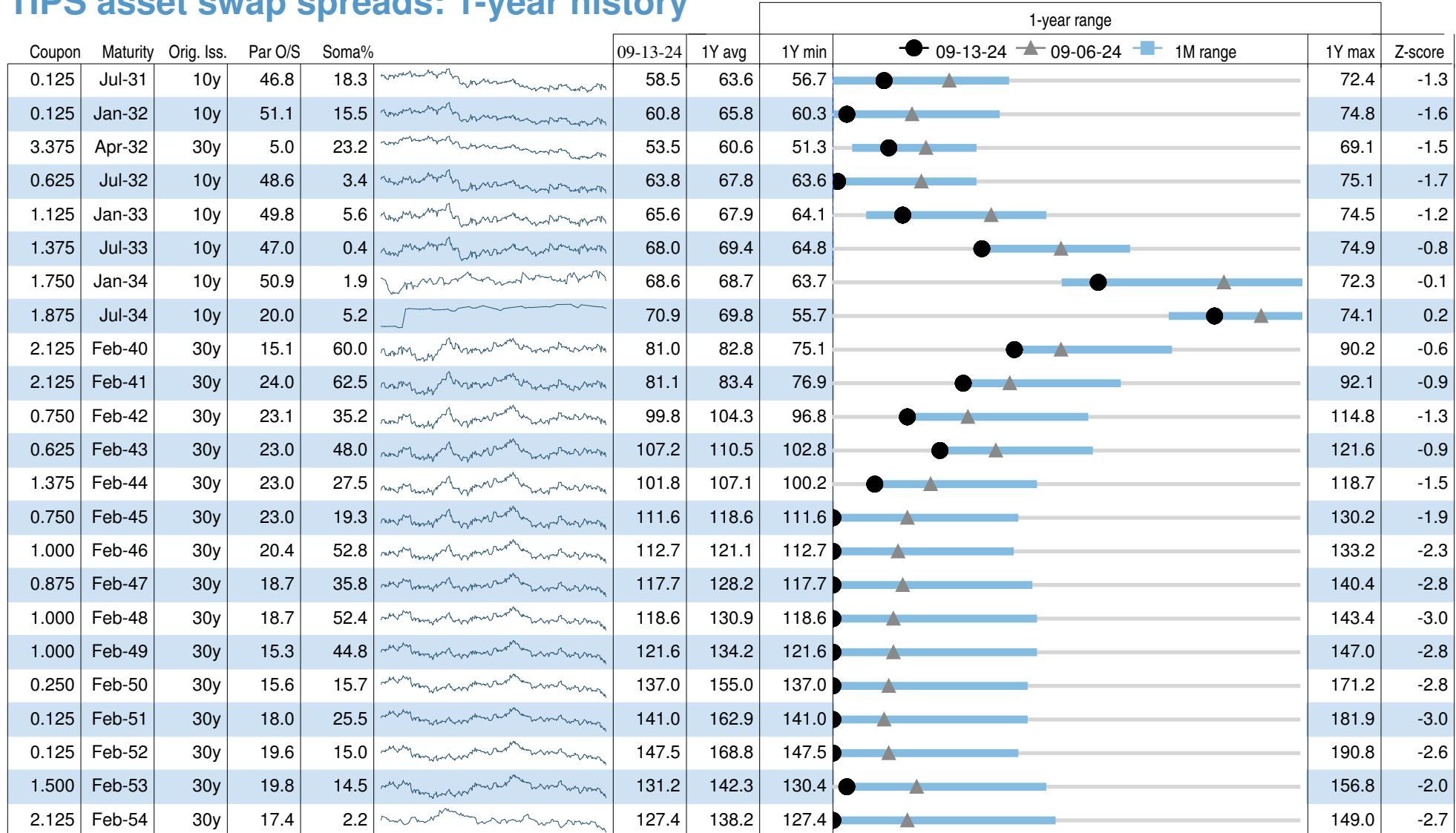
— 10Y Breakeven (right)

* The TIPS fund index is comprised of the 15 largest (by assets under management) inflation-protected funds focused on the US. The daily excess return of the index is computed as the asset value wtd. avg. of the excess returns of the constituents relative to the J.P. Morgan TIPS index (JUSTINE). Regression statistics are calculated using daily excess returns versus daily changes in the variables over the past three months. ** Positive numbers denote fund exposures to the following relative to the benchmark: (1) long 10-year TIPS duration, (2) 5s/30s real yield curve steepeners, and (3) long 10-year breakevens. Source: J.P. Morgan

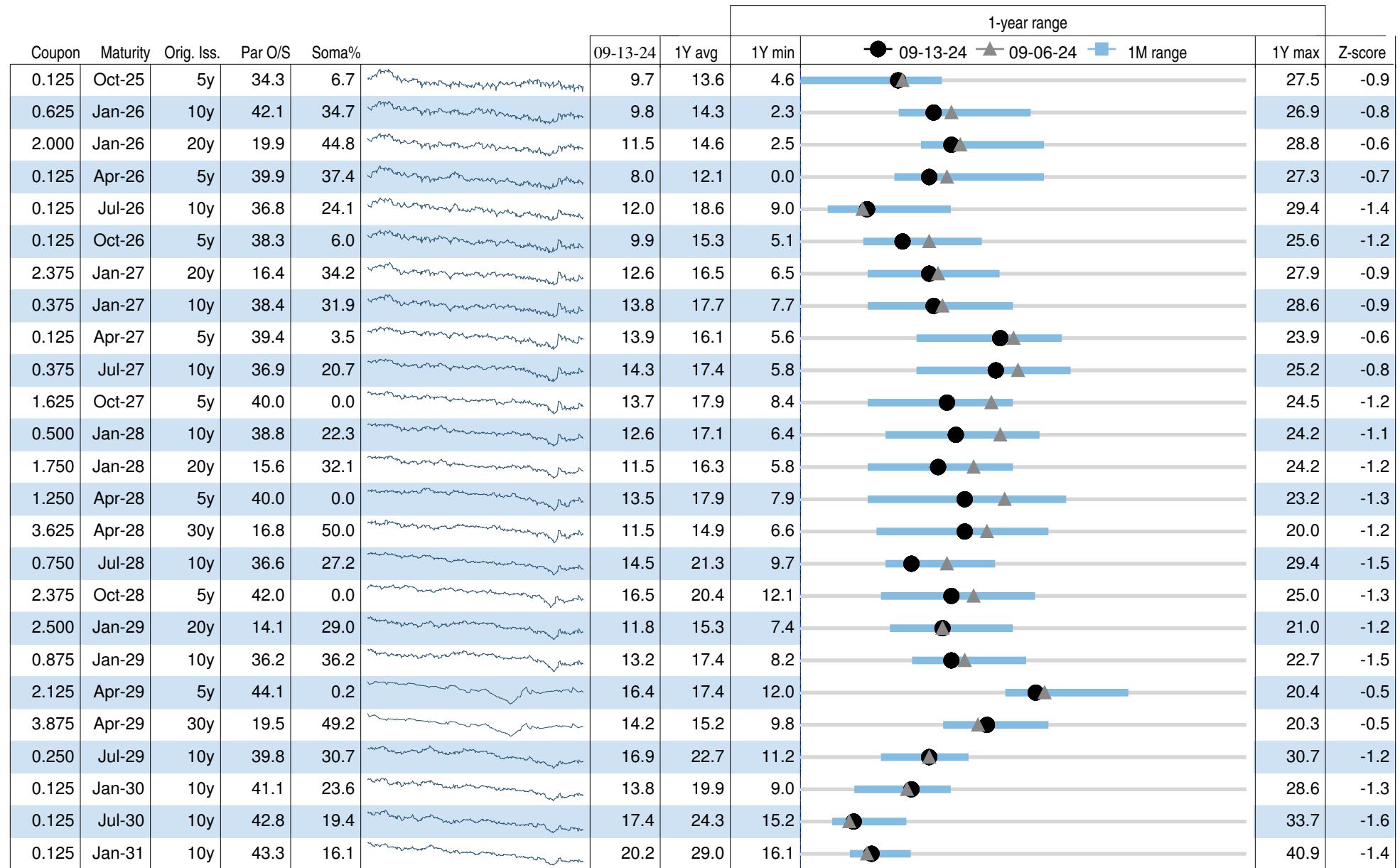
TIPS asset swap spreads: 1-year history



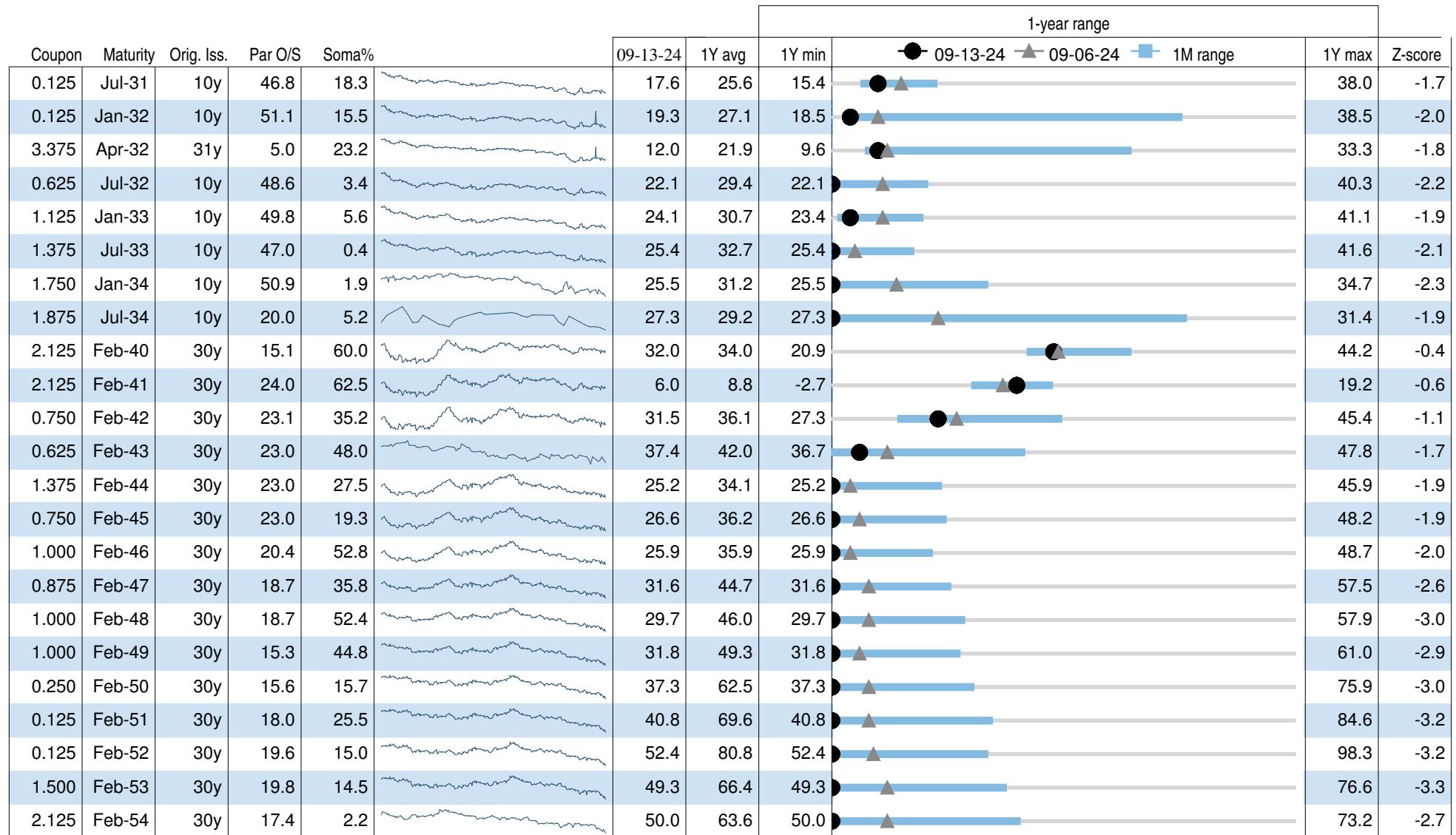
TIPS asset swap spreads: 1-year history



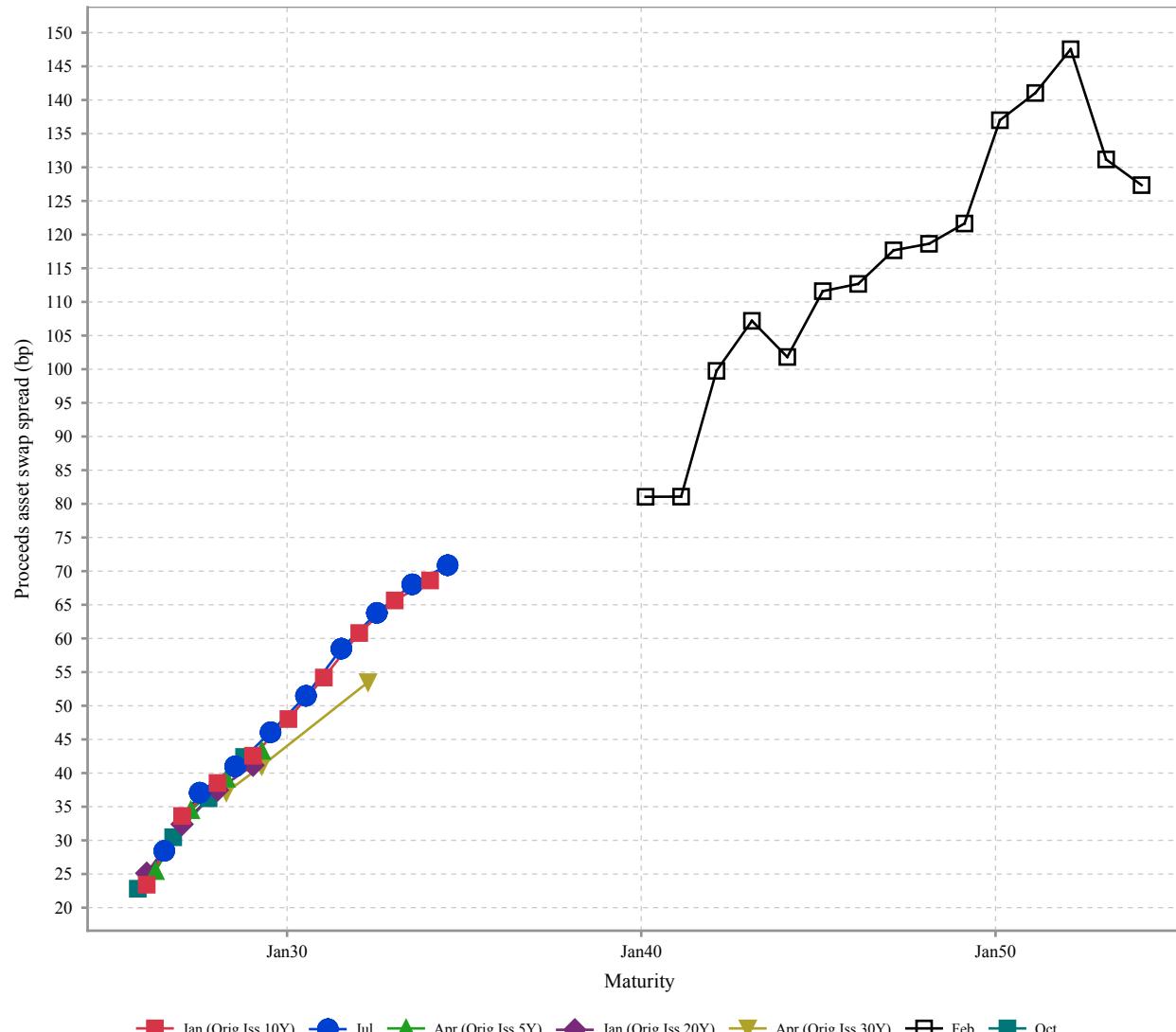
TIPS asset swap spreads vs. closest-maturity Treasury asset swap spreads: 1-year history



TIPS asset swap spreads vs. closest-maturity Treasury asset swap spreads: 1-year history



TIPS asset Sofr Swaps by maturity month



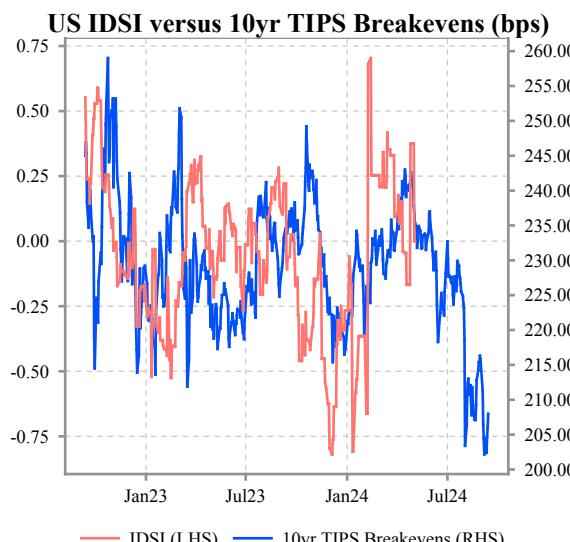
US Fixed Income Strategy

Inflation Data Surprise Report

Name	Bloomberg Ticker	Last Release Date	Next Release Date	Last Release	Last Survey	Surprise	Z-Score	Weight
Average hourly earnings (SA MoM %chg)	AHEMOM	04/05/2024	10/04/2024	0.3	0.3	0.00	0.00	0.96
DOE US Crude oil inventories (1wk chg; 000s of barrels)	DOEASCRD	04/03/2024	09/18/2024	3210.0	-1000.0	-4210.00	-0.68	1.01
DOE US Gasoline inventories (1wk chg; 000s of barrels)	DOEASMGS	04/03/2024	09/18/2024	-4256.0	100.0	4356.00	1.79	1.01
Import Price Index (NSA MoM %chg)	IMP1CHNG	03/15/2024	09/13/2024	-0.3	0.3	0.00	0.00	1.13
Core CPI (SA MoM %chg)	CPUPXCHG	03/13/2024	10/10/2024	0.0	0.0	0.04		1.19
Core PCE (SA MoM %chg)	PCECMOM	02/29/2024	09/27/2024	0.40	0.40	0.00	0.00	0.90
Headline CPI (SA MoM %chg)	CPICHNG	02/13/2024	10/10/2024	0.3	0.2	0.10	0.68	1.16

Note: For the DOE inventory data, the surprise is defined as $-1^*(\text{"last release"} - \text{"last survey"})$, because higher-than-expected inventories are viewed as negative for the market. For all other releases, the surprise is defined as $\text{"last release"} - \text{"last survey"}$.

Source: Bloomberg, J.P. Morgan



US Treasury Strips Relative Value and Asset Swap Report

Maturity	Type	Cusip	Size (MM)	Model Yield	Yield 1-D Yld Mod			Strips Model				Asset Swap Spreads				3 Month			
					Yield	Diff	Chg	Dur	R/C	Pctl	Hi	Lo	Spot	Avg	Pctl	Hi	Lo	Roll	Tot Ret
Oct 31, 2024	P	9128203U9	13	0.000	5.230	-522.974	0.0	0.14	-1.7	95	0.0	-546.1	-535.2	-554.8	89	-531.7	-569.0		
Nov 15, 2024	C	912833LT5	0	4.613	5.199	-58.560	2.1	0.18	-44.6	5	479.4	-68.0	-88.8	-62.2	0	-46.6	-88.8		
Nov 15, 2024	P	912820R58	208	5.141	5.199	-5.791	1.7	0.18	-20.7	33	519.1	-23.2	-37.2	-34.0	25	-27.9	-44.3		
Nov 15, 2024	P	912803BD4	973	3.866	5.199	-133.212	3.0	0.18	-69.2	2	408.4	-138.1	-161.9	-111.2	0	-72.5	-161.9		
Nov 30, 2024	P	9128203Z8	0	0.000	5.129	-512.937	0.0	0.22	-0.4	92	0.0	-541.9	-535.3	-552.3	87	-530.4	-567.4		
Jan 31, 2025	P	9128204K0	13	4.883	4.862	2.122	-0.5	0.38	-15.3	75	492.8	-11.4	-32.7	-21.7	2	8.3	-33.3	-36.5	1.191
Feb 15, 2025	C	912833LU2	0	4.225	4.809	-66.293	4.7	0.43	-22.5	27	422.0	-115.0	-92.1	-75.4	3	-52.5	-100.5	-38.6	1.008
Feb 15, 2025	P	912820T31	605	4.916	4.809	1.487	4.1	0.42	-4.1	95	482.1	-41.4	-24.5	-25.8	67	-18.4	-33.4	-37.7	1.184
Feb 15, 2025	P	912803BE2	980	3.936	4.809	-94.659	10.4	0.43	-31.9	14	386.6	-120.9	-120.4	-94.4	3	-77.6	-123.8	-38.9	0.935
Feb 28, 2025	P	9128204Q7	6	4.693	4.706	-1.285	5.4	0.46	-20.3	19	471.1	-15.2	-34.6	-22.8	2	12.6	-35.5	-36.7	1.101
Apr 30, 2025	P	9128204Z7	10	0.000	4.484	-448.357	0.0	0.63	32.9	93	-202.1	-522.1	-471.1	-508.4	92	-464.0	-545.1	-34.8	-0.134
May 15, 2025	C	912833LV0	0	4.298	4.439	-14.164	5.8	0.66	4.5	78	181.6	-59.4	-35.9	-45.9	83	-26.4	-83.0	-30.6	0.930
May 15, 2025	P	912820U96	664	4.473	4.439	3.407	5.4	0.66	-3.9	53	199.4	-7.5	-18.5	-20.3	77	-14.8	-25.1	-30.4	0.974
May 31, 2025	P	9128205F0	117	0.000	4.410	-441.020	0.0	0.72	38.3	93	-286.3	-520.6	-458.8	-500.8	93	-451.9	-541.0	-35.4	-0.165
Jul 31, 2025	P	912821AF2	66	4.236	4.241	-0.417	4.6	0.86	-15.3	12	58.4	-11.7	-18.5	-6.8	20	37.6	-25.3	-24.0	0.900
Aug 15, 2025	C	912833LW8	0	4.016	4.209	-19.309	6.2	0.91	0.5	45	21.2	-52.3	-36.8	-40.9	53	-22.8	-75.4	-23.0	0.844
Aug 15, 2025	P	912820W78	370	4.221	4.209	1.227	5.7	0.90	-0.9	36	41.8	-11.1	-16.6	-19.1	70	-12.3	-24.1	-22.8	0.898
Aug 15, 2025	P	912803BF9	987	3.541	4.209	-66.806	3.4	0.91	-25.1	2	-20.6	-70.3	-83.6	-62.7	0	-52.8	-83.6	-23.6	0.722
Aug 31, 2025	P	912821AL9	0	0.000	4.184	-418.403	0.0	0.97	45.0	93	-390.3	-506.1	-431.4	-482.6	93	-425.0	-530.0	-25.1	-0.179
Oct 31, 2025	P	912821AU9	14	0.000	4.010	-401.041	0.0	1.13	53.5	95	-396.2	-500.6	-415.9	-471.3	93	-409.9	-522.6	-20.3	-0.179
Nov 15, 2025	C	912833LX6	0	3.917	3.980	-8.061	3.5	1.15	-0.1	53	-3.9	-17.8	-21.0	-22.9	61	-15.6	-29.6	-22.8	0.793
Nov 15, 2025	P	912820Y43	354	3.985	3.980	-1.326	3.7	1.15	-1.5	8	3.0	-11.4	-14.2	-14.7	56	-10.0	-20.4	-22.9	0.810
Nov 30, 2025	P	912821AZ8	0	0.000	3.957	-395.746	0.0	1.22	54.8	97	-390.9	-497.5	-410.7	-467.5	93	-404.8	-520.3	-18.7	-0.181
Dec 31, 2025	P	912821BD6	0	0.000	3.906	-390.622	0.0	1.30	56.6	97	-385.8	-495.4	-404.0	-462.3	93	-398.3	-516.1	-17.1	-0.179
Jan 31, 2026	P	912821BJ3	1	3.868	3.860	1.647	4.4	1.36	-0.5	31	5.3	-8.6	-11.7	-13.0	70	-9.5	-17.4	-15.0	0.783
Feb 15, 2026	C	912833LY4	0	3.834	3.835	-1.508	4.9	1.40	3.5	98	-1.5	-15.2	-13.6	-18.8	95	-11.8	-24.6	-14.5	0.775
Feb 15, 2026	P	9128202A4	321	3.847	3.835	-0.210	4.3	1.40	-0.3	20	1.8	-10.5	-12.2	-13.6	64	-9.3	-17.9	-14.5	0.778
Feb 15, 2026	P	912803BG7	512	3.597	3.835	-25.128	4.8	1.40	-1.0	14	-22.1	-34.9	-37.3	-38.0	62	-34.6	-42.7	-14.5	0.717
Feb 28, 2026	P	912821BP9	0	0.000	3.801	-380.063	0.0	1.47	58.2	97	-375.5	-488.4	-395.6	-455.3	93	-390.2	-510.2	-14.4	-0.175
Apr 30, 2026	P	912821BY0	0	0.000	3.726	-372.599	0.0	1.63	59.5	97	-368.3	-483.4	-385.7	-446.1	95	-380.6	-502.2	-11.9	-0.165
May 15, 2026	C	912833LZ1	0	3.781	3.710	7.062	4.7	1.64	5.7	83	8.6	-7.0	-5.4	-12.3	81	-3.4	-21.9	-11.0	0.779

Notes:

1. Type C indicates that this instrument is a coupon strip, and type P indicates that this instrument is a principal strip.
2. The Rich/Cheap(R/C) measure = (actual yield - model yield) / 3 month average of (actual yield - model yield).
3. In the strips model and asset swap spread calculation, high, low, percentile and average are calculated using past 3 month history.

US Fixed Income Strategy

Maturity	Type	Cusip	Size (MM)	Yield	Model Yield	Yield Diff	1-D Chg	Yld Mod Dur	Strips Model				Asset Swap Spreads				3 Month		
									R/C	Pctl	Hi	Lo	Spot	Avg	Pctl	Hi	Lo	Roll	Tot Ret
May 15, 2026	P	9128202R7	340	3.740	3.710	2.993	4.1	1.64	0.6	72	3.9	-7.6	-9.5	-11.2	70	-7.7	-16.2	-11.1	0.769
May 31, 2026	P	912821CD5	0	0.000	3.700	-369.973	0.0	1.72	59.6	97	-365.8	-481.3	-382.1	-442.8	95	-377.1	-499.4	-10.9	-0.159
Jul 31, 2026	P	912821CP8	0	3.670	3.642	2.793	4.0	1.85	1.0	86	3.8	-8.2	-8.5	-10.9	86	-7.6	-16.3	-8.3	0.769
Aug 15, 2026	C	912833PA2	0	3.620	3.630	-2.013	5.3	1.89	6.2	97	-0.8	-15.3	-12.3	-20.1	97	-11.5	-26.8	-7.8	0.761
Aug 15, 2026	P	9128205K9	23	3.657	3.630	1.740	3.6	1.89	0.1	33	3.5	-9.3	-8.5	-10.2	75	-7.0	-15.2	-7.8	0.770
Aug 15, 2026	P	912803BH5	848	3.475	3.630	-16.463	5.3	1.89	1.9	95	-15.3	-27.8	-26.7	-30.3	94	-26.0	-35.2	-7.9	0.725
Sep 30, 2026	P	912821CY9	0	0.000	3.599	-359.925	0.0	2.05	59.6	97	-356.4	-471.9	-370.9	-432.0	95	-366.4	-489.2	-7.1	-0.127
Oct 31, 2026	P	912821DD4	0	0.000	3.582	-358.236	0.0	2.13	59.5	97	-354.8	-470.2	-367.8	-428.9	95	-363.5	-486.1	-6.3	-0.119
Nov 15, 2026	C	912833PB0	0	3.577	3.573	-0.080	3.7	2.14	12.1	98	-0.1	-22.8	-9.6	-23.6	94	-9.1	-36.8	-5.9	0.773
Nov 15, 2026	P	9128205Y9	41	3.596	3.573	1.792	3.2	2.14	0.3	55	3.3	-8.6	-7.7	-9.9	86	-6.4	-14.7	-5.9	0.777
Nov 15, 2026	P	912803BJ1	1037	3.212	3.573	-36.543	3.7	2.14	9.4	98	-36.5	-55.4	-46.1	-57.3	94	-45.6	-68.7	-5.9	0.682
Dec 31, 2026	P	912821DN2	0	0.000	3.551	-355.122	0.0	2.30	59.0	97	-351.9	-466.3	-364.3	-425.2	97	-360.2	-482.3	-5.1	-0.105
Jan 31, 2027	P	912821DT9	1054	3.593	3.539	6.256	3.2	2.34	1.5	92	6.9	-4.1	-3.1	-6.8	88	-1.9	-13.1	-4.3	0.794
Feb 15, 2027	C	912833PC8	0	3.472	3.532	-6.364	3.1	2.38	2.2	95	-5.6	-18.2	-14.8	-19.2	92	-13.1	-25.3	-4.1	0.767
Feb 15, 2027	P	9128206P7	194	3.546	3.532	1.032	2.7	2.38	-0.1	27	2.5	-8.4	-7.4	-9.5	80	-5.3	-14.3	-4.1	0.786
Feb 15, 2027	P	912803BK8	528	3.302	3.532	-23.336	3.1	2.38	-1.7	9	-19.2	-33.1	-31.8	-32.3	50	-29.0	-38.5	-4.1	0.725
May 15, 2027	C	912833PD6	0	3.491	3.493	-0.917	2.9	2.63	2.3	88	0.7	-9.1	-7.6	-12.0	83	-4.6	-17.7	-3.0	0.793
May 15, 2027	P	9128207D3	192	3.523	3.493	2.236	2.7	2.63	-0.3	19	4.2	-6.8	-4.5	-6.2	67	-1.3	-11.4	-3.0	0.801
Aug 15, 2027	C	912833PE4	0	3.511	3.474	3.346	2.9	2.87	3.1	98	3.3	-7.0	-2.5	-7.9	89	0.3	-13.2	-1.9	0.814
Aug 15, 2027	P	9128203H8	10	3.494	3.474	1.668	2.5	2.87	-0.7	23	3.8	-7.3	-4.2	-5.8	83	-2.6	-10.3	-1.9	0.810
Aug 15, 2027	P	912803BL6	1504	3.401	3.474	-7.634	2.9	2.88	-0.9	16	-4.7	-16.0	-13.5	-14.9	75	-10.7	-18.5	-1.9	0.787
Nov 15, 2027	C	912833QB9	0	3.523	3.462	6.047	2.4	3.12	4.4	98	6.0	-4.3	1.4	-5.2	95	2.7	-12.1	-1.3	0.833
Nov 15, 2027	P	9128203W5	6	3.483	3.462	2.103	2.7	3.12	-0.5	9	4.0	-6.5	-2.6	-4.2	81	-0.6	-9.6	-1.3	0.823
Nov 15, 2027	P	912803BM4	1417	3.423	3.462	-3.954	2.4	3.12	1.3	95	-3.7	-12.2	-8.6	-12.1	86	-7.0	-18.1	-1.3	0.808
Feb 15, 2028	C	912833RY8	0	3.530	3.456	7.426	1.9	3.36	4.2	95	7.9	-1.7	4.2	-2.3	86	6.6	-9.7	-0.6	0.849
Feb 15, 2028	P	9128204M6	532	3.481	3.456	2.507	2.2	3.37	-0.3	17	4.3	-5.3	-0.7	-2.7	81	1.0	-8.7	-0.6	0.837
Mar 31, 2028	P	912821MA0	0	0.000	3.451	-345.132	0.0	3.55	54.7	97	-342.9	-450.2	-347.8	-404.5	97	-345.2	-458.3	-0.6	-0.020
Apr 30, 2028	P	912821MF9	0	0.000	3.449	-344.870	0.0	3.63	54.5	97	-342.7	-449.7	-347.0	-403.5	97	-344.5	-457.2	-0.5	-0.015
May 15, 2028	C	912833WQ9	0	3.520	3.449	7.141	1.9	3.61	4.0	97	7.5	-1.5	5.5	-0.7	92	6.5	-7.7	-0.3	0.861
May 15, 2028	P	9128205B9	43	3.467	3.449	1.884	2.0	3.61	-0.5	16	3.9	-5.3	0.2	-1.5	72	1.4	-8.2	-0.3	0.848
Jun 30, 2028	P	912821MQ5	0	0.000	3.449	-344.904	0.0	3.80	53.9	97	-342.8	-449.1	-345.9	-402.0	97	-343.5	-455.1	-0.2	-0.006

US Fixed Income Strategy

Maturity	Type	Cusip	Size (MM)	Yield	Model Yield	Yield Diff	1-D Chg	Yld Mod Dur	Strips Model				Asset Swap Spreads				3 Month		
									R/C	Pctl	Hi	Lo	Spot	Avg	Pctl	Hi	Lo	Roll	Tot Ret
Aug 15, 2028	C	912833RZ5	0	3.510	3.451	5.967	1.9	3.86	3.9	97	6.2	-2.0	5.7	-0.5	95	6.5	-6.2	0.2	0.871
Aug 15, 2028	P	912821AH8	6	3.472	3.451	2.187	1.9	3.86	-0.1	33	3.4	-4.5	1.9	-0.4	81	3.3	-6.1	0.2	0.862
Aug 15, 2028	P	912803BP7	553	3.345	3.451	-10.525	1.9	3.86	1.5	95	-10.3	-17.5	-10.8	-14.7	94	-10.0	-19.7	0.2	0.830
Aug 31, 2028	P	912821NA9	2	0.000	3.451	-345.142	0.0	3.97	53.3	97	-343.1	-448.5	-345.0	-400.3	97	-342.7	-452.8	0.1	0.002
Sep 30, 2028	P	912821GM1	0	0.000	3.452	-345.208	0.0	4.05	53.0	97	-343.1	-448.1	-344.9	-400.0	97	-342.6	-452.3	0.2	0.006
Nov 15, 2028	C	912833WR7	0	3.550	3.455	9.461	2.6	4.10	6.9	97	9.5	-3.5	10.7	1.5	94	11.2	-5.7	0.4	0.892
Nov 15, 2028	P	912821AW5	8	3.474	3.455	1.847	2.2	4.10	1.1	97	2.0	-4.5	3.1	-0.3	92	3.7	-6.0	0.4	0.873
Nov 15, 2028	P	912803BV4	776	3.420	3.455	-3.534	2.6	4.10	1.9	97	-3.5	-10.4	-2.3	-6.5	94	-1.8	-10.9	0.4	0.860
Nov 30, 2028	P	912821GX7	0	0.000	3.455	-345.498	0.0	4.22	52.4	97	-343.5	-447.6	-344.1	-398.8	97	-342.0	-450.6	0.3	0.014
Dec 31, 2028	P	912821HB4	0	0.000	3.458	-345.797	0.0	4.30	52.2	97	-343.8	-447.6	-343.5	-398.0	97	-341.4	-449.4	0.4	0.017
Jan 31, 2029	P	912821HG3	1	0.000	3.461	-346.052	0.0	4.38	51.8	97	-344.1	-447.2	-343.6	-397.8	97	-341.5	-448.9	0.5	0.020
Feb 15, 2029	C	912833XN5	0	3.540	3.462	7.809	3.1	4.35	5.2	98	7.8	-1.0	10.4	2.6	97	10.4	-3.6	0.7	0.899
Feb 15, 2029	P	912821BL8	9	3.463	3.462	0.162	2.1	4.35	0.3	73	1.3	-5.8	2.8	-0.1	92	3.3	-5.3	0.7	0.880
Feb 15, 2029	P	912803BW2	368	3.355	3.462	-10.680	3.1	4.35	1.0	80	-9.4	-18.1	-8.1	-11.7	97	-8.0	-15.6	0.7	0.853
Feb 28, 2029	P	912821HM0	0	0.000	3.457	-345.682	0.0	4.47	51.4	97	-343.7	-446.4	-343.3	-397.2	97	-341.3	-448.1	0.5	0.023
Mar 31, 2029	P	912821HR9	2	0.000	3.461	-346.089	0.0	4.55	51.2	97	-344.2	-446.3	-342.8	-396.4	97	-340.8	-447.0	0.6	0.026
May 15, 2029	C	912833XS4	0	3.551	3.463	8.767	2.4	4.59	3.8	98	8.8	2.1	12.7	6.2	97	12.9	-0.9	0.7	0.911
May 15, 2029	P	912821CA1	12	3.461	3.463	-0.245	2.0	4.59	0.4	69	1.1	-5.9	3.7	0.7	95	3.9	-4.7	0.7	0.888
May 31, 2029	P	912821JB2	0	0.000	3.466	-346.608	0.0	4.72	50.5	97	-344.7	-445.9	-342.6	-395.7	97	-340.6	-446.0	0.7	0.031
Jun 30, 2029	P	912821JF3	0	0.000	3.468	-346.774	0.0	4.80	50.3	97	-344.9	-445.7	-342.3	-395.3	97	-340.3	-445.2	0.7	0.033
Aug 15, 2029	C	912833XP0	0	3.551	3.473	7.856	2.4	4.84	2.9	95	8.0	2.0	13.0	7.1	97	13.0	0.9	0.9	0.916
Aug 15, 2029	P	912821CR4	33	3.439	3.473	-3.310	1.9	4.84	-0.2	36	-1.0	-8.3	1.8	-1.0	94	2.2	-6.4	0.9	0.889
Aug 15, 2029	P	912803CG6	774	3.441	3.473	-3.140	2.4	4.84	0.6	83	-1.9	-9.0	2.0	-1.6	97	2.0	-6.6	0.9	0.889
Aug 31, 2029	P	912821JR7	1	0.000	3.475	-347.454	0.0	4.97	49.7	97	-345.6	-445.3	-341.8	-394.2	97	-339.9	-443.7	0.8	0.036
Sep 30, 2029	P	912821JV8	0	0.000	3.477	-347.684	0.0	5.05	49.4	97	-345.9	-445.1	-342.1	-394.3	97	-340.2	-443.8	0.8	0.038
Oct 31, 2029	P	912821KA2	1	0.000	3.480	-348.040	0.0	5.13	49.1	97	-346.2	-445.0	-341.7	-393.7	97	-339.8	-443.0	0.8	0.039
Nov 15, 2029	C	912833XT2	0	3.570	3.482	8.766	1.4	5.08	3.3	97	9.1	3.5	15.0	8.6	95	15.5	2.1	0.8	0.924
Nov 15, 2029	P	912821DF9	16	3.457	3.482	-2.542	1.6	5.09	1.8	91	-1.8	-7.2	3.7	-1.2	94	4.4	-7.4	0.8	0.896
Nov 30, 2029	P	912821KF1	0	0.000	3.483	-348.269	0.0	5.22	48.8	97	-346.5	-444.7	-341.9	-393.8	97	-340.1	-443.0	0.8	0.040
Jan 31, 2030	P	912821KQ7	0	0.000	3.490	-348.970	0.0	5.38	48.2	97	-347.2	-444.5	-341.8	-393.3	97	-340.1	-442.2	0.8	0.041
Feb 15, 2030	C	912833XX3	0	3.576	3.491	8.437	1.4	5.33	2.5	97	8.8	3.6	15.6	9.7	95	15.9	2.9	0.9	0.928

US Fixed Income Strategy

Maturity	Type	Cusip	Size (MM)	Yield	Model Yield	Yield Diff	1-D Chg	Yld Mod Dur	Strips Model				Asset Swap Spreads				3 Month		
									R/C	Pctl	Hi	Lo	Spot	Avg	Pctl	Hi	Lo	Roll	Tot Ret
Feb 15, 2030	P	912821DV4	6	3.484	3.491	-0.679	1.7	5.33	-0.9	5	3.0	-5.0	6.5	4.0	91	7.1	-1.4	0.9	0.905
Feb 28, 2030	P	912821KV6	0	0.000	3.488	-348.764	0.0	5.47	47.9	97	-347.0	-443.8	-341.8	-393.0	97	-340.1	-441.8	0.8	0.042
Mar 31, 2030	P	912821KZ7	0	0.000	3.492	-349.176	0.0	5.55	47.6	97	-347.5	-443.8	-341.6	-392.5	97	-339.9	-441.2	0.8	0.042
May 15, 2030	C	912833XU9	0	3.576	3.495	8.080	1.4	5.57	1.7	95	8.5	3.4	16.1	10.8	97	16.3	4.5	0.8	0.929
May 15, 2030	P	912803CH4	672	3.474	3.495	-2.116	1.4	5.58	0.0	50	0.6	-6.8	5.9	2.3	95	6.1	-2.5	0.8	0.904
May 15, 2030	P	912821EK7	1513	3.493	3.495	-0.141	1.9	5.58	-1.0	9	3.6	-5.0	7.9	5.3	97	7.9	-0.1	0.8	0.909
May 31, 2030	P	912821LK9	1	0.000	3.497	-349.732	0.0	5.72	47.1	97	-348.0	-443.5	-341.7	-392.3	97	-340.0	-440.8	0.8	0.042
Jun 30, 2030	P	912821LP8	0	0.000	3.499	-349.906	0.0	5.80	46.9	97	-348.2	-443.3	-341.4	-391.9	97	-339.8	-440.3	0.8	0.042
Jul 31, 2030	P	912821LU7	0	0.000	3.502	-350.211	0.0	5.88	46.6	97	-348.5	-443.1	-341.6	-391.8	97	-340.0	-440.0	0.7	0.042
Aug 15, 2030	C	912833XY1	0	3.636	3.504	13.257	1.6	5.82	5.0	97	13.3	5.3	21.9	13.1	95	22.2	6.7	0.9	0.944
Aug 15, 2030	P	912821EZ4	526	3.504	3.504	0.044	2.2	5.82	-0.5	25	3.6	-5.2	8.7	5.4	98	8.7	0.3	0.9	0.911
Aug 31, 2030	P	912821NC5	0	0.000	3.505	-350.528	0.0	5.97	46.3	97	-348.9	-443.1	-341.3	-391.3	97	-339.7	-439.3	0.7	0.042
Oct 31, 2030	P	912821NM3	2	0.000	3.511	-351.061	0.0	6.13	45.9	97	-349.4	-442.9	-341.5	-391.2	97	-340.0	-439.1	0.7	0.043
Nov 15, 2030	C	9128337N4	0	3.646	3.512	13.415	1.6	6.06	4.6	95	13.5	5.2	22.8	14.2	97	23.1	7.0	0.8	0.947
Nov 15, 2030	P	912821FP5	13	3.501	3.512	-1.050	2.2	6.07	-0.5	30	3.0	-5.2	8.4	4.9	98	8.4	-0.1	0.8	0.911
Nov 30, 2030	P	912821NS0	0	0.000	3.513	-351.258	0.0	6.22	45.6	97	-349.6	-442.6	-341.8	-391.4	97	-340.3	-439.2	0.7	0.043
Jan 31, 2031	P	912821PB5	1	0.000	3.519	-351.878	0.0	6.38	45.2	97	-350.3	-442.5	-341.9	-391.2	97	-340.4	-438.8	0.7	0.043
Feb 15, 2031	C	912833XZ8	0	3.646	3.520	12.107	1.6	6.31	3.7	92	12.2	6.1	22.6	14.7	97	22.8	8.1	0.8	0.947
Feb 15, 2031	P	912821GD1	2	3.485	3.520	-3.948	1.7	6.31	-0.9	27	1.7	-7.7	6.5	3.2	95	8.9	-2.4	0.8	0.907
Feb 15, 2031	P	912803CK7	694	3.436	3.520	-8.862	1.6	6.32	2.4	91	-8.7	-13.3	1.6	-5.0	97	1.8	-12.4	0.8	0.895
May 15, 2031	C	9128337P9	0	3.656	3.524	13.261	1.6	6.55	3.6	98	13.3	6.6	23.8	15.8	97	23.9	9.2	0.7	0.952
May 15, 2031	P	912821MH5	19	3.536	3.524	1.295	2.2	6.56	-0.2	34	4.8	-2.5	11.8	7.7	98	11.8	1.7	0.7	0.922
Aug 15, 2031	C	9128334S6	0	3.661	3.532	12.963	1.6	6.80	3.0	97	13.2	6.9	23.9	16.4	97	24.0	10.0	0.8	0.954
Aug 15, 2031	P	912821MX0	7	3.547	3.532	1.545	1.9	6.80	-0.9	8	5.9	-2.3	12.5	8.8	98	12.5	3.0	0.8	0.926
Nov 15, 2031	C	9128337Q7	0	3.676	3.540	13.375	1.6	7.04	2.9	97	13.6	7.2	25.2	17.5	97	25.2	11.1	0.7	0.959
Nov 15, 2031	P	912821GU3	12	3.556	3.540	1.370	1.7	7.05	-1.5	9	6.3	-2.0	13.1	10.0	98	13.1	4.2	0.7	0.929
Feb 15, 2032	C	9128334T4	0	3.686	3.548	13.600	1.6	7.29	3.0	98	13.6	7.3	25.7	17.9	97	25.8	11.2	0.8	0.963
Feb 15, 2032	P	912821HJ7	2	3.566	3.548	1.587	1.4	7.29	-1.6	8	6.8	-1.8	13.7	10.5	98	13.7	4.5	0.8	0.933
May 15, 2032	C	9128337R5	0	3.698	3.553	14.244	1.6	7.53	2.6	94	14.8	8.6	26.8	19.2	98	26.8	12.6	0.7	0.968
May 15, 2032	P	912821HY4	26	3.567	3.553	1.174	1.3	7.54	-2.0	9	7.0	-2.3	13.7	10.8	98	13.7	5.2	0.7	0.936
Aug 15, 2032	C	9128334U1	0	3.708	3.561	14.594	1.6	7.78	2.8	94	15.2	8.4	27.3	19.5	98	27.3	12.9	0.8	0.973

US Fixed Income Strategy

Maturity	Type	Cusip	Size (MM)	Yield	Model Yield	Yield Diff	1-D Chg	Yld Dur	Strips Model				Asset Swap Spreads					3 Month	
									R/C	Pctl	Hi	Lo	Spot	Avg	Pctl	Hi	Lo	Roll	Tot Ret
Aug 15, 2032	P	912821JN6	4	3.575	3.561	1.329	1.7	7.78	-2.0	12	7.7	-9.0	14.0	11.0	97	14.4	-0.6	0.8	0.940
Nov 15, 2032	C	9128337S3	0	3.718	3.568	14.931	1.6	8.02	2.4	89	16.1	8.5	27.9	20.4	98	27.9	14.0	0.7	0.977
Nov 15, 2032	P	912821KC8	5	3.573	3.568	0.503	1.2	8.03	-2.1	11	6.3	-2.6	13.5	10.5	97	13.9	4.7	0.7	0.942
Feb 15, 2033	C	9128334V9	0	3.728	3.577	15.122	1.6	8.27	2.4	91	16.4	8.3	28.5	20.8	98	28.5	13.9	0.8	0.983
Feb 15, 2033	P	912821KS3	1036	3.598	3.577	2.148	1.2	8.28	-2.7	9	8.3	-0.5	15.5	12.9	92	16.8	6.2	0.8	0.951
May 15, 2033	C	9128337T1	0	3.738	3.581	15.540	1.6	8.51	2.0	88	17.4	8.7	29.4	22.1	98	29.4	15.1	0.8	0.989
May 15, 2033	P	912821LG8	12	3.609	3.581	2.705	1.0	8.52	-2.5	9	8.8	0.1	16.5	13.8	89	17.6	6.9	0.8	0.957
Aug 15, 2033	C	9128334W7	0	3.763	3.590	17.324	1.6	8.76	2.7	89	19.5	9.0	31.3	23.3	98	31.3	16.1	0.8	0.998
Aug 15, 2033	P	912821LW3	11	3.621	3.590	3.161	0.8	8.77	-31.6	9	633.3	0.9	17.2	43.4	84	644.2	7.1	0.8	0.963
Nov 15, 2033	C	9128337U8	0	3.772	3.598	17.429	0.8	9.00	0.3	50	20.4	11.7	31.9	26.2	95	33.1	18.9	0.8	1.004
Nov 15, 2033	P	912821NP6	28	3.622	3.598	2.451	0.4	9.01	-21.4	14	632.6	0.0	16.9	33.0	86	642.8	6.2	0.8	0.967
Feb 15, 2034	C	9128334X5	0	3.789	3.607	18.250	0.8	9.25	1.2	78	20.1	10.8	33.1	26.4	95	33.5	19.0	0.9	1.012
Feb 15, 2034	P	912821PD1	18	3.636	3.607	2.972	0.8	9.26	-1.2	36	13.0	-1.0	17.8	13.5	84	22.5	5.1	0.9	0.974
May 15, 2034	C	9128337V6	0	3.804	3.612	19.135	0.8	9.49	1.1	72	21.1	11.3	34.3	27.8	95	34.8	20.5	0.9	1.020
May 15, 2034	P	912821PT6	32	3.631	3.612	1.907	0.8	9.50	-2.2	20	12.6	-2.4	17.1	14.0	80	22.5	6.2	0.9	0.978
Aug 15, 2034	C	9128334Y3	0	3.816	3.622	19.405	0.8	9.74	1.3	73	21.3	11.0	35.0	28.3	95	35.4	20.6	0.9	1.028
Aug 15, 2034	P	912821QH1	2	3.636	3.622	1.377	0.9	9.75	65.7	57	11.0	-390.1	17.0	-51.3	65	20.5	-377.5	0.9	0.983
Nov 15, 2034	C	9128337W4	0	3.830	3.631	19.899	0.8	9.98	1.4	73	21.8	10.9	36.0	29.2	95	36.3	21.6	0.9	1.036
Feb 15, 2035	C	9128334Z0	0	3.835	3.641	19.417	0.8	10.23	0.7	66	22.4	11.0	35.9	29.9	95	36.2	22.7	1.0	1.042
May 15, 2035	C	912833X88	0	3.850	3.648	20.168	0.8	10.47	0.9	67	23.1	11.2	37.1	30.9	94	37.4	23.3	1.0	1.052
Aug 15, 2035	C	9128335A4	0	3.858	3.659	19.969	0.8	10.72	1.0	69	22.9	10.5	37.3	31.2	94	37.7	23.7	1.0	1.060
Nov 15, 2035	C	912833X96	0	3.858	3.669	18.887	0.8	10.96	0.2	48	23.0	10.1	36.8	31.5	94	37.2	24.3	1.0	1.066
Feb 15, 2036	C	9128335B2	0	3.878	3.681	19.771	0.8	11.21	0.8	69	23.5	10.2	38.2	32.5	94	38.6	25.3	1.1	1.077
Feb 15, 2036	P	912803CX9	1703	3.538	3.681	-14.231	0.8	11.23	-1.8	23	-7.2	-20.3	4.2	1.1	89	4.6	-5.4	1.1	0.993
May 15, 2036	C	912833Y20	0	3.883	3.690	19.315	0.8	11.45	0.7	62	23.4	10.2	38.4	33.0	94	38.7	25.6	1.1	1.086
Aug 15, 2036	C	91283370000.0000	3.888	3.702	18.621	0.8	11.70	0.2	44	23.4	10.1	38.3	33.6	92	38.7	26.1	1.2	1.094	
Nov 15, 2036	C	912833Y38	0	3.898	3.715	18.183	0.8	11.94	0.4	52	22.9	9.2	38.9	34.1	92	39.3	27.1	1.2	1.104
Feb 15, 2037	C	9128337F1	0	3.922	3.728	19.239	0.7	12.18	0.2	39	25.6	10.4	40.7	36.3	89	41.4	28.8	1.3	1.118
Feb 15, 2037	P	912803CZ4	364	3.622	3.728	-10.751	0.7	12.20	-1.1	23	-2.9	-17.5	10.7	7.5	86	11.7	0.3	1.3	1.044
May 15, 2037	C	912833Y46	0	3.959	3.738	22.184	0.8	12.43	1.0	81	28.0	12.3	44.2	39.1	95	44.7	30.7	1.3	1.136
May 15, 2037	P	912803DA8	420	3.639	3.738	-9.819	0.8	12.45	-0.8	28	-1.5	-16.7	12.2	9.0	89	13.7	-0.2	1.3	1.057

US Fixed Income Strategy

Maturity	Type	Cusip	Size (MM)	Yield	Model Yield	Yield Diff	1-D Chg	Yld Mod Dur	Strips Model				Asset Swap Spreads					3 Month	
									R/C	Pctl	Hi	Lo	Spot	Avg	Pctl	Hi	Lo	Roll	Tot Ret
Aug 15, 2037	C	912833Z52	0	3.964	3.752	21.114	0.8	12.67	1.5	95	26.5	11.0	44.2	38.8	97	44.3	30.6	1.4	1.146
Nov 15, 2037	C	912834AD0	0	3.974	3.766	20.795	0.8	12.92	1.6	95	26.3	10.8	44.8	39.5	95	45.2	31.5	1.4	1.158
Feb 15, 2038	C	912833Z60	0	3.981	3.780	19.958	0.8	13.16	0.5	62	27.2	12.1	44.9	41.0	91	45.4	33.3	1.5	1.170
Feb 15, 2038	P	912803DC4	625	3.681	3.780	-10.039	0.8	13.18	-0.6	22	-1.3	-16.4	14.9	12.0	84	16.8	4.0	1.5	1.096
May 15, 2038	C	912834AE8	0	4.008	3.793	21.346	0.9	13.41	1.3	92	28.0	12.6	47.4	42.9	89	48.6	34.8	1.5	1.187
May 15, 2038	P	912803DD2	486	3.698	3.793	-9.645	0.9	13.43	-0.7	25	0.0	-15.3	16.4	13.9	73	19.3	5.8	1.5	1.111
Aug 15, 2038	C	912834AT5	0	4.023	3.809	21.366	0.9	13.65	1.8	97	28.2	13.1	48.5	43.6	97	48.6	35.9	1.6	1.202
Nov 15, 2038	C	912834DU9	0	4.033	3.825	20.827	0.9	13.89	2.1	92	27.3	12.4	49.1	44.2	97	49.3	36.9	1.6	1.216
Feb 15, 2039	C	912834AU2	0	4.054	3.842	21.266	0.9	14.14	1.9	95	28.1	12.9	50.9	46.3	94	52.2	37.9	1.7	1.233
Feb 15, 2039	P	912803DF7	99	3.744	3.842	-9.733	0.9	14.16	-0.4	44	0.5	-14.8	19.9	17.5	80	23.2	9.6	1.7	1.157
May 15, 2039	C	912834DV7	0	4.075	3.857	21.794	0.7	14.38	1.6	89	29.4	14.5	52.8	48.7	84	54.5	40.0	1.7	1.251
May 15, 2039	P	912803DG5	985	3.775	3.857	-8.205	0.7	14.40	-0.5	36	2.6	-12.3	22.8	20.8	64	26.8	12.1	1.7	1.177
Aug 15, 2039	C	912834EP9	0	4.094	3.875	21.940	0.8	14.62	2.0	86	29.1	14.4	54.4	49.8	84	56.3	40.2	1.8	1.268
Aug 15, 2039	P	912803DH3	742	3.794	3.875	-8.056	0.8	14.65	-0.1	42	2.4	-12.3	24.4	22.0	69	28.0	12.5	1.8	1.194
Nov 15, 2039	C	912834EV6	0	4.099	3.893	20.566	0.7	14.87	1.6	84	28.8	14.7	54.7	50.6	81	56.5	42.0	1.8	1.281
Nov 15, 2039	P	912803DJ9	2182	3.799	3.893	-9.429	0.7	14.89	-0.1	47	1.3	-12.8	24.7	22.3	67	28.5	13.9	1.8	1.207
Feb 15, 2040	C	912834FB9	0	4.108	3.912	19.569	0.8	15.11	1.4	84	28.2	14.4	55.3	51.5	81	57.0	42.9	1.9	1.293
Feb 15, 2040	P	912803DK6	2288	3.803	3.912	-10.924	0.8	15.14	0.0	55	-0.3	-14.1	24.8	22.4	69	28.5	14.4	1.9	1.218
May 15, 2040	C	912834HV3	0	4.130	3.930	20.036	0.8	15.36	1.3	88	27.7	14.9	57.4	53.7	83	59.1	45.5	1.9	1.308
May 15, 2040	P	912803FQ1	386	3.941	3.930	1.125	0.8	15.37	1.9	77	7.4	-5.1	38.5	34.2	77	41.0	23.9	1.9	1.261
May 15, 2040	P	912803DM2	2389	3.805	3.930	-12.469	0.8	15.38	-1.3	27	-0.8	-13.9	24.9	23.8	61	29.6	17.0	1.9	1.228
Aug 15, 2040	C	912834JB5	0	4.129	3.949	17.995	0.8	15.60	-0.2	53	27.3	15.5	57.1	54.8	70	59.7	47.1	1.9	1.315
Aug 15, 2040	P	912803FS7	129	3.967	3.949	1.776	0.8	15.61	2.0	80	7.9	-4.1	40.8	36.3	84	42.8	26.4	1.9	1.276
Aug 15, 2040	P	912803DN0	237	3.834	3.949	-11.492	0.8	15.62	-1.9	12	0.3	-12.1	27.6	27.0	50	32.2	20.1	1.9	1.243
Nov 15, 2040	C	912834JH2	0	4.147	3.969	17.842	0.7	15.85	-0.2	34	27.9	14.3	58.7	56.4	72	61.5	49.2	1.9	1.326
Nov 15, 2040	P	912803FU2	73	4.002	3.969	3.307	0.9	15.86	1.8	81	9.5	-2.1	44.2	39.8	81	46.0	28.8	1.9	1.291
Nov 15, 2040	P	912803DP5	936	3.832	3.969	-13.654	0.7	15.87	-2.7	3	-0.6	-14.2	27.2	27.4	36	33.0	20.8	1.9	1.249
Feb 15, 2041	C	912834JP4	0	4.163	3.988	17.423	0.5	16.09	0.8	70	25.1	12.0	60.0	56.6	80	62.3	48.9	1.9	1.335
Feb 15, 2041	P	912803FW8	438	4.016	3.988	2.788	0.8	16.10	1.6	83	9.7	-1.9	45.4	41.2	78	46.8	30.5	1.9	1.299
Feb 15, 2041	P	912803DQ3	820	3.823	3.988	-16.570	0.6	16.12	-2.7	12	-3.9	-17.5	26.0	26.1	42	31.3	19.9	1.9	1.252
May 15, 2041	C	912834KH0	0	4.174	4.005	16.839	0.4	16.33	0.5	64	25.2	12.9	61.1	57.9	72	64.3	49.1	1.9	1.342

US Fixed Income Strategy

Maturity	Type	Cusip	Size (MM)	Yield	Model Yield	Yield 1-D Yld Mod			Strips Model				Asset Swap Spreads					3 Month	
						Diff	Chg	Dur	R/C	Pctl	Hi	Lo	Spot	Avg	Pctl	Hi	Lo	Roll	Tot Ret
May 15, 2041	P	912803DS9	358	3.859	4.005	-14.660	0.4	16.36	-2.9	0	-1.7	-14.7	29.6	29.8	31	35.0	22.9	1.9	1.265
May 15, 2041	P	912803FZ1	564	4.032	4.005	2.684	0.9	16.34	1.5	91	9.4	-1.4	47.0	42.8	88	48.0	31.9	1.9	1.307
Aug 15, 2041	C	912834KP2	0	4.196	4.025	17.145	0.7	16.58	-0.1	47	26.3	14.7	63.2	60.5	78	65.7	51.3	1.9	1.350
Aug 15, 2041	P	912803DT7	446	3.926	4.025	-9.858	0.7	16.60	-1.9	9	1.9	-10.7	36.2	35.3	50	40.2	26.8	1.9	1.283
Aug 15, 2041	P	912803GB3	471	4.059	4.025	3.440	0.8	16.59	2.5	92	8.9	-1.8	49.5	44.2	92	50.2	33.3	1.9	1.316
Nov 15, 2041	C	912834KV9	0	4.224	4.044	18.025	1.1	16.82	0.7	66	26.4	14.2	65.9	62.3	84	67.6	53.2	1.9	1.357
Nov 15, 2041	P	912803GD9	19	4.068	4.044	2.454	1.1	16.83	2.1	95	8.3	-1.8	50.3	45.3	92	50.9	34.8	1.9	1.319
Nov 15, 2041	P	912803DU4	636	3.969	4.044	-7.476	1.1	16.84	-2.3	11	4.9	-8.4	40.4	39.8	44	44.9	31.7	1.9	1.295
Feb 15, 2042	C	912834LB2	0	4.243	4.063	17.824	0.7	17.06	0.7	70	26.1	15.4	67.6	63.9	81	69.6	53.9	1.9	1.361
Feb 15, 2042	P	912803DV2	594	4.008	4.063	-5.667	0.7	17.08	-1.1	9	5.2	-6.6	44.1	42.2	66	47.0	33.0	1.9	1.304
Feb 15, 2042	P	912803GF4	700	4.083	4.063	1.735	1.5	17.08	1.7	92	7.6	-2.2	51.5	46.8	88	52.0	36.1	1.9	1.322
May 15, 2042	C	912834LK2	0	4.284	4.079	20.512	0.9	17.30	2.5	91	26.1	16.1	71.7	66.0	89	72.8	55.4	1.8	1.369
May 15, 2042	P	912803GJ6	97	4.068	4.079	-1.103	0.7	17.32	0.5	73	6.1	-3.1	50.1	46.5	78	52.2	36.6	1.8	1.316
May 15, 2042	P	912803DX8	1021	4.054	4.079	-2.482	0.9	17.32	0.3	78	6.1	-4.1	48.7	45.2	81	50.3	35.4	1.8	1.313
Aug 15, 2042	C	912834LR7	0	4.289	4.097	19.232	1.0	17.55	3.2	97	23.9	14.4	72.1	65.6	97	72.5	55.2	1.8	1.366
Aug 15, 2042	P	912803GL1	4	4.072	4.097	-2.472	0.6	17.57	-0.5	33	5.6	-3.0	50.4	47.6	69	52.7	37.8	1.8	1.313
Aug 15, 2042	P	912803DY6	1081	4.079	4.097	-1.774	1.0	17.57	1.0	94	5.8	-4.3	51.1	46.8	95	51.5	37.2	1.8	1.315
Nov 15, 2042	C	912834LX4	0	4.295	4.114	17.949	1.1	17.79	2.8	89	22.7	12.8	72.7	66.4	88	73.6	55.7	1.7	1.362
Nov 15, 2042	P	912803GN7	0	4.038	4.114	-7.725	0.7	17.81	-2.0	0	1.7	-7.7	47.0	45.6	52	50.9	36.3	1.7	1.299
Nov 15, 2042	P	912803DZ3	2767	4.085	4.114	-3.040	1.1	17.81	0.2	66	5.2	-4.6	51.7	48.1	77	53.5	38.3	1.7	1.310
Feb 15, 2043	C	912834MD7	0	4.303	4.131	17.033	1.0	18.04	2.0	88	22.6	13.3	73.4	67.7	89	74.4	56.8	1.7	1.356
Feb 15, 2043	P	912803GQ0	5	4.067	4.131	-6.479	0.6	18.06	-1.7	5	2.4	-6.8	49.9	47.9	64	53.3	38.5	1.6	1.298
Feb 15, 2043	P	912803EA7	5055	4.103	4.131	-2.958	1.0	18.05	-0.1	70	5.2	-4.2	53.4	49.8	80	55.2	39.4	1.6	1.307
May 15, 2043	C	912834MM7	0	4.303	4.144	15.878	1.1	18.28	1.4	92	21.8	12.6	73.6	68.3	89	73.9	57.7	1.6	1.347
May 15, 2043	P	912803GT4	2	4.088	4.144	-5.655	0.7	18.30	-1.0	11	2.5	-6.3	52.0	49.2	69	54.5	39.5	1.5	1.294
May 15, 2043	P	912803EC3	4818	4.118	4.144	-2.619	1.1	18.30	0.6	86	4.3	-4.8	55.1	50.6	86	56.2	40.2	1.6	1.301
Aug 15, 2043	C	912834MT2	0	4.302	4.160	14.122	1.1	18.53	0.5	83	21.2	11.9	73.5	68.9	84	74.5	58.3	1.5	1.334
Aug 15, 2043	P	912803GV9	1	4.070	4.160	-9.047	0.6	18.55	-1.9	2	-0.3	-9.4	50.3	48.1	62	52.9	38.5	1.5	1.277
Aug 15, 2043	P	912803ED1	4692	4.117	4.160	-4.374	1.1	18.54	-0.3	55	3.7	-5.6	55.0	51.2	75	57.0	40.8	1.5	1.289
Nov 15, 2043	C	912834MZ8	0	4.302	4.174	12.810	1.3	18.77	0.3	80	19.7	10.8	73.6	69.1	88	74.6	58.3	1.4	1.321
Nov 15, 2043	P	912803GX5	0	4.056	4.174	-11.793	0.7	18.79	-2.1	5	-2.6	-12.4	48.9	46.9	64	51.7	37.7	1.4	1.260

US Fixed Income Strategy

Maturity	Type	Cusip	Size (MM)	Yield	Model Yield	Yield Diff	1-D Chg	Yld Mod Dur	Strips Model				Asset Swap Spreads					3 Month	
									R/C	Pctl	Hi	Lo	Spot	Avg	Pctl	Hi	Lo	Roll	Tot Ret
Nov 15, 2043	P	912803EE9	3236	4.117	4.174	-5.678	1.3	18.79	-0.5	38	2.4	-7.1	55.1	51.4	78	57.3	40.9	1.4	1.275
Feb 15, 2044	C	912834NF1	0	4.311	4.187	12.410	0.9	19.01	0.5	84	18.6	10.1	74.5	69.6	91	75.2	58.4	1.3	1.307
Feb 15, 2044	P	912803GZ0	16	4.090	4.187	-9.739	0.9	19.03	-1.1	12	-1.3	-10.4	52.3	49.0	69	54.8	38.4	1.3	1.252
Feb 15, 2044	P	912803EF6	5373	4.126	4.187	-6.089	0.9	19.03	-0.5	39	1.4	-7.6	56.0	52.0	78	58.0	41.2	1.3	1.261
May 15, 2044	C	912834NP9	0	4.312	4.197	11.392	0.9	19.26	0.2	72	17.6	9.4	74.7	69.9	89	75.8	59.0	1.2	1.289
May 15, 2044	P	912803HC0	0	4.089	4.197	-10.899	0.9	19.28	-0.5	33	-3.3	-13.9	52.4	48.3	69	54.6	35.5	1.2	1.234
May 15, 2044	P	912803EH2	3678	4.130	4.197	-6.789	0.9	19.28	-0.5	42	0.4	-8.3	56.5	52.5	81	58.6	41.8	1.2	1.244
Aug 15, 2044	C	912834NV6	0	4.310	4.208	10.221	0.9	19.50	-0.2	48	17.2	8.6	74.7	70.1	83	75.7	59.3	1.1	1.267
Aug 15, 2044	P	912803HE6	1	4.200	4.208	-0.777	13.1	19.51	11.0	93	-0.8	-14.7	63.7	52.5	93	63.7	49.7	1.1	1.240
Aug 15, 2044	P	912803EJ8	3268	4.125	4.208	-8.272	0.9	19.52	-1.4	12	0.2	-9.3	56.2	52.7	70	58.7	42.3	1.1	1.222
Nov 15, 2044	C	912834PB8	0	4.314	4.217	9.634	0.9	19.75	0.8	78	15.1	6.7	75.2	69.5	91	75.6	58.4	0.9	1.245
Nov 15, 2044	P	912803EK5	6400	4.129	4.217	-8.861	0.9	19.77	-1.2	19	-1.2	-10.2	56.7	53.0	77	58.4	42.9	0.9	1.199
Feb 15, 2045	C	912834PH5	0	4.307	4.225	8.188	0.8	19.99	0.3	73	14.3	6.3	74.7	69.3	92	75.2	58.5	0.8	1.217
Feb 15, 2045	P	912803EL3	5022	4.127	4.225	-9.812	0.8	20.01	-1.6	17	-1.2	-11.1	56.7	53.2	75	59.0	43.0	0.8	1.173
May 15, 2045	C	912834KB3	0	4.297	4.230	6.681	0.8	20.24	-0.7	41	13.8	5.4	74.0	69.5	81	74.9	58.6	0.6	1.188
May 15, 2045	P	912803EN9	2921	4.122	4.230	-10.817	0.8	20.26	-2.5	11	-1.4	-11.9	56.5	53.8	67	59.7	43.5	0.6	1.145
Aug 15, 2045	C	912834PM4	0	4.294	4.235	5.954	0.9	20.48	-0.7	39	13.2	4.2	73.9	69.3	84	74.7	58.3	0.5	1.158
Aug 15, 2045	P	912803EP4	3739	4.119	4.235	-11.548	0.9	20.50	-2.7	11	-1.6	-12.8	56.4	53.8	67	59.8	43.5	0.5	1.115
Nov 15, 2045	C	912834PT9	0	4.289	4.238	5.061	1.0	20.73	-1.4	16	13.0	3.6	73.6	69.6	73	74.9	58.5	0.3	1.128
Nov 15, 2045	P	912803EQ2	3252	4.114	4.238	-12.437	1.0	20.75	-3.3	8	-2.0	-13.9	56.1	54.0	61	59.9	43.5	0.3	1.085
Feb 15, 2046	C	912834PZ5	0	4.292	4.241	5.100	0.6	20.97	-0.9	25	12.2	3.8	74.1	69.6	77	75.2	58.4	0.2	1.101
Feb 15, 2046	P	912803ER0	5955	4.127	4.241	-11.403	0.6	20.99	-2.7	6	-2.1	-12.5	57.6	54.8	62	61.0	44.1	0.2	1.060
May 15, 2046	C	912834QH4	0	4.293	4.240	5.367	0.9	21.22	-0.7	31	12.2	4.0	74.7	69.9	77	75.4	58.5	0.1	1.076
May 15, 2046	P	912803ET6	5091	4.128	4.240	-11.133	0.9	21.24	-2.5	5	-2.1	-12.0	58.2	55.2	64	61.1	44.2	0.1	1.035
Aug 15, 2046	C	912834QP6	0	4.297	4.240	5.706	0.9	21.46	-0.3	41	12.4	3.9	75.2	70.0	84	76.0	58.6	0.0	1.051
Aug 15, 2046	P	912803EU3	4708	4.127	4.240	-11.292	0.9	21.48	-2.8	5	-1.6	-12.0	58.2	55.5	59	62.0	44.6	0.0	1.009
Nov 15, 2046	C	912834QV3	0	4.289	4.238	5.091	0.8	21.71	-0.7	20	12.4	4.0	74.7	70.0	72	76.3	58.3	-0.2	1.024
Nov 15, 2046	P	912803EV1	3036	4.128	4.238	-11.010	0.8	21.73	-2.7	6	-1.1	-11.9	58.6	55.9	59	62.3	44.8	-0.2	0.984
Feb 15, 2047	C	912834RB6	0	4.300	4.236	6.429	0.7	21.95	0.1	53	13.1	4.6	76.1	70.5	80	77.2	58.5	-0.2	1.003
Feb 15, 2047	P	912803EW9	4718	4.135	4.236	-10.069	0.7	21.97	-2.5	5	-0.4	-10.9	59.6	56.6	61	63.4	45.6	-0.2	0.963
May 15, 2047	C	912834RK6	0	4.296	4.231	6.577	1.1	22.20	0.3	66	13.2	4.5	76.1	70.4	89	77.6	58.5	-0.4	0.981

US Fixed Income Strategy

Maturity	Type	Cusip	Size (MM)	Yield	Model Yield	Yield Diff	1-D Chg	Yld Mod Dur	Strips Model				Asset Swap Spreads					3 Month	
									R/C	Pctl	Hi	Lo	Spot	Avg	Pctl	Hi	Lo	Roll	Tot Ret
May 15, 2047	P	912803EY5	5409	4.141	4.231	-8.924	1.1	22.21	-1.8	16	0.2	-10.1	60.6	57.0	77	63.8	46.0	-0.4	0.943
Aug 15, 2047	C	912834RR1	0	4.298	4.226	7.204	0.8	22.44	0.5	81	13.6	3.9	76.6	70.7	83	77.7	58.6	-0.4	0.960
Aug 15, 2047	P	912803EZ2	8586	4.143	4.226	-8.294	0.8	22.46	-1.6	9	0.6	-9.0	61.1	57.2	69	64.0	46.2	-0.4	0.922
Nov 15, 2047	C	912834SZ2	0	4.294	4.221	7.338	0.9	22.69	0.8	88	13.8	3.6	76.5	70.4	84	77.3	58.3	-0.5	0.939
Nov 15, 2047	P	912803FA6	10011	4.143	4.221	-7.763	0.9	22.70	-1.3	12	1.0	-9.1	61.4	57.4	69	64.0	46.3	-0.5	0.902
Feb 15, 2048	C	912834TF5	0	4.307	4.215	9.008	1.3	22.93	1.9	94	15.5	3.3	78.0	70.9	97	78.0	58.0	-0.6	0.924
Feb 15, 2048	P	912803FB4	9288	4.149	4.215	-6.713	1.3	22.95	-1.1	11	2.8	-8.6	62.3	58.1	72	64.7	46.7	-0.6	0.885
May 15, 2048	C	912834TP3	0	4.301	4.208	9.333	1.2	23.18	1.5	86	15.9	4.0	77.9	71.2	88	78.6	57.8	-0.7	0.905
May 15, 2048	P	912803FD0	5951	4.147	4.208	-6.048	1.2	23.19	-1.1	11	3.2	-8.3	62.5	58.4	67	65.4	46.6	-0.7	0.867
Aug 15, 2048	C	912834TV0	0	4.299	4.200	9.823	0.9	23.42	1.6	83	16.9	3.5	78.0	71.2	83	78.7	57.8	-0.7	0.889
Aug 15, 2048	P	912803FE8	12377	4.140	4.200	-6.070	0.9	23.44	-1.4	6	4.1	-8.5	62.1	58.4	61	65.2	46.6	-0.7	0.850
Nov 15, 2048	C	912834UB2	0	4.311	4.192	11.801	1.1	23.66	3.3	95	17.2	3.1	79.5	71.1	95	80.1	57.4	-0.8	0.878
Nov 15, 2048	P	912803FF5	10875	4.143	4.192	-5.003	1.1	23.68	-0.6	19	4.5	-8.9	62.7	58.2	62	65.3	46.1	-0.8	0.836
Feb 15, 2049	C	912834UH9	0	4.299	4.184	11.418	0.9	23.91	3.1	95	16.7	2.9	78.6	70.4	97	78.9	56.9	-0.8	0.862
Feb 15, 2049	P	912803FG3	14742	4.136	4.184	-4.876	0.9	23.93	-0.3	25	4.0	-9.2	62.3	57.5	69	64.4	45.6	-0.8	0.822
May 15, 2049	C	912834UR7	0	4.285	4.174	10.941	0.8	24.16	2.7	83	17.0	2.8	77.6	69.9	91	78.1	56.7	-0.9	0.847
May 15, 2049	P	912803FJ7	17457	4.127	4.174	-4.807	0.8	24.18	-0.2	34	4.2	-9.2	61.9	57.0	69	63.5	45.5	-0.9	0.808
Aug 15, 2049	C	912834UY2	0	4.286	4.165	11.981	0.8	24.40	3.9	95	16.7	2.4	78.0	69.1	94	78.1	56.4	-0.9	0.838
Aug 15, 2049	P	912803FK4	8981	4.124	4.165	-4.215	0.8	24.42	0.6	72	3.9	-9.8	61.8	56.2	89	62.5	45.1	-0.9	0.798
Nov 15, 2049	C	912834VE5	0	4.267	4.156	11.055	0.9	24.65	3.4	91	16.7	2.0	76.5	68.1	94	76.9	55.8	-0.9	0.825
Nov 15, 2049	P	912803FL2	8933	4.117	4.156	-3.946	0.8	24.67	1.0	83	3.9	-10.2	61.5	55.5	89	61.9	44.6	-0.9	0.788
Feb 15, 2050	C	912834VM7	0	4.251	4.147	10.410	0.9	24.89	2.7	94	17.0	2.0	75.2	67.5	97	75.2	55.7	-0.9	0.814
Feb 15, 2050	P	912803FM0	1142	4.106	4.147	-4.088	0.9	24.91	0.7	73	4.2	-10.0	60.7	55.1	91	61.3	44.5	-0.9	0.778
May 15, 2050	C	912834VV7	0	4.229	4.136	9.270	0.8	25.14	3.2	89	16.0	0.6	73.5	65.4	94	73.8	53.4	-1.0	0.804
May 15, 2050	P	912803FP3	12929	4.070	4.136	-6.623	0.8	25.16	-0.1	41	3.2	-11.1	57.6	52.7	83	59.1	42.1	-1.0	0.765
Aug 15, 2050	C	912834WC8	0	4.227	4.127	10.000	0.9	25.39	2.7	89	17.3	1.9	73.5	65.9	94	73.8	54.5	-0.9	0.800
Aug 15, 2050	P	912803FR9	18293	4.082	4.127	-4.499	0.9	25.41	0.4	61	4.5	-10.0	59.0	53.6	83	60.1	43.3	-0.9	0.764
Nov 15, 2050	C	912834WJ3	0	4.216	4.117	9.831	1.3	25.63	2.1	91	17.8	2.5	72.8	65.7	98	72.8	54.3	-1.0	0.796
Nov 15, 2050	P	912803FT5	22271	4.079	4.117	-3.814	1.3	25.65	0.6	64	5.1	-9.5	59.1	53.5	88	60.1	43.0	-1.0	0.762
Feb 15, 2051	C	912834WR5	0	4.215	4.108	10.738	1.0	25.88	3.2	92	17.9	2.5	73.1	64.8	98	73.1	53.6	-0.9	0.796
Feb 15, 2051	P	912803FV0	20955	4.066	4.108	-4.143	1.0	25.90	0.6	67	5.2	-9.6	58.2	52.5	91	59.1	42.3	-0.9	0.759

US Fixed Income Strategy

Maturity	Type	Cusip	Size (MM)	Yield	Model Yield	Yield 1-D Yld Mod			Strips Model				Asset Swap Spreads				3 Month		
						Diff	Chg	Dur	R/C	Pctl	Hi	Lo	Spot	Avg	Pctl	Hi	Lo	Roll	Tot Ret
May 15, 2051	C	912834WZ7	0	4.204	4.098	10.593	1.2	26.12	3.2	97	17.3	3.2	72.3	64.0	98	72.3	53.1	-0.9	0.796
May 15, 2051	P	912803FY4	16347	4.061	4.098	-3.632	1.2	26.14	0.8	86	5.3	-8.8	58.1	52.2	95	58.5	41.9	-0.9	0.760
Aug 15, 2051	C	912834XG8	0	4.187	4.089	9.841	0.8	26.37	3.7	89	15.4	1.6	71.0	62.1	97	71.1	51.3	-0.9	0.795
Aug 15, 2051	P	912803GA5	21082	4.050	4.089	-3.811	0.8	26.39	0.5	64	5.4	-8.3	57.3	51.6	88	58.2	41.6	-0.9	0.762
Nov 15, 2051	C	912834A65	0	4.151	4.080	7.141	1.0	26.62	2.8	91	13.2	0.6	67.8	59.7	97	67.8	49.1	-0.9	0.793
Nov 15, 2051	P	912803GC1	21146	4.040	4.080	-4.014	1.0	26.64	0.6	77	4.8	-7.8	56.7	50.7	91	57.5	40.9	-0.9	0.765
Feb 15, 2052	C	912834B56	0	4.124	4.072	5.261	0.9	26.87	3.6	91	10.4	-1.6	65.4	56.3	95	65.6	46.1	-0.8	0.794
Feb 15, 2052	P	912803GE7	22287	4.027	4.072	-4.441	0.9	26.88	0.4	67	4.5	-7.5	55.7	49.9	91	56.5	40.4	-0.8	0.770
May 15, 2052	C	912834C55	0	4.099	4.063	3.614	0.7	27.12	2.4	89	10.1	-0.4	63.4	55.3	95	63.6	44.9	-0.8	0.798
May 15, 2052	P	912803GH0	15830	4.012	4.063	-5.145	0.7	27.13	0.0	58	4.2	-6.3	54.6	49.0	92	55.4	39.3	-0.8	0.776
Aug 15, 2052	C	912834D47	0	4.067	4.056	1.103	0.8	27.37	1.3	86	8.0	-1.7	60.4	53.3	95	60.8	43.4	-0.7	0.802
Aug 15, 2052	P	912803GK3	13543	3.995	4.056	-6.096	0.8	27.38	-0.5	27	3.2	-6.5	53.2	47.9	89	54.4	38.8	-0.7	0.784
Nov 15, 2052	C	912834F29	0	4.017	4.049	-3.205	0.7	27.62	0.8	88	4.5	-5.2	55.9	49.0	97	56.1	40.5	-0.7	0.803
Nov 15, 2052	P	912803GM9	9856	3.947	4.049	-10.204	0.7	27.63	0.0	53	-1.3	-12.1	48.9	42.8	97	49.1	34.8	-0.7	0.786
Feb 15, 2053	C	912834F94	0	3.992	4.043	-5.156	1.0	27.87	-1.2	14	4.0	-5.6	53.8	48.7	92	54.8	41.0	-0.6	0.813
Feb 15, 2053	P	912803GP2	15208	3.952	4.043	-9.153	1.0	27.87	-1.4	14	0.3	-9.6	49.8	44.8	89	51.0	37.2	-0.6	0.804
May 15, 2053	C	912834G93	0	3.966	4.036	-7.073	0.8	28.12	-2.2	2	3.0	-7.3	51.6	47.2	86	53.3	39.8	-0.6	0.825
May 15, 2053	P	912803GS6	22697	3.937	4.036	-9.921	0.8	28.12	-2.2	3	0.2	-10.2	48.7	44.3	86	50.4	36.9	-0.6	0.818
Aug 15, 2053	C	912834H84	0	3.947	4.032	-8.496	0.6	28.36	-2.7	0	2.5	-8.5	50.0	45.8	83	51.3	39.0	-0.5	0.842
Aug 15, 2053	P	912803GU1	10619	3.909	4.032	-12.305	0.6	28.37	-2.7	0	-1.3	-12.3	46.2	42.0	83	47.5	35.1	-0.5	0.832
Nov 15, 2053	C	912834J66	0	3.927	4.028	-10.158	0.7	28.61	-2.4	5	2.8	-10.9	48.5	43.6	97	48.7	36.6	-0.4	0.860
Nov 15, 2053	P	912803GW7	9632	3.868	4.028	-16.075	0.7	28.62	-2.4	5	-3.1	-16.8	42.6	37.7	97	42.8	30.7	-0.4	0.845
Feb 15, 2054	C	912834K56	0	3.941	4.025	-8.463	0.7	28.86	-3.5	2	7.4	-9.0	50.3	46.1	88	51.2	39.0	-0.3	0.889
Feb 15, 2054	P	912803GY3	12995	3.892	4.025	-13.403	0.7	28.86	-3.5	2	2.5	-13.9	45.3	41.1	88	46.3	34.0	-0.3	0.877
May 15, 2054	C	912834XP8	0	3.897	4.022	-12.580	0.7	29.11	-4.3	5	6.9	-13.2	46.3	42.5	86	47.3	35.9	-0.2	0.906
May 15, 2054	P	912803HB2	8027	3.867	4.022	-15.559	0.7	29.11	-4.3	5	3.9	-16.2	43.3	39.5	86	44.4	32.9	-0.2	0.899
Aug 15, 2054	C	912834XW3	0	3.918	4.022	-10.406	2.3	29.35	-4.7	22	-0.1	-12.7	48.8	49.5	43	54.3	46.5	-0.1	0.942
Aug 15, 2054	P	912803HD8	694	3.870	4.022	-15.275	0.7	29.36	-2.9	13	-2.5	-16.1	44.0	42.7	74	54.2	40.5	-0.1	0.930

STRIPS Spread to Treasuries Report

		Crv	Lev	Crv*Lev	Fed Expect	Const	R-Square	SE	Residual	Z-Score
5-year CSTRIPS	Beta	0.35	-4.28	-0.06	-0.03	24.34	0.83	0.6	0.1	0.1
	T-Stat	6.5	-10.8	-5.0	-6.6	14.8	-	-	-	-
10-year PSTRIPS	Beta	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	T-Stat	N/A	N/A	N/A	N/A	N/A	-	-	-	-
15-year PSTRIPS	Beta	-0.26	1.68	0.08	0.08	-3.23	0.86	0.5	-0.3	-0.5
	T-Stat	-8.5	7.5	10.8	23.3	-3.5	-	-	-	-
20-year PSTRIPS	Beta	-0.03	-2.43	0.02	0.05	16.28	0.84	0.6	-1.1	-1.9
	T-Stat	-0.8	-8.7	2.6	11.2	13.9	-	-	-	-

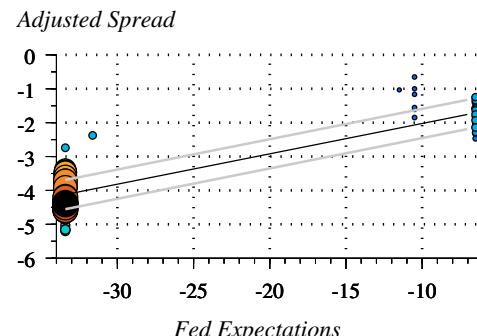
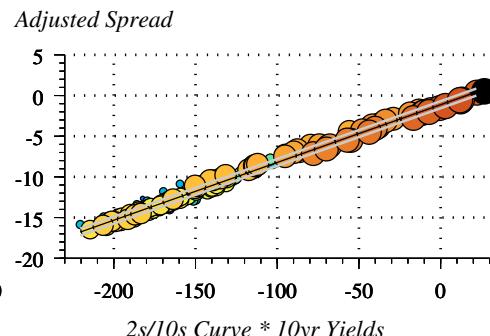
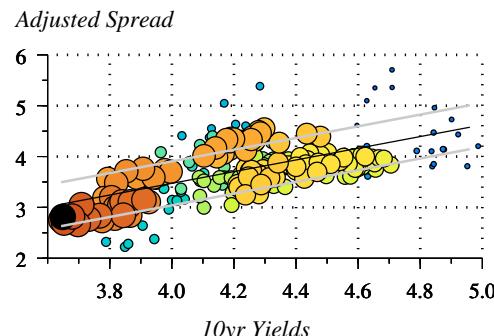
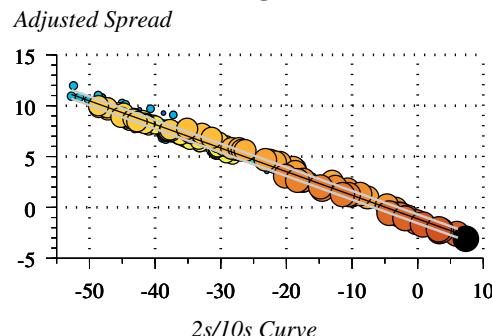
Levels

5-year CSTRIPS	8.8	5s	3.42	5s*2s/5s	-51.9
10-year PSTRIPS	N/A	10s	3.65	10s*2s/10s	26.8
15-year PSTRIPS	0.0	2s/5s	-15.2	Fed Expectation	N/A
20-year PSTRIPS	4.9	2s/10s	7.3		

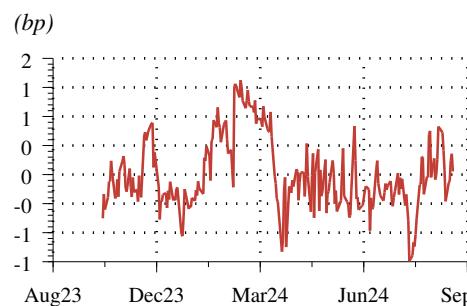
Sensitivity

	5y	10y	15y	20y
10bp curve steepening	1.4	N/A	0.3	0.6
10bp rise in yields	-0.3	N/A	0.2	-0.2
10bp steepening in Fed Expectations	-0.3	N/A	0.9	0.5

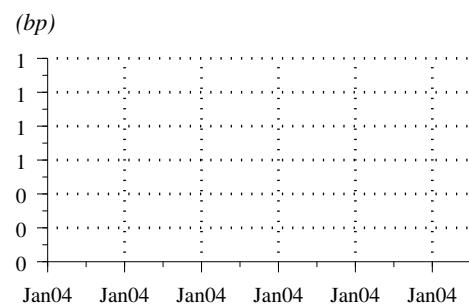
15 Year PSTRIPS Regression



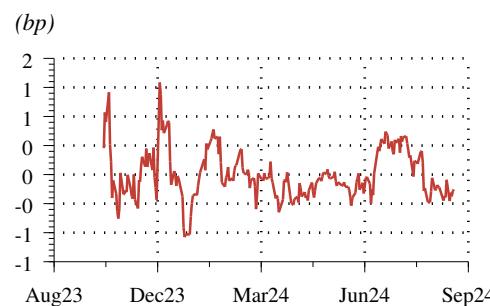
5 Year CSTRIPS Residual



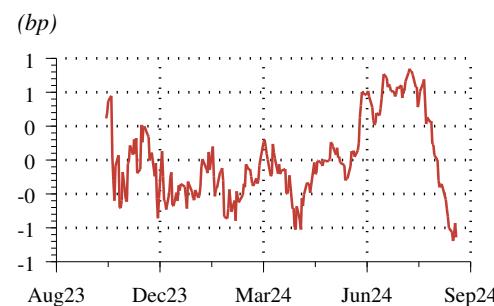
10 Year PSTRIPS Residual



15 Year PSTRIPS Residual



20 Year PSTRIPS Residual



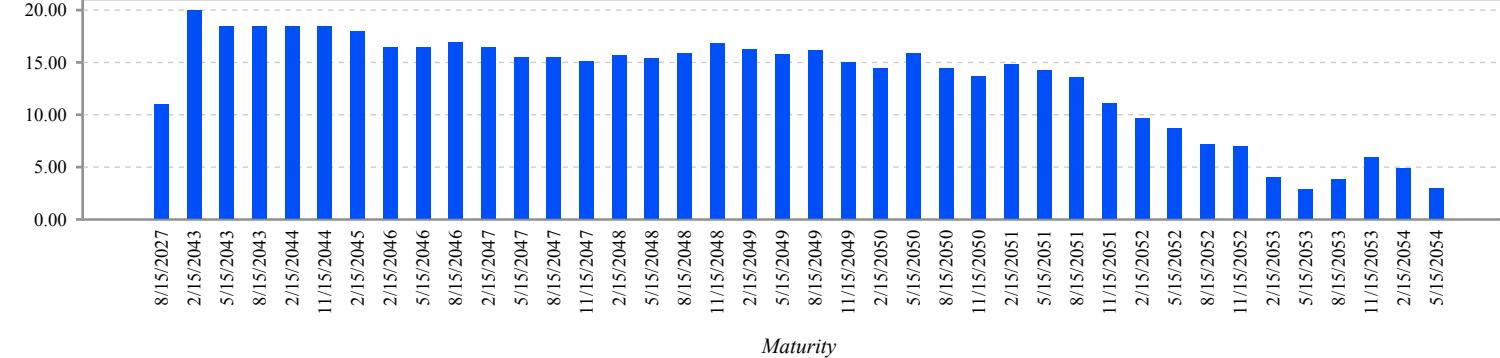
Notes

- Notes:

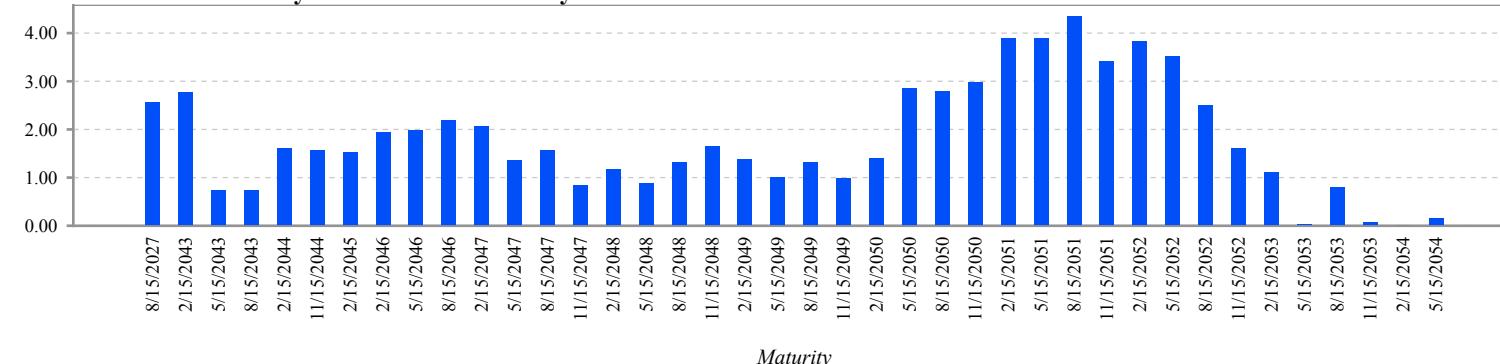
 - Regression uses 1 year of data. Hot-run 2s/5s curve used in 5-year regression; hot-run 2s/10s used in 10-, 15-, and 20-year regressions. Fed expectations defined as the difference between the expected Fed funds rate 3 meetings ahead and the current funds rate.
 - STRIPS spreads are calculated as the difference between averages of a bucket of STRIPS' yields and average of a bucket of whole bonds yields.
 - 3.5 year buckets(5Y+/-6M): STRIPS: 20290515 20290815 20291115 20300215; BONDS: 3.125-20290831 2.375-20290331 4-20291031 1.75-20291115 1.5-20300215 3.875-20290930 6.125-20290815 2.875-20290430 3.25-20290630 2.75-20290531 3.5-20300131 3.875-20291231 2.625-20290731 4-20300228 1.625-20290815 3.875-20291130 2.375-20290515
 - 10-year buckets(10Y+/-1Y): STRIPS;; BONDS:
 - 15-year buckets(15Y+/-1Y): STRIPS: 20390515 20390815 20391115 20400215 20400515 20400515 20400815 20400815; BONDS: 4.625-20400215 4.25-20390515 3.875-20400815 3.5-20390215 1.125-20400515 4.375-20391115 4.5-20390815 1.125-20400815 4.375-20400515

C-P Spreads Snapshot

Current C-STRIPS yield minus P-STRIPS yield; bp

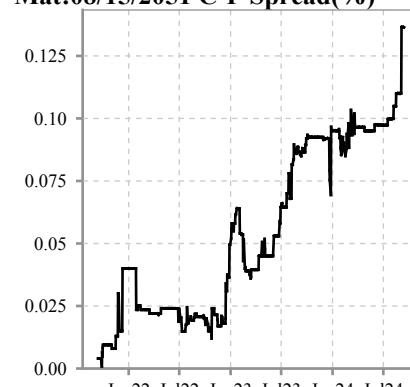


1Y Zscore of C-STRIPS yield Minus P-STRIPS yields

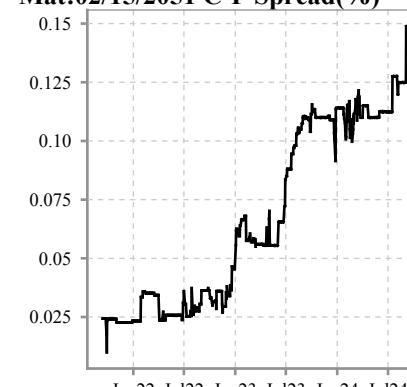


Most mis-priced trades

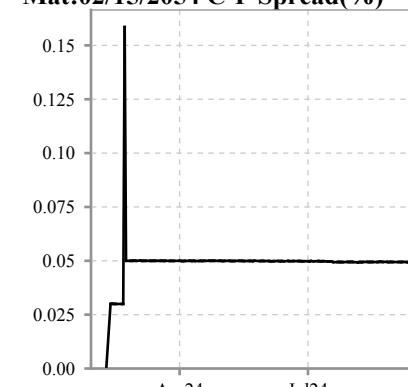
Mat:08/15/2051 C-P Spread(%)



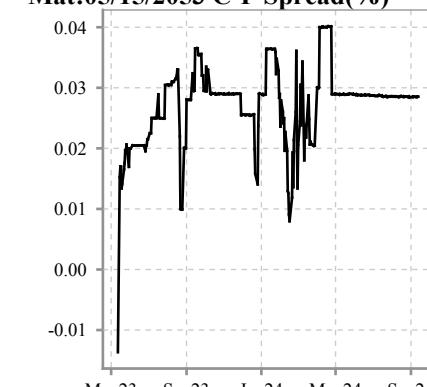
Mat:02/15/2051 C-P Spread(%)



Mat:02/15/2054 C-P Spread(%)



Mat:05/15/2053 C-P Spread(%)



US Fixed Income Strategy

Cusip (P-STRIP)	P STRIPS Coupon	%ge o/s (\$mn)	Yield	Mat. matched C-STRIP cusip	C minus P yield (bp)	1y zscore Spread	1y min. of C-P sprd (bp)	1y max of C-P sprd (bp)	C-PCSTRIP amt o/s (\$mn)		
Coupon	Maturity	Stripped (P-STRIP)									
912803BL6	6.375	08/15/2027	0	16	3.35	912833PE4	11	2.6	0.8	11.0	0
912803EA7	3.125	02/15/2043	0	12	4.11	912834MD7	20	2.8	16.3	20.0	0
912803EC3	2.875	05/15/2043	0	11	4.13	912834MM7	18	0.7	16.0	20.3	0
912803ED1	3.625	08/15/2043	0	11	4.13	912834MT2	19	0.7	16.4	20.6	0
912803EF6	3.625	02/15/2044	0	13	4.14	912834NF1	19	1.6	15.6	19.7	0
912803EK5	3.000	11/15/2044	0	15	4.14	912834PB8	19	1.6	14.3	18.9	0
912803EL3	2.500	02/15/2045	0	12	4.14	912834PH5	18	1.5	14.0	19.1	0
912803ER0	2.500	02/15/2046	0	15	4.14	912834PZ5	16	1.9	13.4	17.1	0
912803ET6	2.500	05/15/2046	0	12	4.14	912834QH4	17	2.0	13.1	16.7	0
912803EU3	2.250	08/15/2046	0	12	4.14	912834QP6	17	2.2	13.4	17.1	0
912803EW9	3.000	02/15/2047	0	12	4.15	912834RB6	17	2.1	12.5	17.0	0
912803EY5	3.000	05/15/2047	0	12	4.15	912834RK6	16	1.4	12.4	17.1	0
912803EZ2	2.750	08/15/2047	0	20	4.16	912834RR1	16	1.6	12.4	16.3	0
912803FA6	2.750	11/15/2047	0	24	4.16	912834SZ2	15	0.8	12.0	16.7	0
912803FB4	3.000	02/15/2048	0	21	4.16	912834TF5	16	1.2	11.0	16.5	0
912803FD0	3.125	05/15/2048	0	12	4.15	912834TP3	15	0.9	11.0	16.8	0
912803FE8	3.000	08/15/2048	0	25	4.15	912834TV0	16	1.3	11.0	16.4	0
912803FF5	3.375	11/15/2048	0	20	4.15	912834UB2	17	1.7	11.0	16.8	0
912803FG3	3.000	02/15/2049	0	27	4.15	912834UH9	16	1.4	11.0	16.3	0
912803FJ7	2.875	05/15/2049	0	30	4.14	912834UR7	16	1.0	11.0	16.3	0
912803FK4	2.250	08/15/2049	0	14	4.13	912834UY2	16	1.3	11.0	16.2	0
912803FL2	2.375	11/15/2049	0	15	4.13	912834VE5	15	1.0	11.0	15.7	0
912803FM0	2.000	02/15/2050	0	18	4.12	912834VM7	14	1.4	11.0	14.5	0
912803FP3	1.250	05/15/2050	0	18	4.09	912834VV7	16	2.9	11.0	15.9	0
912803FR9	1.375	08/15/2050	0	21	4.10	912834WC8	15	2.8	11.0	14.7	0
912803FT5	1.625	11/15/2050	0	26	4.10	912834WJ3	14	3.0	10.9	13.7	0
912803FV0	1.875	02/15/2051	0	23	4.09	912834WR5	15	3.9	9.2	14.9	0
912803FY4	2.375	05/15/2051	0	17	4.08	912834WZ7	14	3.9	9.6	14.2	0
912803GA5	2.000	08/15/2051	0	23	4.07	912834XG8	14	4.4	6.9	13.7	0
912803GC1	1.875	11/15/2051	0	23	4.06	912834A65	11	3.4	5.8	11.2	0
912803GE7	2.250	02/15/2052	0	26	4.05	912834B56	10	3.8	4.8	9.7	0
912803GH0	2.875	05/15/2052	0	20	4.03	912834C55	9	3.5	1.5	8.8	0

US Fixed Income Strategy

Cusip (P-STRIP)	P STRIPS Coupon	%ge o/s (\$mn)	Yield Stripped	Mat. matched (P-STRIP)	C-STRIP cusip	C minus P yield (bp)	1y zscore Spread	1y min. of C-P sprd (bp)	1y max of C-P sprd (bp)	CSTRIP amt o/s (\$mn)	
Coupon	Maturity										
912803GK3	3.000	08/15/2052	0	19	4.02	912834D47	7	2.5	2.4	7.2	0
912803GM9	4.000	11/15/2052	0	15	3.96	912834F29	7	1.6	3.8	7.0	0
912803GP2	3.625	02/15/2053	0	23	3.97	912834F94	4	1.1	1.6	5.2	0
912803GS6	3.625	05/15/2053	0	36	3.96	912834G93	3	0.0	0.8	4.0	0
912803GU1	4.125	08/15/2053	0	15	3.93	912834H84	4	0.8	0.6	5.1	0
912803GW7	4.750	11/15/2053	0	14	3.89	912834J66	6	0.1	-449.0	7.5	0
912803GY3	4.250	02/15/2054	0	18	3.91	912834K56	5	0.0	0.0	15.9	0
912803HB2	4.625	05/15/2054	0	11	3.89	912834XP8	3	0.1	-0.0	3.0	0

U.S. Fixed Income Strategy

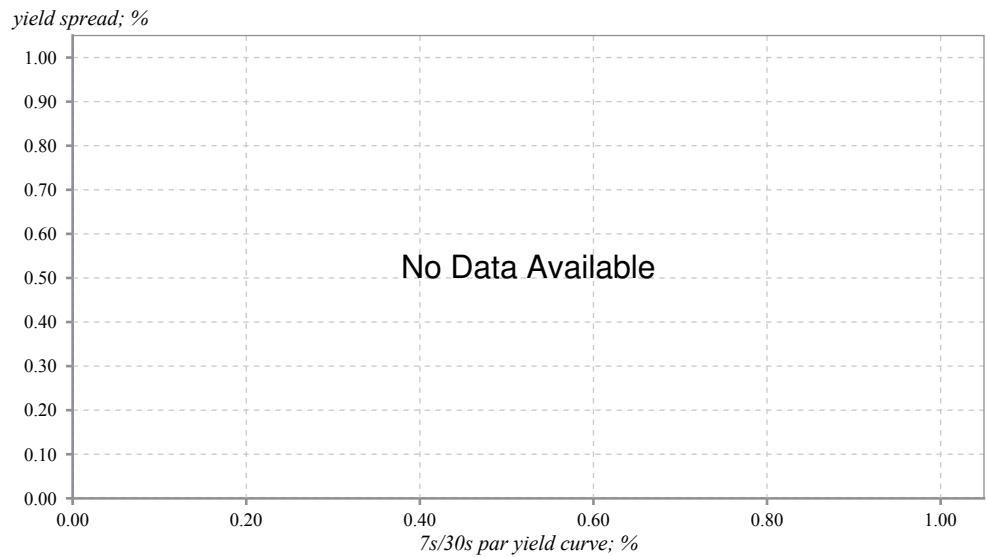
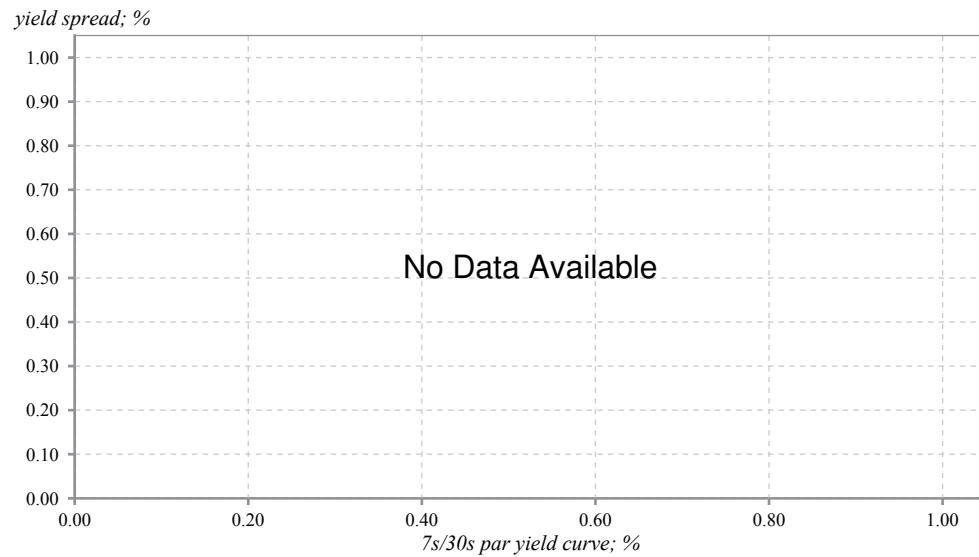
Most Mispriced STRIPS Pairs

Pairs that look too steep relative to 7s/30s curve

Trades **Strips** **Maturities** **Z-Score** **Res** **Beta** **R-Sqr** **Size (\$bn)** **Trades** **Strips** **Maturities** **Z-Score** **Res** **Beta** **R-Sqr** **Size (\$bn)**

Pairs that look too flat relative to 7s/30s curve

Trades	Strips	Maturities	Z-Score	Res	Beta	R-Sqr	Size (\$bn)
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All statistics are based on 1-year regressions.

Only trades with a minimum r-square of 30% are shown. Additionally, a minimum level of 1.25bp was applied to the absolute level of the zscore, and 1bp to the absolute level of the residual.

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U.S. Fixed Income Strategy

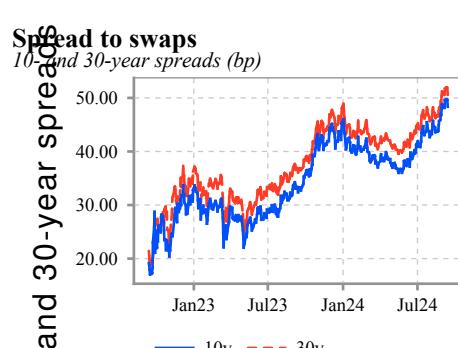
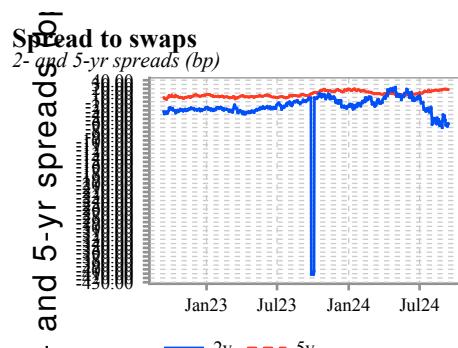
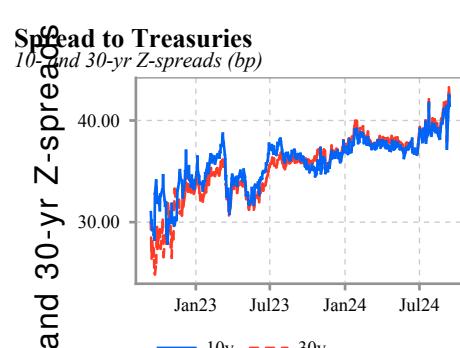
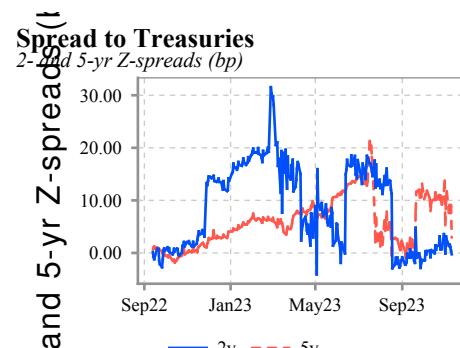
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FNMA Benchmark Notes					Nominal Spread							Matched Maturity Asset Swap Spread						
Maturity	Coupon	Mat Date	Yield	Mod Dur	Spot	1d Chg	1w Chg	3m Avg	3m High	3m Low	3m Pct	Spot	1d Chg	1w Chg	3m Avg	3m High	3m Low	3m Pct
2y	1.625	Oct 15, 2024	4.659	.1	-34.5	-.4	-.2	-2.6	33.6	-39.7	4.8	-61.9	-1.2	2.5	-36.0	3.8	-70.4	17.5
3y	0.500	Nov 7, 2025	4.077	1.1	15.9	1.7	2.1	17.3	21.9	12.5	28.6	2.9	.7	.1	3.3	7.5	-.5	46.0
5y	0.750	Oct 8, 2027	3.666	3.0	22.7	1.2	1.6	19.4	22.7	14.5	100.0	17.9	-.5	-1.5	14.3	19.6	7.3	85.7
10y	0.875	Aug 5, 2030	3.897	5.6	41.1	-.1	-.1	38.1	41.2	35.2	95.2	48.3	-1.3	-1.3	44.0	49.7	38.6	87.3
30y	6.625	Nov 15, 2030	3.920	5.0	44.5	-.1	-.7	41.3	45.2	36.8	96.8	50.5	-1.3	-1.2	46.9	52.0	42.3	85.7

FHLMC Reference Notes					Nominal Spread							Matched Maturity Asset Swap Spread						
Maturity	Coupon	Mat Date	Yield	Mod Dur	Spot	1d Chg	1w Chg	3m Avg	3m High	3m Low	3m Pct	Spot	1d Chg	1w Chg	3m Avg	3m High	3m Low	3m Pct
2y																		
3y																		
5y	0.375	Sep 23, 2025	4.126	1.0	13.7	2.1	2.5	17.3	23.7	9.7	17.5	-1.9	.9	.2	.6	6.4	-5.9	12.7
10y	0.375	Sep 23, 2025	4.126	1.0	13.7	2.1	2.5	17.3	23.7	9.7	17.5	-1.9	.9	.2	.6	6.4	-5.9	12.7
30y	6.250	Jul 15, 2032	4.170	6.2	73.5	1.3	1.4	68.0	73.5	60.7	100.0	73.6	-.7	-.6	68.0	74.4	61.0	92.1

FNMA/FHLMC on-the-run spread curves

	Yield Curve (bp)						Nominal Spread						Matched Maturity Asset Swap Spread					
Curve	Spot	1d Chg	3m Avg	High	Low	Pct	Spot	1d Chg	3m Avg	High	Low	Pct	Spot	1d Chg	3m Avg	High	Low	Pct
2s/3s																		
2s/5s																		
2s/10s																		
2s/30s																		
3s/5s																		
3s/10s	.2	.0	.0	.2	-.2	100.0	24.3	.1	20.7	30.6	17.8	95.2	42.4	.2	38.1	43.0	35.4	96.8
3s/30s	.5	.0	.2	.5	.0	100.0	45.8	2.1	40.6	52.3	35.3	96.8	67.6	.8	62.0	67.6	58.2	100.0
5s/10s																		
5s/30s																		
10s/30s	.3	.0	.2	.3	.2	100.0	21.5	2.0	19.9	24.1	16.3	85.7	25.2	.6	23.9	26.2	21.4	85.7



U.S. Fixed Income Strategy

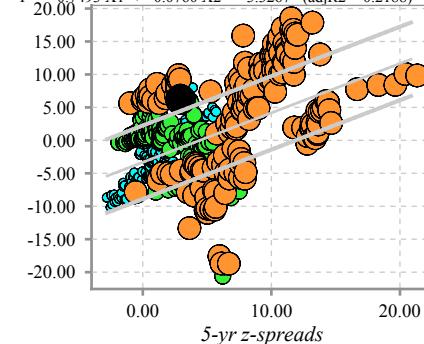
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Agencies Spread to Treasuries Report

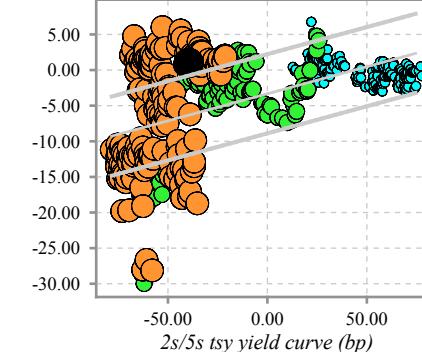
2s/5s off the run tsy z-spread (bp)



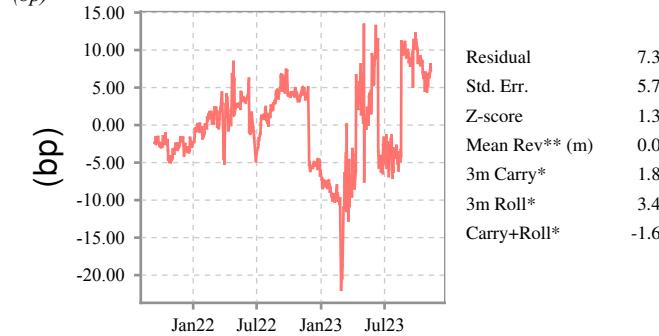
Regressed vs. 5yr z-spread



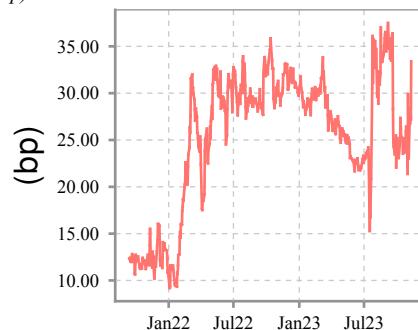
and 2s/5s tsy yld curve



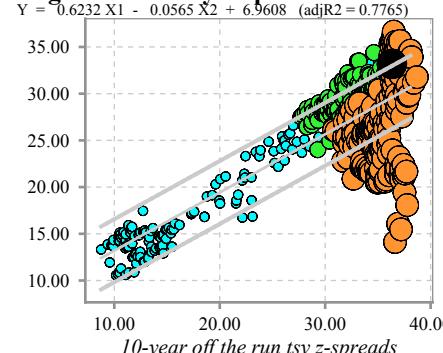
Residual (bp)



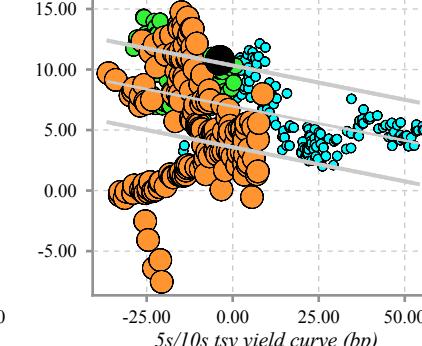
5s/10s off the run tsy z-spread (bp)



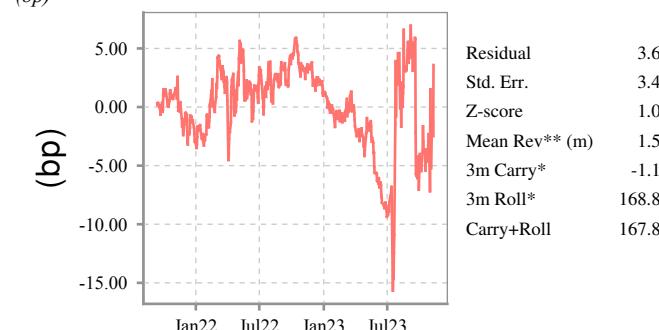
Regressed vs. 10y z-spreads



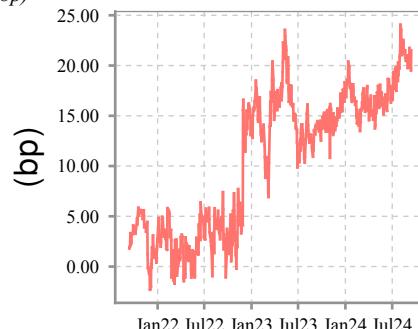
and 5s/10s tsy yield curve



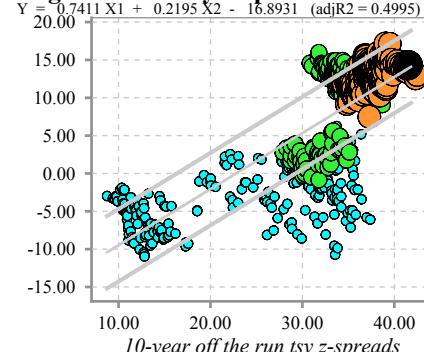
Residual (bp)



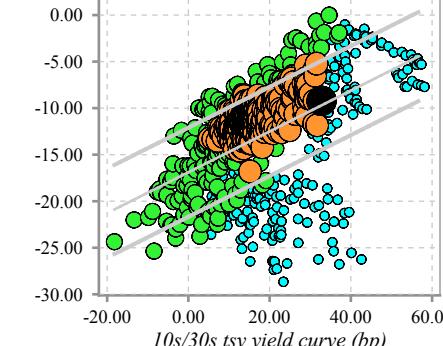
10s/30s off the run tsy z-spread (bp)



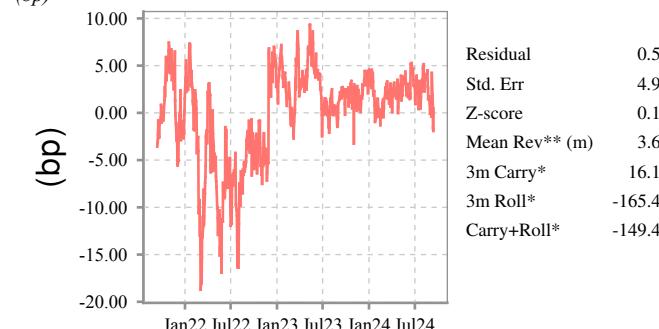
Regressed vs. 30y z-spreads



and 10s/30s tsy yield curve



Residual (bp)



*Assumes long position in the longer-leg of the curve trade

**Estimated peak-to-peak period of mean reversion for the residual * 3/8 (in months)

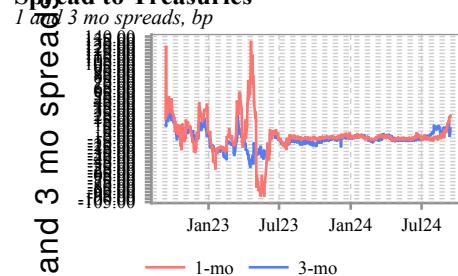
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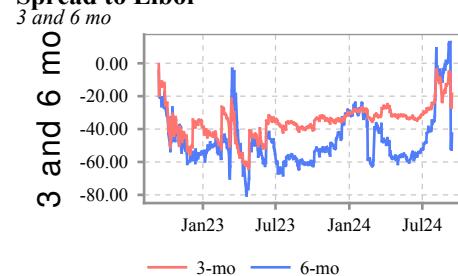
Short-term Agency Report

Maturity	Disc. Rate	MMY	Spread to T-Bills (bp)*							Spread to Libor (bp)						
			Spot	1d Chg	5d Chg	3m Avg	3m High	3m Low	Z-score	Spot	1d Chg	5d Chg	3m Avg	3m High	3m Low	Z-score
1m	5.26	5.260	23	1	12	-6	23	-14	3.2	14	10	12	-15	14	-27	3.5
2m	5.00	5.000	-5	3	-23	-5	19	-13	0.1	-18	8	-13	-22	-4	-35	0.4
3m	4.95	4.950	4	5	-5	-3	15	-13	0.9	-43	10	-55	-29	13	-57	-0.6
4m	4.90	4.900	8	8	-18	7	37	-11	0.0	-32	10	-6	-55	10	-91	0.9
5m	4.50	4.500	-22	10	-53	11	40	-32	-1.9	-	-	-	-	-	-	-
6m	4.50	4.500	-12	8	-55	5	45	-24	-0.8	-	-	-	-	-	-	-
7m	4.40	4.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8m	4.40	4.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9m	4.40	4.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10m	4.40	4.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11m	4.30	4.300	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12m	4.30	4.300	25	9	-12	5	49	-30	-5.6	-32	10	-6	-55	10	-91	0.9

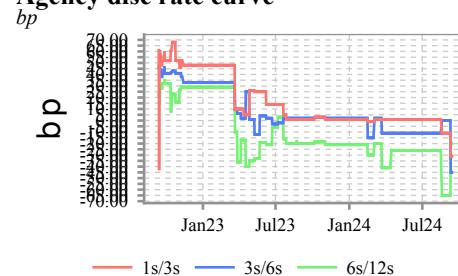
Spread to Treasuries



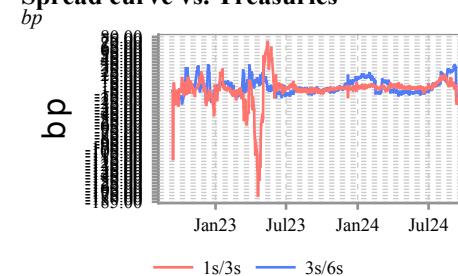
Spread to Libor



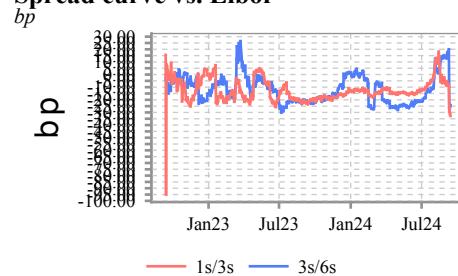
Agency disc rate curve



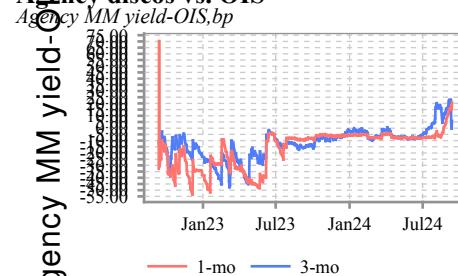
Spread curve vs. Treasuries



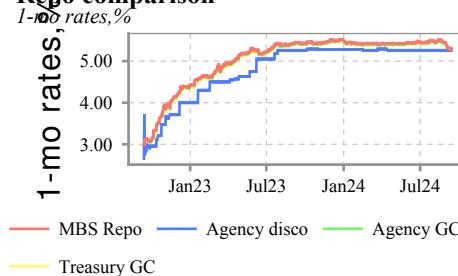
Spread curve vs. Libor



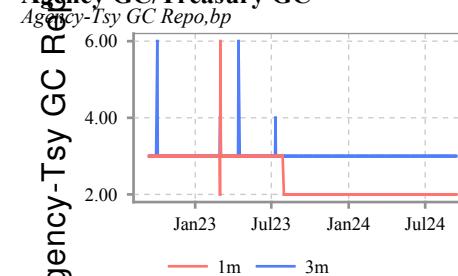
Agency discos vs. OIS



Repo comparison



Agency GC/Treasury GC Ratio



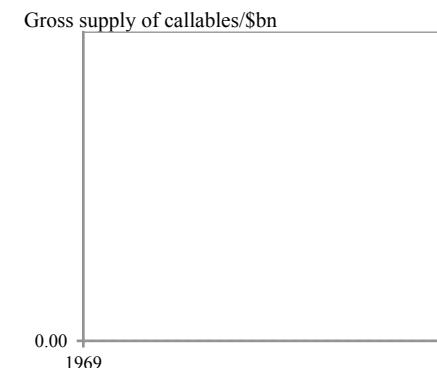
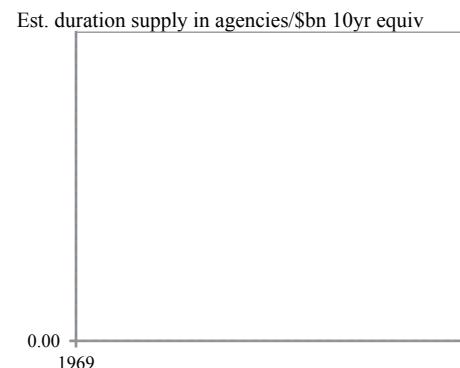
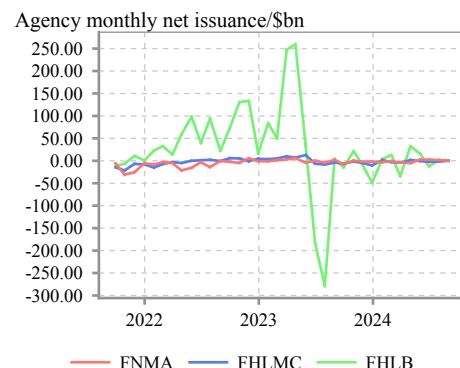
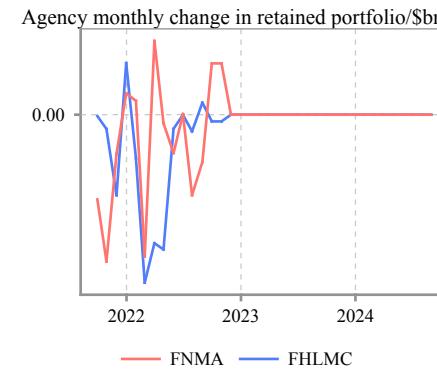
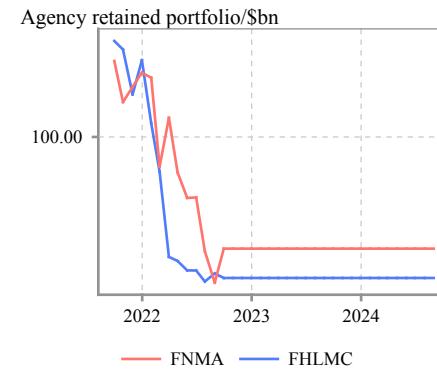
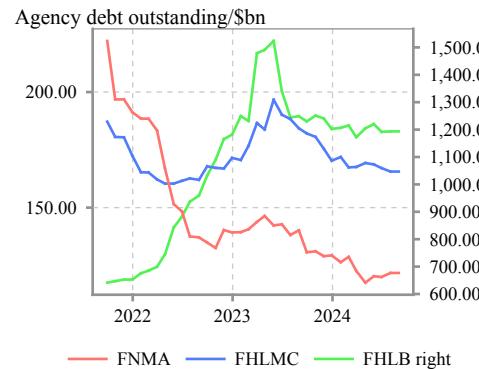
*Money market yield differential. Note: All averages, high/low and Z-scores are calculated over 3-month history.
All rates are reflective of FHLB discount notes.

bp	1m	2m	3m	bp	1m	2m	3m
MBS,GC %	5.18	5.18	5.18	Agy GC, %	5.29	5.27	5.16
MBS-Disco	5.00	29.00	23.00	Agy-Tsy GC	2.00	3.00	3.00
Avg	18.73	16.11	14.63	Avg	2.00	3.00	3.00
High	25.00	29.00	23.00	High	2.00	3.00	3.00
Low	2.00	1.00	1.00	Low	2.00	3.00	3.00

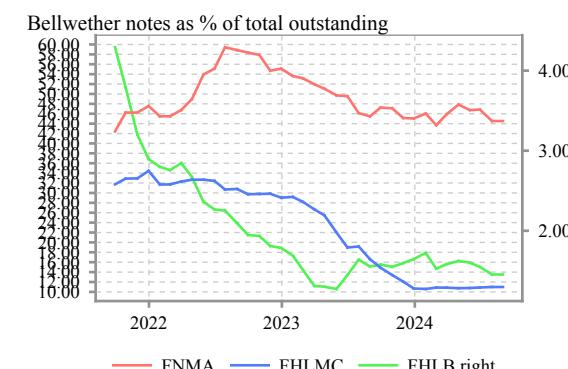
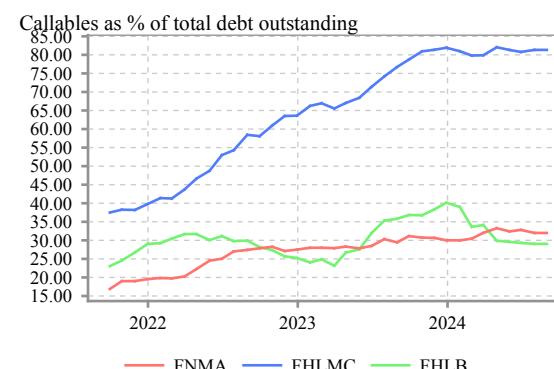
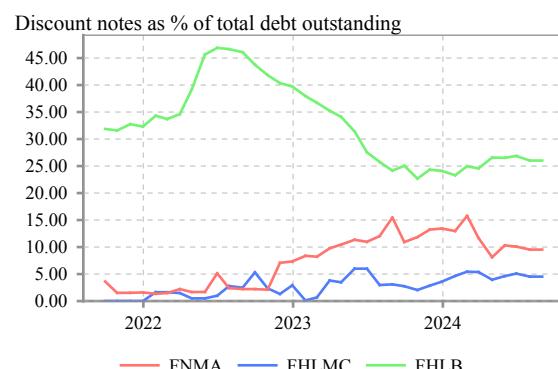
Fixed Income Strategy

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Agency Issuance Summary



Changes in Debt Outstanding				
	FNMA	FHLMC	FHLB	Total
1m change				
Net debt issuance	1.7	-1.5	1.6	1.8
Discount notes	-.5	-1.0	-9.6	-11.1
Long-Term	2.2	-.5	11.2	13.0
Callables	-.4	-.3	-2.6	-3.3
Bullets	2.7	-.2	13.9	16.3
6m change				
Net debt issuance	-4.7	-6.3	-13.0	-24.0
Discount notes	-4.8	-.5	29.4	24.1
Long-Term	.1	-5.8	-42.4	-48.1
Callables	1.1	-4.5	-123.8	-127.2
Bullets	-.9	-1.3	81.3	79.1



US Fixed Income Strategy

Agency Callables Spread Report

Euro								Coupon (%)								Spread to Matched Maturity Treasuries (bp)							
structure	spot	1d chg	1w chg	3m avg	3m high	3m low	3m pct	spot	1d chg	1w chg	3m avg	3m high	3m low	3m pct	Issuer								
3nc3m	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	fhlmc								
3nc6m	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	fhlmc								
3nc1y	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	fhlmc								
5nc3m	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	fhlmc								
5nc6m	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	fhlmc								
5nc1y	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	fhlmc								

Berm								Coupon (%)								Spread to Matched Maturity Treasuries (bp)							
structure	spot	1d chg	1w chg	3m avg	3m high	3m low	3m pct	spot	1d chg	1w chg	3m avg	3m high	3m low	3m pct	Issuer								
3nc3m	0.00	0.00	0.00	0.00	0.00	0.00	0.0	.0	0.0	0.0	0.0	0.0	0.0	0.0	fhlmc								
3nc6m	0.00	0.00	0.00	0.00	0.00	0.00	0.0	.0	0.0	0.0	0.0	0.0	0.0	0.0	fhlmc								
3nc1y	0.00	0.00	0.00	0.00	0.00	0.00	0.0	.0	0.0	0.0	0.0	0.0	0.0	0.0	fhlmc								
5nc3m	0.00	0.00	0.00	0.00	0.00	0.00	0.0	.0	0.0	0.0	0.0	0.0	0.0	0.0	fhlmc								
5nc6m	0.00	0.00	0.00	0.00	0.00	0.00	0.0	.0	0.0	0.0	0.0	0.0	0.0	0.0	fhlmc								
5nc1y	0.00	0.00	0.00	0.00	0.00	0.00	0.0	.0	0.0	0.0	0.0	0.0	0.0	0.0	fhlmc								

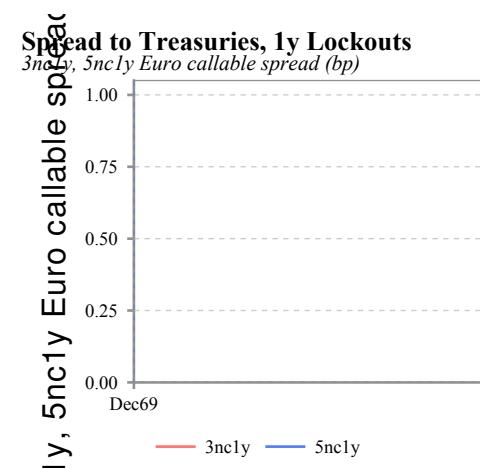
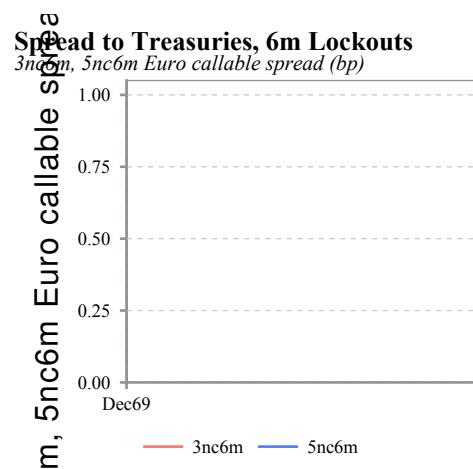
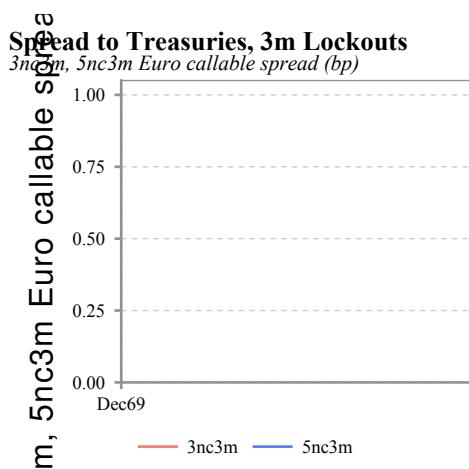


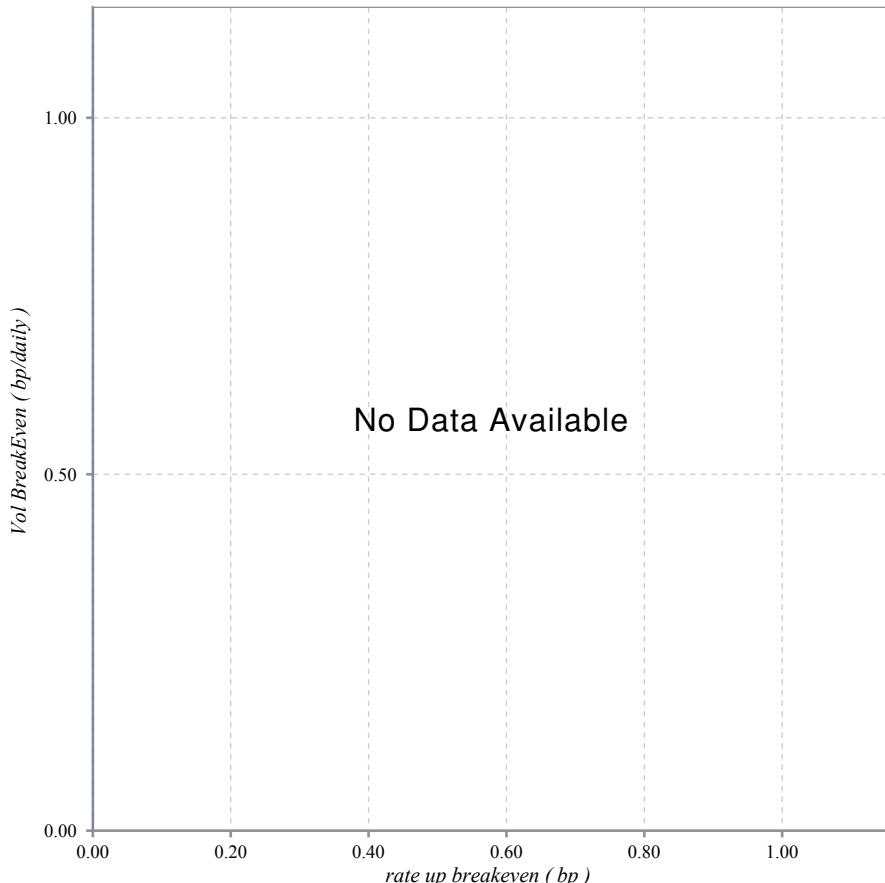
Table includes the higher of FNMA and FHLMC's callable spread level for each structure. Spreads are calculated using mid vol levels and do not reflect executable quotes. Calculations also assume a forward settlement date.

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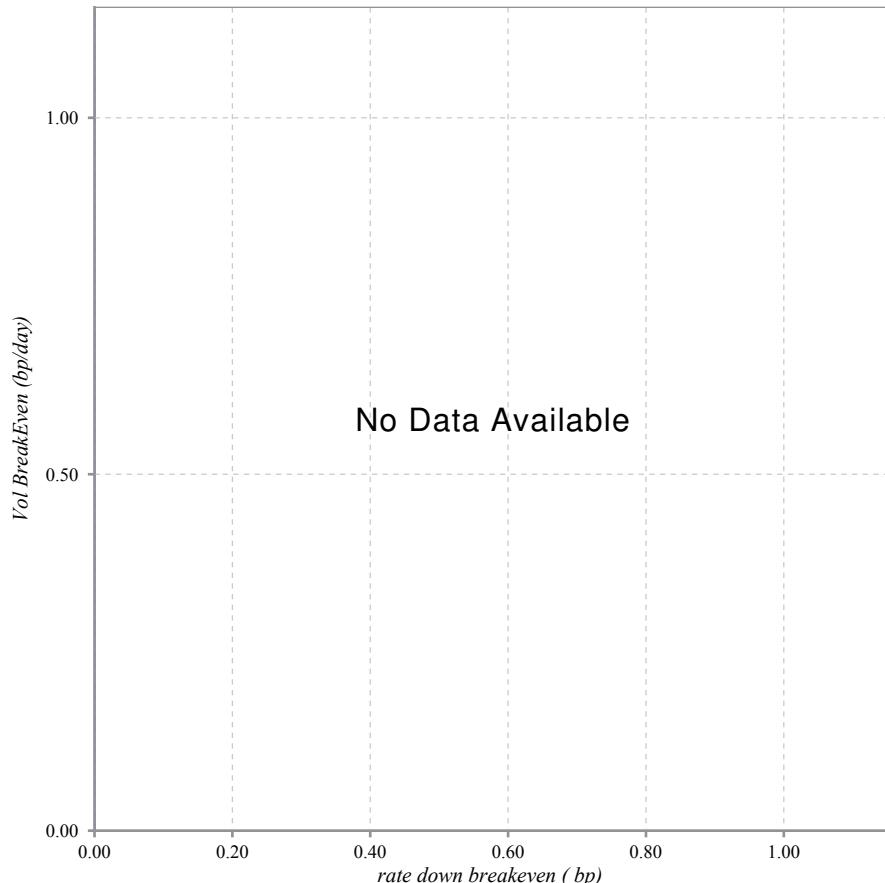
FHLMC Euro Callable 3M BreakEven Report

Structure	RateUp	VolUp	RateDown	Yield	Fltsprd	USTsprd	Bulletsprd	Delta	Gamma	Bpvega	Vslide
0.00	0.0	0.0	0.0	0.0	0	0	-0				
0.00	0.0	0.0	0.0	0.0	0	0	-0				
0.00	0.0	0.0	0.0	0.0	0	0	-0				
0.00	0.0	0.0	0.0	0.0	0	0	-0				
0.00	0.0	0.0	0.0	0.0	0	0	-0				
0.00	0.0	0.0	0.0	0.0	0	0	-0				
0.00	0.0	0.0	0.0	0.0	0	0	-0				
0.00	0.0	0.0	0.0	0.0	0	0	-0				
0.00	0.0	0.0	0.0	0.0	0	0	-0				
0.00	0.0	0.0	0.0	0.0	0	0	-0				
0.00	0.0	0.0	0.0	0.0	0	0	-0				

Rate Up / Vol Up



Rate Down / Vol Up



1. Bulletsprd is defined to be the yield spread w.r.t matched duration bullet agency bond.
2. RateUp, VolUp and RateDown are the rate or vol changes needed for callable bonds' return to degenerate to matched duration agency bonds at 3m later.
3. Vslide is the daily bpvol change via sliding down the vol surface, for example, 1yx2y-9mx2y swaption bpvol change with strike at 3Ync1Y callable par yield.

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Page 87

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Page 89

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